

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

10-KILOMETRE SQUARE MAPPING SCHEME FOR NON-MARINE MOLLUSCA

Good steady progress was made in 1969. My best thanks are due to everyone concerned. The number of new records (about 11,000) fell a little short of the total for 1968, a drop due partly to the absence of a special collecting expedition (such as our very successful Irish field trip of April 1968), and partly to the law of diminishing returns setting in in some of the more accessible and better worked areas. I hope very much that in the 1970 season members will make a special effort to visit some of the more thinly recorded parts of the map. To avoid duplication, I will gladly send on request copies of the master cards for particular squares.

It is planned to produce a distribution atlas in 1974, thus allowing four more full field seasons for the collection of data. This will appropriately mark the centenary of publication of the Journal of Conchology. The atlas will essentially be a corporate venture by the Society as a whole, and its scientific value and completeness will depend on our continuing enthusiasm. Even if you feel that your knowledge of the British non-marines is limited, your help is much needed, particularly if you are likely to visit an area where records are sparse. I am always glad to receive localized lots of un-named molluscs.

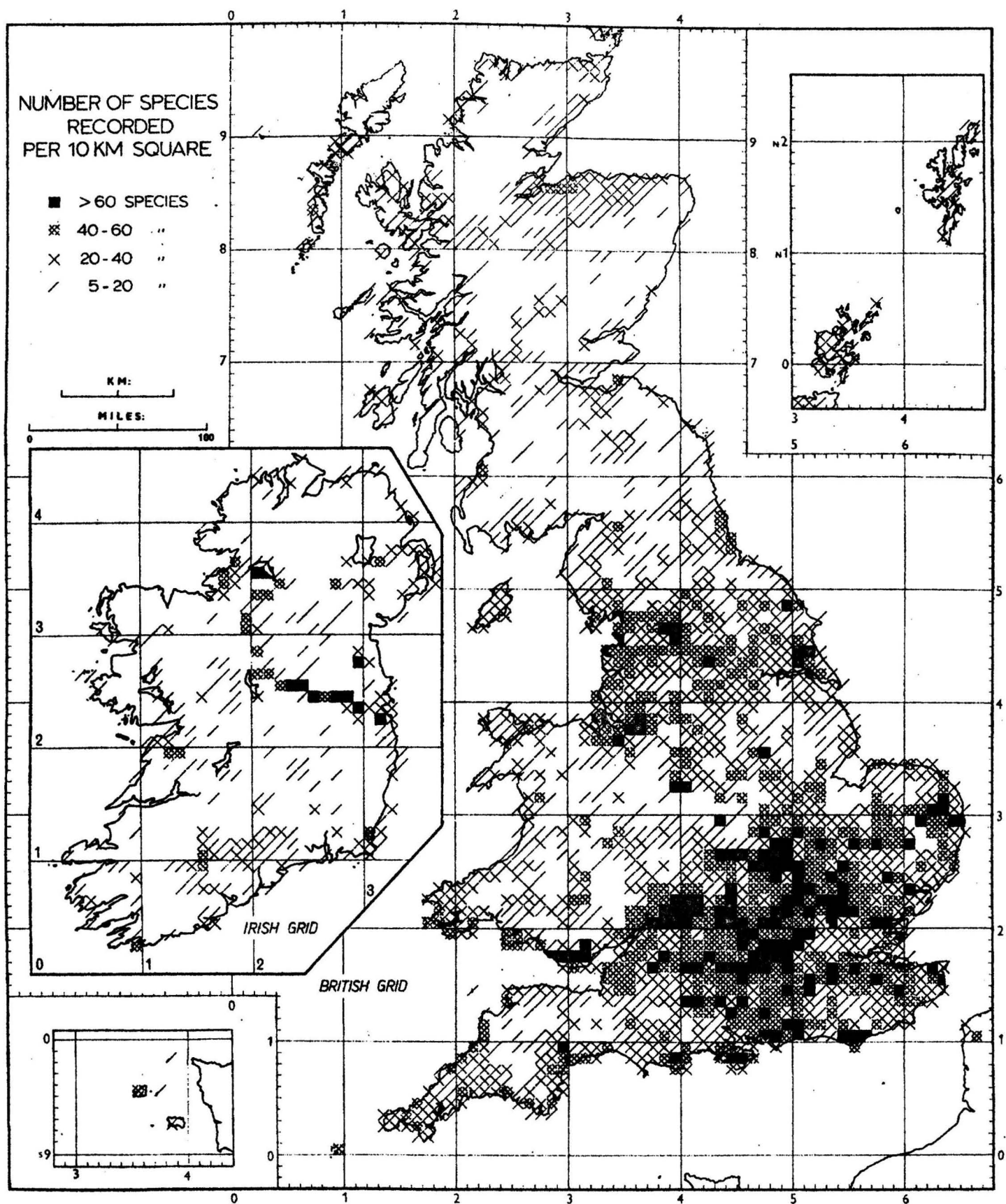
Already for certain species it is possible to construct meaningful maps, usually forms which are regarded as rarities, so that collectors in the past kept careful note of the localities in which they occurred, and this data can today be extracted and plotted. Information is also reasonably adequate for a number of south-eastern species. But for the majority of our common snails (e.g. Lymnaea peregra or Helix aspersa) this cannot yet be done and far more records are needed. These are the species which occur in most or all vice-counties and which the older conchologists came to regard as 'ubiquitous'; little useful information can usually be gleaned about them by searching old publications or collections. Yet it is precisely these species which are likely to provide biogeographical information of the greatest value.

PROVISIONAL DISTRIBUTION MAP OF PYRAMIDULA RUPESTRIS

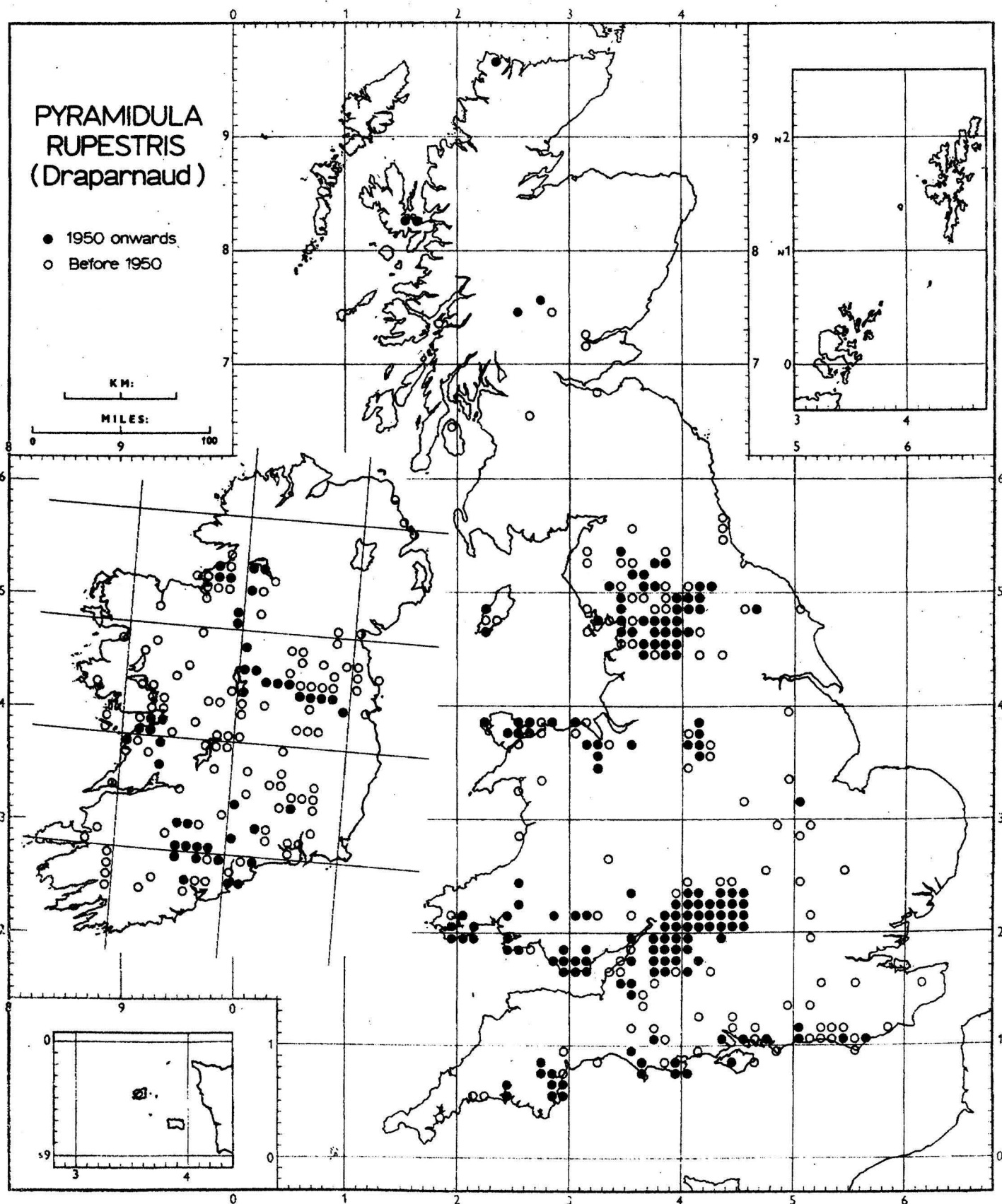
P. rupestris is, as its name implies, an inhabitant of rocks and stone walls, especially on limestone. It is usually abundant where it occurs. Mapping by vice-counties tends to obscure its markedly western distribution in the British Isles, most of the occurrences in the eastern counties being based on one or two records, often of considerable age and not confirmed in recent years. It is possible that P. rupestris likes high atmospheric humidities. Virtually all the stations in Britain lie to the west of the 30-inch isohyet, and one notes its great abundance in the Cotswolds in Gloucestershire and Oxfordshire as against its virtual absence from the same limestone belt going north-east into Northamptonshire and Lincolnshire. Thus it is common on limestone walls round, say, Banbury, but not round, say, Northampton.

The very scattered colonies in Scotland, such as in Skye and near Durness, are of great interest in relation to problems of dispersal in land Mollusca.

P. rupestris appears to be abundant in the limestone areas of Ireland (i.e., about half the country), but the map gives only a very poor reflection of this owing to the inadequacy of the Irish information. The high proportion of old (pre-1950) records has therefore no significance. Once again, therefore, may I make a plea for fresh fieldwork in Ireland! It is hoped that the recent adoption for biological recording purposes of the Irish National Grid (marked on all Irish ordnance maps and shown (squares only) in the Reader's Digest AA Book of the Road) in place of the cumbersome 'Biological Grid' will stimulate interest



Map showing the number of species of land and freshwater Mollusca recorded to January 1970 for each 10-kilometre square of the British and Irish National Grids (post-1950 records only)



Known distribution of Pyramidula rupestris (Draparnaud)
in the British Isles

in recording in that country.

M. P. Kerney,
Hon. Recorder for non-marine Mollusca,
Dept. of Geology,
Imperial College,
London, S.W.7.

THE EFFECT OF ENVIRONMENT ON THE DISTRIBUTION OF MOLLUSCS

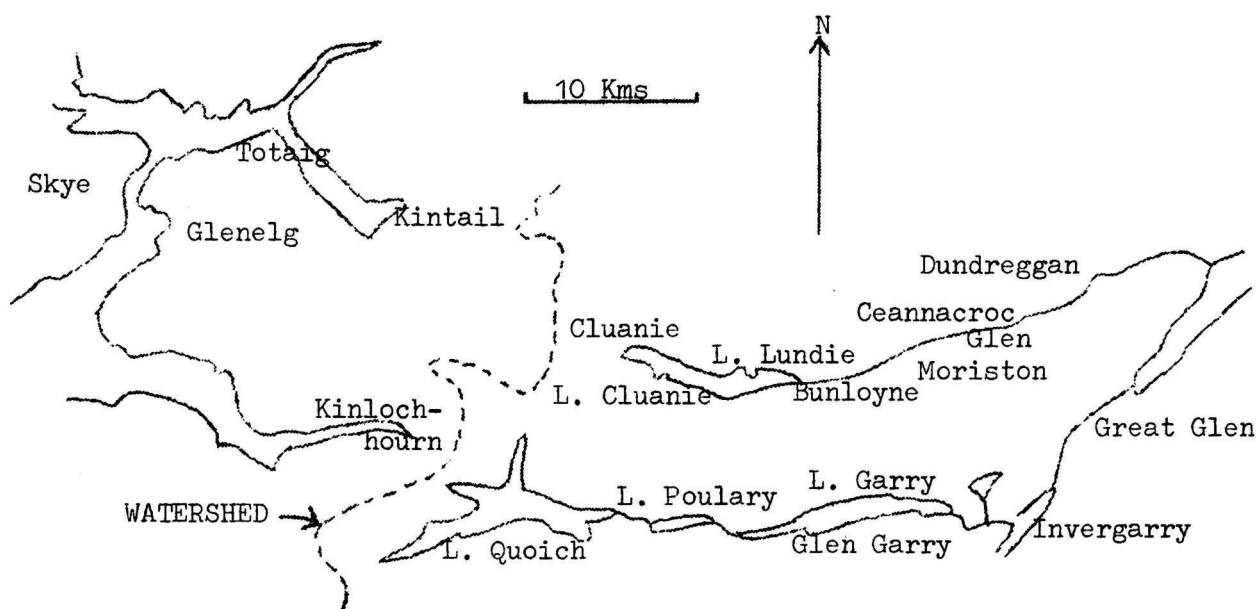
IN GLEN GARRY AND GLEN MORISTON, SCOTTISH HIGHLANDS

As a follow-up to my 1967 season, described in the Conchologists' Newsletter for March 1968, this year I was able to do considerably more collecting in Glen Moriston and also along its neighbour to the south, Glen Garry, and thus obtained a fairly comprehensive collection of an area approaching 1,000 square kilometres. This showed up the effect of environment on the mollusc population. Although one must bear in mind that climate and geology influenced the distribution of man and his works, high mountains excepted man is the most important controlling factor in the ecology of the molluscs of the area.

Western Scotland has a number of rather similar east-west valleys which drain eastwards into the Great Glen or the Moray Firth, and westwards into the Minch or its offshoots. The watershed is only a few miles from the west coast, in a region of high mountains, but is itself relatively low. Most of the eastwards draining valleys contain hydro-electric schemes.

Glen Garry and Glen Moriston start at the eastern end in well cultivated agricultural and wooded land with some coniferous forests. The mollusc populations are typified by those of Invergarry and Dundreggan - Ceannacroc respectively. Further up there are isolated houses and crofts (Tomdoun and Bunloyne) but once lochs Quoich and Cluanie are reached the areas are characterised by an almost complete absence of houses and few trees except in scattered plantations. Once over the watershed there are rapid drops down to the sea at the head of sea lochs. At Kinlochhourn to the south there is but one farm, a lodge and some woods, while in Kintail there are crofting communities and coniferous forests. The open coast is reached near Glenelg and Totaig (opposite Dornie). On the west coast the climate is milder but much wetter than in the east, and at the watershed it is both cold and wet.

Table I (land molluscs) shows very clearly that slugs are much more abundant than snails, and also reveals that the more cultivated peripheral areas contain a more diverse fauna, totalling 24 species, than the wild ground near the watershed where there are but three. The rapid fall-off in the number of species, and generally speaking the number of individuals also, away from human-influenced environ-



ments is especially marked in the Tomdoun and Bunloyne areas, where the only species encountered outwith the immediate neighbourhood of building or ruins or rubbish dumps were Agriolimax reticulatus, Arion intermedius, A. subfuscus and A. ater ater. The warmer weather on the west coast near the sea, together with the presence of some calcic outcrops in an otherwise acidic soil, tends to allow the molluscs to cling less closely to human habitation in their fight for survival. While the activity of the Forestry Commission has undoubtedly upset and reduced the mollusc population in the areas where trees have been planted, it has also had the opposite effect where wild land has been developed for housing, etc..

Where freshwater molluscs are concerned, the effect of human interference on the environment is less happy. Table II does not show a clear pattern, because it does not differentiate between the five types of environment present. H. ulvae has only been found in the sea. The two species of Lymnaea and Ancylus fluviatilis have a distribution as random as that of the bogs and streams they inhabit. The Pisidiums are much more interesting. P. lilljeborgii and P. hibernicum are found in hill lochs, and P. casertanum, P. personatum and P. obtusale in bogs as well as in larger waters, but the other three, P. milium, P. subtruncatum and P. nitidum only occur in quietly-flowing rivers and in lochs not affected by large fluctuations in water level. Lochs Garry and Quoich in Glen Garry, and Loch Cluanie in Glen Moriston which are hydro-electric reservoirs have been searched without success, the latter to below 'low water mark'. Adjacent to the latter is Loch Lundie, at one time quite separate but now joined to Loch Cluanie. Neighbouring hill lochs of a similar type contain considerable numbers of Pisidiums but yielded only one specimen of P. casertanum at the mouth of a boggy stream. It is likely that the 15 years of hydro-electric activity have been more than enough to kill the original fauna. Loch Poullary, a natural loch in Glen Garry between lochs Quoich and Garry, and the river Moriston are inhabited by numerous Pisidiums, especially the latter where conditions are enhanced by riverside arable farming. The withdrawal of water from the lochs would appear to be much more deadly than the unnatural floods and freshets which are released into the river areas.

I wonder if lack of water rather than sheer cold in the winter of 1962/63 was an important cause of the depletion of the mollusc population of the Cheshire ponds (Nora McMillan, Conch. News. Sept. 1969), bearing in mind of course that Highland molluscs are used to severe winters while the Cheshire ones are not.

Shelagh M. Smith

Table I. Land Molluscs

Ia, Invergarry; Ib, Dundreggan - Ceannacroc; IIa, Tomdoun; IIb, Bunloyne; IIIa, Quoich; IIIb, Cluanie; IVa, Kinlochhourn; IVb, Kintail; Va, Glenelg; Vb, Totaig.

	I		II		III		IV		V	
	a	b	a	b	a	b	a	b	a	b
<u>Agriolimax reticulatus</u>	x	x	x	x		x	x	x	x	x
" <u>laevis</u>	x	x								
<u>Arion intermedius</u>		x	x	x	x		x			
" <u>hortensis</u>	x	x	x	x			x		x	x
" <u>subfuscus</u>	x	x	x	x				x	x	x
" <u>ater ater</u>	x	x	x	x	x	x	x	x	x	x
<u>Limax maximus</u>	x	x	x	x				x		
<u>Lehmannia marginata</u>	x	x								
<u>Milax sowerbyi</u>	x									
<u>Oxychilus cellarius</u>	x	x	x				x			x
" <u>alliarius</u>	x	x	x	x					x	x
<u>Retinella radiatula</u>		x								x
" <u>nitidula</u>	x									
" <u>pura</u>										x
<u>Euconulus fulvus</u>	x									
<u>Vitrea crystallina</u>	x									x
<u>Vitrina pellucida</u>	x	x							x	
<u>Cochlicopa lubrica</u>	x	x							x	x
<u>Lauria cylindracea</u>	x							x	x	x

	I		II		III		IV		V	
	a	b	a	b	a	b	a	b	a	b
<i>Clausilia bidentata</i>										x
<i>Balea perversa</i>										x
<i>Succinea pfeifferi</i>										x
<i>Arianta arbustorum</i>	x									x
<i>Cepaea hortensis</i>	x									
" <i>nemoralis</i>	x									

Table II. Fresh Water Molluscs

	I		II		III		IV		V	
	a	b	a	b	a	b	a	b	a	b
<i>Hydrobia ulvae</i>							x			
<i>Lymnaea peregra</i>	x	x	x		x		x		x	
" <i>truncatula</i>		x			x		x			
<i>Ancylus fluviatilis</i>		x							x	
<i>Pisidium casertanum</i>	x	x	x	x	x	x	x			
" <i>personatum</i>		x			x		x			
" <i>obtusale</i>		x	x		x					
" <i>milium</i>		x	x	x						
" <i>subtruncatum</i>		x		x						
" <i>lilljeborgii</i>		x								
" <i>hibernicum</i>		x								
" <i>nitidum</i>		x								

THE NON-MARINE MOLLUSCS OF RAASAY - V.C.104, NORTH EBUDES

In the course of a field meeting arranged by the Botanical Society of the British Isles between 28th. June - 5th. July 1969, some attempt was made, with the assistance of other members of the party, to sample the molluscs of Raasay. This island, which lies just east of Skye, is approximately 27 square miles in area (14 miles long by $\frac{1}{2}$ -3 miles wide) and has a complex geology. Much of the vegetation is heath but there is a little mixed farming and considerable areas of woodland, both planted conifers and natural birch/hazel. A total of 18 species with external shells, of which six were aquatic, were collected and at least three species of slugs were noticed. Perhaps the most interesting find was *Oxychilus draparnaldi*, under vegetation on a wall near Raasay House, a new record for this area. It was accompanied by *Lauria cylindracea* and another *Oxychilus* species, most probably *O. alliarius*. These walls were the only area near habitation which proved productive although wall-bases, fallen stones and vegetation were searched near a number of occupied, and deserted, houses and out-buildings. (Inhabited: Inverarish village, Oskaig & Eyre; Deserted: Old Mill, Inverarish; building S.W. of Rubha na Leac; ruins: Screaperdal, N. of Hallaig & Brochel).

Lymnaea peregra occurred in the seepage from the abandoned iron mine above Inverarish, in a roadside trickle S. of Oskaig and in Loch Eader da Bhaile. This was the richest of the ten lochs which were studied and also held *L. truncatula*, well-grown *Ancylus fluviatilis*, *Pisidium casertanum* and *P. nitidum*. *Planorbis albus* was found on Glyceria in the Home Loch but the small lochans in the Oskaig area and Loch a Chadha charnaich proved barren. The eastern group of lochs on the neighbouring island of Scalpay were also unproductive. On both islands stream mouths were searched unsuccessfully for brackish-water species, such as *Hydrobia jenkinsi*.

Most of the Raasay woods were rich in bryophytes and, particularly on limestone, these yielded several characteristic species. *Clausilia bidentata* was frequent in crevices in the limestone and on trees in wooded gorges and cliffs. *Helix hortensis* was also widespread but not as abundant as *Arianta arbustorum* which occurred also in limestone grassland at Screaperdal. *Discus rotundatus* was found only once - under a small patch of aspen in a birch wood above Eyre. (It has been suggested in Finland that aspen can concentrate calcium in its leaves and thus increase the number of species of mollusc that can survive in acid conditions*) The only land molluscs seen in Scalpay (the wooded settlement

area was not visited) were Arion ater agg. slugs. These were both abundant and widespread throughout Raasay where Arion subfuscus and Agriolimax reticulatus were also noted. Thanks are to Mr. A. McG. Stirling and Dr. H. A. P. Ingram for help in collecting and to Dr. M. P. Kerney, non-marine census recorder, for determining most of the species listed.

*Valovita 1. Land Molluscs in relation to acidity on hyperite hills in Central Finland. Annales Zoologici Fennici, 1968, Vol. 5, No. 3, p. 253.

Dr. L. S. Garrad, Manx Museum

Shelled Non-Marine Molluscs collected on Raasay, 1969

Species	Localities								
	1	2	3	4	5	6	7	8	9
<u>Lymnaea truncatula</u>	x								
<u>L. peregra</u>	x	x	x						
<u>Planorbis albus</u>				x					
<u>Ancylus fluviatilis</u>	x								
<u>Lauria cylindracea</u>						x	x		x
<u>Clausilia bidentata</u>					x	x			
<u>Arianta arbustorum</u>					x	x			
<u>Helix hortensis</u>					x	x	x		x
<u>Monacha granulata</u>						x			
<u>Discus rotundatus</u>								x	
<u>Vitrea crystallina</u>					x	?			
<u>V. contracta</u>							x		
<u>Oxychilus draparnaldi</u>									x
<u>O. cellarius</u>							x		
<u>O. alliarius</u>					x	x			?
<u>Retinella pura</u>							x		
<u>Pisidium casertanum</u>	x								
<u>P. nitidum</u>	x								

1. Loch Eader da Baille
3. Seepage at mine entrance
5. Gorge S.W. of Brae
7. Beinn na leac cliffs
9. Walls behind Raasay House

2. Small roadside pool nr. Oskaig
4. Home (or Mill) Loch
6. Creag na Bruich, northern cliffs
8. Woodland near South Fearn

A CENTENARY

Nowadays the celebration of centenaries seems to have become a popular pastime, with the issue of special stamps and other junketings. To the layman the centenary of a wrinkle may be of little import, but to the conchologist it may be of some interest.

Winkworth, 1932, in his paper, "The British Marine Mollusca", lists as a species Littorina aestuarii Jeffreys 1869.

Jeffreys, 1869, in "British Conchology", Vol. V, figures on Plate CI, Littorina aestuarii. In the Supplement to Vol. V, on page 205, under Littorina obtusata, he gives "var. aestuarii (figured as L. aestuarii)", followed by descriptions of the animal and the shell. Of the latter he writes, "Shell smaller than the typical form, uniform greenish-brown (the colour being more or less obscured by the excoriation or decay of the surface); spire more raised and compact; mouth more contracted, outer lip not expanding; sculpture slight and indistinct except in the young." It now seems to be generally accepted that aestuarii is but a form of Littorina littoralis.

Jeffreys continues, "Abundant between tide marks, on the banks of the River Deben at Shottisham Creek near Sutton, and at Manningtree, Suffolk. A dwarf and depauperated variety of L. rudis occurred with it."

I have two specimens labelled L. aestuarii, date and collector unknown, from Woodbridge, Suffolk, which is on the opposite bank of the River Deben to Shottisham Creek and a little lower down stream. I visited Woodbridge on 17th.

September 1969, a hundred years after the publication of the name by Jeffreys. The tide was coming in, what was left of the shore was very foul; even what little weed there was (Fucus sp.) appeared to be depauperate. However, I did manage to find one living specimen of aestuarii in weed on a stone. Along the base of the sea wall Littorina saxatilis rudis (Maton 1797) was abundant, with Hydrobia ulvae Pennant 1777. Clean rudis shells were few and far between; in the vast majority both colour and sculpture were, to use Jeffreys' words, "obscured by the excoriation or decay of the surface." They did, however, reach a fair size, while many of the Hydrobia were large and well-grown.

L. W. Stratton

HELIX ASPERSA USED AS FOOD

Several nineteenth-century conchological writers drew their readers' attention to the statement in Gray's Manual (1840) that "the glassmen at Newcastle once a year have a snail feast; they generally collect the snails themselves in the fields and hedges, the Sunday before the feast day."

The glassmen no longer carry out this practice but Helix aspersa is still collected and used as food in the shipyard areas of the Tyne and Wear.

Cooked snails found a fairly ready market during the 1940's, when food was scarce, but by about 1948 very few, if any, were on sale in the shipyards.

Then, late in 1969, while I was passing a limestone cutting which had a strong colony of snails, I saw two men and a boy skilfully and systematically denuding the whole rock face of its population. They told me that they cooked and sold the snails, and added that if they were properly prepared they were very tasty.

Since then I have made further enquiries. It appears that every quarry and limestone exposure is scoured for snails, and as there are many in the north-east of Durham there is at present a thriving market in some working men's clubs, public houses and shipyards.

I asked one collector to give me a recipe and this is what he wrote:-

"When you find snails they will be in clusters and bunched together. The first thing to do is to separate them. You then break the cap (epiphragm) of every one with a pin. When this is done give them a thorough washing but mind that you do not break the shells, which are very thin. Next comes the boiling of the snails. Fill a pan with salted water, then place the snails in the pan and leave them to boil. You will notice that slime comes up to the surface of the water. Remove this slime and repeat this until no more comes to the surface. Boil the snails to your taste by taking one out every so often. Repeat this till you are satisfied. It should take about one hour. When they are boiled, drain them and lay them out to dry, then sprinkle some salt on them and then they are ready to eat. If you do not want to eat them with salt you can pick them out with a pin and pickle them in vinegar. Leave them in vinegar overnight then they are ready to eat."

The snails sell at two to three shillings a hundred. It is only within the last year or two that they have been on sale again, after a lapse of about twenty years, and it is doubtful that those concerned will be able to keep it up. They take every snail they can find and the colonies are already considerably reduced; so much so that very few are left in each colony.

This is not the only area where snails are eaten. Mr. John Holness, in an interview with the Daily Mail (18-6-1963), said: "And then there's the problem of snails. No decent snails round here (Hyde, Cheshire) but I'm keen on walking and I often bring back a 2 lb. jarful from the limestone of Derbyshire. You can eat pretty well any snail you're likely to find. There is one reputedly poisonous snail - but it's very small and obscure. Snails have a flavour rather reminiscent of pork. But Mary has to shut her eyes if she eats them. About half the youth hostellers to whom I demonstrate try them. One boy went a bundle on them."

The interview concludes with this recipe: "Cookery hint - feed snails on

bran for 24 hours as a cleansing process, boil for 20 minutes, then treat as a winkle. After boiling, fry in butter and serve on toast flavoured with basil and fennel seeds. Or make snail soup."

R. H. Lowe

FIELD MEETING - TO TATTON PARK, CHESHIRE, 14th. JUNE 1969

Tatton Park, owned by the National Trust and leased to Cheshire County Council, includes a large shallow lake, Tatton Mere, set in 2,000 acres of parkland and fringed at its southern end by extensive marsh and damp alder-wood.

A group of five members met at Knutsford and searched the northern end of Tatton Park in grid-square 3378; two late-arrivers failed to contact the main party and worked the southern end of the Park in grid-square 3377. The following species were recorded:-

North End Grid-square 3378

Potamopyrgus jenkinsi (Smith)
Lymnaea palustris (Müller)
Planorbis vortex (L.)
Arion intermedius Normand
Arion ater agg.
Retinella radiatula (Alder)
Agriolimax laevis (Müller)
Sphaerium lacustre (Müller)

Bithynia tentaculata (L.)
Planorbis carinatus Müller
Planorbis albus Müller
Arion subfuscus (Draparnaud)
Euconulus fulvus (Müller)
Agriolimax reticulatus (Müller)
Sphaerium corneum (L.)

South End Grid-square 3377

Valvata piscinalis (Müller)
Bithynia tentaculata (L.)
Lymnaea truncatula (Müller)
Lymnaea stagnalis (L.)
Planorbis carinatus Müller
Planorbis albus Müller
Cochlicopa lubrica (Müller)
Hygromia striolata (C. Pfeiffer)
Arion intermedius Normand
Arion ater agg.
Vitrea crystallina (Müller)
Retinella radiatula (Alder)
Agriolimax reticulatus (Müller)
Anodonta cygnea (L.)
Sphaerium lacustre (Müller)
Pisidium casertanum (Poli)
Pisidium nitidum Jenyns

Potamopyrgus jenkinsi (Smith)
Carychium minimum Müller
Lymnaea palustris (Müller)
Lymnaea peregra (Müller)
Planorbis vortex (L.)
Succinea pfeifferi Rossmässler
Vertigo antivertigo (Draparnaud)
Discus rotundatus (Müller)
Arion hortensis Ferussac
Euconulus fulvus (Müller)
Oxychilus alliarius (Miller)
Zonitoides excavatus (Alder)
Agriolimax laevis (Müller)
Sphaerium corneum (L.)
Pisidium amnicum (Müller)
Pisidium subtruncatum Malm

A thriving colony of Vertigo antivertigo was found on Glyceria maxima at the southern end of the lake. Hygromia striolata, uncommon in this part of Cheshire, occurred sparingly on garden refuse.

L. Lloyd-Evans

FIELD MEETING - TO PLANTATION FARM, CHAIGLEY,
LANCASHIRE, ON 20th. SEPTEMBER 1969

Leader: Mr. A. R. Lord

A party of 3 members, 1 junior member and 2 visitors was led by Mr. A. R. Lord, who had obtained permission for a visit to Plantation Farm, Chaigley, O.S. 346642.

This area is not far distant from New Laund Farm, visited in September 1967 (Newsletter No. 25, June 1968) and is also included in the limestone area of this region, although the limestone is of a much darker type than that found on the

earlier excursion, and is mingled with deposits of shale.

The River Hodder and its banks were examined, with the adjacent woods, and also a ditch and the remains of an old pond. A total of 40 species was collected. In the main the list was similar to that from the New Laund Farm excursion, but the following additional species were recorded:

<u>Potamopyrgus jenkinsi</u> (Smith)	<u>Arion subfuscus</u> (Draparnaud)
<u>Succinea pfeifferi</u> Rossmässler	<u>Lehmannia marginata</u> (Müller)
<u>Acanthinula aculeata</u> (Müller)	<u>Pisidium casertanum</u> (Poli)
<u>Helix nemoralis</u> L.	<u>P. personatum</u> Malm
<u>Hygromia subrufescens</u> Miller	

The following species, taken in 1967, were not found:

<u>Azeca goodalli</u> (Ferussac)	<u>Helix hortensis</u> Müller
<u>Cochlicopa lubricella</u> (Stabile)	<u>Punctum pygmaeum</u> (Draparnaud)
<u>Columella edentula</u> (Draparnaud)	<u>Vitrea contracta</u> (Westerlund)
<u>Vertigo pygmaea</u> (Draparnaud)	<u>Limax maximus</u> L.
<u>Ena obscura</u> (Müller)	

We should like to thank Mr. Lord for arranging and leading the excursion, Mr. Kay (of Plantation Farm) for granting permission, and Mrs. Lord for entertaining us to a wonderful spread.

Marjorie Fogan

PUBLICATIONS RECEIVED

Circular III (Sept. 1969) of the Conchological Society of Southern Africa.

As usual, the activities of the Society, together with the A.G.M., are fully reported, and appear to indicate a most enthusiastic and knowledgeable membership. D. W. Aiken contributes a useful illustrated article on Radular Classification, D. H. Kennelly a note on Nomenclatural Changes in the Muricidae, and E. Dee another tracing the present whereabouts of known specimens of Conus milne-edwardsi Jousseaume 1894.

Secretary: Mrs. R. O. Carlsson, [REDACTED], Pinelands, Cape.

Association Belge de Malacologie, Conchyliologie et Palaeontologie, Bulletin Mensuel No. 10 (October 1969).

This issue contains a very wide variety of fare from a notice of the 200th. anniversary of the birth of Cuvier to a travel article on the Island of Fadiouth by Gilbert Houlet. This Island, about seventy miles from Dakar and in a mangrove area, is it seems, largely composed of oyster shells discarded over the centuries and supporting baobab trees, themselves a hundred years old.

Notice is taken of the discovery of a carbonised fossil, alleged to be 3,500 million years old, near Barberton, South Africa. The news is treated with justifiable caution but its source is not revealed.

An article by R. J. Bonnell deals with the serious losses of sand from parts of the Belgian coast such as at Heyst and deals with possible methods of stopping the erosion.

Two museums are recommended with enthusiasm to members: one at Palamos on the Costa Brava, said to possess an outstanding shell collection and the other is the newly opened Musee de Malacologie founded by Madame Denise Valero at Nice. The writer is here particular to enthuse about the lack of 'guides' - a museum hazard apparently more to be feared on the continent than in this country. "Neuf fois surdix ils en connaissent moins que bien des visiteurs - au pas de charge - voyez a gauche, tournez la tete a droit - par ici la Sortie et n'oubliez pas la guide Messieurs Dames: Dieu nous protege de cette 'profession'!"

There is also an excellent article on Gibbula umbilicalis Da Costa with synonyms, complete-ish bibliography, anatomical details, occurrence, and a

dichotomous key for Gibbula.

Editor: M. Lucas, [REDACTED], Brussels 17.

T.E.C.

GENERAL NOTES

During the last week of November 1969, a meeting was held at the Musée Royal de l'Afrique Centrale, Tervuren, attended by various persons interested in the study of land and freshwater molluscs of Africa south of the Tropic of Cancer including Madagascar and adjacent islands and part of Arabia. It is proposed to issue a yearly newsletter beginning in spring 1970 giving the names and addresses of persons interested in this area, lists of their papers and current researches, also notes on the location of types, proposed expeditions to Africa, specialised bibliographies, queries, etc.. This will be called Achatina and copies will be available free to bona fide workers prepared to co-operate in the scheme. A long term project is an annotated bibliography of all papers dealing with the non-marine molluscs of the area. The terms of reference are restricted to taxonomy and zoogeography; medical aspects are considered to be outside this field. Those interested should contact Dr. J. J. van Mol, c/o. Musée de l'Afrique Centrale, Tervuren, Belgium.

B. Verdcourt

Note on Clausilia parvula Stüder

A number of examples of a Clausilia collected in Switzerland by a junior member of the Society were sent to me recently (October 1969) for identification. I sent a sample to Dr. F. E. Loosjes of Wageningen, Netherlands, as he is a specialist in the Clausiliidae, and he named them Clausilia parvula Stüder.

I understand that a number of these shells were released by the collector at a lay-by on the A1 road near Bridge Inn, Croxdale, Co. Durham. This note is to record the release in case a breeding colony becomes established.

H. E. J. Biggs

Limax tenellus in West Sussex

The Mens and The Cut is a tract of very ancient mixed woodland on Weald Clay undisturbed for at least the last two centuries and lies some 3 miles E.N.E. of Petworth. While on a visit in September 1969, with a local Natural History Society on a fungus foray, I searched for mollusca as well. Several slugs were in evidence - Limax maximus, Arion subfuscus and A. intermedius - but the commonest was a small Limax, clear deep yellow in colour with brownish head and tentacles. This proved to be Limax tenellus (confirmed by Dr. M. P. Kerney). Several were feeding on fungi such as Russula spp. and Mycena pellianthina. The only shelled mollusca I noticed were Discus rotundatus, Hygromia striolata and Oxychilus alliarius.

On preserving the Limax tenellus, as soon as it was immersed in the weakest alcoholic solution (20%) the yellow colour was extracted leaving the animal a dirty greyish-white.

M. Goodchild

Notes on Conus milne-edwardsi, Jousseaume 1894. (Syn. C. clytospira Melvill & Standen 1899)

Roderick Cameron (1961) wrote recording a total of nine of this rare Conus known to science.

The purpose of this note is to give some data regarding another eleven specimens collected between 1965 and 1968, with two further localities - the Porto Amelia area, Mozambique Coast, and the northern section of the coast of Zululand.

Specimen No. 10 was secured by Mr. J. Walker of Cape Town, from a trawler "Gambus", and he later disposed of the shell to Dr. Grace G. Eddison, a well-known collector of New York, in 1965.

Specimens Nos. 11, 12, 13, 14 and 15 were all obtained from the trawler "Gambus" by Mr. Darroll Smith in the same year.

Four of these were sold to a syndicate in Philadelphia, and the last (No. 15) is held by a collector resident in Johannesburg.

These six specimens are regarded as coming from the Porto Amelia area, where the French trawler "Gambus" had been operating prior to her return to France.

Between 1966 and 1968 the northern coast of Zululand was searched by skin divers who, with great difficulty, collected another five shells. The disposal of these Zululand shells is given below:-

Nos. 16, 17 and 18 are held in collections in Zululand, No. 19 was sold in the U.S.A., and the last (No. 20) held in a collection either in Natal or Zululand, is said to be badly broken.

Northern Zululand is extremely difficult of access, and the sea off the coast is very rough and dangerous. It is reported that one skin diver has been drowned off this area, and at the present time it seems dubious if any more specimens of this rare shell will be taken from the locality.

References: Cameron, Roderick (1961) Shells. Conch. Soc. of S. Africa (1969) Circular No. 109, p.3, and Cir. No. 111, p.6.
Dance, S. Peter (1966) Shells and Shell Collecting. (An illustrated History)
Eddison, Dr. Grace G. (1967) The Jersey Sheller, Vol. 2, No. 1, p.27. "Glory of India" Cone.
Editor, Hawaiian Shell News, 1966, Vol. 14, No. 5.
Smith, Darroll (1965) Hawaiian Shell News, Vol. 14, No. 6 (Dec.)

D. H. Kennelly,
Conchologist, East London Museum, South Africa

Announcement of Publication

A catalogue of Popular Marginella species with values. Privately published by Phillip W. Clover, whose current address is [REDACTED] Rota, Cadiz, Spain. 117 of the more common species of Marginellidae are clearly illustrated in black and white and the text gives brief details of each. At 17/6 this stiff-covered, 16 page book is a very good buy for anyone wanting a handy identification manual for this group. Available from the Author or from Janet Heppell, Glasgow.

Charles Pettitt

Cave Research Group Luncheon

This Society invited a representative to attend a celebration luncheon in honour of the Founder, Brigadier Aubrey Glennie, C.I.E., D.S.O., on August 2nd. 1969. I arrived at Staff House, Birmingham University, rather early, but found that already about 40 members of that Group and from Caving Societies from all over Britain, had arrived. I was presented to Brig. Glennie and to the Chairman, Dr. Picknett, and other guests. People were arriving continually and finally about 70 of us sat down to a very nice cold lunch. Afterwards, the Chairman gave a short address and presented the Brigadier with a specially prepared and printed volume, containing articles about every aspect of his career, a really thoughtful gift. In replying, Brigadier Glennie told some horrifying tales about the hazards to be encountered below ground, ranging from incessant rockfalls which once pinned him into a narrow opening for about 3 hours, to meeting a Cobra! I began to feel that the hazards of conchology, - even the sting from a Conus geographus, were minor in comparison!

A very pleasant occasion spent amongst very pleasant people, and most interesting to hear of what flora and fauna there is even a long way underground.

H. Nash

REQUEST.

I am researching into the distribution of Rissoa violacea, R. lilacina and R. rufilabrum. I also hope to sort out the confusion over the identification and nomenclature of these species. Some people have already very kindly lent me their collections, but as the matter is proving to be largely statistics I would be grateful if anyone would lend me their specimens, labelled with locality please. I would also be grateful for references to published literature.

Mrs. Shelagh Smith, [REDACTED], Edinburgh 8.

SHELLS FOR SALE.

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

WANTED.

Back Nos. of 'Indo-Pacific Mollusca'; any papers concerning mollusca of the Red and neighbouring seas, and Ellis - 'British Snails'.

S. Davis, [REDACTED], Hove, Sussex.

WANTED for a National Library. A copy of the Journal of Conchology, Vol. 25, No. 2, to complete the set of the Swedish Natural History Museum. Any reasonable price paid. Please write to Dr. B. Hubendick, Naturhistoriska Museet, Goteborg II, Sweden.

Junior Membership. The following have been promoted to Senior Membership:-
SHALLCROSS, Elizabeth, [REDACTED], Hayes, Middlesex.
STONE, Christopher, [REDACTED], Northwood Hills, Middlesex.

Elected on 31st. January 1970.

KNIBBS, Jacqueline, [REDACTED], Kettering, Northants.
MARLER, Peter, [REDACTED], Brentwood, Essex.

Helix aspersa used as food. Additional note to the article on P. 140 of this issue.

In another newspaper article, Mr. Paul Leyton, of the [REDACTED], Priddy, near Wells, Somerset, tells how he served Helix aspersa in his restaurant.

He said that garden snails had always been a sort of delicacy around Somerset, Bristol and Bath, so when he took the restaurant he decided that what was good enough for the locals was good for the clients and he served up the snails as "Mendip snails a la France de Patron".

His supplies he bought from local collectors and paid an average of 4/- a lb. There were about 45 good-sized snails to the lb. These he kept for five days on a diet of cabbage and lettuce in case they had eaten any poison beforehand. Then they were boiled and served in their shells with a sauce of local cider, butter, cream and Cheddar cheese. They cost the diner about 6/- a half-dozen, depending on the time of the year, and about one person in eight ordered them. Mr. Leyton reckoned to have sold 500 dozen to diners during the previous year.

This article was published not so very long ago and it would be interesting to know if "Mendip snails a la France de Patron" are still on the menu of the 'Miners Arms'.

R. H. Lowe

ATTENTION PLEASE

Will members please note that following the Annual General Meeting on 28th. February, the Hon. Secretary is now Miss J. T. Sawyer, B.A., [REDACTED], [REDACTED], London, N.W.2. It will be much appreciated if everyone will ensure that they address their correspondence correctly and to the appropriate Officer of the Society

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

LUSITANIAN LANDSNAILS

I set out in mid March 1969 (lamentably, by air) for the Pitiuses and Baleares: first stop was Ibiza. Iberellus companyonii was the quarry here, and it turned up all right, though very few in number. I hired a little S.E.A.T. as transport, and certainly made it work. There were several interesting sections, not a great deal of walking, but I was able to stop pretty nearly every time I saw a possible locality, and have a hunt then and there. I wasted one morning trying to persuade a fisherman at San Antonio Abad to take me out to Isla Plana, the only locality for Iberellus pythiusensis: no luck, and I think he may have been right in saying that the wind and the currents were unfavourable for getting me off again. I did however, manage to bounce the box over some really vile tracks to get a look at the row of small rocky uninhabited islands of which Plana is the outermost. Something to go back for, but it will have to be soon or they will build a super-luxury hotel on the site.

Next stop was Mallorca, where I hired another little box; I stayed up in the mountains at Soller - Iberellus was again the quarry, and beautiful balearicus turned up quite often in the mountains: I. graellsianus also turned up once, to the number of three specimens.

Then on to Menorca, looking for more Iberellus, this time minoricensis, but I kept my eye open also for good old Italian Murella muralis which is recorded from one islet in the middle of Port Mahon creek. I turned out of my bunk at about 5 a.m. to get a look at Isla del Rey as we passed, and wrote it off as a hunting ground - the Army had got it. I think that the fortifications there are ancient even by Spanish standards, but there was also what looked like a modern hospital. Anyway, having landed and collected my third little car I set out along the main east-west road to get a look at the land: many stops to hunt, but nothing found until the western end of the road, at Ciudela. Here, the harbour wall was crawling, as were most of the walls along the quayside. After that, I jinked to and fro across the narrow width of the Island; at one point I had to get out to open a gate and I saw a M. muralis on the post. Much searching did not produce any more, so back to Port Mahon for petrol. Coming out again, I took a new by-pass road to the harbour from the west, saw an interesting flight of old stone steps, and stopped. They ran up the hillside between stone walls, and there were muralis by the dozen. I had also been keeping an eye open for Menorca's stone age forts and temples, as nicely excavated ruins are often good hunting grounds, Pompeii, Paestum and all. Such ruins are, or seemed to me to be, more numerous at the eastern end of the Isle; certainly muralis was, though minoricensis liked the ruins too, though never the same ones. All in all, it seems to me after a five day hunt, that Iberellus minoricensis is to be found sparingly at the west of Menorca, but more frequently to the east: Murella muralis has spread from the Isla del Rey to Port Mahon and is continuing to spread inland and westward. It has not got more than a third of the way yet, but I wonder if minoricensis is retiring before the foreign invasion. M. muralis is a fairly hardy traveller and colonist. Avignon is a long way north from its native Sicily, but it is well established at Orgon. I have kept it alive at home for some months at a time, but indoors, which is cheating. I think another visit is called for: as yet the super-luxury hotels are not too conspicuous, but I don't think I shall delay it too long, as Ibiza is getting them badly and Palma de Mallorca is now incurable.

Altogether, that was a very enjoyable trip and I covered a lot of ground in five days per island. The bag was meagre by Italian standards, but good for Spain, where bleak midwinter seems to be the best hunting time. I have not yet really got down to sorting out the nomenclature, but I think the names I have

given are good.

J. F. M. de Bartolome

AN UNUSUALLY PROLIFIC 10-KILOMETRE SQUARE

The ten-kilometre square 42/36 (Leamington Spa, Warwickshire) contains 104 species of molluscs and thus ranks as one of the best-recorded squares in the country. However, this is probably due to thorough collecting rather than the presence of unusually good molluscan habitats.

For the freshwater species the best localities are the River Leam and the Grand Union Canal. The following species are present in both the river and the canal: Theodoxus fluviatilis, Viviparus viviparus, Valvata piscinalis, Bithynia tentaculata, Potamopyrgus jenkinsi, Physa fontinalis, Lymnaea stagnalis, L. auricularia, L. peregra, Planorbis carinatus, P. vortex, P. contortus, P. albus, Acroloxus lacustris, Unio pictorum, U. tumidus, Anodonta cygnaea, A. anatina, A. complanata, Sphaerium rivicola, S. corneum, Pisidium amnicum and P. henslowanum. All the Unionidae, however, are rare in the canal. Four species (Ancylus fluviatilis, Valvata cristata, Pisidium supinum and P. moitessieranum) are found in the river but not in the canal. Segmentina complanata and Bithynia leachi are both known in this square only from one living specimen found in the canal and from a few dead shells in the river.

On 3rd. October 1969 it was found that most of the Lymnaea auricularia in the canal were var. lagotis, though this had never turned up before. The var. ovata of L. peregra is common in some parts of the river.

Special mention must be made of certain species which have spread from the canal into the lower part of the river by means of the canal overflow at 42/345649. These include Physa heterostropha, Sphaerium transversum and Dreissena polymorpha - none of which, it will be noted, is truly indigenous to the British Isles. In the canal, Physa heterostropha is sometimes commoner than P. fontinalis, and S. transversum is the commonest Sphaerium.

Only relatively few species occur in ponds and streams, chiefly because there are no ponds of any size. Physa acuta has become abundant in a small stream at Lillington (42/325671) associated with Lymnaea peregra, Potamopyrgus jenkinsi and Pisidium personatum. L. peregra and P. jenkinsi are widespread in streams, with Pisidium milium, P. nitidum, P. cassertanum, P. subtruncatum and Sphaerium lacustre, while P. personatum, Lymnaea truncatula and L. palustris prefer stagnant ditches, the last two being surprisingly rare in this area. Three species of Planorbis are confined to ponds (P. planorbis, P. leucostoma and P. crista), and all three are uncommon in this square. Planorbis corneus precariously survives in a single locality in the river. The last two aquatic species are Pisidium hibernicum, known from one specimen in a stream at 42/338650, and P. obtusale, found only in the ponds and streams at Ufton Fields (42/383617).

Of the terrestrial species, the following are generally common everywhere except in gardens: Cochlicopa lubrica, Clausilia bidentata, Retinella nitidula, Oxychilus cellarius, O. alliarius, Discus rotundatus, Vittrina pellucida, Hygromia liberta and Helix nemoralis. The slugs Arion ater, A. circumscriptus, A. silvaticus (this is not yet verified), A. hortensis and Agriolimax reticulatus are also widespread, the last two being very common also in gardens. Other species have more specialised habitats.

The mollusc fauna of river banks comprises: Carychium minimum (abundant), Vallonia pulchella (rarely also V. excentrica), Arion intermedius, Agriolimax laevis, Retinella radiatula, and Zonitoides nitidus. Succinea putris is also common, while surprisingly, S. pfeifferi is found only in Welch's Meadow, Leamington Spa (42/325657).

Hedges have few characteristic species, but Azeca goodalli, Cochlicopa lubricella, Ena obscura and Lauria cylindracea are in this area confined to hedges. The first two of these are each confined to a single locality in this square, while the other two are widely dispersed but very rare. Arianta arbustorum can perhaps be classed as a hedgerow species; it is chiefly found in

nettle beds under hedges near the river, but is by no means common.

The woodlands of the area are mostly deciduous, but none of them are of any antiquity, and their mollusc fauna is not outstanding. In this area, Carychium tridentatum, Columella edentula, Arion intermedius, Vitrea crystallina, V. contracta, Retinella pura, Limax maximus and Acanthinula aculeata are characteristic woodland species. The difference in habitats between Carychium minimum and C. tridentatum is very clear-cut, although very occasionally C. tridentatum has been found on river-banks. Of the Vitreas, V. contracta is somewhat the scarcer, and seems to prefer slightly drier places; unlike V. crystallina it has never turned up in flood-debris. The Arion intermedius of woods are usually yellowish, while those of river-banks are generally larger and a curious blue-green colour.

In and around Leamington itself, a number of synanthropic species are found, mostly on waste ground near gardens. Arion subfuscus and Milax budapestensis are the most widespread, but there are also more restricted colonies of Arion ater rufus, A. fasciatus, Agriolimax caruanae, Milax sowerbyi and Oxychilus draparnaldi. Arion subfuscus is not usually a synanthropic slug in Britain, but in Warwickshire it is rare outside built-up areas. Most of these synanthropes are much more common in S.W. England than in the Midlands; a striking exception is the recently segregated A. fasciatus, which I have never found in Devon or Cornwall, though I have searched for it many times.

Finally, there are the species, mainly Helicellas, which live on calcareous soils and are therefore confined to the south-east of the square, where the Keuper Marls give way to the Lias. These species include not only Helicella caperata, H. gigaxi, H. virgata, H. itala, Helix hortensis, Monacha cantiana, Vallonia costata, V. excentrica and Ceciliodes acicula, as one would expect, but also Oxychilus helveticus, which in Warwickshire and East Gloucestershire seems to have a decided predilection for calcareous soils. Marpessa laminata occurs in Ufton Wood, the only wood in the square on calcareous soil.

Thanks are due to Dr. M. P. Kerney, who has confirmed, and in some cases corrected, the identity of these species, and to Mr. A. E. Ellis for verifying Arion ater rufus and A. fasciatus.

M. W. Rowe

FIVE DAYS SNAIL COLLECTING IN SOUTH WALES

The main purpose of our collecting trip was to locate the Pembrokeshire habitat of Hygromia subvirescens (Bellamy) recorded by Dr. L. Lloyd Evans, (J. Conch. 24; 437, 1960). We hoped also to record it from new localities for the 10-kilometre-square mapping scheme; and we also wanted to see Theba pisana (Muller) and some of the other interesting species found in South Wales.

On 27th. September 1969, in the company of Mr. S. Peter Dance, who joined us for the day, we visited the sand dunes at Merthyr Mawr Warren, near Porthcawl. There Peter, with great enthusiasm, showed us the only known site in South Wales for Vertigo pusilla Muller; a dune slack near the southern end of the Warren. On the same dunes, but nearer the sea, we were shown two large colonies of Theba pisana, a species we were to meet up with several times in the next few days. We left the dunes, and Peter, late in the afternoon with the intention of driving straight to Swansea, but we could not resist stopping at the only known site in Glamorgan for Planorbis laevis Alder; this is a small, completely enclosed section of the large Eglwys Nunnid reservoir just outside Port Talbot (Grid Ref. 21/800846). Peter had informed us of this and many other records we were to make use of on our trip.

We stayed the night at the Mumbles, near Swansea, and must have been within a few yards, on at least two occasions, of another site for Theba pisana, the only one in Wales we did not visit. J. G. Jeffreys introduced specimens onto the golf links here over a century ago (British Conchology, 1; 208, 1862); and Peter Dance tells us that a small colony still survives on the nearby embankment where Mumbles Road Station used to be.

The morning of the 28th. was marred by strong winds and showers but this

did not deter us from proceeding to Tenby in Pembrokeshire to spend some time collecting on the burrows. Tenby is perhaps, the classic site for Theba pisana in Britain. Here, along with Cochlicella acuta (Muller), Helicella virgata (da Costa), H. caperata (Montagu), H. itala (L.), etc. it can be collected in great numbers. That evening we set up our base camp at the Hotel at Broad Haven, 6 miles west of Haverfordwest. Here we worked until the small hours, cleaning and recording our finds.

The following morning, guided by information given us by Dr. L. Lloyd Evans, we located the site for Hygromia subvirescens at St. Brides (Grid Ref. 12/804113). The weather being warm and dry the snails had moved into the roots of the plants which afforded them protection from the sun. We found them most plentifully under the roots of isolated clumps of cocksfoot grass Dactylis glomerata L. and under the spreading leaves of hawkbit Leontodon taraxacoides (Vill), on firm well drained soil with just a little moss. The site was the south-west facing, upper slope, of an Old Red Sandstone cliff with layers of outcropping limestone, H. subvirescens being found in varying numbers over the whole area, but most commonly in areas of broken ground with sparse herbage. We did not find H. subvirescens on dry, friable soil or on the bare stone, nor did we find it on the plants listed by Dr. Lloyd Evans, though the plants were nearby, suggesting that the snail uses different plants according to the conditions and the time of the year.

With the knowledge we had gained we set forth to find some more localities for this very local species. First we visited the neighbouring cliffs near Musselwick Farm at Marloes where we found a large colony, (Grid Ref. 12/788095), with a fair proportion of young specimens, something we had not found at the previous locality. This site was very similar to the first with the same general conditions and plant combinations. Continuing northward from Musselwick Farm we found a few specimens at every likely spot as far as Tower Point, overlooking St. Brides Haven. The next day proved a little cooler than the last and, confidently, we spent it on the cliffs to the north of Broad Haven. Our first stop was on the National Trust property between Newgale and Solva. There had been rain the previous night and we arrived before the ground had dried with the result that the H. subvirescens were on the walk and were very difficult to locate. Most of those we did find were shaken from heather Erica and other herbage, mostly thick beds of cocksfoot grass. The best place for locating H. subvirescens at this site was an area much less overgrown, and facing a little east of south (Grid Ref. 12/826230). We next moved on to Carreg-y-Barcud near St. David's in the adjacent 10-kilometre-square. Here, near a clump of white heather, we located another small colony (Grid Ref. 12/771241). This was now our fifth 10-kilometre-square record for H. subvirescens in two days. Rickets Head, an isolated headland in the middle of St. Brides Bay, also produced two adult specimens.

Having exhausted most of the readily accessible sites within a reasonable distance of our base camp, we decided to drive back to Goultrop Roads to look for another of Dr. Lloyd Evans' records; Leucophytia bidentata (Mont.), a semi-marine snail found at extreme high-water mark. The scramble down the cliffs at Goultrop Roads (Grid Ref. 12/841126), would have disheartened all but the most ardent conchologist but the effort was worth while. We found a few L. bidentata, an insignificant white needle-shaped snail with only two teeth, under stones on mud and rough sand at high-water mark. With L. bidentata there was a very common cream-coloured snail with a white body and many apertural teeth which turned out to be the marine variety, denticulata of Phytia myosotis (Drap.). (Det. A. E. Ellis). The same row of hairs found on the rich chocolate-coloured, estuarine Phytia myosotis could easily be seen. We noted that there was not a trace of fresh water where they were found.

On our last day, 1st. October 1969, we crossed Milford Haven by ferry from Nayland to Pembroke and examined the cliffs on the Angle Peninsula. After a long search we found a single, adult H. subvirescens, near Black Cave, Angle, the first record of this species from the cliffs south of Milford Haven. After examining the cliffs southwards we found that the rocks were all limestone and apparently unsuitable for H. subvirescens.

The remaining part of the day was spent at Stackpole Warren and Bosherston fish ponds. At the warren it was most interesting to note the occurrence of Theba pisana, of which there is a fine colony, on Bracken. This is an excellent

example of a Caldicole snail being found on a Calcifuge plant. At Bosherston a large variety of Anodonta anatina (L.) was plentiful.

Note.

The number of different snails found in association with H. subvirescens was small, the most characteristic species being the following seven:-

Vertigo pygmaea (Drap.), Vitrina pellucida (Muller), Lauria cylindracea (da Costa), Helicella caperata (Mont.), Oxychilus alliarius (Miller), Cochlicopa lubrica (Muller), Cepaea nemoralis (L.).

The occurrence of Monacha granulata (Alder) on the cliffs near Angle could have caused a little confusion, as dead specimens of this species could have been mis-identified, with H. subvirescens.

Dr. Barry Colville and Mr. Adrian Norris
Leeds, December 1969.

THE CENTENARY CELEBRATION OF THE GERMAN MALACOLOGICAL SOCIETY

This celebration took place in the Senckenberg Museum, Frankfurt am Main on the 24th.-26th. May 1969. My wife and I were very pleased to be able to be present and to meet many old friends and make many new ones. The meeting was attended by some seventy five malacologists and friends from over ten countries including Czechoslovakia, Italy, Netherlands, and Great Britain as well as the German speaking countries.

Most people arrived on the Friday evening, although the opening address was not until the following morning. The evening meal was taken in the Museum and consisted of Frankfurters, a little wine and a lot of talk! The meeting was formally opened by Professor Dr. Hohorst of the Senckenberg Museum in which he emphasised the connection between the Museum and the development of malacology in Germany, and how pleased he was that the Museum should play host to the centenary meeting. Dr. A. Zilch, President of the Deutschen Malakozoologischen Gesellschaft, then replied, thanking Prof. Dr. Hohorst, he went on to give a resume of the history of the D.M.G. and to highlight some of its more august members. He also pointed out that the D.M.G. was the German language society and not the German National society as it was founded in 1869 and the German State in 1871.

After a short break for wine, the meeting was resumed with a lecture from Dr. H. Ant on the evolution of European land mollusca from the end of the Tertiary to the present day. This lecture, by making use of the present distribution of species and sub-species of land snails and by their fossil record, tried to reconstruct a distribution map for Europe and the changes that have taken place in the last million years and to assess the effects of climatic changes and forestation, etc.. Many examples were given from both the molluscan field and the rest of the animal kingdom. Although one or two of Dr. Ant's ideas are still somewhat controversial his lecture was well received.

The Celebration Luncheon was taken in the Frankfurt Palmengartens. Here many speeches were made and greetings telegrams were read. Afterwards we returned to the Museum for a lecture by Prof. Dr. Hohorst on the development of the "Lancet leech" and the role played by land snails and ants as intermediate hosts. This was followed by a film called "Ants in the service of Parasites", which dealt with the same subject. It showed how the parasite passed from the sheep to the snail Zebrina detrita Müller and from this to an ant and the ant then being eaten by other sheep whilst on grass they were grazing.

On the following two days coach trips were arranged to places of interest around Frankfurt. On the first morning we went to the old Rhine island of Kühkopf which was formed by an ox-bow of the Rhine, and is now a nature reserve. One interesting feature of this locality (apart from man-eating mosquitoes) was that it was subject to periodic flooding with the result that all the land snails were found to be living about eight feet above the ground on the branches of trees! What was even more unusual, the species found there included such animals as Helix pomatia L., Cepaea nemoralis (L.) and Arianta arbustorum (L.)

as well as the more usual tree-dwelling snails such as Clausilia dubia (Draparnaud) and Laciniaria biplicata (Montagu). Many other species were found including those not native to Britain such as Hygromia (Trichia) villosa Studer, Laciniaria plicata Draparnaud, Clausilia parvula Studer and a very interesting variety of Lymnaea palustris (Müller) which was far larger than any found in Britain.

We then travelled to "Weinkastell Dittelsheim" in Rheinhessen, which was a hill top restaurant surrounded by vineyards. After lunch a short time was spent collecting Zebrina detrita Müller and Helicella obvia Hartmann. These species were also found at the next stopping place, which was a small quarry at Weinheim bei Alzey. In this quarry was exposed a classical section in the middle Oligocene marine sands of the Mainz basin. Many fossil marine shells were collected, one of the more notable being a large specimen of Glycymeris sp. This section was described by Frau Dipl-Geol. E. Kuster-Wendenburg of the Palaeontology Institute of the University of Mainz.

In the evening in the grounds of the Museum several people collected specimens of Testacella haliotideia Draparnaud. Most of them were later replaced as it appeared that they were an introduced colony.

On the second day the trips were of a Geological nature to visit localities in the upper Oligocene and Miocene at Falkenberg bei Florsheim-Hochheim and the Mosbach sands (Pleistocene) at Hambusch. This was of particular interest to me as the Miocene does not occur to any extent in Britain, and to be able to collect land and freshwater shells in it was a great pleasure, especially the finding of Cepaea silvatica Draparnaud which occurred in the beds overlying the sand and nowadays is found only in the French Alps and south eastern France.

After lunch, which was taken in Eltville Rhein, the party returned to the Senckenberg Museum in Frankfurt, from which the party dispersed with much hand-shaking and promises to meet again next year.

D. G. Pickrell

CONFERENCE OF NATIONAL BIOLOGICAL SOCIETIES

4-5th. October 1969

This meeting, organised on similar lines to that of 1968 (Newsletter No. 28 (1969): 84) and presided over by Dr. F. H. Perring and Dr. J. Heath of the Biological Records Centre, was held in pleasant surroundings at the Monks Wood Experimental Station of the Nature Conservancy, Abbots Ripton, Hunts. The main theme of discussion was again common problems of biological mapping and the storage of information.

The principal new development is the launching of a scheme for the mapping of European invertebrates, made possible by the recent publication of maps bearing the international U.T.M. grid. An excellent base map is already available, produced by the Committee for Mapping the Flora of Europe based in Helsinki, and utilizing the 50-kilometre square units of the U.T.M. grid. Such a scheme would appear to be ideally suited to the mapping of non-marine Mollusca, either on an international basis (using 50-kilometre squares), or for more detailed national or regional surveys (using 10- or 5-kilometre squares). Standard recording cards will be distributed free on application to specialists or amateurs wishing to participate. For a preliminary period of three years the Biological Records Centre have agreed to act as a co-ordinating body for the invertebrate scheme. Anyone further interested should write to Dr. John Heath at the Monks Wood Experimental Station for fuller details.

The idea of holding common field meetings between societies was again raised. For example, botanists and conchologists might often combine to mutual advantage. Dr. Perring agreed to pursue a number of suggestions and to initiate contact between programme secretaries.

Consideration was given to the drawing up of a code of conduct for biologists in the field. Wittingly or unwittingly, much damage was being caused to sites of scientific interest, for example by trampling or disturbance of the

habitat, or by over-collecting. It was agreed that such a code should not be too wordy or specific, but that there were certain general principles which would apply to all disciplines. Dr. Perring agreed to prepare a draft incorporating suggestions made at the meeting, which would subsequently be circulated to the various societies for individual discussion.

Dr. M. G. Morris demonstrated the new mobile laboratory. At a later date it is hoped to be able to hire this out to individual societies for their use in the field.

The meeting included an enjoyable visit to the National Nature Reserve at Holme Fen.

M. P. Kerney

FOURTH PROGRESS REPORT ON MARINE CENSUS WORK

Although the map and definitions of the British Marine Census Areas was reproduced in J. Conch. 25 (7):299-303 and again in Papers for Students No. 11, there is a definite call for a larger map. Mrs. E. B. Rands of Luton kindly volunteered to prepare the accompanying copy, which she has enlarged to a suitable size for the Newsletter and simplified so that only the boundary lines of the Areas are included, instead of boundary lines together with lines of latitude and longitude. Collectors will find the map large enough to mark in the definitions of those Areas in which they have a special interest

SUB-DIVISION OF THE BRITISH MARINE CENSUS AREA INTO CENSUS AREAS

The following are the names and boundaries of the Census Areas:

1. SHETLAND 100 fm.; 0°; 59°15'N.; 1°50'W.; 60°0'N.
2. SUTHERLAND 5°0'W. (Cape Wrath); 100 fm.; 60°0'N.; 3°30'W.
3. ORKNEY 3°30'W.; 60°0'N.; 1°50'W.; 59°15'N.; 0°; 58°30'N.
4. VIKING 100 fm.; 2°30'E.; 58°30'N.; 0°.
5. MORAY FIRTH 58°30'N.; 0°; 57°30'N. (Buchan Ness).
6. ABERDEEN 57°30'N.; 0°; 56°40'N.
7. FIRTH OF FORTH 56°40'N.; 0°; 56°0'N.
8. NORTH SEA 58°30'N.; 2°30'E.; 56°0'N.; 0°.
9. NORTHUMBERLAND 56°0'N.; 2°30'E.; 20 fm.; 55°0'N.
10. DOGGER 20 fm.; 2°30'E.
11. YORKSHIRE 55°0'N.; 20 fm.; 2°30'E.; 54°0'N.
12. WASH 54°0'N.; 2°30'E.; 52°30'N.
13. THAMES 52°30'N.; 2°30'E.; northern limit of French intertidal zone; line joining Cap Gris Nez and Dover.
14. EAST CHANNEL Line joining Cap Gris Nez and Dover; northern limit of French intertidal zone; 50°0'N.; 0°.
15. WIGHT 0°; 50°0'N.; 2°0'W. (St. Alban's Head).
16. PORTLAND 2°0'W.; 50 fm. contour north of Hurd Deep; 3°40'W. (Start Point).
17. CHANNEL ISLES 50 fm. contour north of Hurd Deep; 2°0'W.; 49°0'N.; 4°0'W.
18. WEST CHANNEL 3°40'W.; 50 fm.; 4°0'W.; 49°30'N.; 5°50'W.; latitude of Cape Cornwall.
19. SCILLY ISLES 51°0'N.; 5°50'W.; 49°30'N.; 7°15'W.
20. NORTH CORNWALL Latitude of Cape Cornwall; 5°50'W.; 51°0'N.
21. BRISTOL CHANNEL 51°0'N. (Hartland Point); 5°50'W.; 52°0'N.
22. CARDIGAN BAY 52°0'N.; 5°50'W.; 52°45'N. (Bardsey).

NORTH
ATLANTIC
AREA.

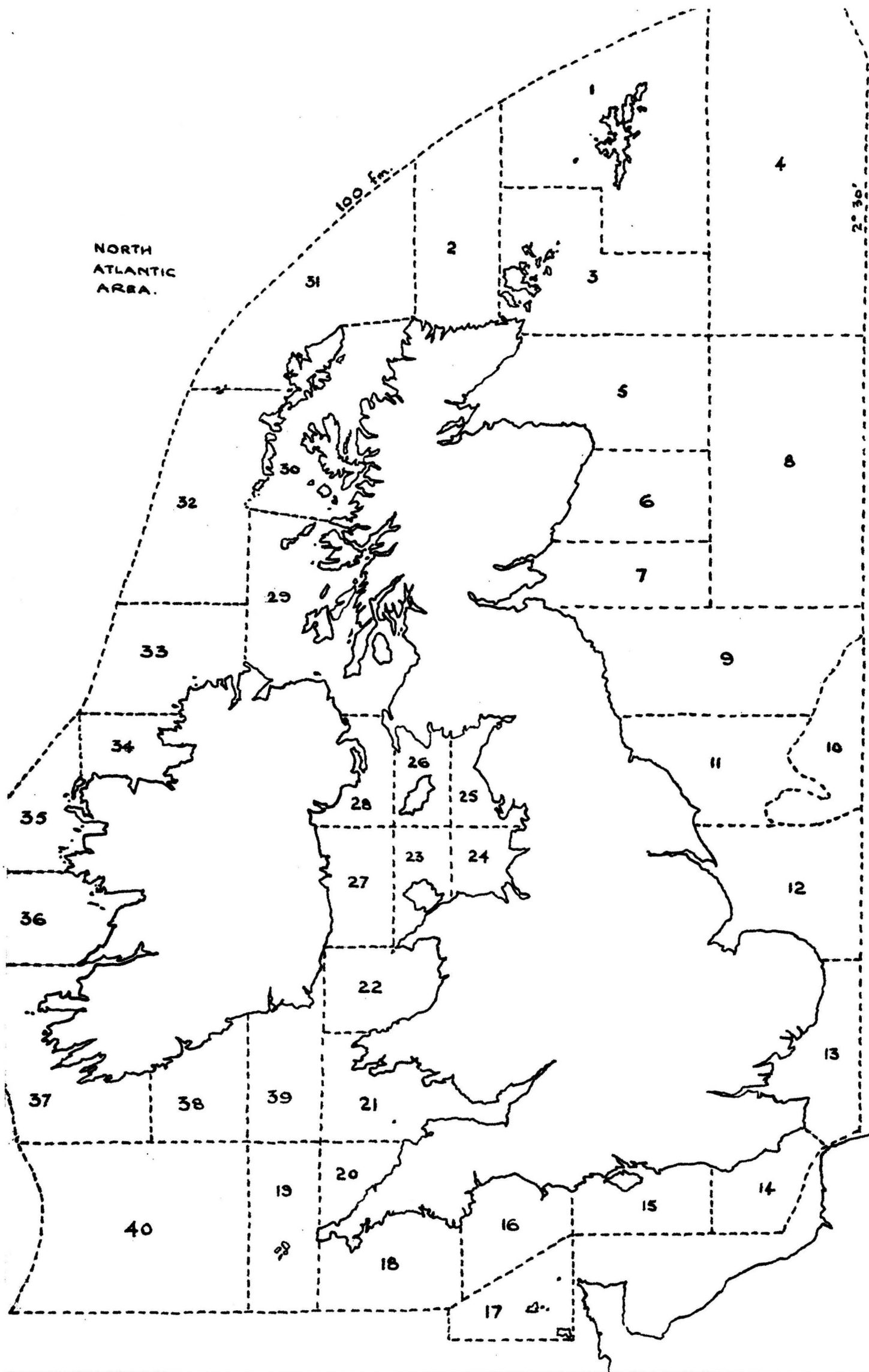


DIAGRAM OF THE BRITISH MARINE CENSUS AREAS.

- | | |
|--------------------|--|
| 23. ANGLESEY | 52°45'N.; 5°0'W.; 54°0'N.; 4°0'W. |
| 24. LIVERPOOL BAY | 4°0'W.; 54°0'N. |
| 25. SOLWAY | 54°0'N.; 4°0'W. |
| 26. ISLE OF MAN | 4°0'W.; 54°0'N.; 5°0'W. |
| 27. DUBLIN | 54°0'N.; 5°0'N.; 52°45'N. |
| 28. BELFAST | 55°0'N.; 5°0'W.; 54°0'N. |
| 29. CLYDE & ARGYLL | 55°0'N.; 7°25'W. (Malin Head); 50 fm.; line joining Ardnamurchan Point and Barra Head. |
| 30. MINCH | Line joining Ardnamurchan Point and Barra Head; line joining Butt of Lewis and Cape Wrath. (In the Sound of Harris, Minch is east of 7°0'W. and south of 57°40'N.) |
| 31. LEWIS | 58°0'N.; 100 fm.; 5°0'W.; line joining Butt of Lewis and Cape Wrath. |
| 32. UIST | Line joining Ardnamurchan Point and Barra Head; 50 fm.; 56°0'N.; 100 fm.; 58°0'N. |
| 33. NORTH DONEGAL | 55°0'N.; 100 fm.; 56°0'N.; 7°25'W. |
| 34. DONEGAL BAY | 10°0'W.; 55°0'N. |
| 35. MAYO | 53°25'N. (Slyne Head); 100 fm.; 55°0'N.; 10°0'W. |
| 36. GALWAY BAY | 52°30'N. (Loop Head); 100 fm.; 52°25'N. |
| 37. FASTNET | 9°0'W. (Galley Head); 51°0'N.; 100 fm.; 52°30'N. |
| 38. CORK | 7°15'W.; 51°0'N.; 9°0'W. |
| 39. NYMPHE BANK | 52°45'N.; 5°50'W.; 51°0'N.; 7°15'W. |
| 40. SOLE | 51°0'N.; 7°15'W.; 49°30'N.; 100 fm. |

COASTLINE INCLUDED IN THE CENSUS AREAS

1. Shetland; Fair Isle.
2. Sutherland, from Cape Wrath; Caithness to Dunnet Bay.
3. Orkney; Caithness, from Dunnet Bay to Noss Head.
4. (Entirely offshore).
5. Caithness, from Noss Head; E. coasts of Sutherland and Ross and Cromarty; N. coast of Inverness; Nairn, Moray, Banff; Aberdeen to Buchan Ness.
6. Aberdeen, from Buchan Ness, Kincardine, Angus, to Lunan Bay.
7. Angus, from Lunan Bay; Perth, Fife, Clackmannan, Stirling, West Lothian, Midlothian; East Lothian, to Dunbar.
8. (Entirely offshore).
9. East Lothian, from Dunbar; Berwick, Northumberland.
10. (Entirely offshore).
11. Durham; Yorkshire, to Bridlington Bay.
12. Yorkshire, from Bridlington Bay; Lincolnshire, Norfolk, Suffolk, to Lowestoft.
13. Suffolk, from Lowestoft; Essex; Kent, to Dover.
14. Kent, from Dover; Sussex, to Newhaven.
15. Sussex, from Newhaven; Hampshire (including the Isle of Wight); Dorset, to St. Alban's Head.
16. Dorset, from St. Alban's Head; Devon, to Start Point.
17. Channel Isles.
18. Devon, from Start Point; Cornwall, to Cape Cornwall (St. Just).
19. Isles of Scilly.
20. Cornwall, from Cape Cornwall; Devon, to Hartland Point.
21. Devon, from Hartland Point; Somerset, Gloucester, Monmouth, Glamorgan, Carmarthen; Pembroke, to Strumble Head.
22. Pembroke, from Strumble Head; Cardigan, Merioneth; Caernarvon, to Bardsey Island.
23. Caernarvon, from Bardsey Island to Llanfairfechan; Anglesey.
24. Caernarvon, from Llanfairfechan; Denbigh, Flint, Cheshire, Lancashire, to the estuary of the River Lune.
25. Lancashire, from the estuary of the River Lune (including Westmorland); Cumberland, Dumfries; Kirkcudbright, to Abbey Head.

26. Kirkcudbright, from Abbey Head; Wigtown, to Port Logan; Isle of Man.
27. Wicklow, Dublin, Meath; Louth, to Dundalk.
28. Louth, from Dundalk; Down, Antrim, to Carnlough; Wigtown, from Port Logan to Cornwall Point.
29. Antrim, from Carnlough; Londonderry; Donegal, to Malin Head; Wigtown, from Corsewall Point; Ayr, Renfrew, Dunbarton, Bute (including the Isles of Cumbrae and Arran); Argyll, to Ardnamurchan Point (including the Isles of Gigha, Islay, Jura, Oronsay, Colonsay, Mull, Iona, Tiree and Coll).
30. Argyll, from Ardnamurchan Point; Inverness (including the Isles of Muck, Eigg, Rhum, Canna, Skye and Raasay); W. coast of Ross and Cromarty; Sutherland, to Cape Wrath; E. coasts of Barra, South Uist, Benbecula, North Uist, Harris and Lewis.
31. W. coast of Lewis; W. coast of Harris to Scarpay.
32. W. coast of Harris, from Scarpay; W. coasts of North Uist, Benbecula, South Uist and Barra.
33. Donegal, from Malin Head to Aran Is. (Co. Donegal).
34. Donegal, from Aran Is.; Leitrim, Sligo; Mayo, to Erris Head.
35. Mayo, from Erris Head; Galway, to Slyne Head.
36. Galway, from Slyne Head (including the Aran Islands); Clare, to Loop Head.
37. Clare, from Loop Head; Limerick, Kerry; Cork, to Galley Head.
38. Cork, from Galley Head; Waterford, to Dunabrattin Head.
39. Waterford, from Dunabrattin Head; Wexford.
40. (Entirely offshore).

This map has replaced the usual form of the Progress Report, but members not at the A.G.M. will find a full report of the year's work published in due course in the Journal. The compiler of the Newsletter is kindly allowing space in the September issue for a list of molluscs so far recorded from C.A.22, Cardigan Bay.

Stella M. Turk

FIELD MEETING - TO CLAUGHTON, NR. GARSTANG, LANCASHIRE, ON SEPTEMBER 6th. 1969

A party of eight members and friends met on September 6th. to investigate the colonization by plants and animals of a recently-formed gravel-pit, now water-filled, at Claughton, near Garstang (NGR SD54). The pit was excavated in stony boulder-clay to obtain material for the adjacent motor-way and was abandoned in the summer of 1966. By the autumn of that year it was full of water, partly from springs and partly surface water, and by September 1967 contained the following waterplants; Myriophyllum spicatum, Potamogeton crispus, P. natans, P. berchtoldii, Ranunculus aquatilis s.s., and R. circinatus. In 1969 Elodea and Ruppia maritima were also present, the latter species several miles inland of its normal brackish habitat. In 1968 and 1969 a "water-bloom" of algae occurred.

Mr. E. F. Greenwood, who led the party, and who kindly obtained permission for us to visit the pit, is studying the flora and it is hoped to make surveys of both plants and Mollusca at regular intervals and to record subsequent changes. On this, our first visit, we took Lymnaea peregra, L. stagnalis, L. auricularia, and on the stony 'shore' left bare by the low water-level L. truncatula. The other freshwater molluscs obtained were Potamopyrgus jenkinsi and Planorbis albus. A curious feature was that numbers of extremely young Lymnaea peregra and one very young L. stagnalis were found but no adults of either species. One is tempted to speculate whether the hot summer and the new habitat have provoked a 'population-explosion' of two generations in one season?

There have been no deliberate introductions of either plants or animals to the pit except brown and rainbow trout in the winter of 1967/68. On our visit we saw swans, lapwings and swallows all come to the pit to feed, and ducks and gulls make casual visits.

Later Mr. Greenwood took us to the nearby River Brock at Boggy Wood (still in the same NGR 'square') where in it, and along its banks, clothed with native woodland, sometimes marshy and sometimes fairly dry, the following species were taken; Lymnaea peregra, L. truncatula, Ancylus fluviatilis, Succinea (too young to det.), Carychium minimum s.s., C. tridentatum, Columella edentula, Arion

ater s.l., A. subfuscus, Vitrea crystallina s.s., Retinella radiatula, R. pura,
R. nitidula, Oxychilus alliarius, Zonitoides excavatus, Euconulus fulvus,
Punctum pygmaeum, Discus rotundatus, Vitrina pellucida, Hygromia subrufescens
and Agriolimax laevis.

Nora F. McMillan

PUBLICATIONS RECEIVED

Royal Air Force Association of Sub-Aqua Clubs, News Sheet No. 2, December 1969.
Compiled and produced by Flt. Lt. D. A. J. Taylor, B.E.M.

A fat volume, containing a great deal of information, which makes it evident that molluscs compete for the attention of divers with a great many others subjects, including the investigation of a Spitfire wreck near Gozo, a number of ancient Greek amphorae near the same place, the salvage of a racing yacht sunk in Lake Windermere, investigation of a 1940 wreck at Oban and of others, with ancient cannon, off the Scillies.

Flt. Lt. Taylor explains in detail the Society's Marine Mollusca Census, inviting other groups to contribute, and describes the St. Athan Sub-Aqua Group's investigations in the area of the Scilly Islands, which provided valuable census information including several species new to the area; twenty eight species in all were recorded, and voucher specimens provided. The divers were also able to investigate the wreck of the 'Association'.

Flt. Lt. Taylor also contributes a note to the Pittsburgh Shell Club Bulletin, Vol. IV, No. 1 (March 1969) reporting on the expeditions of the R.A.F. Changi Sub-Aqua Club, which had as one of their most important objects the collection of molluscs. Encounters with various predatory fish are graphically described and the Club on one occasion had an opportunity to study the activities of the 'Crown of Thorns' starfish. On one occasion the expedition was shipwrecked, the two local seamen who formed the crew of the boat displaying much presence of mind according to their lights: one busied himself in throwing small rolled paper prayers on to the troubled waters and the other fighting against the storm to light his joss-sticks. Frantic pumping was left to the British passengers. A great many mollusca were obtained and scientific information on them provided to the University of Malaysia.

Bulletin Mensuel, January 1970.
Association Belge de Malacologie, Conchyliologie et Palaeontologie.

One stimulating article concerns the precise meaning of the terms 'fossil' and 'subfossil' and their inter- relationship. One suggested way of arriving at a closer definition is to consider all remains of living species as subfossil and those of extinct species as fossil. There seems a good subject for argument here.

There is a reprint of an American article on the deadly 'Red Tide' which periodically decimates parts of the Caribbean. This is primarily caused by a microscopic organism known as Gymnodinium brevis but the cause of its sudden proliferations seem still far to seek, and no control measures are possible as yet.

Joseph Christiaens continues an article on the mollusca of Tasmania, and the classification and gross anatomy of Land Snails is lucidly set out by Jean Buyle in the beginning of a series of articles.

A continuing discussion on the Belgian marine shells features this month various species of Calliostoma, well illustrated, with descriptions, localities and bibliography in each case.

Editor, Maurice Lucas, [REDACTED], 1170 Bruxelles, Belgium.

T.E.C.

GENERAL NOTES

Honours bestowed on members of the Society.

It is a great pleasure to record the bestowal upon one of our members of a signal honour. The Linnean Society of London has nominated Mr. A. E. Ellis to receive the H. H. Bloomer Award, "given to an amateur naturalist in recognition of important contributions to biological knowledge." Mr. Ellis apparently has some difficulty in understanding why this honour should come his way. May I point out to him that the Linnean Society knows all about him, having published his "Synopsis of British Bivalve Molluscs", which, together with "British Snails", so opportunely reprinted last year, make up the standard works on British Non-marine Mollusca.

It is very appropriate that Mr. Ellis should receive this particular Award. H. H. Bloomer, who died in 1960 at the age of 94, was a member of the Conchological Society for 53 years, and was its President in 1928-29. The great majority of his many publications were concerned with the larger freshwater mussels, and he was especially an expert on the Genus Anodonta. It is virtually impossible for any author not to quote Bloomer when writing of these molluscs. During his Presidency Bloomer proposed the establishment of our Research Fund, which he started with a gift of £100. The Society received the same sum by bequest after his death.

L.W.S.

It is also pleasant to record that Mr. P. Cambridge has received the FOULERTON AWARD from the Geologists' Association in connection with his valuable work on the Crag of East Anglia.

Pyramidula rupestris at Porchester Castle, Hampshire.

The small wall-snail Pyramidula rupestris was first recorded from the walls of Porchester Castle by F. H. Sikes in 1905. Although the species is not common in South Hampshire there are several widely scattered records of occurrence from Warblington church (1912), Emsworth (1956), Hambledon (1910), Winchester (1884), Southampton (1912), Titchfield Abbey (1955), Beaulieu (1955), Beaulieu Abbey (1885), Christchurch (1884) and Brockenhurst (1885).

Porchester Castle situated on the coast between Portsmouth and Southampton consists of a flint and brick wall of the Roman fort and a 12th. century keep and bailey in squared blocks of Caen stone (a Jurassic limestone). As the castle has been restored by the Ministry of Works, a search was made on 18th. January 1970 to establish the presence of Pyramidula rupestris. It was found living (although far from numerous) on the inside of the west wall of the Roman fort. A few yards away living specimens of Balea perversa and Limax flavus were recorded.

Pyramidula rupestris favours bare but crumbling walls whether actual stone or crumbling mortar between flint (as at Pevensey Castle, Sussex). The addition of new mortar in the restoration of the castle has destroyed most of the suitable niches for this snail and its future in this habitat seems precarious.

J. E. Chatfield

Junior Membership.

The following have been promoted to Senior Membership:-

WILLIAMSON, P.G., [REDACTED], Bushey, Watford, Herts.
WILLING, M.J., [REDACTED], Ewell, Surrey.
HARD, R.L., [REDACTED], Wraxall, Nr. Bristol, BS19 1JR
HOWELL, Miss A., [REDACTED], Edgbaston, Birmingham 15.

Elected on 28th. February 1970:-

BLUCK, Susan D., [REDACTED], Nuhaka, Hawkes Bay, New Zealand.

CRANMER, David J., [REDACTED], Leamington Spa, Warwickshire.
EVANS, Jane, [REDACTED], London, S.W.8.

Elected on 21st. March 1970:-

MILLER, J.D., [REDACTED], Holmbush, St. Austell, Cornwall.
MORRISON, Andrew J., [REDACTED], Wolverhampton.

Shells for Sale.

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

Exchange and Correspondent Wanted.

I have British live taken Land and Marine shells with locality data which I would like to exchange with members abroad. Mrs. G. Slator, S.R.N., [REDACTED], Clevedon, Somerset [REDACTED]

Pen Pal Wanted (Shell Collector) by Mary Webster, [REDACTED], Maxwell Coast Road, Christchurch, Barbados - 13 years old (blonde hair and green eyes!) collecting for 4 years, would like to correspond with someone about her own age.

Outstanding Subscriptions.

Once again the Treasurer wishes to remind members that some subscriptions are still unpaid for 1969 (not to mention 1970!). It will be greatly appreciated if those in arrears will settle promptly on reading this notice. Money spent on stationery and postage in sending out repeated individual reminders is, after all, a waste of the members' own resources.

ADDITIONAL NOTES

Brief Review.

Maggie Ross, The Gasteropod. Barrie & Rockliff, The Cresset Press, 1968; Penguin Books, 1970. This is not a conchological treatise.

Mrs. Nora F. McMillan.

It is a great pleasure to announce that Mrs. McMillan has been elected to membership of The Royal Irish Academy (M.R.I.A.) 1970, one of only four elected for scientific work.

Further Exchanges Wanted.

Mr. M. Deas, [REDACTED], Bawtry, Doncaster, Yorkshire (recently returned from the Far East) - any contacts please.

Mr. A. Coomans, [REDACTED], Pr. de Liege Belgique, wishes to increase his collection with some British specimens.

Grady Shults, [REDACTED], Arlington, Texas, U.S.A. 76010, wishes to obtain examples of common British Marine Molluscs.

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

THE MEDICINAL SNAIL

Considerable healing powers have been attributed to the common garden snail, Helix aspersa L. through the ages. Its use in medicine was first recorded by Pliny, who stated that some snails beaten in warm water cured coughs, and that sore throats should be anointed with juice drawn from living snails. The mucilaginous broth obtained from snails probably is soothing to a dry, sore throat, and it is this which may explain the almost universal and remarkably long-lived belief that snails in various forms are good for pulmonary troubles. Until quite recently the glass blowers of Newcastle held an annual feast of snails to "strengthen their lungs" for the coming year.

In 1728 Dr. J. Quincy pronounced about snails: "They abound with a slimy juice; and are experienced very good in weaknesses and consumption, especially for children and tender constitutions. To make a syrup of snails, take Garden snails, early in the morning while the dew is upon them, one pound; take off their shells; slit them; and with half a pound of sugar, put them in a bag; hang them in a cellar and the syrup will melt and drop through; which keep for use. It possesses in the best manner all the virtues of snails."

That the administration of snail potions was not always welcomed by the patient is implied in these instructions given by Mrs. Delaney in 1758: "Two or three snails should be boiled in the barley water which Mary takes, who coughs at night: she must know nothing of it, they give no manner of taste. Six or eight boiled in water and strained off, and put in a bottle would be a good way of adding a spoonful of the same to every liquid she takes; this must be fresh done every two or three days, otherwise they grow thick."

Almost a century later, in 1854, M. de la Marr, of Paris, was expounding the virtues of Helicin, the glutinous extract obtained from the snail and "long given in broth for pulmonary phthisis", as a domestic remedy.

In France, snails were dried and concocted into cough lozenges. For consumptive diseases of the lungs, the snails were not only eaten but also crushed and rubbed on the back and chest, the snail juice being extolled by some as superior to cod liver oil.

Although snails have always been primarily considered a specific against pulmonary complaints, they have also tended to be treated as a veritable panacea. The London Dispensatory (1696) states "the flesh (of snails) cools, thickens, consolidates, is pectoral, strengthens the nerves, cures coughs, asthmas, spitting of blood and consumptions; (used) outwardly they ripen tumours, imposthumes and carbuncles." The Rich Storehouse of Medicine (1650) directs that "for any manner of boil, fellin or uncome, take twenty garden snales and beat them, shells and all, in a mortar until you perceive them to be come to a salve, then spread a little thereof upon a linen cloth and lay it on the place grieved... and it will kill the fellin". This source further recommends "a very sovereign remedy for the gout, take a good quantity of snails and pick them forth of the shells and stamp them in the mortar: then put them in a pretty quantity of salt, salet oyl, and sope, and stamp them all well together in the mortar with the snails; then take the same and make a plaister thereof, and apply the same to the place grieved, and so let it ly for the space of three days and this will destroy the gout."

A mixture of pounded snails and crushed parsley was used as a poultice to cure "scrofulous swellings". Boyle gives "a tryed medicine for a whitloe" in his Collection of Medicines (1695): "Take House snails and beat them, shells and all, in a stone or wooden mortar so long till they be reduced to the consistence of a cataplasme, which apply some what warm to the part affected, and keep it on

for sixteen or twenty four hours, renewing it then if need be." Local application of snails was also recommended to cure obstinate eczema of the skin.

The powdered shells also, according to an old medicinal writer, are "Lithontriptrick and good for the gravel, they cure clefts or chops in the hands, lips or fundament. Aqua Cochlearium, distilled from the snails in May and October being excellent against consumption and a cosmetick; it also takes away corns and warts."

That snail remedies were taken seriously in bygone days is evidenced by the entry in the London Gazette of March 23rd. 1739 which tells that Mrs. Joanna Stevens received from the Government then in power £5,000 for revealing the secret of her famous cure against "stones". The cure consisted chiefly of snails, eggshells, soap, honey and herbs.

There are many even more esoteric medicinal uses of garden snails to be found in the records, particularly in rural areas. Thus in South Hampshire snails were made into a poultice with soaked bread crusts and applied "to help weak eyes". Gloucestershire yields two typical recipes: to cure earache a snail was pricked and the froth which exudes is dropped into the ear as it falls: and also a sufferer from "ague" in this county would often wear a live garden snail in a bag around the neck for nine days. The bag would then be opened and the snail thrown on the fire when it would "shake like to ague", thus curing the patient. Such was the faith in the healing power of snails that one country remedy for warts did not even require contact with the beast. The cure was reputedly effected merely by "pricking a live snail's shell as many times as one had warts in number" and then impaling the snail upon a blackthorn in the hedgerow. As the snail died and withered the warts were supposed to wane and disappear.

Charles Pettitt

"SNAIL WATER. FOR JAUNDICE 1700"

"Take a peck of snail shells, lay them on a hot hearthstone before the fire until they have done hissing and spitting, then wipe them from the froth and break in a mortar. Have a quart of earth worms, slit and scoured clean with salt and water and heat them with the snails. Then take angelica, celandine, wood-sorrel, agrimony, bearfoot, barberry bark, great dock roots of each two handfuls, rosemary flowers a quart, 1 lb. of hartshorn, turmeric and fenugreek 2 oz. of each, $\frac{1}{2}$ oz. of powdered saffron and 3 oz. of cloves fresh beaten. Shred and infuse all in 3 galls. of ale, then distil and draw off. Three spoonfuls in a glass of sack before every meal and use moderate exercise".

Reprinted in Water in England, by Dorothy Hartley (1964).

Nora F. McMillan

SHELL COLLECTORS' PARADISE

Although it is some years since I was last on Herm, a tiny island near Guernsey, I can still recall the excitement with which I boarded one of the many boats which make the 25 minute trip between St. Peter Port and Herm several times a day. Hadn't I heard many times that Herm was a shell collector's paradise, but also nearly as often that "everything is broken when you get there." According to the state of the tide, one lands either at the main jetty or at the Rosiere landing Steps, a few minutes' walk further to the south. On arriving at the main jetty, I saw a tiny beach immediately on the right, and although this is not the famous Shell Bay, I hurried down to find it covered with Arca lactea by the thousand! A few other species were there too, but the main impression was of Arca lactea. After a few minutes there we started off on the 15 minute walk to the 600 yd. long Shell Bay. First, on our right, we saw the attractive White House Hotel, then some shops for souvenirs and gifts; we passed a Tavern and a Snack bar, and rather important, some lavatories. The path took us along the edge of Herm and looking down to our left we could see a large expanse of rather muddy looking beach with seaweed-covered rocks, not really very inviting. This beach continues round the west side of the island right round to Alderney Point, which marks the start of Shell Bay. But the path takes one across some hilly

meadowland, losing sight of the sea for several minutes, until suddenly one goes downhill and there at last, lies the famous Shell Beach! 600 yards of golden sand with some rocky areas to the right, also a small rocky "island" which is uncovered when the tide is right out.

As soon as we got onto the beach we could see several shell lines left by the outgoing tide. The beach shelves fairly sharply, uncovering a fair area of sand. These shell lines contained myriads of shells, and one could just sit or lie down, and sift through a convenient heap for many minutes without moving. It was really wonderful and we were lucky for, on this day, nothing was broken after all! Most of the shells were rather small in size, compared to, say, similar species found in Wales. They were very colourful, pink predominating. One very interesting feature was that quite a few live or dying Venus rhomboides and Venus fasciata were found lying in these heaps.

We were in Guernsey for two weeks and during that time managed to get to Herm 3 times. It was not a good summer, - "the worst for 30 years" - and although on some days the sun was shining, the boats could not set out for Herm as the sea was too rough. Our third visit took place after 48 hrs. of stormy weather and this time, when we got to Shell Beach, we saw just what people meant when they said that everything is broken - it certainly was! So if you plan to go to Herm whilst staying in Guernsey, it would be advisable to plan two trips in case your first one is disappointing. In those 3 visits we found around 80 species, but I feel sure that if one could call there over a period of time, more would be discovered. In fact Mr. T. E. Crowley has kindly provided me with a list of shells he found on a visit to Herm, and where this differs from mine I am giving his finds below. We were never able to be at Herm at absolute low tide, nor did we have snorkelling equipment, and I would certainly like to go again to try my luck with these additional advantages.

A charming little bay, Belvoir Bay, is connected to Shell Beach by a cliff-top path, in fact this path goes right round the island at cliff-top level. There are kiosks at both beaches supplying hot and cold drinks, also sandwiches and other snacks. One of the nicest things about Herm is the complete peace and quiet, as only essential vehicles belonging to the island community are allowed. The return boats leave up to 5 p.m. but it is advisable to aim for the 4.30 boats, as very long queues develop for the last boats.

List of shells found by T. E. Crowley.

<u>Cingulla cingillus</u>		<u>Rissoa membranacea grossa</u>
<u>Cingulla vitrea</u>		<u>Rissoa parva exilis</u>
<u>Alvania cancellata</u> (described as cmn.)		<u>Rissoa parva</u> (described as cmn.)
<u>Alvania carinata</u>		<u>Triphora perversa</u>
<u>Alvania punctura</u>		<u>Balcis lubrica</u>
<u>Alvania zetlandica</u>		<u>Mangelia brachystoma</u>
<u>Alvania crassa</u> cmn.		<u>Mangelia costulata smithii</u>
<u>Rissoella diaphana</u>		<u>Mangelia coarctata</u>
<u>Haedropleura septangulata</u>		<u>Chauvetia rbunnea</u>
<u>Turbonilla jeffreysii</u>		<u>Trophon muricatus</u>

List of shells found by H. H. E. Nash.

Gastropods

<u>Haliotis tuberculata</u>	1 only
<u>Emarginula reticulata</u>	cmn.
<u>Emarginula conica</u>	
<u>Diodora apertura</u>	v. cmn.
<u>Patella vulgata</u> var.	cmn.
<u>Patina pellucida</u>	cmn.
<u>Tectura virginea</u>	3
<u>Calliostoma zizyphinum</u>	cmn. young
<u>Gibbula magus</u>	v. cmn.
<u>Gibbula cineraria</u>	cmn.
<u>Gibbula umbilicalis</u>	cmn.
<u>Gibbula pennanti</u>	cmn.
<u>Cantharidus striatus</u>	v. cmn.
<u>Cantharidus exasperatus</u>	v. cmn.

Bivalves

<u>Nucula nucleus</u>	
<u>Glycymeris glycymeris</u>	cmn., mostly juv.
<u>Arca tetragona brit.</u>	
<u>Arca lactea</u>	v. cmn.
<u>Anomia ephippium</u>	cmn.
<u>Monia patelliformis</u>	cmn.
<u>Mytilus edulis</u>	1 valve
<u>Modiolus adriaticus</u>	
<u>Pecten maximus</u>	cmn. juv.
<u>Chlamys varia</u>	cmn.
<u>Chlamys distorta</u>	cmn.
<u>Aequipecten opercularis</u>	cmn.
<u>Lima hians</u>	
<u>Loripes lacteus</u>	

<u>Tricolia pullus pictus</u>	cmn.	<u>Phacoides borealis</u>	
<u>Littorivaga saxatilis</u>		<u>Diplodonta rotundata</u>	1 only
<u>Neritoides littoralis</u>	cmn.	<u>Cardium edule</u>	
<u>Hydrobia ulvae</u>	2 only	<u>Cardium papillosum</u>	1 only
<u>Alvania cancellata</u>	2 only	<u>Cardium ovale</u>	
<u>Rissoa parva</u>	1 only	<u>Cardium scabrum</u>	
<u>Bittium reticulatum</u>		<u>Cardium exiguum</u>	
<u>Clathrus clathrus</u>	3 only	<u>Laevicardium crassum</u>	all juv.
<u>Brachystomia scalaris</u>	1 only	<u>Dosinia exoleta</u>	1 double
<u>Balcis alba</u>	1 only, juv.	<u>Gafrarium minimum</u>	1 double
<u>Capulus ungaricus</u>	3 juv.	<u>Venus verrucosa</u>	
<u>Calyptrea chinensis</u>		<u>Timoclea ovata</u>	v. cmn., dble
<u>Natica poliana alderi</u>		<u>Venus casina</u>	juv.
<u>Natica montagui</u>		<u>Clausinella fasciata</u>	some live dble
<u>Erato voluta</u>	2	<u>Venerupis rhomboides</u>	cmn., some live
<u>Velutina velutina</u>	few	<u>Moerella donacina</u>	cmn.
<u>Trivia monacha</u>	v. cmn.	<u>Arcopagia crassa</u>	
<u>Trivia arctica</u>	v. cmn.	<u>Psammocola depressa</u>	
<u>Nucella lapillus</u>		<u>Psammobella tellinella</u>	
<u>Buccinum undatum</u>	1 br. juv.	<u>Ensis arcuatus</u>	2 only
<u>Ocenebra erinacea</u>	cmn.	<u>Lutraria lutraria</u>	
<u>Ocenebra aciculata</u>	1 only	<u>Spisula elliptica</u>	juv.
<u>Nassarius reticulatus</u>		<u>Spisula solida</u>	
<u>Nassarius incrassatus</u>	cmn.	<u>Thracia phaseolina</u>	
<u>Philbertia purpurea</u>	1 only		
<u>Retusa alba</u>	1 only		
<u>Dentalium entalis</u>	cmn.		

Tiny heart urchins were common, also some fossils.

Mrs. H. Nash

ADDITIONAL NOTE TO FOURTH PROGRESS REPORT ON THE MARINE CENSUS

Since April, when copy was sent to Mr. Negus for the June Newsletter, an important development of the Marine Census work has occurred. The Biological Records Centre at Monks Wood, Abbots Ripton, Hunts., in pursuance of its aim to build up a data bank of all available information on the distribution of plants and animals in the British Isles, is undertaking co-ordination of recording marine organisms. Dr. F. H. Perring, its Director, has approached the Conchological Society and agreement has been reached with the Council and the Marine Recorder for liaison, so that there will in time be a central computerized bank of records available. Naturally the concern of the Biological Records Centre (which is a section of the Nature Conservancy, in turn part of the larger Natural Environment Research Council) is with conservation: it becomes increasingly important that the effects of various kinds of pollution on shore plants and animals should be known, and that changes of actual occurrence and relative abundance should be recorded for this purpose. As was made clear in Newsletter No. 25, the present Marine Recorder considers that the 40 Marine Census Areas are sufficiently small units for the purposes of zoogeographical studies. From the conservation angle, smaller units are desirable, based on the 10 kilometre square units currently employed for the non-marine mollusc Census as well as for many other groups (including marine algae). An agreement favourable to both the B.R.C. and the Conch. Soc. has been reached with Dr. Perring in the following manner. Both present and future records will be loaned to the Centre so that copies can be made and, where necessary, grid references added. Eventually the data will be organized so that the following information can be presented:-

- Maps showing Marine Census Areas with distribution of any particular species
- Maps showing 10 km. squares with distribution of any particular species
- Lists of species from areas of coastline specified by enquirer
- Lists of localities for any species with grid reference and Census Area.

When the transfer has reached some state of relative equilibrium, research workers will be able to contact the B.R.C. for this basic information, so saving the time

and energies of the Recorder for checking identifications and entering in the species notebooks the thousands of records waiting to be gathered from submitted lists and published sources.

No change in the present system is envisaged, since the Marine Area recording is considered by both the Society and the B. R. Centre to be 'an essential stage in the organisation of any widespread survey of the distribution of marine molluscs around the shores of the British Isles'. The 40 Marine Census Areas, from each of which a list of authenticated species is being compiled, are as important to 10 km. square recording as are the vice-counties in terrestrial distribution mapping. The prototype recording form, used by the majority of helpers (see the Conchologists' Newsletter No. 17 or Papers for Students No. 11) has columns for all the relevant information. The grid reference will now be essential and readers may like to know that the Ordnance Survey publish a gazetteer listing every place which appears on their quarter inch map series with 1 km. grid refs. (available through any O. S. agent for 20/-). Any information with possible conservation implications will be welcome and indeed some observers already include valuable notes under column 9 'Estimation of numbers, behaviour and any other observations' e.g. a species becoming less common or more common, species found in artificially warmed water, species found near sewage outlets and comparative notes before and after oil pollution of a beach.

Those members who have carefully listed many different beaches in single Areas will be glad to know that their records will be of prime importance in the 10 km. square scheme and that all the material gathered will be of more use to more people more readily.

Stella M. Turk

The following list of records for C.A.22, Cardigan Bay, has been compiled with the help of records submitted by many members, chief of whom are Mrs. A. M. Brockbank, Mrs. J. Charlish and Mrs. H. Nash. Published information has also been extracted, and Mr. S. P. Dance has kindly supplied photocopies of many papers contained in the library of the National Museum of Wales on marine molluscs from this Area. Amongst these was an eight page privately published list priced at threepence, dated 1930 and entitled 'Shells found at Mochras and shores of Cardigan Bay: the Collector's Guide' by Joe J. Cotton. Of the 209 species and varieties listed in these pages, all but 36 are already on submitted lists or in published sources: although 19 of the 36 are not just doubtful ('D') but very doubtful, they are nevertheless included as they will alert the observer to the unexpected and perhaps encourage a critical attitude to all lists. No 'R' (authenticated) is added to any of these extra records, but that more of Mr. Cotton's species are likely to be found may be judged from the fact that many of his small obscure species occur on no other lists, and yet have been authenticated in the past few years from shell sand painstakingly sorted by Mrs. Charlish. The main purpose in producing this present list is to provide a firm basis for future recording, and to emphasize what a large number of species require upgrading to 'AR' or better still 'ARV'

Record status:-			This century	Last century	
	live		A	a	
	empty shell		B	b	
	beach worn		C	c	
	doubtful record		D	d	
	fully accepted		R		
	Voucher specimens in B.M.(N.H.)		V		
Lo 7	Lepid.cin.	AR	G 107	Acl.min.	BR
Lo 9	Acanth.crin.	AR	G 112	Eul.trif.	BR
			G 114	Balc.alb.	BR
G 2	Emarg.ret.	BR	G 122	Balc.dev.	BR
G 6	Diod.apert.	AR	G 125	Chrys.obt.	BR
G 7	Pat.vulg.	ARV	G 126	Chrys.ind.	BR
G 10	Pat.pell.	AR	G 128	Chrys.dec.	BR
G 12	Pat.tess.	D	G 131	Chrys.spir.	BR
G 13	Pat.virg.	AR	G 132	Men.dol.	BR
G 17	Marg.helic.	B	G 133	Men.div.	BR

G 20	Call.ziz.	AR	G 136	Men.warr.	B
G 23	Gibb.mag.	AR	G 138	Odos.niv.	D
G 24	Gibb.tum.	BR	G 140	Odos.plic.	bR
G 25	Gibb.cin.	AR	G 142	Odos.uni.	B
G 26	Gibb.umb.	ARV	G 144	Odos.acuta	BR
G 28	Canth.mont.	B	G 146	Odos.con.	BR
G 29	Canth.striat.	D	G 148	Odos.alb.	BR
G 30	Canth.clel.	B	G 149	Odos.scal.	BR
G 30	Mon.lin.	ARV	G 150	Odos.eul.	BR
G 36	Tric.pull.	AR	G 154	Eulim.laev.	BR
G 37	Lac.vinct.	AR	G 157	Turb.eleg.	BR
G 38	Lac.crass.	B	G 160a	(Q) Turb.vert.	C
G 39	Lac.parva	AR	G 161	Turb.cren.	B
G 40	Lac.pall.	BR	G 166	Trich.bor.	D
G 41	Litt.litt.	AR	G 167	Cap.ung.	BR
G 42	Litt.sax.	ARV	G 168	Cal.chin.	D
G 43	Litt.nerit.	AR	G 170	Aporrh.pespel.	BR
G 45	Litt.littoral.	ARV	G 173	Amaur.isl.	D
G 46	Hydrob.vent.	B	G 174	Nat.pall.	D
G 47	Hydrob.jenk.	BR	G 175	Nat.fusc.	BR
G 48	Hydrob.ulvae	AR	G 176	Nat.can.	ARV
G 50	Acm.suncyl.	D	G 177	Nat.pol.	BR
G 51	Cing.fulg.	D	G 178	Nat.mont.	B
G 53	Cing.vit.	BR	G 179	Vel.vel.	AR (no date)
G 53	Cing.semic.	BR	G 180	Vel.plic.	B
G 56	Cing.semistr.	BR	G 181	Lam.persp.	AR (no date)
G 57	Cing.cing.	bR	G 183	Erato vol.	BR
G 58	Alv.crassa	BR	G 184	Triv.mon.	AR
G 60	Alv.bean.	BR	G 184b	Triv.arct.	BR
G 63	Alv.canc.	B	G 186	Gal.rug.	AR (no date)
G 64	Alv.car.	BR	G 187	Troph.trunc.	R
G 67	Alv.punct.	BR	G 189	Troph.mur.	BR
G 68	Riss.alb.	BR	G 190	Nuc.lap.	ARV
G 70	Riss.inc.	BR	G 192	Ocen.erin.	BR
G 71	Riss.parv.	BR	G 193	Ocen.acic.	D
G 72	Riss.guer.	BR	G 199	Col.grac.	AR
G 73	Riss.lil.	BR	G 203	Nept.ant.	BR
G 74	Riss.memb.	BR	G 204	Bucc.und.	AR
G 75	Barl.unif.	D	G 206	Chauv.brunn.	D
G 78	Torn.subc.	BR	G 207	Nass.ret.	AR
G 85	Riss.opal.	BR	G 208	Nass.incrass.	BR
G 87	Turrit.comm.	AR	G 209	Nass.pyg.	BR
G 88	Caec.imp.	BR	G 211	Haedrop.sept.	BR
G 89	Caec.glab.	B	G 212	Lora.turr.	BR
G 90	Bitt.ret.	BR	G 214	Lora rufa	BR
G 91	Cerith.tub.	BR	G 217	Mang.atten.	BR
G 98	Triph.perv.	BR	G 218	Mang.cost.	BR
G 100	Clath.clath.	BR	G 219	Mang.coarct.	BR
G 101	Clath.turt.	BR	G 222	Mang.neb.	BR
G 102	Clath.trev.	BR	G 224	Philb.gac.	BR
G 103	Clath.clathrat.	B	G 226	Philb.purp.	BR
G 104	Janth.brit.	BR	G 228	Philb.lin.	BR
G 105	Graph.alb.	BR	G 230	Act.torn.	AR
G 106	Acl.asc.	BR	G 234	Hamin.nav.	B
			G 236	Akera bull.	B
S 1	Dent.ent.	BR	G 238	Ret.ret.	BR
S 2	Dent.vulg.	aR	G 239	Ret.alb.	BR
			G 240	Ret.suncyl.	BR
L 2	Nuc.nuc.	BR (no date)	G 243	Cyl.cyl.	AR
L 4	Nuc.turg.	AR	G 245	Tric.lig.	BR
L 6	Nuc.ten.	D	G 247	Phil.ap.	AR
L 12	Glyc.glyc.	BR	G 248	Herm.scab.	B
L 13	Arca tet.	BR	G 249	Herm.cat.	BR
L 14	Arca lact.	B	G 251	Oss.alat.	BR
L 16	Anom.ephipp.	AR	G 287	Pal.dub.	AR
L 17	Mon.pat.	CR	G 290	Acanth.pil.	AR
L 19	Het.squam.	BR	G 294	Onch.fusc.	AR
L 20	Myt.ed.	AR	G 302	Gon.nod.	AR
L 22	Mod.mod.	AR (no date)	G 303	Gon.cast.	AR

G 308	Anc.crist.	AR	L 107	Vener.sax.	BR & aR
G 312	Arch.pseud.	AR	L 108	Vener.dec.	AR
G 317	Jor.tom.	AR	L 109	Irus irus	B
G 330	Idul.cor.	AR	L 111	Mys.und.	BR
G 366	Facel.drumm.	A	L 112	Don.vitt.	ARV
G 370	Aeol.pap.	AR	L 114	Erv.cast.	D
G 371	Eol.glauc.	AR	L 115	Tell.squal.	BR
G 374	Phyt.myos.	BR	L 116	Tell.ten.	AR
			L 117	Tell.fab.	AR
L 23	Mod.barb.	AR	L 118	Tell.donac.	B
L 25a	Mod.adr.rad.	BR	L 119	Tell.pyg.	b
L 26	Mod.phas.	BR	L 120	Tell.crass.	BR
L 29	Musc.marm.	BR	L 122	Gastr.frag.	BR
L 31	Musc.nig.	D	L 123	Mac.balth.	AR
L 34	Pter.hir.	D	L 124	Scrob.plana	AR
L 35	Ostr.ed.	AR	L 126	Abra alb.	AR
L 39	Pect.max.	AR (no date)	L 127	Abra nit.	BR
L 42	Chlam.var.	BR	L 128	Abra pris.	AR
L 43	Chlam.dis.	CR	L 129	Gari ferv.	AR
L 44	Chlam.operc.	AR	L 130	Gari dep.	BR
L 47	Chlam.tig.	BR	L 131	Gari tell.	BR (no date)
L 48	Chlam.striat.	D	L 133	Solec.scop.	BR
L 50	Chlam.sim.	D	L 135	Phar.leg.	BR
L 51	Lima hians	bR	L 136	Cult.pell.	AR
L 58	Ast.mont.	D	L 137	Ens.ens.	AR
L 59	Ast.triang.	BR	L 138	Ens.arc.	BR
L 60	Thyas.flex.	AR	L 139	Ens.sil.	AR
L 64	Lor.luc.	bR	L 140	Sol.marg.	BR
L --	Phac.bor.	bR	L 141	Mact.cor.	ARV
L 67	Dipl.rot.	BR	L 142	Spis.ell.	BR
L 69	Kellia sub.	AR	L 143	Spis.sol.	BR
L 70	Las.rubra	BR	L 144	Spis.subtr.	AR
L 71	Turt.min.	BR	L 145	Lutr.lut.	BR
L 72	Lept.squam.	bR	L 145a	Lutr.ang.	CR
L 73	Lept.nit.	CR	L 146	Lutr.magna	b
L 76	Lept.clark.	BR	L 147	Mya trunc.	AR (no date)
L 79	Mont.ferr.	BR	L 148	Mya aren.	AR (no date)
L 80	Mysel.bid.	AR	L 149	Sphen.bing.	AR
L 83	Dev.perr.	BR	L 150	Corb.gib.	AR
L 84	Cypr.isl.	ARV	L 151	Hiat.arct.	BR
L 87	Card.ecin.	BR	L 152	Hiat.striat.	AR
L 88	Card.tub.	B	L 154	Sax.jeff.	CR
L 90	Card.ov.	BR	L 155	Gast.dub.	bR
L 91	Card.scab.	BR	L 156	Phol.dact.	AR
L 92	Card.exig.	BR	L 157	Barn.cand.	AR
L 93	Card.edule	AR	L 158	Barn.parv.	bR
L 94	Card.crass.	BR	L 159	Zirf.crisp.	B
L 95	Dos.exol.	BR	L 163	Ter.nor.	b
L 96	Dos.lup.	BR	L 164	Ter.meg.	BR
L 97	Gafr.min.	CR	L 168	Ter.nav.	B
L 98	Call.chione	BR	L 169	Cochl.praet.	BR
L 99	Venus verr.	BR	L 170	Thrac.phas.	AR
L 100	Ven.cas.	bR	L 171	Thrac.vill.	BR
L 101	Ven.ov.	BR	L 174	Thrac.dist.	AR
L 102	Ven.fasc.	BR	L 176	Calop.alb.	B
L 103	Ven.striat.	AR			
L 104	Vener.aur.	AR	C 6	Allot.med.	AR
L 105	Vener.rhomb.	AR	C 9	Sep.off.	BR
L 106	Vener.pull.	AR	C 18	Eled.cirrh.	AR

Stella M. Turk

UNIO TUMIDUS IN A SMALL STREAM

The Car Dyke rises in the vicinity of Nut Wood, near Kirklington, Notts.. It flows in a south-easterly direction, and is joined by the Wink between Hockerton and Upton. About $\frac{1}{2}$ mile before the village of Upton is reached the stream flows under the Southwell, Newark road. Thereafter it flows in a more

easterly direction below Upton village, for about $1\frac{1}{2}$ miles, then on joining another stream above Staythorpe, it becomes Bingley Dyke, after about a further 2 miles distance, it flows in the River Trent by Averham church. In the vicinity of Upton the Car Dyke varies from 4 to 8 feet in width, the depth of the water in the wider gravelly parts being only a few inches, in the narrower parts it may reach 2 or 3 feet deep.

On the 8th. March 1968 I visited the Car Dyke, approaching by way of a rough lane which runs between what was the blacksmith's shop and Mill Lane, Upton. From a bridge about midway along this lane, I saw the opened valves of a recently dead specimen of Anodonta anatina (L.) on a mudbank in the middle of the stream. With the aid of a stick these valves were brought to the bank, on closer inspection I noticed the posterior portion of the shell had been gnawed away, which could have been done by Arvicola amphibius. I had previously seen the freshwater vole feeding on young Anodonta, taken from the R. Meden, Thoresby Park. Pitchford, (1953).

Other valves were found strewn on the bed of the stream, some of these shells showed damage to the ventral as well as the posterior end, these mussels could have been destroyed by moorhens. Pitchford, (1961).

A little further down stream a recently dead left valve of Unio tumidus Philipsson was taken from water about 9 inches deep, further investigation was rewarded with the find of a specimen which measured 50.5 mm. in length.

Eight live specimens of A. anatina were found in a muddy sand-bank, the water being a little over one foot deep, these shells compared well with the typical form, illustrated plate 5, fig. 11, Bloomer, 1938. Shells like these I have also taken from the R. Devon, near Farndon, Notts. Both U. tumidus and A. anatina occur in the R. Trent below the weir above the railway, and the junction with Bingley Dyke. The periostracum of U. tumidus in the R. Trent are almost always of a dark brown or blackish colour. A. anatina varies little in shape being always of the var. piscinalis Nilsson. Plate 7, fig. 17, Bloomer, 1938.

Alburnus lucidus (Bleak), and Gasterosteus aculeata (Three-spined sticklebacks) occur in the dyke. Shoals of bleak move up stream at spawning time, April to June, to spawn in the shallower parts among stones and water plants. I have often pondered, are the mussels in The Car Dyke progeny of the mussels in the R. Trent, carried with host fish as glochidium larva?

Bloomer, H.H., 1938. The British Species of Anodonta Lam., and their Varieties. J. of C., Vol. 21, Pl. 2-9, p.33-48.

Pitchford, G.W., 1953. Giant Unio pictorum (L.) in Nottinghamshire. J. of Conch., Vol. 23, No. 10, p. 338.

Pitchford, G.W., 1961. Herons, Moorhens and Rats feeding on Anodonta anatina (L.). Conchologists Newsletter, Vol. 1, No. 2, p. 5.

G. W. Pitchford

The meeting of the Conchological Society held at Manchester University Museum on Saturday, 18th. April 1970 was the scene of a pleasant little ceremony when the President, Mr. T. Pain, presented a congratulatory address to the Society's senior member, Dr. J. Wilfrid Jackson, F.G.S., F.S.A., in anticipation of his 90th. birthday (on June 15th.). Addressing Dr. Jackson, the President said:

"The Council and Members at home and abroad of the Conchological Society of Great Britain and Ireland, noting with satisfaction the approach of your 90th. birthday, and remembering the long and distinguished membership of their Senior Vice-President, wish to offer you their heartfelt congratulations and warm wishes for your continuing health and happiness."

Dr. Jackson thanked the President and Members for their kind thought, and said that he was delighted to be able to attend this meeting of the Society in Manchester. Dr. Jackson had just finished giving the Meeting a talk which he had begun with an account of the events leading up to the founding of the Society in 1876 by four Yorkshire conchologists, namely J. W. Taylor, W. Nelson, H. Crowther and W. Denison Roebuck. The Journal of Conchology, Dr. Jackson said, had pre-dated the Society by some two years, and when the Society was established the Journal

became its official organ. Dr. Jackson explained that for a number of years the Society had had its headquarters in Leeds, but that later when the Manchester group of workers grew in number the headquarters were transferred there. Since then they have been moved to London.

Dr. Jackson then went on to give personal reminiscences of many of the older conchologists: R. D. Darbishire; Melville, that mighty collector not only of shells but also of flowering plants; Robert Standen (whose only child Dr. Jackson married) and others, making these well-known names suddenly spring to life for us. In autobiographical vein Dr. Jackson told us that he was not really a Mancunian at all but had been born in Scarborough in 1880, though he added that his family had moved to Manchester when he was still very young. He related how he had watched Queen Victoria's Golden Jubilee celebrations in Manchester in 1887, had seen Buffalo Bill's Wild West Show, and had seen Queen Victoria open the Manchester Ship Canal in 1894. It was on Mafeking Night that he had first met Robert Standen who was to become his father-in-law and life-long friend. In 1904 he had visited Ireland for the first time and had worked at the little biological station then functioning at Larne, Co. Antrim (it was run by the Ulster Fisheries and Biological Association). In Ireland too he met Robert Welch, that doughty champion of Irish natural history, who became a firm friend.

Dr. Jackson went on to say that although his first love was conchology, his interests had gradually broadened out with time to include ethnoconchology, geology, archaeology and spelaeology, and he told us something of his work in these varied fields. For instance, as an expert on the identification of vertebrate bones he had spent a season in Egypt with the Egyptian Exploration Society, and had reported on the bones from numerous archaeological "digs" as well as on the Mollusca obtained.

Dr. Jackson was glad that his and Standen's large mollusca collections had found a good home in Liverpool Museum.

Finally, he said, he wished the Society every success in the future.

Mrs. N. F. McMillan
10th. May 1970

FIELD MEETING - TO CHIPPENHAM, WILTSHIRE, 25th. OCTOBER 1969

A party of about nine members and friends met at Chippenham Station at 11.30, and then proceeded by car to the Warren (31 955 682), a small open wood near the village of Sandy Lane. As the name of the village suggests the soil was found to be very sandy and although there had been some rain in the morning the ground was very dry. However the following species were found:

<u>Carychium tridentatum</u> (Risso)	<u>Vitrea crystallina</u> (Müller)
<u>Lauria cylindracea</u> (da Costa)	<u>Vitrea contracta</u> (Westerlund)
<u>Cepaea hortensis</u> (Müller)	<u>Oxychilus alliarius</u> (Miller)
<u>Helix aspersa</u> Müller	<u>Retinella pura</u> (Alder)
<u>Hygromia striolata</u> (C. Pfeiffer)	<u>Retinella nitidula</u> (Draparnaud)
<u>Hygromia hispida</u> (L.)	<u>Vitrina pellucida</u> (Müller)
<u>Discus rotundatus</u> (Müller)	<u>Arion subfuscus</u> (Draparnaud)
<u>Arion ater</u> agg.	

The party then moved on to Bowden Hill (31 938 678), where they examined a small area of marshy ground; the following species were noted:

<u>Lymnaea truncatula</u> (Müller)	<u>Hygromia hispida</u> (L.)
<u>Succinea pfeifferi</u> Rossmässler	<u>Ashfordia granulata</u> (Alder)
<u>Cochlicopa lubrica</u> (Müller)	<u>Oxychilus helveticus</u> (Blum)
<u>Arianta arbustorum</u> (L.)	<u>Agriolimax reticulatus</u> Müller
<u>Helix aspersa</u> Müller	<u>Agriolimax laevis</u> (Müller)

Lunch was taken at the National Trust Village of Lacock. After lunch some members looked around the village, whilst others collected the following in the nearby River Avon (31 922 682):

<u>Theodoxus fluviatilis</u> (L.)	<u>Unio pictorum</u> (L.)
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Viviparus viviparus (L.)
Valvata piscinalis (Müller)
Potamopyrgus jenkinsi (E.A.Smith)
Bithynia tentaculata (L.)
Lymnaea stagnalis (L.)
L. auricularia (L.)
L. peregra (Müller)
Planorbis corneus (L.)
Planorbis carinatus Müller
Ancylus fluviatilis Müller

Unio tumidus Philipsson
Anodonta cygnaea (L.)
Anodonta anatina (L.)
Sphaerium rivicola (Lamarck)
Sphaerium corneum (L.)
Pisidium amnicum (Müller)
Pisidium sp.

Also obtained from the Avon was Pisidium supinum Schmidt (collected and identified by Mr. S. P. Dance) which was a new Vice County record.

The party then travelled to Birds Marsh Wood (31 917 755), a small wood to the north of Chippenham on the Oxford Clay, in which it was hoped to find Limax tenellus Müller, this was not found, but the following species were:

Oxychilus alliarius (Müller)
Discus rotundatus (Müller)
Hygromia striolata (C.Pfeiffer)
Arion ater agg.

Arion intermedius Normand
Arion hortensis Ferussac
Lehmannia marginata (Müller)

The final stopping place before the party dispersed was Stanton Park (31 890 795). As time was short only the limestone walls at the edge of the wood were seen, and it was here that the most interesting find of the day was made by Mr. Dance, that of Vertigo pusilla Müller, another County Record. Together with:

Cochlicopa lubrica (Müller)
Lauria cylindracea (da Costa)
Vallonia costata (Müller)
Clausilia bidentata (Ström)
Punctum pygmaeum (Draparnaud)
Discus rotundatus (Müller)
Vitrea pellucida (Müller)
Oxychilus alliarius (Müller)
Cochlicopa lubricella

Pyramidula rupestris (Draparnaud)
Acanthinula aculeata (Müller)
Ena obscura (Müller)
Cepaea hortensis (Müller)
C. nemoralis (L.)
Euconulus fulvus (Müller)
Vitrea crystallina (Müller)
V. contracta (Westerlund)

It is interesting to note the vast difference between the last two woods which are only a few miles apart.

D. G. Pickrell

██████████, Kington St. Michael, Wilts.

The Compiler regrets the delay in including this report, due to pressure on space.

REPORT OF A FIELD MEETING HELD ON 11th. APRIL 1970

Three members and two visitors examined the River Fender and ponds in an area of square 332--8-- which is to be built over at Prenton, Birkenhead (vicinity of G.R. 288864). Conditions were suitable for collecting, and it was probably because of the early date of the excursion that more species were not found.

In the River Fender, which had floating pollution and a bed of sandy clay, were found:

Potamopyrgus jenkinsi (E.A.Smith)
Aplexa hypnorum (L.)

Lymnaea peregra (Müller)
Planorbis leucostoma Millet

In the ponds, which varied widely in their amounts of tree-shading and cattle-trampling and in their molluscan fauna, were found:

Lymnaea truncatula (Müller)
Planorbis crista (L.)
Pisidium personatum Malm

Lymnaea palustris (Müller)
Sphaerium corneum (L.)

In Miss Turner's garden were found:

<u>Arion fasciatus</u> (Nilsson) agg.	<u>Arion hortensis</u> Ferussac
<u>Arion subfuscus</u> (Draparnaud)	<u>Arion ater</u> (L.)
<u>Oxychilus cellarius</u> (Müller)	<u>Oxychilus alliarius</u> (Müller)
<u>Milax budapestensis</u> (Hazay)	<u>Agriolimax reticulatus</u> Müller
<u>Agriolimax caruanae</u> Pollonera	

Those attending would like to thank Miss Turner for providing an excellent tea, and Dr. Kerney for identifying the Pisidia.

D. R. B. Harrison

REPORT OF THE FIELD MEETING ON SUNDAY APRIL 19th. 1970

The morning after the successful northern meeting of the Society, twentyone members and friends met in the University Quadrangle and left by coach for a day's collecting in Lancashire.

The first stop was made at the canal at Rufford, O.S. 34465157. This canal is the Rufford branch of the Leeds and Liverpool Canal, and is now almost completely disused. Unfortunately it would appear that there had been some recent disturbance affecting the banks, and the actual number of specimens taken was therefore not as large as might have been expected. Nevertheless, most of the species previously encountered at this site were obtained, and a few additions to the Census records for this 10 Km. square were made.

Species taken in and by the canal were:

<u>Valvata cristata</u> Müller	<u>Arion fasciatus</u> Nilsson
<u>V. piscinalis</u> (Müller)	<u>A. circumscriptus</u> s.s. Johnston
<u>Bithynia tentaculata</u> (L.)	<u>A. hortensis</u> Ferussac
<u>Carychium minimum</u> Müller	<u>A. subfuscus</u> (Draparnaud)
<u>Lymnaea palustris</u> (Müller)	<u>A. ater</u> agg. (L.)
<u>L. stagnalis</u> (L.)	<u>Euconulus fulvus</u> (Müller)
<u>L. auricularia</u> (L.)	<u>Oxychilus alliarius</u> (Müller)
<u>L. peregra</u> (Müller)	<u>Retinella radiatula</u> (Alder)
<u>Physa fontinalis</u> (L.)	<u>Zonitoides nitidus</u> (Müller)
<u>Physa</u> sp.	<u>Vitrea pellucida</u> (Müller)
<u>Planorbis carinatus</u> Müller	<u>Agriolimax reticulatus</u> (Müller)
<u>P. vortex</u> (L.)	<u>A. caruanae</u> Pollonera
<u>P. albus</u> Müller	<u>A. laevis</u> (Müller)
<u>P. crista</u> (L.)	<u>Anodonta cygnaea</u> (L.)
<u>Cochlicopa lubrica</u> (Müller)	<u>A. anatina</u> (L.)
<u>C. lubricella</u> (Stabile)	<u>Sphaerium rivicola</u> (Lamarck)
<u>Hygromia hispida</u> (L.)	<u>S. corneum</u> (L.)
<u>Discus rotundatus</u> (Müller)	<u>S. lacustre</u> (Müller)
	<u>Pisidium milium</u> Held
	<u>P. subtruncatum</u> Malm
	<u>P. nitidum</u> Jenyns

The party then proceeded to Southport and lunched at a cafe on the Marine parade. A short wait for some members who had arranged to meet us was put to good use by the non-marine enthusiasts. The party then moved down to the beach and split into two groups.

One group, led by Dr. Kerney, spent about two hours recording the non-marine Mollusca, in 1-kilometre squares 34/3114 and 34/3115. Altogether 34 species were found, nine of them new to this 10-kilometre square.

Short mown grass and some old brickwork opposite the cafe on the marine parade yielded Cochlicopa lubrica, C. lubricella, Vallonia excentrica, Helix aspersa, Hygromia hispida, Arion intermedius, A. hortensis, Vitrea contracta, Oxychilus draparnaldi, O. cellarius, O. alliarius, Retinella nitidula, Agriolimax reticulatus and A. caruanae. On the extensive sand dunes which begin just south of the built-up area live Pupilla muscorum, Helix nemoralis, H. aspersa, H. caperata and H. virgata, the last two abundantly. At 34/315154 Mr. Norris found several Vertigo antivertigo on a half-submerged piece of wood at the edge of

a small water-filled slack in the zone of fixed dunes, just east of the new coast road. Carychium minimum and Zonitoides nitidus were taken in association. Vertigo antivertigo was found again by a larger slack on the golf course at 34/313146, and Punctum pygmaeum, Euconulus fulvus, Retinella radiatula and Agriolimax laevis occur here in wet moss near the water's edge. In the slacks themselves live Potamopyrgus jenkinsi, Lymnaea truncatula, Pisidium personatum and P. obtusale.

Most of the party spent a pleasant two hours collecting on the extensive sandy beach at Southport. In all, 37 species were found, 23 bivalves and 14 gastropods. Except for four, all these species have been previously listed in Newsletters 21, 25 and 30. The new species were:

<u>Tricolia pullus</u> (L.),	B	<u>Nucula turgida</u> Leckenby & Marshall	B
<u>Eulima trifasciata</u> (J.Adams),	B	<u>Parvicardium scabrum</u> (Philippi)	A

These four species bring the list for Southport to 55 marine species.

The groups then re-united and travelled back to Manchester together. The trip was led by Charles Pettitt, but this report was a joint effort, Mrs. Fogan contributing the Ruffard section, Dr. Kerney the Southport non-marine and Mrs. Pain the Southport marine; the present writer merely acted as 'editor'.

Charles Pettitt

FIELD MEETING TO PORTON DOWN, WILTSHIRE, SATURDAY 9th. MAY 1970

Eighteen Members met at Salisbury Station on a grey morning and set off by car to carry out a survey of the land mollusca on the Experimental Ground attached to the Chemical Defence Establishment at Porton Down. This Experimental Ground covers an area of some 11 square miles comprising mostly open downland dotted with sizeable stretches of mature beechwood which has lain undisturbed for half a century. The first habitat searched (Census Area 23) was one such heavily wooded area, long avenues of beech trees interspersed with clearings and clumps of yew and elderberry. There was plenty of dead wood to be found half-buried in the carpet of leaf-mould beneath the trees and this yielded a plentiful supply of slugs and snails. Some of the clearings were searched too and proved equally rewarding. To the writer's knowledge the Experimental Ground had never been surveyed conchologically before and though a number of species had already been recorded for the square these were considerably augmented by the meeting's "finds" which were as follows:-

<u>Agriolimax reticulatus</u> (Müller)	<u>Marpessa laminata</u> (Montagu)
<u>Limax maximus</u> (L.)	<u>Ena obscura</u> (Müller)
<u>Arion circumscriptus</u> (Nilsson)	<u>Clausilia bidentata</u> (Ström)
and A.c. var. <u>fasciatus</u>	<u>Vitrina pellucida</u> (Müller)
<u>Arion subfuscus</u> (Draparnaud)	<u>Carychium tridentatum</u> (Risso)
<u>Arion hortensis</u> (Ferussac)	<u>Punctum pygmaeum</u> (Draparnaud)
<u>Arion intermedius</u> (Normand)	<u>Vitrea contracta</u> (Westerlund)
<u>Lehmannia marginata</u> (Müller)	<u>Acanthinula aculeata</u> (Müller)
	<u>Vallonia costata</u> (Müller)
<u>Vallonia excentrica</u> (Sterki)	<u>Helicella caperata</u> (Montagu)
<u>Discus rotundatus</u> (Müller)	<u>H. virgata</u> (da Costa)
<u>Cochlicopa lubricella</u> (minima)	<u>Oxychilus cellarius</u> (Müller)
<u>Cepaea hortensis</u> (Müller)	<u>Retinella radiatula</u> (Alder)
<u>C. nemoralis</u> (Müller)	<u>Vertigo pygmaea</u> (Draparnaud)
<u>Hygromia</u> (Trichia) <u>hispida</u> (L.)	<u>Euconulus fulvus</u> (Müller)
<u>Oxychilus alliarius</u> (Miller)	<u>Pomatias elegans</u> (Müller)
<u>Helicigona lepicida</u> (L.)	
<u>Retinella pura</u> (Alder)	
<u>R. nitidula</u> (Draparnaud)	
<u>Helix aspersa</u> (Müller) - A mating pair was found and Members were able to examine the dart.	

The sky cleared and the sun appeared whilst Members sat eating their picnic lunch, and the rest of the day was warm and sunny. After retrieving one Member who had lost his way in the woods the party proceeded to another part of the Experimental Ground where a further search was made. This was a similar habitat

to the first, i.e. beechwood surrounded by downland, but was much smaller in area. No new species were found and the portion of the wood searched consisting predominantly of yew trees, Taxus baccata, yielded no snails, dead or alive. On the adjoining downland the following species were found:-

<u>Cochlicopa lubricella</u> (minima)	<u>Cepaea</u> sp. juv. (Müller)
<u>Vitrea contracta</u> (Westerlund)	<u>Vitrina pellucida</u> (Müller)
<u>Retinella radiatula</u> (Alder)	<u>Oxychilus cellarius</u> (Müller)
<u>R. nitidula</u> (Draparnaud)	<u>Retinella pura</u> (Alder)
<u>Carychium tridentatum</u> (Risso)	<u>Hygromia hispida</u> (L.)
<u>Discus rotundatus</u> (Müller)	(Census Area 23)

In mid-afternoon the group left the Experimental Ground, crossed the London Road (A.30) and shortly entered Census Area 22. First stop was at the village pond at East Grinstead. This was covered with duckweed (Lemna minor) but when this was disturbed by a number of eager conchological scoops it yielded only one species, Segmentina complanata (L.), and a very foul stench as methane and sulphurated hydrogen gases were released from the stagnant water. Two species were found in the village itself:-

Vallonia costata (Müller) and Carychium minimum (Müller)

Then the party adjourned for tea to the Red Lion Inn at the village of West Dean where a magnificent spread had been prepared, including gargantuan slices of sponge cake and large quantities of tea which were most welcome on a hot afternoon. The Inn is most picturesquely situated on the green banks of a shallow river and stands on the county border between Hants and Wilts. With an excellent sense of timing whilst we were eating tea the proprietors of the inn produced a jam jar containing a splendid specimen of Helix aspersa, horns very much to the fore as it peeped over the rim of the jar. This caused much merriment and was immediately christened "The Border Snail" from the geographical location of the Inn. The Society's President, Mr. T. Pain, who was a member of the party, then gave a vote of thanks to Mr. K. F. Sawyer, B.Sc., Deputy-Director of the Chemical Defence Establishment, for acting as official escort and guide at the Experimental Ground.

After tea a search was made of the river, a tributary of the R. Test, and probably due to its somewhat polluted state only the following species were found:-

<u>Valvata piscinalis</u> (Müller)	<u>Lymnaea palustris</u> (Müller) juv.
<u>V. cristata</u> (Müller)	<u>L. truncatula</u> (Müller)
<u>Ancylus fluviatilis</u> (Müller)	<u>Succinea pfeifferi</u> (Rossmässler)
<u>Planorbis leucostoma</u> (Miller)	(Census Area 22)
<u>Lymnaea peregra</u> (Müller)	
<u>Potamopyrgus jenkinsi</u> (E.A.Smith)	
<u>Pisidium</u> spp.	

Four species were found on the river bank:-

<u>Hygromia hispida</u> (L.)	<u>Retinella radiatula</u> (Alder)
<u>H. striolata</u> (C. Pfeiffer)	<u>Monacha granulata</u> (Alder)

While some Members left to catch trains, others continued to Dean Hill, a north-facing chalk escarpment, and a search in scrub and in nettle patches by the roadside produced the following species:-

<u>Pomatias elegans</u> (Müller)	<u>Vertigo pygmaea</u> (Draparnaud)
<u>Ena obscura</u> (Müller)	<u>Vallonia pulchella</u>
<u>Retinella pura</u> (Alder)	<u>Vallonia excentrica</u> (Sterki)
<u>R. nitidula</u> (Draparnaud)	<u>Clausilia bidentata</u> (Ström)
<u>R. radiatula</u> (Alder)	<u>Vitrea contracta</u> (Westerlund)
<u>Vitrina pellucida</u> (Müller)	<u>Zonitoides nitidus</u>
<u>Pupilla muscorum</u> (L.)	
<u>Discus rotundatus</u> (Müller)	<u>Agriolimax reticulatus</u> (Müller)
<u>Hygromia hispida</u> (L.)	<u>A. laevis</u>
<u>Cepaea nemoralis</u> (Müller)	<u>Arion subfuscus</u> (Draparnaud)
<u>C. hortensis</u> (Müller)	<u>A. hortensis</u> (Ferussac)
<u>Helix aspersa</u> (Müller)	<u>A. circumscriptus</u> (Nilsson)
<u>Cochlicopa lubricella</u> (minima)	
<u>C. lubrica</u> (Müller)	(Census Area 22)

Oxychilus cellarius (Müller)
O. draparnaldi
O. alliarius (Miller)
Ceciloides acicula (Müller)
Helicella caperata (Montagu)

Alas, all searches must have their end, and the Members departed reluctantly homewards through the warm evening light. The writer wishes to record her grateful thanks to Mr. John Llewellyn Jones and Dr. M. P. Kerney for identifying the species found and assisting in the preparation of the list.

Janet T. Sawyer

FIELD MEETINGS TO THE WHITE BOG, KILLOUGH, CO. DOWN, NORTHERN IRELAND

It is not often that field meetings of the Conchological Society are held in Ireland, but on May 28th. and again on June 1st. (1970) Mr. A. W. Stelfox, now in his 86th. year, but still an active conchologist, led parties to the White Bog. The White Bog, so called because of the Chara-marl underlying the peat, is the site of a late-glacial lake-deposit and the main purpose of our visits was to obtain more material of Pisidium vincentianum. In this we were unfortunately unsuccessful, but thanks to Prof. G. F. Mitchell and Mr. Craig who accompanied the June party useful palaeobotanical data were gathered.

In the sixty years since Stelfox first visited the White Bog the surface has become covered with a dense growth of Phragmites, in which the party was promptly lost to sight, only buffalo-like crashings in the reeds revealing their whereabouts. Everyone, however, returned safely.

A full account of the White Bog deposits and their Mollusca (by A. W. Stelfox and J. G. J. Kuiper) is in preparation and will appear shortly.

N. F. McMillan
L. D. Harfield

PUBLICATIONS RECEIVED

Circular No. 113 (Nov. 1969), Conchological Society of Southern Africa.

Included are notes on Chitons with odd valves by C. M. Connolly, various species of Marginella with identifications by D. H. Kennelly and R. O. Carlsson. There is an article on the semi-cowry Pseudocypraea adamsonii Sowerby new to the Indian Ocean by Prof. F. A. Schilder, and one by the late Percy Elston on Early Conchologists: this part deals principally with Bonanni and Lister and is based mainly on Mr. Dance's book 'Shell Collecting: an Illustrated History'. The issue is completed by minutes, requests for exchanges and Field Meeting notes.

Editor, R. O. Carlsson, [REDACTED], Pinelands, Cape.

Circular No. 115 (Feb. 1970).

A very interesting issue. There is an illustrated review of South African freshwater molluscs (to be continued), by C. C. Appleton. A plea for the collection of beachworn shells is entered by Steve Fenwick. He reminds us that all introductory books forbid us to treasure knocked-about shells but points out that a study of the old historic types in London and Oxford reveals that many of them are in appallingly poor condition and almost unrecognisable by comparison with a live-collected example of the same species. A series of specimens, condition-graded for each confirmed species, seems to be the ideal.

D. H. Kennelly has some remarks concerning the occasional phenomenon of an unusually heavy concentration of shells of one species on a particular small area of a beach, and Professor Schilder contributes some erudite notes on Phenacovolva labroguttata, a new South African semi-cowry.

A short article on the various types and techniques of boring and burrowing

marine animals by Mrs. J. Day, claims our tears for the unfortunate oyster and the almost equally pitiable shipowner!

Irish Naturalists Journal; Vol. 16, No. 9, January 1970.

This issue contains an article of particular interest to Conchologists by L. M. Cook reviewing the genetical studies on Helix aspersa by A. W. Stelfox who commenced this work about 1903-4 and to a great extent, continues it to this day. He was of course, one of the first ever to interest himself in the Mendelian principles and his early work contributed in a major way to the establishment of the new science. He helped in establishing the dominance relations of many of the major genes for Helix and studied reasons for band variations and the factors influencing their inheritance through many generations; he also did pioneer work on non-segregating factors such as shell size, and his latest paper (1968) describes an attempt to modify the expression of the factor of scalariformity. By breeding for conical shape the shells in some specimens started to develop scalariformity but with continued growth, the shape was corrected and reverted to normal except for the final angle of the apex. Finally, completely scalariform individuals also appeared, and he was able to retain this trait through subsequent generations. This is proof that scalariformity is not always simply the result of a rare single gene mutation.

"The result must be particularly satisfying for Stelfox" says Cook, "because it brings his work on the genetics of the group full circle, to the point where it is possible to interpret a biometric character in terms of segregating loci, each of comparatively small effect. He has never thought of himself as a geneticist.... this makes his varied contributions to the genetics of the group the more remarkable."

The I.N.J. also notes (F. A. Gibson) the introduction of Mercenaria mercenaria to Ireland. Four batches of 900, each enclosed in a plastic-mesh covered timber frame rendering escape unlikely, have been experimentally located respectively in Wexford Harbour, Bannow Bay, Cork Harbour and Oysterhaven, and regular observations are being made.

The Middle-Thames Naturalist. Annual Report of the Middle-Thames Natural History Society; No. 21: 1968.

This publication contains two articles on the mollusca of South Bucks. and of Berkshire north of the Blackwater River: 'The Conchology of the Middle Thames Area' and 'Further Notes on the Mollusca of the Area', both by J. B. Hall and which, taken together, are of a good deal of interest and importance, particularly to amateur naturalists who have not so far given detailed attention to conchology. It is in fact, as Hall points out, the first article on the subject which has appeared in these Reports in twenty years, and is bound to stimulate interest in the group.

The first article explains briefly the ten-kilometre square method of recording, and proceeds to list all mollusca by scientific name and the squares from which each has been recorded. The author explains his reasons for ignoring popular names (alluding to them incorrectly as 'trivial' names), and certainly the points do need stressing from time to time. Recorders' initials follow each recording, but this is invidious because the records tabulated are those received from 1950 to date whereas the recorders quoted appear to comprise those people who first logged the species under the 10KM square system which was not instituted until about 1962. Certainly the workers in the area concerned over the last twenty years total a great deal more than six and the effect is to give a reduced impression of the scale of work that goes on in the provision of data.

The author justly points out that records must still be regarded as far from complete in the area, some squares being still comparatively neglected, so that plenty of good opportunities for careful field-work remain even in the Home Counties. Some snails can be found only at certain seasons of the year, some tend to be inaccessible at all times, and others have a great facility for slipping through the meshes of a scoop. All this should give much encouragement to sharp-eyed naturalists.

The articles are illustrated by a good double-plate of selected shells, photographed by R. F. Cumberland.

T.E.C.

GENERAL NOTES

Large Anodonta cygnea (L.) from Claughton, nr. Garstang, Preston, Lancashire.

As a supplement to the recent note on large Anodonta cygnea from this locality it may be of interest to list the dimensions of some of the large specimens obtained, and also a few notes on other large examples. In all cases Height = umbones to lower margin; length = anterior to posterior, and measurements are in millimetres.

a).	L. 220 mm	H. 124 mm	(Pain Coll.)
b).	L. 214 mm	H. 112.3 mm	(Nat.Hist.Mus. ex Heathcote)
c).	L. 206 mm	H. 112 mm	(Stelfox Coll. in Liverpool Mus.)
d).	L. 205.5 mm	H. 112.5 mm	(Nat.Hist.Mus. Cuming Coll. no loc.)
e).	L. 202 mm	H. 114 mm	(Nat.Hist.Mus.)

The above are all the specimens with lengths exceeding 200 mm which I have been able to trace. All are from the Claughton locality except d).

Manchester Museum have two Claughton examples but these only measure L. 181mm, H. 104 mm. and L. 175 mm, H. 99 mm. respectively.

In Liverpool Museum there is a fine specimen measuring L. 180 mm. H. 100 mm. from Raby Mere, Wirral, Cheshire, collected before 1863. This "mere" is really a disused mill-pond and a well-known "beauty-spot"; the water is run off periodically but I have never found any Anodonta spp., not even old valves, on a good many visits.

Haas (1941) refers to a Polish specimen (quoting Feliksiak 1930) which far outstrips the best we in these islands can do - with a length of 260 mm. and height of 130 mm!

References:

- Feliksiak, S., 1930. Ueber riesige Exemplare der Teichmuschel Anodonta cygnea (L.).
Fragm. faun. Mus. Zool. Pol., I, 135-142, pl. 4.
- Haas, F., 1941. Records of large fresh-water mussels.
Zool. ser. Field Mus. nat. hist. 24, 259-270.

I am grateful to Mr. Peake and Mr. Pettitt for details of material in the British Museum (Nat.Hist.) and the Manchester Museum.

Nora F. McMillan

Mapping Scheme for non-marine mollusca.

May I remind members that I am always very pleased to provide copies of master cards for particular 10-kilometre squares or blocks of squares? As recording advances, the danger of duplicating records rises, and much energy is sometimes expended in accumulating information which is not new. Our man-power is so slender that this is a pity! By reference to the master cards, efforts can be directed towards filling gaps in the 10-kilometre square lists, often by concentrating on categories of habitats which may have been overlooked. For example, squares with good terrestrial lists may be deficient in freshwater records (or vice versa). Common synanthropic ('garden') species are also often missed. Even in well-recorded squares, surprising chance blanks of no significance may remain.

M. P. Kerney,
Dept. of Geology, Imperial College,
London, S.W.7.

PAPERS FOR STUDENTS

This series of papers was initiated to help young people aged 12-18 when it was decided by the Society to inaugurate Junior Membership in 1964. Since then the scope of the series has been widened with the result that distribution has extended to very many countries overseas and also to Libraries and Institutions in this country. The original papers, and indeed many of the later ones, have had to be reprinted to meet this demand. We expected some rise in costs.

It is therefore necessary to publish a list of revised prices.

- | | | |
|--|------------------------|-----|
| (1) Introducing Junior Membership. (Now replaced by a more attractive coloured leaflet obtainable free of charge from the officers of the Society) | | |
| (2) Collecting Non-Marine Mollusca.
(L. W. Stratton) | 3 pages | 1/- |
| (3) Key to the Land Shells of Great Britain.
(A. E. Ellis) | 9 pages | 3/- |
| (4) A Short Glossary of Molluscan Terms.
(T. Pain) | 9 pages | 3/- |
| (5) Preparation of the Radula. (Formerly 8 pages illustrated - revised and enlarged edition in preparation) D. Claugher | | |
| (6) Post-Pliocene Fossil Mollusca.
(Land & Freshwater)
(P. Cambridge) | 8 pages | 2/- |
| (7) Literature on British Molluscs.
(S. M. Turk) | 16 pages | 4/- |
| (8) Dissecting Snails.
(M. R. Block) | 13 pages (illustrated) | 4/- |
| (9) The Identification of British Chitons.
(G. Matthews) | 4 pages (illustrated) | 3/- |
| (10) The Care of the Collection.
(A. Blok and T. E. Crowley) | 7 pages | 2/- |
| (11) Collecting British Marine Mollusca.
(S. M. Turk) | 16 pages | 4/6 |
| (12) Key to British Slugs.
(A. E. Ellis) | 12 pages (illustrated) | 3/6 |

To be obtained (post free) from H. E. J. Biggs, [REDACTED], Bromley, Kent, [REDACTED]. Remittance with order will be appreciated. Special terms to the trade.

JUNIOR MEMBERSHIP

Elected - 18th. April 1970.

COXHEAD, N., [REDACTED], Orpington, Kent.

Elected - 16th. May 1970.

ANDREWS, Christopher, [REDACTED], Colchester, Essex.

QUIRK, Andrew, [REDACTED], Peel, Isle of Man.

STEEDMAN, Douglas, [REDACTED], Edinburgh, [REDACTED], Scotland.

WEBSTER, Mary Louise V., [REDACTED], Christchurch, Barbados, West Indies.

Transferred to Senior Membership.

SMARTT, John T., [REDACTED], Philsboro, Dublin 7.

REVISION OF JUNIOR ANNUAL SUBSCRIPTION

Due to the increased cost of duplicating, also to higher postage rates, the Council of the Society has decided that it will no longer be possible to retain the present Annual Subscription of 7/6d. for Junior Members.

Will all Junior Members please note that the 1971 Annual Subscription (due 1st. January 1971) will be 10/- (50 new pence). Junior Members will still obtain remarkably good value for money, as the actual cost to the Society of the publications which they receive is in the region of 18/-.

To offset this increase for new Junior Members the present Entrance Fee of 2/6d. for Junior Members will be abolished after the end of 1970.

Marjorie Fogan, Hon. Treasurer

SEVEN YEAR COVENANTS

Dear Members,

Once again I am appealing to all eligible Members who are not yet paying their Annual Subscriptions by means of Seven Year Covenants.

From the 3 Members who took part in the trial run in 1968 the number of covenanted Members has now in 1970 risen to 50, and as a result the Society will benefit by something like £70. This is a very useful amount, and a great help towards stemming the constant rise in costs which we have to face.

All Members are eligible to pay by covenant if they pay income-tax in the U.K. at standard rate, unless they are already claiming a rebate of tax on their Subscriptions as a professional expense.

PLEASE NOTE - THIS DOES NOT COST YOU MORE !

If you pay by covenant you will pay the usual Annual Subscription of £2, but the Society will be entitled to reclaim tax to the value of £1.8.1 which will be diverted from your normal tax payment by the Inland Revenue Department.

Ask yourselves - would you rather the Conchological Society had the money, or the Inland Revenue Department?

It is not too soon to start thinking about 1971, so if you have not already signed a covenant and would like to do so please write to me for a covenant form and explanatory letter.

Marjorie Fogan, Hon. Treasurer.

[REDACTED], Atherton, Manchester [REDACTED]

SHELLS FOR SALE.

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

COLLECTION OF INDO-PACIFIC SHELLS AND CORALS FOR SALE.

Many 'live-taken' - Volutes, Cones, Olives, Murex, Cowries, Neritas, Haliotis, Helmets, Tridacnas, Ark shells and many other gastropods and bivalves. Corals of many families such as Fungiidae, Faviidae, Siderastreidae, etc., also sponges - Demospongiae. Prefer to sell entire collection - further details and appointment to view - K. M. Green, [REDACTED], Shrewsbury, Salop.

EXCHANGE WANTED.

Mrs. L. M. Gurr, [REDACTED], Christchurch 2, New Zealand. Will exchange Voluta and other deep water shells for your species (British).

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

RECIPE FOR REPOSE

From the cult of the headlong and hasty,
From the worship of spasms and speed,
We turn to a topic more tasty
To serve a contemplative need;
From rockets where ruin the aim is,
And all that the atom entails,
We look for relief--and our aim is
The watching of snails.

For the snail is an excellent creature,
It hates to be hustled along;
Repose is its dominant feature,
Rapidity seems to it wrong.
The house problem leaves it unworried,
It bears on its back its abode;
Unharrassed, unhampered, unhurried,
It goes its own road.

So here's to the snail and its watchers
All pledged to the leisurely life,
Forsaking the bustle of botchers
Who rush into trouble and strife !
When stresses and strains seem to harden,
Would you weather the gusts and the gale ?
Get you out to the green of the garden
And study the snail !

By 'Lucio' (Mr. Phillips), "In recognition of the first anniversary of the British Snail-watching Society," Manchester Guardian, 7 September 1946.

(From A. E. Ellis)

COLLECTING SNAILS IN HUNGARY

A three days' trip to the Bükk Mountains

You do not know Dr. Endre Krolopp, or as he introduced himself Krolopp Endre, of the "Allami Földtani Intézet", the Central Geological Institute at Budapest. He is a pleasant companion, a good scientist but an extremely bad correspondent. We **would never** have managed to co-operate if I had not paid him a visit in the autumn of 1967, on my way from Baja, where I had collected the Danube fauna of which I have already written (Newsletter No. 31, December 1969).

Between two trains I spoke to him, looked at his Helicellae, and invited him to visit our 3rd. international Colloquium at Weimar in September 1968 and to give there an account of any calcareous tufa of the last interglacial and its molluscan fauna - which he did and was a great success - and received an invitation from him to stay for two weeks in Budapest. Within an hour, discussing some problems, we became friends at once, which would have been impossible without that meeting.

In May 1968 we met again at Budapest. He had done his very best for me, but unfortunately I had not yet had time to revise all the fine fossil material gathered at some famous sites - I will tell you later on. Finally I mentioned

that I needed to know the ecology of Orcula dolium (Draparnaud) and the species does not occur in my country. So he proposed that we go to the Bükk Mountains for a few days.

It was the 17th. of May and we started from the Budapest Keleti Station by railway to the fine old town of Eger. Then he proposed to leave our bags at the station and at once go on by a secondary train to Monosbél. As everything was new to me I trusted him to know best. It was a fine deposit of calcareous tufa that he showed me, but the day was very hot and I envied my host who stripped to a pair of shorts. However we climbed up to the youngest strata, not at the very top but not much below it there was a stratum of loose material containing a rich fauna of which he told me. The age of that deposit is not yet determined, either the end of the Last Interglacial or early Holocene. Of course we did not obtain the complete snail-fauna in an hour's collecting, but we found:

Sadleria pannonica
Carychium tridentatum
Radix peregra ovata
Orcula doliolum apex
Discus rotundatus
Aegopinella pura
Oxychilus cellarius

Clausilia sp. fragment
Bradybaena fruticum
Euomphalia strigella
Helicodonta obvoluta
Helix pomatia juv.
Pisidium personatum (rev. Kuiper)

The presence of Sadleria pannonica shows, as I had already learnt from other Hungarian tufas, that this was deposited by cold water, thermal springs being indicated by Theodoxus prevostianus, Fagotia acicularis, F. esperi and Amphimelania holandri..... The present land-snails indicate a woodland, as is usual in Hungary the trees are spaced rather widely with a lot of undergrowth.

A little deeper we found another unconsolidated stratum, recently opened, which evidently was new also to Dr. Krolopp himself. This must be Pleistocene, he said, but we were not very lucky here, finding nothing but some Helix pomatia, an ordinary species in Hungary.

But there was no time for disappointment. We went southward along the slope and a little deeper still. Here we have two strata containing Helicigona banatica, he said. This species is for Central Europe one of the climax indicators of several interglacial periods, and in Thuringia we have it only in one climax stratum of the last Interglacial, in the literature called "Canthensis-Schicht" after the old name "Helix Canthensis" formerly used for fossil H. banatica. Two Banatica strata immediately following each other, that was indeed a fine place! The upper Banatica stratum, with white shells in red matrix, was broken down and we could only find a few large shells of Bradybaena fruticum and H. banatica, but the lower white stratum was more accessible and we found there some more species, viz.

Vallonia costata
Succinea oblonga
Discus ruderratus
Aegopinella pura
Aegopinella minor
Zonitoides nitidus
Cochlodina laminata fragm.

Ruthenica filograna
Clausilia sp. frag.
Bradybaena fruticum
Perforatella bidentata frag.
Perforatella vicina
Helicigona banatica frag.

As H. banatica does not now occur in the Bükk Mountains, we can believe that at the time of the deposition both strata were warmer than the Hungarian recent climate. This fauna, even as fragmentary as it is, shows the presence of woodland, but rather damp (Z. nitidus, P. bidentata).

Pleased with our results we climbed down to the village, hot and thirsty, and took the next train back to Eger. Here adventures began. Dr. Krolopp had ordered rooms for us and had trusted that it was all right, but when we came to the hotel we found that it had been booked out by a congress, and so our Odyssey began; where to sleep? The travel bureau found us rooms in private houses for one night, and for the second one a chalet in the camp-site for each of us.

After a wash and change we went for a stroll round the city, castle, minaret, and all that was worth seeing, and then for dinner and tasting the local wine. "Nobody drinks water here", said Dr. Krolopp "for there is only thermal water,

that is a strong reason for drinking wine!"

Next morning we first took our bags to the camp-site and then started by rail for the nature reserve Szalajka-Völgy, the valley of the small brook Szalajka. Szilvasvarad is the name of the station from which we began our wandering. We enjoyed the shade of the trees, the narrow valley, the running water, but the earth was dry and in vain we looked here and there along the lower part of the brook. About halfway along there is a fish-breeding place with some artificial ponds, and these we tried but found no freshwater Mollusca but Galba truncatula and Radix peregra peregra and some empty shells of these land snails:

Cochlicopa lubrica
Oxychilus glaber
Zonitoides nitidus

Perforatella rubiginosa
Trichia hispida

Perhaps the brook itself would furnish a better fauna, at least some Pisidia? A little way up the valley we found a place where we could get down to the water and reach a muddy place for sieving for Pisidia. We got Pisidium subtruncatum, P. casertanum and P. personatum and a few empty shells of Sadleria pannonica and Zonitoides nitidus. Now I was eager to get living Sadleria, and Dr. Krolopp promised me that we would get them soon. Somewhat further up the valley he showed me a rocky slope, rather steep, and at the foot a cold spring rose, running over stones down into the Szalajka. Here we turned over stones and found Sadleria sitting on the underside, not at all rare. I was glad of this find but did not forget that I had come to collect Orcula dolium.

Now we continued upwards along the Szalajka, the valley becoming more and more narrow until the road came to an end. Here we see a spring running down the slope into an artificial reservoir, and this is the source of the Szalajka. Here we stopped and had our lunch sitting on the grass. I was too hot to have much appetite so I left my companion to his bread and sausage and again tried to collect along the left bank of the stream among grass, under shrubs and at the forest edge. There were no mosses, but here one snail, there a second, and when Dr. Krolopp had finished his meal and came looking at my success I could show him;

Discus perspectivus
Arion rufus
Arion circumscriptus
Vitrea diaphana
Aegopinella pura
Aegopinella minor
Oxychilus glaber
Lehmannia marginata

Cochlodina laminata
Laciniaria cana
Bradybaena fruticum
Trichia unidentata
Perforatella incarnata
Perforatella vicina
Isognomostoma isognomostoma

An English collector would have been glad to see some of these species, but I personally was most glad of that one single specimen of Discus perspectivus (Mühlfeldt), but why? In Thuringia I had got this species in hundreds out of the last interglacial of the Weimar Park caves, and from some strata of Taubach as well, the High Interglacial. Now for the first time I found it living! Besides, the other results were not bad, but still Orcula dolium was missing. Now, on our way back down the valley we will look again, we resolved.

A little below the head of the valley there was a pond with a wide border of Petasites and Mentha so we stopped and collected at the water's edge:

Radix peregra peregra
Succinea oblonga
Zonitoides nitidus

Bradybaena fruticum
Trichia hispida concinna

and in the water some Anisus leucostoma, a single Sadleria pannonica sitting on a stone and one Galba truncatula as well. Below this pond the Szalajka fell in a cascade and then a small tributary valley came in on the left side. Here, said Dr. Krolopp, was an old habitat for Orcula dolium. I knelt down and searched between the herbs under trees and shrubs: one young Abida frumentum, two Ena obscura, nothing else.

There is one possibility left, said Dr. Krolopp, the rock above Szikla-forrás, the rock spring, where we obtained Sadleria. So we stopped there again, looked into all the holes full of dead leaves and mud, overgrown with herbs and

small shrubs. "Oh," I called "I have another species, look, a Helicigona". The doctor looked, yes, it was Helicigona faustina. And then I found a small ribbed shell, resembling a Discus but still different, and some larger Pupillids as well. In the end we found we had got:

Abida frumentum
Chondrina clienta
Spelaeodiscus triarius

Vallonia costata
Laciniaria plicata
Helicigona faustina

Of course I had never seen living Chondrina clienta, Spelaeodiscus triarius and Helicigona faustina before. Had I no reason to be glad with what I had collected, though Orcula dolium was not among the material? Yes, I was satisfied; after all it had been a fine day in beautiful surroundings and with interesting snails, and last but not least in the company of a good friend. Perhaps tomorrow we will succeed in finding what you seek, he said.

The second morning at Eger I get up with the sunrise, awakened by my cold feet. In Hungary the climate is much more continental than in Germany, days are warmer, nights are much colder than at home. But with the sun, a new warm day had come, but by the clouds coming up we thought it might rain. Why not? then perhaps we will get our Orcula! First we had a long bus run right through the mountains to Lillafüred, and when we left the bus we had to put our coats on, for it really rained. So we began our collecting at a special dry place. Below the great Sanatorium there was a rocky part that looked somewhat like an abandoned quarry; solid calcareous tufa hanging over a stratum of loose material. A brook near the Sanatorium fell in a high waterfall into the depth. We climbed down to the loose stratum where we found no fossils except Sadleria pannonica, but here and there on the rocks or between herbs and shrubs there were some living snails creeping about:

Vitrea diaphana
Aegopinella minor
Oxychilus glaber

Laciniaria plicata
Bradybaena fruticum
Helicigona faustina

Then we went further on. There was an artificial lake surrounded by forest, a sort of promenade road along its banks. We followed the road to a small cold spring called "Eszperanto-forras", with the richest population of Sadleria I had met. After having collected here we went back and somewhat up the highroad into the mountains whence we had come by bus. There were limestone rocks grown with the well-known blue blossoming grass Sesleria coerulea; further on the highroad passed through a tunnel and beyond this we collected for the third time. Here are the three results:

	Along the lake	beneath the tunnel	beyond the tunnel
<u>Abida frumentum</u>	-	X	X
<u>Chondrina clienta</u>	-	X	X
<u>Zebrina detrita</u>	-	X	X
<u>Ena obscura</u>	X	-	-
<u>Vitrina pellucida</u>	-	X	X
<u>Vitrea diaphana</u>	-	X	-
<u>Aegopinella minor</u>	X	X	X
<u>Oxychilus glaber</u>	X	-	X
<u>Cecilioides acicula</u>	-	-	X
<u>Bradybaena fruticum</u>	X	-	-
<u>Perforatella vicina</u>	-	-	X
<u>Euomphalia strigella</u>	X	X	-
<u>Helicodonta obvoluta</u>	X	-	-
<u>Helicigona faustina</u>	X	X	-
<u>Helix pomatia</u>	X	X	X
	8	9	9
			species

Along the lake we had a genuine forest fauna, along the highroad we had a fauna of warmer and drier places, both collections from the roadside very similar to each other, perhaps versions of the same fauna. But still we had no Orcula dolium - we were resigned to it.

Dr. Krolopp called me to stop collecting, for it was time for the bus to take us to Miskolo. At the railway station he took me to a tramway, saying "Now we are going to Tapolca". That is a thermal bath quite near the town, hot

springs in caves, with bathing there, but also in the effluents there is a thermal fauna he wanted to show me. It was not easy to get to the water as the effluent flows in a canal with steep sides, but from a bridge we could see dark snails, conical ones and round ones, sitting on the yellow stones. Some boys in bathing dress came down the canal, and when Dr. Krolopp called them they willingly got us some black-dotted stones from the water and gave them to us, refusing any reward for their help. So we got the thermal fauna of Miskolo-Tapolca:

Fagotia acicularis audebardii
Physa acuta

Theodoxus prevostianus

This ended our collecting trip. We had not found what we had wished for in the beginning, but a lot of other species that I had never hoped to see. So I said my thanks to Dr. Krolopp and say it again now. Also I thank Mr. Kuiper, who has kindly revised all Pisidia collected, as well as Dr. Forcart who confirmed my determinations of the Vitrinidae.

Hildegard Zeissler,
Institut für Quartärpaläontologie, Weimar.

PUBLICATIONS RECEIVED

THE ECOLOGIST, Vol. 1, No. 1, July 1970. Monthly, 4/- Editor, E.R.D. Goldsmith. Subs. Dept., [REDACTED], Bletchingley Road, Merstham, Surrey.

Shortly before seeing this publication, I had been reading about the dumping locally of acid liquid waste on a country road-side. This had evidently been going on for some time, and had killed all the vegetation, including some mature willow trees, and also presumably all the animal life for quite a distance all round. The County Council were doing what they could to counteract the blight with a hundred tons of lime dust; the culprits had not been traced. If they are, will they hear themselves called irresponsible from the Bench? Lip-service is being paid to the problems of pollution by many who cannot or will not do much else about the matter, and in thinking about the incident described, I called to mind the Seven Deadly Sins and wondered which one of them was involved. Was it selfishness, greed of gain, or 'merely' laziness? Nearly all the failings of humanity can be wrapped up in this business of pollution, and this is why the fight for cleanliness must be an uphill one for the comparatively few who care. What research is going on in the matter of trade waste disposals? What is the proper procedure for a small firm? What are the responsibilities of the Local Authorities? Most of us are pretty vague about such things.

Last time I walked on a beach, it was late in the evening; I counted beer and lemonade bottles by the dozen, abandoned with plenty of plastic cups and other rubbish by the day's trippers and well placed for the night tide to break against the rocks so that the babies' feet might be gashed the next day. Any protest is likely to provoke the remark that there are those who are paid to pick these things up anyway. It seems a part of human nature itself that containers once empty must be abandoned forthwith, just as a child, having finished his meal, will instinctively push his plate to one side. People who set out to work against the promptings of instinct have a hard task ahead of them unless they can rely on an efficiently imposed discipline.

Ecology, for long thought of as the study of living things in relation to their environment, now seems to connote as much as anything, a study of the causes and cures of defects in environments - in other words, it must largely concern itself with pollution. Accordingly, the 'Ecologist', in the statement of policy accompanying its first issue, makes it clear that it exists to arouse conscience at all levels about the menace of unchecked population growth and unreal 'standards of living'. It attempts to influence decision-makers into revising the basic assumption that 'human ingenuity and modern technology will always pull us through'. The problem here could be in preaching to the converted, since only those already interested or concerned are likely to welcome the publication. Probably the indifferent majority does not need to know: only to be legislated for.

The cover is striking enough, showing a man drowning in sludge; the main contents are as follows. The Editorial, pointing out the preoccupation of

scientists, like most other people, with short-term results, and their lack of concern with wider problems; the urgent need to stop thinking of standards of living as an accumulation of goods and services instead of a quality of life in tune with Nature.

'No Standing Room' by Dr. Aubrey Manning shows that of all the pollution problems facing mankind, over-population is certainly the most serious. In this country alone there are no signs that the backlog of housing, schools, hospitals - prisons - etc. can be met; the British Isles are incapable of holding more than a certain number of people, houses, airports, cars, oil-refineries, industrial complexes, etc.. Action to curb growth must inevitably come: why not now, while there is still something to save? The first step might be to stop unnecessary and irresponsible scientific work on multiple births and life-synthesis. Unwanted fertility is many peoples' problem - with which they get no official help.

'Medicine and Agriculture' by Prof. R. Lindsay Robb, shows that these two disciplines should be regarded as facets of a single subject. The National Health Service is at present mainly a disease-fighting service, it does little to promote good health because it has no say in the production of the foods on which health depends. Agriculture on the other hand, has become a means of converting the greatest amount of raw material into finished product in the shortest time at maximum cash profit; there is no incentive to consider quality or nutritive value. Farming however, unlike most industry, deals with Life, and this has in the past been implicitly acknowledged in the philosophy of husbandry, based on human terms of quality and service. But not now.

'The Menace of the Milk Bottles' by Lawrence D. Hills. Almost every week a new P.V.C. container encloses a new product, and this useful plastic material is made into waterproofs, insulation, 'leather' jackets and boots, upholstery, pipes and many other things. The fantastic onset of metrication is likely to bring P.V.C. milk bottles of unexpected capacity to replace the familiar glassware. Progress to this end is happily being made with no consideration for the great quantities of plastic scrap which will continuously arise. Polythene containers tossed overboard are already killing fish in large numbers - even a shark cannot digest stuff like that. If P.V.C. is burned (and most rubbish tips burn spontaneously anyway), the product is gaseous hydrochloric acid, a virulent fluid which destroys vegetation, corrodes metals and even brick, and does the human body no good at all. Its release into the atmosphere has been illegal ever since the primitive industrial times of 1860, and yet we do it now and think to do it more. Is this a part of the 'progress' dreamed of by the Metrication Board?

'Is there a peaceful Atom?' by Peter Bunyard. Increasing amounts of radiation are looked on complacently as long as they stay below some arbitrary figure, but disease may result from very low doses even under natural conditions. Waste radioactivity is continuously being put up in containers, these have on occasions been found to leak: there is nowhere safe on the whole face of Earth where such things may be parked. It is still proposed to use nuclear explosions for releasing underground oil or blasting canals: nuclear power stations have a mere 25 year life but what happens to them after that? Their contents are permanently lethal. Somebody else's worry, it seems.

'Bringing Order to Chaos' by Edward Goldsmith. Simplicity of organisation brings vulnerability; organised complexity tends to an optimum size for efficiency, but present-day craving for vast and centralised corporations introduces fatal weaknesses into Society. Cancer is an example of undisciplined growth of tissue, and a modern city is an equally good example. Rather similarly, antibiotics replace natural processes by over-simplified 'blanket' treatments, and the results are impossible to contemplate without foreboding.

'One Jump ahead of Malthus' (Michael Allaby) deals with proposals to ensure adequate food supplies for an increasing population. I.W.P. is developing wonder-cereals of greatly increased yield to satisfy World hunger; but the Writer claims that these are bound to fail because of the enormously increased requirements (up to 27 times present needs) for nonexistent fertilisers: complete exhaustion of the soil after which further dressings drain straight through and poison water sources: ecological imbalance which will cause increase in pests, weeds and diseases - to which the new cereals will certainly be very prone. Immunities to pesticides are being rapidly built up, and hybrids are genetically unstable: how are the vast irrigation schemes going to be organised and paid for? F.A.O. plans are short-

term, and it may take thirty years to recover from a five-year plan.

And so the grim pattern continues to emerge. 'Eskimo Knell' by Robert Allen demonstrates how the discovery of oil in Alaska, developed according to modern policies, will almost literally destroy human communities, animal life and environment throughout the Far North. Caribou 'treks' will be cut and the animal will be doomed. Proposals apparently show little understanding that there is any ecological problem to be faced.

The Periodical contains book reviews, reports of conferences and items of research. Many telling points continue to be made, for instance that the universal sale of contaminated foods has resulted in pure foods now being regarded as a luxury. In Wales, vigorous action is reclaiming annually 1600 acres of derelict land at a cost of £3.4M., which sounds encouraging until one finds that a further 3500 acres are being rendered derelict each year. About 80 tons of solid material are dumped into the River Ebbw every DAY - the bed of the river is bright orange from an inch thickness of iron hydroxide on top of three inches of tar. One might conceivably have expected to hear of such a thing in 1870. Limpets play a valuable part, it seems, in removing marine oil pollution, but are very sensitive to detergents. However, the latter, though discredited, are still being used as much as ever for beach cleaning. We see that although much money is being spent, mistakenly or otherwise, in clearing up mess, far more is being laid out in creating it.

There is a tragic account of the breakup of the tribal system in Southern Sudan, deliberately encompassed with the aid of semi-official murders, by the Arab North; and a telling note on the worship of artefacts wondering why, when millions can be found for the restoration of cathedrals for instance, nobody will pay for the preservation of the great Whales. A painting by Stubbs of an Indian Cheetah was sold at Sotheby's recently for nearly a quarter of a million pounds, but the animal itself is extinct, not a penny spent to save it. Why should the Apollo rocket in all its clumsy costliness, be so much more worthy of attention than the albatross?

In another review, commercial practice is held to assume that man's wants are infinite and can never be met. The sophistication of technology merely increases what we think are our needs and anything which becomes technically possible has a habit of getting done regardless of its desirability; but essentially, man's wants are few and easily satisfied. We don't really need to get to New York (if at all), in three hours, despite the Concorde project.

Not much about Mollusca in all this, of course, but I am not apologising for the unusual length of this review because the subject is of such a critical nature that it concerns us all, and members of our Society, who are surely all nature-lovers, have a particular chance to observe things for themselves on field meetings and shell expeditions, and are thus primarily involved. At the same time, Man should not live on the physical plane alone, and it must give even more cause for concern to realise that ecology is but the material side of things and half of the pollution to which we are subjected comes through the moral side. Organisations crowd upon us, many of them officially supported, which retail crude violence as a cosy entertainment, peddle commercial nudity for cash, and offer us public representations of fornication, sexuality and deviationism under the guise of advanced and thoughtful art-forms. They are supposed to be avant-garde: they are usually profitable; but pollution after all, is usually dirt, and those who roll in it must expect to be called dirty.

T. E. Crowley

The fact that interest in shells continues to grow, especially in the United States of America, is reflected in the increasing number of periodicals on the subject, designed to appeal to the collector, and it is to be hoped that the best of these will survive and become a permanent feature of the activity.

A notable example, recently launched on a commercial basis, is Of Sea and Shore, to be published in four issues at \$3.50 per year, postage extra, by T. C. Rice, [REDACTED], Port Gamble, Washington 98364, U.S.A. Vol. 1, No. 1 indicates that although the coverage, as usual, is likely to be almost exclusively marine, the net is going to be cast as widely as possible;

for example the 52 pages of the edition present everything from an article of very real scientific value on 'Two Species recently discovered invading the Black Sea' by Prof. Dr. Al. Grossu, to a 'Hidden Names' Puzzle.

The Editor makes clear his opinion that the scientist in malacology is well catered for by specialist writings but that the amateur, particularly if he is of a scientific turn of mind, has very little (in the United States at any rate) in the way of publications to which he can turn for information. It is his intention to fill the gap, and his proposals are very clearly set out on the editorial page.

Articles of interest include 'From a Naturalists Diary', an account of the travels in Russia in 1928 by that redoubtable traveller Walter Eyerdam; a survey of shell collecting in Mauritius; 'Teeth of Iron', a survey into research concerning the composition of *Chiton radulae*; notes on collecting on the coast of South-west Africa; an account of efforts to keep *Tridacna* alive in captivity in a research aquarium: home-made traps for seashells in Hong Kong: an introduction to Shell Art with suggested methods and lines of activity: an article in French entitled 'A propos d'erreurs dans la Classification', and another with some very useful techniques in the Preparation of Chitons for the Collector's Cabinet, together with a quantity of shorter articles, notes, poems, illustrations and a comprehensive advertisement section.

Two other periodicals have recently appeared and deserve a welcome; Oregon Shell News is one, the venture of a well-established Club, the Oregon Society of Conchologists, 3440 S.W. Alice No. 39, Portland, Oregon 97219, U.S.A. The News consists of a well-printed four page pamphlet which evidently intends to deal with a wider field than the Mollusca. Of the two main articles, one reports a collecting trip to Clallam Bay, located over the border into the State of Washington, and evidently famed for sea urchins and starfish as well as chitons. The other article is ethnographic, dealing with the extraordinarily varied uses made of shells by the 'Indians' of the North-west coast. There are good practical hints - some of them new - on the cleaning of freshly collected shells, and an account of a government assistance scheme to enable the Lummi Indians of Puget Sound to start raising oysters and red algae and thus become financially independent. Also included is a list of local fossiliferous localities with all data.

The other periodical is La Conchiglia, published monthly from Piazza S. Lorenzo in Lucina 35-C.P. 00186, Rome. This is the second year of issue, but an International Edition is being made available with an English translation from now on; this is evidently directed at the American market. It is subtitled 'A monthly review of the Marvels of the Sea' so we may once again expect no attention to non-marine mollusca, however there are some fine coloured illustrations of tropical gastropods with a sound general description of each for the collector. Of more value still is a systematic treatment of the Fissurellidae, excellently illustrated, and a page at the end devoted to conchological philately (or, if you prefer it, Filatelia Conchiliologica).

Conus gloriamaris appears strikingly on the cover and commands an article of its own inside, with details of the latest findings.

English Edition can be had from the publishers or from Dr. A. Gordon Melvin, [REDACTED], W. Newton, Mass. 02165, U.S.A. at \$ 6 p.a. plus postage.

Poirieria, Vol. 5, Part 3 (March 1970).

A particularly helpful aspect of this periodical is its habit of providing technical notes on selected species of the New Zealand mollusca. These are of a kind likely to be most useful to the serious amateur whose knowledge comes not as a result of formal training but depends on following a line of study self-defined.

One example is an article on *Cominella virgata* H. & A. Adams describing the several distinctive forms with good illustrations, typical measurements and known localities. This and the next article, which is about *Amphidesma forsterianum* Finlay (how to distinguish it from *A. ventricosum* Gray) are by N. Douglas.

J. Boswell contributes a useful illustrated article on different types of marine egg-capsules, and 'A Visit to the South Seas' by H. Whiting covers a great

deal of sea and some fascinating shelling. Other articles concern Charopa marsupialis Powell which cherishes its young after hatching, three in number, in its wide umbilicus; and a review of the New Zealand species of Schizotrochus, a minute deep-water Scissurellid.

N. W. Gardner describes a search for the rare Paryphanta rossiana gagei Powell on the Paparoa Range; C. A. Fleming contributes notes on a recent French classification of New Zealand species of Dosinia. Recently published papers dealing with N.Z. Mollusca are also reviewed.

Editors: N. and N. Gardner, Conchology Section, Auckland Institute and Museum.

T.E.C.

THOUGHTS ON BEING A NATURALIST

First, get a dog! This ensures that you go out every day, often several times a day and it is astonishing what the most barren-seeming neighbourhood can show when patrolled assiduously several times a day. A medium-sized dog is best, not a 3ft. 6 ins. tall Irish wolfhound (I have had one!) nor a 3 lb. Yorkshire terrier (I have had one of these too!). The former leaps 5-barred gates like a stag and the latter terrifies field-mice.

Now, equipped with dog, O.S. map (6" will do but a really serious walking naturalist needs a 25"), notebook and pencils (2, in case you lose one) and a few assorted tins and tubes, go out. Progress will be slow, frequently infinitesimal, when dog or naturalist stops to peer and poke, but much of interest will be seen. Along suburban avenues birds can be seen, and often garden escapes or unusual aliens for the botanist. In my district of Cheshire the only specimen of Gallant Soldier (Galinsoga ciliata) I have yet found was growing on a pile of gravel dumped in a suburban driveway.

Arrived at fields or waste ground, progress is even slower. Rotten cartons, old planks and such debris of our "civilisation" yield snails and slugs and help to swell the total for one's "square". A pond or ditch, no matter how unpromising, must be investigated - snails, frogspawn, newts, etc.. Should one be fortunate enough to live close to the sea, as I did in Ireland for many years, there is no need to say what to do. Along H.W.M. all sorts of interesting flotsam and jetsam (I once found a Carboniferous Limestone coral not otherwise known to occur in Ireland) is to be found, and lower down a wealth of marine life is spread before one. Time forgotten, icy winds forgotten, numbed hands and feet forgotten, one follows out an equinoctial spring tide to its lowest ebb, as it reveals undreamt-of treasures. In fact, as the hungry husband of this naturalist once declaimed passionately "When you go out nothing but darkness or hunger drives you home" - and so it should be!

Nora F. McMillan

SLUGS AND THE POETS

Although the Snail has often crept into verse - I know of nearly fifty poems in English on the Snail, not counting numerous variants of nursery rhymes and translations of Japanese Haiku, besides many short passages and references in other works - few bards seem to have been inspired by its shell-less relations. I have come across only four poems on slugs, namely: (1) Earle Binney, "Slug in Woods" (30 lines) in David and other Poems (Toronto, 1942); (2) John Pudney, "Slug" (4 lines) in Low Life (John Lane, Bodley Head, 1947) and Collected Poems (Putnam, 1957); James A. Mackereth, "To a Slug" (79 lines) in The Yorkshire Weekly Post*, 13 July 1907, p.5, col. 3. That this author was no slug lover is revealed by his opening lines:

Thou horned, lethargic, bloodless thing,
Thou unctuous glutton among the flowers,
On dust and old death minist'ring,
Mean comer with the shining showers,
Who dost insult the genial grace
Of Nature and Queen Flora's face,

Yea all things buoyant, bounteous, bright;
Creep to thy dank, dark, dwelling-place
Thou parasite of mould and night!

(4) Boncho, "Abaraya no / to no kasugai yo / namekujiri," in R. H. Blyth, Haiku, vol. 3, p. 247 (Hokuseido, Tokyo, 1952); translation:

The slug,
A clamp on the door
Of a tumble-down house.

One who did not scorn the humble slug was the 'peasant poet' John Clare (1793-1864), whose sensitive and exact descriptions of nature are unexcelled. Although nearly one third of his life was spent in Northampton lunatic asylum, it must not be assumed that slugs appeal solely to the insane. It must be borne in mind that until the 18th. Century the word 'snail' was used indiscriminately for shell-bearing and naked terrestrial gastropods. The earliest use of 'slug' in the sense of a shell-less snail cited in the Oxford English Dictionary is Petiver (1704). "Large black Dew Snails" in a dictionary of 1725 evidently refers to Arion ater. Gilbert White (1777) mentions "small shell-less snails, called slugs." The page references in the following citations are to The Poems of John Clare, edited by J. W. Tibble, 2 vols. (J. M. Dent & Sons, 1935).

Arion ater: "The black snail": Evening, stanza 1 (2:417)); Solitude, line 39 (1:191); Expectation, a Ballad, stanza 4 (2:95); Evening (2:485).

"The jetty snail": Summer Images, stanza 16 (2:9).

"The snail jet-black": Summer Moods (sonnet; 2:129).

"Jet-black and shining, from the dripping hedge / Slow peeps the fearful snail": Summer Images, first draft, stanza 8 (1:380).

Clare has several references to snails in the modern sense: "the packman snail" (2:417) and "the snail from his shell peeping out" (1:75) are presumably Helix aspersa. "Painted shell" (1:183, 196; 2:420) and "pooties" probably refer to the banded shells of Cepaea.

*The Yorkshire Weekly Illustrated was published as a supplement to The Yorkshire Post, July 1866 to Nov. 1882, continued as The Yorkshire Weekly Post until August 1929, then as The Yorkshire Weekly Post Illustrated until Jan. 1937, when it ceased publication. Copies are kept in the Leeds Library, 18 Commercial Street, Leeds.

A. E. Ellis

FIELD MEETING - TO LEICESTERSHIRE, 6 JUNE 1970

This meeting was devoted to accumulating further mapping records for an area which remains badly covered.

The first stop was the Dimmingsdale Nature Reserve, near Calke, on the Derbyshire/Leicestershire border (SK(43)375217). There is here a small inlier of Carboniferous Limestone, formerly quarried. The abandoned quarries contain calcareous woodland and grassland, and some large ponds. Forty species were found. The largest of the ponds yielded Potamopyrgus jenkinsi, Lymnaea peregra, Planorbis albus, Acroloxus lacustris, Ancylus fluviatilis, Sphaerium corneum, S. lacustre, Pisidium milium, P. subtruncatum and P. nitidum. Among the terrestrial records, Cochlicopa lubricella, Acanthinula aculeata and Oxychilus helveticus were perhaps the most noteworthy. There was no trace of Hygromia striolata, a surprisingly rare snail in parts of the Midlands.

Next we visited the inlier of Carboniferous Limestone at Breedon on the Hill (SK 405233). The weather had been hot and dry for some days and consequently snails were none too easy to find; nevertheless, the short calcareous grassland on the steep hillside directly west of the church provided such characteristic forms as Cochlicopa lubricella, Vertigo pygmaea, Vallonia costata, V. excentrica and Retinella radiatula. Hygromia liberta was very common in slightly damper places. We found no helicellas.

Near Grace Dieu Priory some feebly calcareous deciduous woodland at SK 433180 yielded 19 species. Ena obscura was perhaps the most notable find. The Grace Dieu Brook contained only Potamopyrgus jenkinsi, Lymnaea peregra, Ancylus fluviatilis and Pisidium subtruncatum.

Finally, a few members visited Blackbrook Reservoir, on the Precambrian rocks of Charnwood Forest about two miles S.W. of Shepshed. The water is evidently non-calcareous and snails were very sparse. A fairly thorough search in the water and adjacent marsh around SK 465172 yielded only Valvata piscinalis, Potamopyrgus jenkinsi, Carychium minimum, Lymnaea truncatula, L. stagnalis, L. peregra, Planorbis leucostoma, P. albus, P. crista (on a caddis case), Succinea pfeifferi and Pisidium obtusale.

Thanks are due to Mr. Ian Evans of Leicester Museum for organising this enjoyable meeting.

M. P. Kerney

CONCHOLOGY IN NORTH WALES

by The Rev. Carleton Greene

How many there are who find the sea-side dull for want of occupation! To all such let me recommend the childish recreation of collecting shells. Without advancing far into the mysteries and difficulties of the science of Conchology, enough may be known to give zest to sea-side rambles and to supply a healthy and pure excitement much needed in hours of idleness. The Rev. J. G. Wood's "Common Shells of the Sea Shore" will supply an elementary textbook, and the beginner will soon be tempted to dive into the interesting pages of Jeffreys, and pore over the admirable coloured plates of Forbes and Hanley.

If he is staying at Colwyn Bay he will pick up in the track of the retreating tide a sufficient variety to form a basis for a collection. Besides the common kinds, e.g., the Limpet, Whelk, Cockle, Scallop, Periwinkle, etc., he will meet with the following, which are not to be found everywhere. First, very plentiful is the pretty little Venus gallina or striatula, with its rays of colour from the beak to the edges. Another largely found is a delicate white bivalve, Thracia papyracea. The common curved razor shell (Solen ensis) is mingled with specimens of the less common Solen vagina or marginatus. Fragments of the delicate Pholas candida, which burrows into clay and wood, abound. Amongst the common Tellina tenuis he may light upon the rarer Tellina fabula, and the rich hues and sharply-cut outline of Psammobia ferroensis. The large rough cockle (Cardium rusticum) is plentiful here; the gaper (Mya truncata), so common in many localities, is more rare; and amongst the frequent specimens of Tapes pullastra the searcher may pick up a rare kind with its delicate reticulations (Tapes decussata). The lovely Donax vitatus (wedge shell) abounds; the common cowry (Cypraea Europaea) and a variety of Top Shell (Trochus umbilicatus) are to be had. Occasional specimens, rarely perfect, of the Turritella terebra, and a very delicate transparent oblong bivalve (Ceratisolen legumen), will reward diligent search. Lastly, in addition to the common Macra stultorum and Macra solida, a white triangular shell flattened at the side, usually called Macra subtruncata, is to be obtained.

Only a few miles further on the same coast we have been able to add several specimens to the foregoing list. At Penmaen-mawr, though shells are not found in profusion, a patient search was rewarded by finding Saxicava rugosa, another burrowing species, Trochus zizyphynus, with its blood-red streaks, Actaeon tornatilis, Cardium echinatum, Pholas dactylus, a large and strong variety, Pleurotoma or Mangelia turricola, unsurpassed for elegance and symmetry, Pleurotoma rufa, Scaphander lignarius, Corbula Gibba, and a strong brown bivalve, Cyrina Islandica, Venus exoleta, Mytilus barbatus, and the short broad species of Pholas, viz., crispata.

The lover of shells will not leave the north coast without a visit to Cardigan Bay. The excursion is rendered so easy and delightful by the Festiniog Railway, that with one night from home he may explore the coast in the neighbourhood of Harlech and return laden with spoils. The chief object to be aimed at is to reach Mochras Island at the right state of the tide, and to spend as long a time as he can there. Llanbedr will be his head quarters, and Pen-sarn station

the terminus of his journey. The Harlech beach itself, though very fine, is not favourable to the conchologist. There is one shell, however, *Lutraria elliptica*, which is easily broken, and is better sought on the smooth sand of Harlech than amongst the rocks of Mochras. We also found there a perfect specimen of the prickly cockle (*Cardium echinatum*). *Tellina crassa*, a large and strong species not commonly found, *Scalaria communis* and the lovely little *Actaeon tornatilis* with its spiral bands, rewarded our search among the debris.

At Mochras you walk ankle deep in shells, and every wave, as the tide comes up, dashes fresh treasures at our feet. There is an *embarras de richesse*; the sand and shingle at high water mark should be carefully sifted, as there are many of the minuter species found here. Besides the shells already mentioned, in our first brief visit we secured the following bivalves:- *Cyprina Islandica*, *Venus chione*, *casina*, and *verrucosa*, *Cardium Norvegicum* and *echinatum*, *Lucina borealis*, *Pectunculus glycymeris*, and *Venus exoleta*. Among the univalves were *Fissurella Graeca*, *Mangelia* or *Pleurotoma rufa*, *Trochus lineatus*, *Cerithium reticulatum*, *Natica Alderi*, *Nassa reticulata* and the rarer *incrassata*; *Murex erinaceus*, so common on the East Coast, we found but rarely. On the rocks were Chitons, *marginatus* and others; the tiny pink *Phasianella pulla*, the elegantly turned *Cylichna cylindracea*, and the protuberant little bivalve with unequal valves (*Corbula gibba*) rewarded a patient investigation of the beach. *Solecurtus candidus* we did not find, but we were shown a specimen picked up on the island. The list given below is the result of a second and more prolonged visit, and probably exhausts the resources of Mochras, except it may be after storms or in winter. To a visitor at Barmouth this is a favourite excursion. Half-an-hour's walk along the embankment of the river from Pen-sarn station brings one to the estuary beyond which lies the shell beach. The farmhouse near the shore supplies abundance of milk to picnic parties. The accommodation at Llanbedr is unpretending, but excellent, and exceedingly moderate in price.

SHELLS FOUND AT COLWYN BAY

<i>Patella vulgata</i> (common Limpet)	* <i>Thracia papyracea</i>
<i>Buccinum undatum</i> (Whelk)	<i>Anomia ehippium</i>
<i>Littorina littorea</i> (Periwinkle)	<i>Pholas candida</i>
<i>Cardium edule</i> (common Cockle)	<i>Chiton marginatus</i>
<i>Mytilus edulis</i> (common Mussel)	* <i>Cardium rusticum</i>
<i>Pecten opercularis</i> (Scallop)	<i>Mya truncata</i>
<i>Macra solida</i>	<i>Nucula nucleus</i>
<i>Macra stultorum</i>	<i>Tapes pullastra</i>
* <i>Macra subtruncata</i>	* <i>Tapes decussata</i>
* <i>Venus gallina</i> (striatula)	<i>Natica catena</i>
<i>Littorina obtusata</i>	<i>Cypraea Europaea</i>
<i>Purpura lapillus</i>	* <i>Tellina fabula</i>
* <i>Trochus umbilicatus</i>	* <i>Psammobia ferroensis</i>
<i>Tellina tenuis</i>	* <i>Ceratisolen legumen</i>
<i>Donax vittatus</i>	<i>Mytilus modiolus</i>
<i>Trochus cinerarius</i>	<i>Pecten varius</i>
<i>Solen ensis</i>	<i>Dentalium entale</i>
* <i>Solen vagina</i>	<i>Venus linctus</i>
* <i>Turritella terebra</i>	

Those marked (*) are not found everywhere. The rest are commonly found.

SHELLS FOUND AT MOCHRAS (Common ones not reckoned)

<i>Cyprina Islandica</i>	<i>Ceratisolen legumen</i>
<i>Venus chione</i>	<i>Trochus lineatus</i>
" <i>gallina</i>	<i>Trochus umbilicatus</i>
" <i>casina</i>	<i>Cerithium reticulatum</i>
" <i>verrucosa</i>	<i>Corbula gibba</i>
" <i>exoleta</i>	<i>Pectunculus glycymeris</i>
<i>Lucina borealis</i>	<i>Tapes decussata</i>
<i>Lutraria elliptica</i>	* <i>Solecurtus candidus</i>
<i>Fissurella Graeca</i>	<i>Scalaria communis</i>
<i>Actaeon tornatilis</i>	<i>Natica Alderi</i>
<i>Pleurotoma rufa</i>	<i>Murex erinaceus</i>
<i>Phasianella pulla</i>	<i>Nassa reticulata</i>

Fusus antiquus
 Cylichna cylindracea
 Cardium Norvegicum
 Cardium echinatum
 Aporrhais pes-pellicani
 Lucinopsis undata
 Pholas dactylus
 Mactra elliptica
 *Nassa pygmaea
 Lacuna pallidula
 Trochus magus
 Chiton marginatus
 Cardium rusticum

Nassa incrassata
 Pecten maximus
 *Dentalium entale
 Tellina crassa
 Pleurotoma turricola
 " nebula
 Rissoa parva
 Helcion pellucidum
 *Cardium pygmaeum
 Turritella terebra
 Donax vittatus
 Scrobicularia piperata

*It should be stated that in a recent summer these shells could not be found at Mochras, but it was probably only a temporary disappearance.

SHELLS FOUND AT HARLECH
 (Common ones not reckoned)

Lutraria elliptica	Scalaria communis	Pecten maximus
Cardium aculeatum	Fusus antiquus	Fusus Berriciensis
Actaeon tornatilis	Venus gallina	Solen vagina
Ceratisolen legumen	Tellina crassa	
Venus chione	Cardium rusticum	

The foregoing list has been prepared by the Rev. Carleton Greene (Vicar of Great Barford, Beds.), who desires us to acknowledge the assistance rendered him by the late Rev. Dr. Churchill Babington in its compilation.-Ed.

Extract from "Gossiping Guide to Wales" by Askew Roberts and Edward Woodall. Published by Simpkin, Marshall, Hamilton, Kent & Co., Stationers' Hall Court, London. Woodall, Minshall, Thomas & Co., Oswestry and Wrexham. 1904.

(Note:- Rev. Churchill Babington: member of the Society until his death on 12 Jan. 1889. Obit. in J. of C. Vol. 4, No. 1. Rev. Carleton Greene joined the Society 1886 and was a member until his death early in 1906.)

This article was kindly provided by John Garcia.

GENERAL NOTES

ELECTION OF MEMBERS TO COUNCIL

ANNUAL GENERAL MEETING, FEBRUARY 1971

In the past there has been some slight confusion about the exact procedure whereby Members are elected to serve on the Society's Council, so I would like to remind you all of the rules which govern this:-

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 Annual General Meeting, and shall be accompanied by a signed declaration of the candidate's willingness to serve.

Please note that this year I will need to receive all 'non-Council' nominations by Saturday 9th. January 1971.

Rule No. 12

Ballot papers shall be sent to Members resident within Great Britain and Ireland; papers shall be returned in a sealed envelope signed on the outside only by the voting Member and addressed to the Scrutineers, c/o the Hon. Secretary.

It is anticipated that the ballot papers will be circulated early in February. Please do not put your name anywhere on the voting slip; instead be sure to write it on the back of the enclosing envelope and post it to me, marked for the attention of "The Scrutineers". Please observe these instructions carefully - otherwise your vote will be invalidated as has unfortunately happened with a large proportion of voting papers returned in recent years.

Hon. Secretary: Miss J. T. Sawyer,

London, N.W.2.

SHELLS FOR SALE. Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

SALES, EXCHANGES, ETC.

Mr. P. Peskey, [REDACTED], St. Peter Port, Guernsey, offers tropical shells from the Pacific at special prices to members of the Society; write for list.

Hermanos Arrocha, [REDACTED], Santa Cruz de la Palma, Islas Canarias, Spain, is interested in exchanging molluscs - can offer a variety of shells from the Canary Islands.

BOOKS WANTED by A. Walton, [REDACTED], Tulse Hill, London, S.W.2.

(a) Conchologists' Newsletter numbers 2, 3, 4, 5, 6, 10, 12, 13, 14.

(b) Taylor's Mollusca, Vol. 1 and the 3 parts of Vol. 4.

Seller's price paid.

REPRINT of 'Coquilles fossiles des environs de Paris' by P. E. Deshayes is being prepared by A. Haandrikman, [REDACTED], Goes, Holland, on a non-profit making basis. Anyone interested, please write for details.

BACK NUMBERS OF THE NEWSLETTER

Please note that our remaining stock of Newsletters is now held on the Society's behalf by:- J. Collins, The Bookshop, 45 Westow Street, Upper Norwood, London, S.E.19 (telephone 01-771 9719).

CHRISTMAS 1970

Seasonal Greetings and Good Wishes to every reader of the Newsletter. Also thanks to all those who have kindly contributed a good variety of items during the year. It is hoped that the flow of interesting and useful material will continue in 1971. Let us also hope that in the New Year there will be less pollution, less litter and broken glass, less destruction of habitats of all kinds and, last but not least, less degrading and obliteration of geological sites.

P. E. Negus

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Required six-month's notice is given on 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.Nomencl.26, pt.6, 7 April 1970):

1891. Type-species for Drupella Thiele, 1925 (Gastropoda).

1909. Type-species for Acanthopleuroceras Hyatt, 1900;

suppression of Ammonites natrix Schlotheim, 1820 (Cephalopoda).

Comments should be sent in duplicate, citing case number, to the Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, London, S.W.7, England. Those received early enough will be published in the Bulletin of Zoological Nomenclature. (Margaret Doyle)

Cypraea. Please send s.a.e. for new list of cowries and other collectors' shells. Shellcraft Supplies, Melrose Place, Bristol BS8 2NG

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

THE SNAIL

With slothful gait the languid snail
Unhindered spreads his silver trail.
The gardener would call him "pest,"
"Destructive mollusc," and at best
Banish him: not so she;
Like bird by snake hypnotically
Spellbound by his expertise,
Amazed by those retractile eyes,
The child, soft chin upon her knees,
Marvels at the casual ease
Of his unhurried pace.

Antennae-warned of each impasse
He rides abreast a blade of grass,
Manipulates the cumbrous shell
And shiplike rides the grassy swell;
Dips and glides, rolls and heaves,
With undulating grace he cleaves
His precarious passageway,
Advancing with each tip and sway,
At her touch to disappear
Coyly soon to reappear
Inches from her face.

The gardener would only see
His plants' potential enemy;
Childish eyes alone can see
A snail in all his majesty.

J. Y. Chapman (Mrs. J. Y. Buckett)

Croydon Advertiser, 3 December 1964; reproduced with the author's permission.

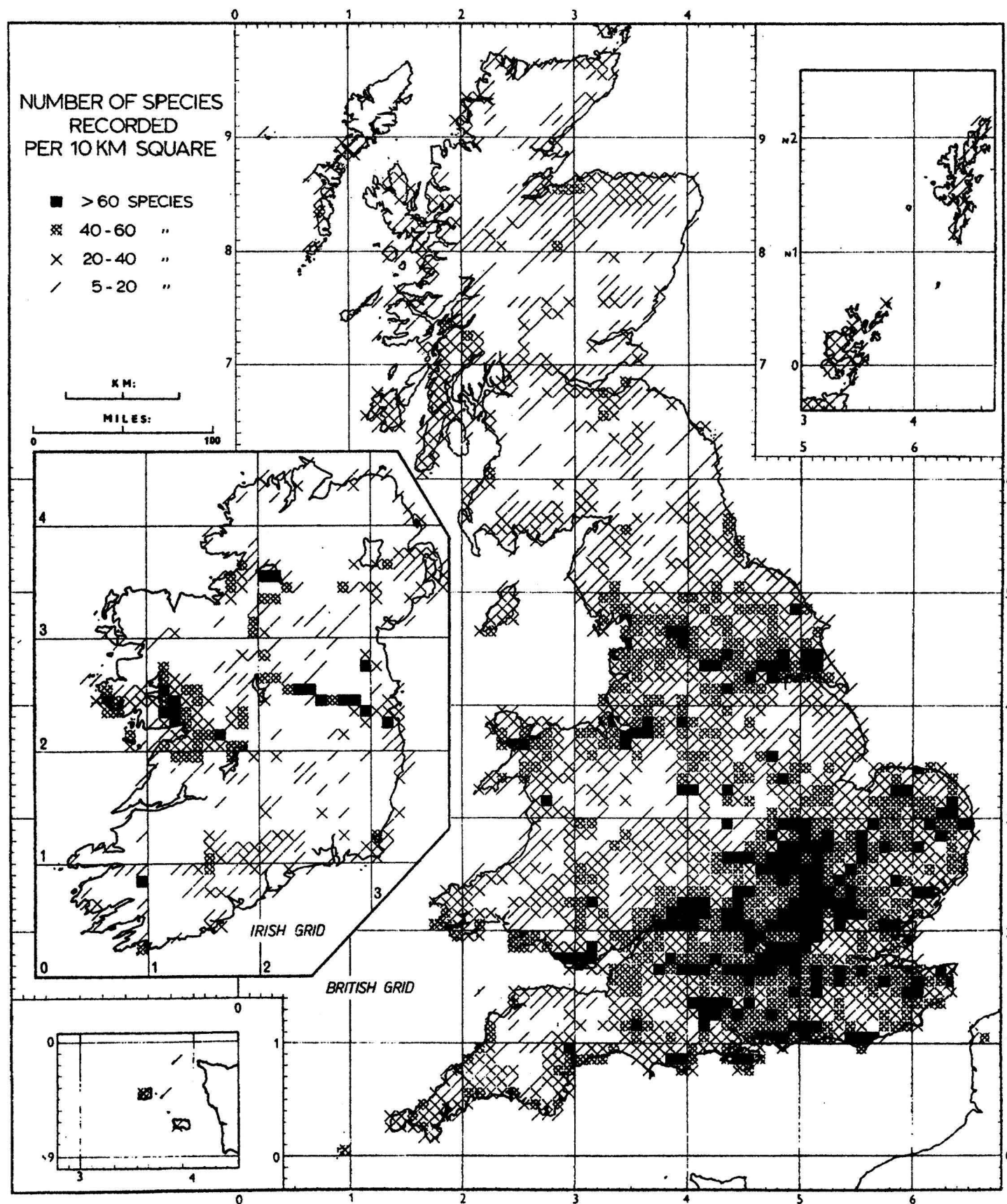
(From A. E. Ellis)

10-KILOMETRE SQUARE MAPPING SCHEME FOR NON-MARINE MOLLUSCA

Records continue to flow in steadily, another 12,000 having been added to the total during 1970 (see map). It is hoped to publish a provisional set of species maps by 1974. Coverage in the north and west of the British Isles has improved somewhat, principally as a result of the work of Mr. Dance in Wales, Mr. and Mrs. Rands in S.W. Scotland, and a party of the Conchological Society which spent a fortnight in the West of Ireland last August. Special thanks are due to Mr. Richard Croome and Dr. Cedric Woods of University College, Galway, who helped to make our Irish visit a success.

Much however remains to be done. Some of the worst blanks must at least be sampled if a reasonably uniform coverage of the British Isles is to be achieved. In lowland areas, any square with fewer than 20 recorded species must be considered as virtually unworked, and fewer than 40 as poor. If you think you can help in any way, please let me know. I am always glad to receive un-named Mollusca for identification.

M. P. Kerney,
Hon. Recorder for non-marine Mollusca,
Dept. of Geology, Imperial College,
London, S.W.7.



Map showing the number of species of land and freshwater Mollusca recorded to January 1971 for each 10-kilometre square of the British and Irish National Grids (post-1950 records only)

TENTATIVE LIST OF ALTITUDE RECORDS FOR BRITISH NON-MARINE MOLLUSCS

This list indicates the highest altitudes attained by non-marine molluscs in England, Wales, Scotland and Ireland respectively. It is issued now in the hope that readers will fill in some of the many gaps before a definitive list is prepared for publication in the Journal of Conchology. Any height above 100 feet is a potential record but most species are found above 500 feet, and a few may reach 4,000 feet. Some of the commoner species for which records are lacking (such as Helix aspersa and Hygromia striolata) are certainly rare above 1,000 feet. Please give altitude (accurate to within at least 50 feet, checked by altimeter reading if possible), locality and vice county, collector, and date collected. The definitive list will include this information.

> altitude above figure stated

< altitude below figure stated

* records all below 100 feet

? reliable altitude information wanting

- not known living at the present time

	England	Wales	Scotland	Ireland
acicula, <i>Cecilioides</i>	1400	?	?	?
acronicus, <i>Planorbis</i>	?	-	-	-
aculeata, <i>Acanthinula</i>	1250	1000	?	1200
acuta, <i>Cochlicella</i>	*	*	*	*
agrestis, <i>Agriolimax</i>	?	-	900	-
albus, <i>Planorbis</i>	1229	1450	950	?
alliarius, <i>Oxychilus</i>	1400	2550	3050	3127
alpestris, <i>Vertigo</i>	?	400	?	-
amnicum, <i>Pisidium</i>	1229	502	?	?
anatina, <i>Anodonta</i>	700	?	?	?
anglica, <i>Lauria</i>	?	1000	?	1200
angustior, <i>Vertigo</i>	?	-	?	?
antivertigo, <i>Vertigo</i>	1230	1100	?	600
arbustorum, <i>Arianta</i>	2400	1800	3800	?
arenaria, <i>Catinella</i>	?	-	-	?
aspersa, <i>Helix</i>	1100	900	?	?
ater, <i>Arion</i>	3000	> 3000	3900	3127
auricularia, <i>Lymnaea</i>	?	502	?	?
biplicata, <i>Laciniaria</i>	?	-	-	-
bidentata, <i>Clausilia</i>	1400	2250	3000	1200
bidentata, <i>Leucophytia</i>	*	*	*	*
budapestensis, <i>Milax</i>	?	1100	?	?
cantiana, <i>Monacha</i>	?	100	?	-
caperata, <i>Helicella</i>	1700	1550	?	?
carinatus, <i>Planorbis</i>	?	400	?	?
cartusiana, <i>Monacha</i>	?	-	-	-
caruanae, <i>Agriolimax</i>	?	900	?	?
casertanum, <i>Pisidium</i>	2356	2400	3300	2000
cellarius, <i>Oxychilus</i>	1800	2250	?	1200
cinctella, <i>Hygromia</i>	?	-	-	-
cinereoniger, <i>Limax</i>	?	?	?	?
circumscriptus, <i>Arion</i>	1250	2550	?	1400
complanata, <i>Segmentina</i>	?	400	?	?
confusa, <i>Pseudamnicola</i>	*	-	-	*
contectus, <i>Viviparus</i>	650	-	-	-
contortus, <i>Planorbis</i>	1229	1350	1600	?
contracta, <i>Vitrea</i>	1325	2550	1250	?
conventus, <i>Pisidium</i>	2356	2400	2300	2300
corneum, <i>Sphaerium</i>	1229	1000	1600	?
corneus, <i>Planorbarius</i>	?	502	?	?
costata, <i>Vallonia</i>	?	?	?	?
crista, <i>Planorbis</i>	1229	950	?	?
cristata, <i>Valvata</i>	1229	400	?	?
crystallina, <i>Vitrea</i>	1400	2250	2500	2300
cygnea, <i>Anodonta</i>	?	600	?	?
cylindracea, <i>Lauria</i>	1800	1550	1000	1300

	England	Wales	Scotland	Ireland
<i>cylindrica</i> , Truncatellina	?	-	?	-
<i>diaphana</i> , Vitrea	1700	-	-	-
<i>dilatatus</i> , Menetus	?	600	?	-
<i>draparnaldi</i> , Oxychilus	?	800	?	?
<i>dubia</i> , Clausilia	2350	-	-	-
<i>edentula</i> , Columella	750	1350	3350	> 2000
<i>elegans</i> , Helicella	*	-	-	-
<i>elegans</i> , Pomatias	?	?	-	-
<i>elegans</i> , Succinea	?	-	-	-
<i>excavatus</i> , Zonitoides	?	?	?	600
<i>excentrica</i> , Vallonia	?	1100	?	?
<i>flavus</i> , Limax	?	?	?	?
<i>fluviatilis</i> , Ancyclus	1600	2250	?	2300
<i>fluviatilis</i> , Theodoxus	?	?	?	?
<i>fontinalis</i> , Physa	1229	970	950	?
<i>fulvus</i> , Euconulus	1400	2250	2500	1300
<i>fusca</i> , Acicula	?	900	?	1200
<i>gagates</i> , Milax	?	?	?	?
<i>geyeri</i> , Vertigo	-	-	-	?
<i>gigaxi</i> , Helicella	700	?	?	-
<i>glabra</i> , Lymnaea	1100	900	900	-
<i>glutinosa</i> , Lymnaea	?	530	-	-
<i>goodalli</i> , Azeca	1250	1100	?	-
<i>granulata</i> , Monacha	1240	?	?	?
<i>grayana</i> , Assiminea	*	-	-	-
<i>gyrina</i> , Physa	-	250	-	-
<i>haliotide</i> , Testacella	?	?	?	?
<i>helveticus</i> , Oxychilus	?	750	?	-
<i>henslowanum</i> , Pisidium	?	502	?	?
<i>heterostropha</i> , Physa	?	?	-	-
<i>hibernicum</i> , Pisidium	1230	1800	?	2300
<i>hispid</i> a, Hygromia	1500	1550	2150	?
<i>hortensis</i> , Arion	1320	1550	1250	?
<i>hortensis</i> , Helix	1050	1250	3050	?
<i>hypnorum</i> , Aplexa	?	?	?	?
<i>intermedius</i> , Arion	1325	1800	3100	2800
<i>itala</i> , Helicella	1400	?	?	?
<i>jenkinsi</i> , Potamopyrgus	1229	1315	?	500
<i>lacustre</i> , Sphaerium	1050	1250	800	?
<i>lacustris</i> , Acroloxus	?	1350	?	?
<i>laevis</i> , Agriolimax	1230	1900	> 1600	1400
<i>laevis</i> , Planorbis	?	970	?	?
<i>lamellata</i> , Acanthinula	?	100	1200	?
<i>laminata</i> , Marpeasa	> 1000	1150	?	?
<i>lapidica</i> , Helicigona	1250	2000	-	?
<i>leachi</i> , Bithynia	?	?	-	?
<i>leucostoma</i> , Planorbis	1229	1000	912	?
<i>liberta</i> , Hygromia	1325	?	-	-
<i>lilljeborgii</i> , Pisidium	1230	2000	2300	2000
<i>lilljeborgi</i> , Vertigo	?	*	948	?
<i>limbata</i> , Hygromia	*	-	-	-
<i>lubrica</i> , Cochlicopa	1400	2550	1600	?
<i>lubricella</i> , Cochlicopa	1400	?	?	?
<i>lusitanicus</i> , Arion	?	?	-	-
<i>macrostoma</i> , Valvata	?	-	-	-
<i>maculosus</i> , Geomalacus	-	-	-	1000
<i>major</i> , Vitrina	750	1400	-	-
<i>margaritifera</i> , Margaritifera	?	?	?	?
<i>marginata</i> , Lehmannia	2600	2350	3900	3127
<i>maugei</i> , Testacella	?	?	?	?
<i>maximus</i> , Limax	1229	?	?	?
<i>milium</i> , Pisidium	1229	2250	2300	1200
<i>minima</i> , Anodonta	?	?	-	-
<i>minimum</i> , Carychium	?	600	?	?
<i>moitessierianum</i> , Pisidium	?	-	-	?
<i>montana</i> , Ena	600	-	-	-
<i>moulinsiana</i> , Vertigo	?	-	-	?
<i>muscorum</i> , Pupilla	750	?	?	?

	England	Wales	Scotland	Ireland
myosotis, Phytia	*	*	*	*
neglecta, Helicella	?	-	-	-
neglecta, Hydrobia	-	-	?	-
nemoralis, Helix	1700	3000	2000	>1800
nitida, Segmentina	?	?	-	-
nitidula, Retinella	1400	1250	?	>2000
nitidum, Pisidium	1230	1925	2300	1900
nitidus, Zonitoides	?	970	?	?
oblonga, Succinea	?	?	?	?
obscura, Ena	1400	1150	>1400	?
obtusale, Pisidium	1220	1925	2300	?
obvoluta, Helicodonta	?	-	-	-
palustris, Lymnaea	1240	950	912	?
pellucida, Vitrina	?	1800	3800	1200
peregra, Lymnaea	2356	2250	2700	?
personatum, Pisidium	2356	2250	3000	2700
perversa, Balea	1500	1100	?	<1000
pfeifferi, Succinea	1300	?	1600	?
pictorum, Unio	?	502	-	-
pisana, Theba	?	?	-	?
piscinalis, Valvata	1229	970	950	?
planorbis, Planorbis	?	?	?	?
polymorpha, Dreissena	?	-	?	-
pomatia, Helix	?	-	-	-
pseudosphaerium, Pisidium	*	-	-	*
pulchella, Vallonia	750	?	?	?
pulchellum, Pisidium	1229	970	?	?
pura, Retinella	1275	1100	2500	1300
pusilla, Vertigo	750	500	?	?
putris, Succinea	1229	?	?	?
pygmaea, Vertigo	1500	?	?	700
pygmaeum, Punctum	1230	1350	?	?
pyrenaica, Vitrina	-	-	-	?
radiatula, Retinella	1400	2250	2450	1400
reticulatus, Agriolimax	1850	2550	2000	?
rivicola, Sphaerium	?	?	-	-
rolphii, Clausilia	525	?	-	-
rotundatus, Discus	1400	2550	>3050	>2000
rufus, Arion	?	?	?	?
rupestris, Pyramidula	3054	1550	?	1500
scholtzi, Bythinella	?	-	*	-
scutulum, Testacella	?	?	?	?
secale, Abida	1600	-	-	-
sowerbyi, Milax	?	?	?	?
stagnalis, Lymnaea	1229	970	?	?
striolata, Hygromia	1275	1500	?	?
subfuscus, Arion	1240	2550	3900	3018
subrufescens, Hygromia	?	?	800	1400
substriata, Vertigo	1230	1650	1000	<1200
subtruncatum, Pisidium	1560	1925	?	>1600
subvirescens, Hygromia	?	?	-	-
supinum, Pisidium	?	-	-	-
tenellus, Limax	?	650	?	-
tentaculata, Bithynia	1229	970	?	?
tenuilineatum, Pisidium	?	-	-	-
transversum, Sphaerium	?	?	-	-
tridentatum, Carychium	1550	1900	800	?
truncatula, Lymnaea	1350	2700	>1400	1775
tumidus, Unio	?	?	-	-
ulvae, Hydrobia	*	*	*	*
ventrosa, Hydrobia	*	*	-	*
virgata, Helicella	?	?	?	?
viviparus, Viviparus	?	?	-	?
vortex, Planorbis	?	400	?	?
vorticulus, Planorbis	*	-	-	-

S. P. Dance,
Asst. Keeper of Zoology,
National Museum of Wales,
Cardiff, CF1 3NP

COLLECTING LAND MOLLUSCS IN VICTORIA, AUSTRALIA

There are both introduced and native faunas of land molluscs in Victoria; the introductions seem to be from Europe though not necessarily the British Isles, and the native fauna, depauperate compared with New South Wales and Queensland, is very similar to that of Tasmania, and is related at the family level to that of New Zealand.

Various workers have studied the land molluscs of Victoria in the past, notably the late C. J. Gabriel who published the most recent State catalogue (Gabriel 1930, 1947), and most areas of the state have received at least a preliminary search though coverage has, perhaps naturally, been best within a hundred miles of Melbourne. Dr. B. J. Smith, the Curator of Molluscs at the National Museum of Victoria in Melbourne, who has just been recruited to the Conchological Society, is now organising a state-wide survey of both the native and introduced non-marine molluscs (Smith 1970). This will eventually enable the distribution of species to be shown on a broad basis (squares of one degree of latitude by one degree of longitude) roughly equivalent to the British vice-comital Census, and also on a finer mesh (10 minute by 10 minute squares).

The introductions live mostly in or near settlements, however small, or on cleared land up to at least 4,500 ft. above sea level though a few have got into the bush. The Helicidae, Zonitidae, and Limacidae are principally involved, conspicuous being Helix aspersa Müller, Theba pisana (Müller) along the coast, Limax flavus L., Milax gagates (Draparnaud), and at least two species of Agriolimax (a few dissections indicate A. reticulatus (Müller) and A. caruanae (Lessona and Pollonera)). One species of Arion, A. intermedius Normand, occurs in bush or partly cleared land. Some of the introductions seem to have been mis-identified in the past, and it is hoped that these errors will be cleared up in time.

Native land molluscs have been found in many undisturbed habitats up to altitudes of 6,000 ft. or more above sea level. The native fauna is dominated by the Endodontacea and a frightening ninety or so names have been proposed for endodontids found in Victoria. As far as larger species go, a large acavid, Hedleyella atomata (Grey) lives in Gippsland in the east of the state, and the wet forests of the Otways to the west and the Dividing Ranges north of Melbourne each have an endemic Black Snail, Victaphanta compacta (Cox & Hedley) and V. atramentaria (Shuttleworth) respectively, which are closely related to Paryphanta; the latter species is a handsome animal, black with a vermilion foot-fringe and mantle edge. Other non-minute molluscs are species of Chloritis, a camaenid, Helicarion which looks superficially like a large Vitrina with a suddenly truncated tail, Strangesta a genus allied to the New Zealand Rhytida, and a slug, Cystopelta.

Speculatively it is thought that the native land mollusca will prove to have recognisable associations linked with each major natural ecotype (and hence micro-climate) in the state. Some areas with similar ecotypes but mutually isolated for some time will probably prove to have faunal elements developed from a common original population; the two species of Victaphanta seem to be an example of this - the Otways are separated from the Dividing Ranges by comparatively recent basalt flows. Whether all these separate populations merit specific rank is one of the major questions facing workers on this area.

Collecting these natives is generally harder work than recording for the Conchological Society's Census in Britain, partly because high summer temperatures tend to dessicate the country and make snails hard to find, and partly because the soils are often poor in calcium. A haul of eight species from one locality would be considered satisfactory. Most native land molluscs in Victoria occur under dead leaves, stones or fallen branches and tree trunks. Generally speaking the larger the animal, the larger the piece of cover it favours. Damp moss can be productive, but grass and tussocks seem to be poor. In damp weather some species such as Cystopelta petterdi Tate and Thalassohelix (= Mulathena) fordei (Brazier), a thin-shelled snail about 5mm in diameter which has been placed in the Flammulinidae (Gabriel, 1947, 1, 115), will climb tree trunks, and they and Victaphanta may be found crawling over the ground. Taking leaf litter home is always more effective for finding small species than a search in the field though care has to be taken to remove the odd scorpion,

leech or centipede before it finds you first. The commonest snails found in leaf litter are laomids, Paralaoma (for a definition of which see Conch. Newsletter No. 28, March 1969:86) or, if sinistral, Miselaoma, followed by charopids, ribbed species with a wide umbilicus and vaguely reminiscent of Discus. A small presumed paryphantid, Prolesophanta dyeri (Petterd) usually occurs in litter from wetter forest localities.

In future work it is hoped to examine more distant areas of Victoria, particularly the highlands, the rain forest pockets of East Gippsland, the drier western districts, and such areas of calcareous soils as are found in the state.

D. C. Long

- References: Gabriel, C. J., 1930. Catalogue of the Land Shells of Victoria. Proc. Roy. Soc. Victoria, 43, 1:62-88.
Gabriel, C. J., 1947. Additions and Alterations in the Catalogue of Land Shells of Victoria. Mem. Nat. Mus. Melbourne, Nr. 15:109-125.
Smith, B. J., 1970. Plans for a Proposed Census of Non-marine Molluscs in Victoria. The Victorian Naturalist, 87, 6:169-170.

THE COST OF CONCHOLOGICAL BOOKS THEN AND NOW!

Dipping into some 30-40 year-old catalogues of second-hand natural history books has prompted these nostalgic remarks.

A large paper col. plate copy of Forbes and Hanley was listed at £2.15.0, with plain plates only 24/-. Jeffreys' British Conchology (original ed.) with col. plates £1.17.6, with plain plates £1.0.0. Brown's Illusts. Rec. Conch. G.B. & I. "a fine copy" was priced at £2.10.0, but the same author's Illusts. Fossil Conch. was only 12/6. Sowerby's Conch. Illusts. described as "rare complete" was £3.10.0, Fischer's Manuel... was 30/- and Donovan's Nat. Hist. Brit. Shells (col. plates) was £2.10.0. Numerous small works were to be had from 6d. upwards!

One's mouth waters when one notes the 4 vols. of the Universal Conchologist "a superb copy" offered for £31 (vols. 1 and 2 were available for £7.10.0 the two), an Exotic Conchology (2nd. ed. - Hanley's) for £2.10.0. A "Perry" was priced at 35/- (two years ago I was offered a copy for £90 and no doubt it is dearer now).

Finally, a complete set of Conch. Icon. (20 vols.) col. plates, for £178.

Nora F. McMillan

AGRIOLIMAX AGRESTIS (L) AND OTHERS FROM MALHAM, YORKSHIRE

The Malham district, with the Cove and Tarn, and its magnificent limestone scenery, must be one of the most famous and well studied, for its Mollusca, in Britain, thanks largely to the many field-courses on molluscs conducted there by L. W. Stratton (J. Conch. 24: 111-138, 1956). When we visited the Field-Centre in August 1970, to run a similar course, we did not therefore expect to discover much that was new to the district. Luck was on our side, however, and a very successful week's course succeeded in finding all but four (Vertigo pusilla, Helicella itala, Limax maximus and Caecilioides acicula) of the land and freshwater gastropods on Stratton's list. Perhaps in compensation for these omissions, we were able to add four new species to the list.

Two of these were the snails Vallonia excentrica and V. costata, from a dry roadside bank near Malham village and from pavements above the Cove. V. pulchella, recorded previously, is widespread, and the dry bank was unusual in that all three species of this genus were found there.

The other two species recorded for the first time were slugs, both from "difficult" groups of species where dissection is necessary to confirm identification. Stratton has already recorded Arion circumscriptus from Malham, but

since 1956 this so-called species has been split into three (see A. E. Ellis, Key to British Slugs - Papers for Students No. 12), and we were able to establish the presence of two of these segregates in the area; Arion circumscriptus sensu stricto in Tarn House Woods, and Arion fasciatus in Ha Mire Plantation, the latter being, therefore, a new record for the district.

Our most exciting find, however, was undoubtedly Agriolimax agrestis, since this is only the second occurrence known in England (although A. E. Ellis tells us that there are now 10 localities for this species in Scotland). We found the species in a very wet meadow bordering the tarn near the small sedge-bed at the N.E. Corner of the tarn; a very unpromising area of rough grass and occasional sedge-clumps, much trampled by cattle, with water-filled hoof-marks and bare muddy patches. One would not have been surprised to find only Lymnaea truncatula in such a disturbed area, but a search revealed many molluscs hiding under small logs and fallen fence-posts which apparently provide some shelter. Besides L. truncatula, these bits of wood yielded Agriolimax laevis, Succinea pfeifferi, Retinella radiatula and Oxychilus alliarius, as well as some pale and unmottled Agriolimax which contrasted so markedly with the dark and mottled A. reticulatus we had found elsewhere, that our suspicions of their true identity were aroused, and rapidly confirmed by dissection - Agriolimax agrestis. We are grateful to Mr. Ellis for confirming our identifications of all the slugs we dissected.

This wet and marshy habitat is evidently similar to that of the other English site in Norfolk, and to at least one of the Scottish localities (A. E. Ellis, J. Conch. 26, 189-196, 1967).

We also recorded a new locality for a newcomer to the British list - Vitrea diaphana, first found in Britain in this area by M. P. Kerney and Marjorie Fogan (J. Conch. 27, 17-124, 1969), who recorded it in Stratton's collections from Tarn House Wood and in other localities nearby. We found it, with its cogener V. contracta and many other species, on the dry and exposed screes of High folds Scar directly above Tarn House Wood, but in a very different habitat.

Conchologists having occasion to visit the Field Centre at Malham Tarn House may like to know that there is a file containing a meticulous and comprehensive account of the molluscs of the district, with dates, localities and species found, compiled by Mr. Stratton, to which we have added all our records.

R. A. D. Cameron, M. Cameron

THE TYPE LOCALITY OF PISIDIUM HENSLOWANUM (SHEPPARD)

In 1823 the Rev. Revett Sheppard, of Wrabness Parsonage, Essex, published an excellent paper on the land and freshwater shells of Suffolk (Trans. Linn. Soc. Lond. 14: 148-170). This includes the original descriptions of the species we now know as Pisidium henslowanum (Sheppard) and Bithynia leachii (Sheppard). Of the first, he says, 'sparingly in the stream at Holbrook', and of the second, 'found sparingly in Campsey Mere, and Holbrook stream and mill-pond'.

On the 27th. August 1970 I visited Holbrook, a village about five miles south of Ipswich. The handsome weatherboarded mill and its surroundings (TM 169357) can have changed little in the past 150 years. The mill-pond is a shallow lake with a silty bottom, about 400 yards long, and formed in the usual way by the damming of a stream. It now contains a prolific growth of Elodea canadensis, which was surely absent in the 1820's. A search quickly and gratifyingly revealed the continuing presence of Pisidium henslowanum and Bithynia leachii, both in fair numbers. The following is a complete list of the freshwater species found: Valvata cristata, V. piscinalis, Potamopyrgus jenkinsi, Bithynia tentaculata, *B. leachii, Lymnaea stagnalis, *L. auricularia, L. peregra, Physa fontinalis, *P. carinatus, P. vortex, *P. albus, Segmentina complanata, Anodonta cygnea, A. anatina, Sphaerium corneum, S. lacustre, *P. amnicum, P. casertanum, P. milium, P. subtruncatum, *P. henslowanum, P. hibernicum, P. nitidum (* = species specially noted by Sheppard as occurring at this locality).

In addition to P. henslowanum and B. leachii, Sheppard described a third supposedly new species from Holbrook: Helix Draparnaudi (p. 158). As Mr. Ellis has already suggested (J. Conch. 18: 54), this was almost certainly a keeled form of Planorbis albus, examples of which still occur in the mill-pond.

M. P. Kerney

FIELD MEETING - TO ROMILEY, CHESHIRE

On Saturday 10th. October, 5 members and 2 visitors met at Romiley Station and proceeded to the nearest section of the Peak Forest Canal.

There has been talk of this now disused canal being cleaned out and used for the purpose of pleasure boating, and it was also felt that this particular section had not received much of our attention.

The canal as a whole contains a fair range of aquatic species, but this particular portion was rather disappointing. Species recorded were:-

<u>Bithynia tentaculata</u> (L.)	<u>Lymnaea stagnalis</u> (L.)
<u>Lymnaea peregra</u> (Müller)	<u>Physa fontinalis</u> (L.)
<u>Planorbarius corneus</u> (L.)	<u>Planorbis carinatus</u> Müller
<u>Planorbis planorbis</u> (L.)	<u>Sphaerium corneum</u> (L.)

On the canal bank and sides of the towpath we found:-

<u>Cochlicopa lubrica</u> (Müller)	<u>Cochlicopa minima</u> (Siemaschko)
<u>Vallonia excentrica</u> Sterki	<u>Discus rotundatus</u> (Müller)
<u>Arion hortensis</u> Ferussac	<u>Arion ater</u> agg.
<u>Vitrea crystallina</u> (Müller)	<u>Oxychilus alliarius</u> (Müller)
<u>Retinella nitidula</u> (Draparnaud)	<u>Agriolimax reticulatus</u> (Müller)

Later we left the canal and explored a wood bordering on the towpath. This proved a little more fruitful and yielded:-

<u>Carychium tridentatum</u> (Risso)	<u>Cochlicopa lubrica</u>
<u>Acanthinula aculeata</u> (Müller)	<u>Punctum pygmaeum</u> (Draparnaud)
<u>Discus rotundatus</u>	<u>Arion ater</u> agg.
<u>Euconulus fulvus</u> (Müller)	<u>Vitrea crystallina</u> (Müller)
<u>Vitrea contracta</u> (Westerlund)	<u>Oxychilus cellarius</u> (Müller)
<u>Oxychilus alliarius</u>	<u>Retinella radiatula</u> (Alder)
<u>Retinella pura</u> (Alder)	<u>Retinella nitidula</u>
<u>Zonitoides excavatus</u> (Alder)	<u>Vitrina pellucida</u> (Müller)
<u>Limax maximus</u> L.	

In a very small dirty stream at the bottom of the wood we were very surprised to find Ancylus fluviatilis Müller on the underside of the stones on the bed of the stream.

Wm. F. Edwards

JOINT FIELD MEETING WITH SUB-AQUA CLUB OF GREAT BRITAIN

June 19th.-21st. 1970 at SWANAGE, DORSET

LEADERS, G. Dinesen (Sub-Aqua Club), T. Pain, J. E. L. Jones

This was a most successful meeting for members with an especial interest in Marine collecting. The divers collected a mass of material for sorting from about 5 fathoms in Swanage Bay. Bottom material is considerably discoloured and generally composed of so much worm-eaten and broken shell material that the sorting has none of the artistic attraction of tide-line collecting. One's reward is the up-grading of species, though fewer than might be expected, and fewer still of new species for the area. A highlight of the diving was the collection of individual live specimens, Trivia monacha, and T. artica, Aporrhais pes pelicani, a striking animal, white with two longitudinal red stripes, Nassarius incrassatus and Phasianella pulla.

The Conchologists failed to find a method of dredging in the bay and thus far felt a certain disappointment in not being actively involved in this underwater collecting. A collection was made from Swanage beach while others of the party visited Chapman's Pool. In the afternoon we all joined together to visit Shell Bay and Studland beach and later all enjoyed a supper party in Swanage in the evening.

The following day, a morning was spent in not too actively collecting fossils and land mollusca and basking in the sunshine on St. Alban's Head where we enjoyed the truly beautiful blue sea and white cliffs. In the afternoon collecting was at Kimmeridge where the main interest turned to exploring the rocks for live material and trying to decide the characteristics which distinguished the species of *Patella*.

The Square and Compasses Inn at Worth Matravers was voted a place to return to and the camping members in Langton Matravers were equally happy. Altogether a very successful and enjoyable week-end.

List of Mollusca collected on Swanage beach tide-lines and at 5-6 fathoms (40ft.) in Swanage Bay.

Specimens found: A = Alive; X = Single or double valves dead shells;
NF = Not found; NR = New record.

SWANAGE BEACH		SWANAGE BAY 5-6 fathoms	SWANAGE BEACH		SWANAGE BAY 5-6 fathoms
NF	Lov. 7 Lep. cin.	A	NF	G211 Haedrop. sept.	X
	<u>NR</u> 20th. Cent.		NF	G218 Mang. costulata	X
			NF	G Mang. costata	X
X	G 3 Emarg. con.	NF	<u>NR</u> 20th	G238 Ret. retusa	NF
NF	G 6 Diod. ap.	X	Cent.		
X	G 7 Pat. vulg.	X			
X	G 10 Pat. pell.	X	X	S 2 Dent. vulg.	X
X	G 13 Pat. vulg.	X			
X	G 20 Call. ziz.	A	NF	L 4 Nuc. turg.	X
	<u>NR</u> 20th. Cent.		X	L 16 An. eph.	X
X	G 23 Gibb. mag.	A	X	L 17 Mon. pat.	NF
X	G 24 Gibb. tum.	X	X	L 20 Myt. ed.	NF
X	G 25 Gibb. cin.	A	X	L 35 Ost. ed.	X
X	G 29 Gibb. striat.	NF	NF	L 39 Pect. max.	X
X	G 36 Phas. pull.	A	X	L 42 Chlam. var.	A
X	G 37 Lac. vincta.	X	NF	L 43 Chlam. dist.	X
X	G 40 Lac. pall.	NF	X	L 80 Mysel. bid.	X
X	G 41 Litt. litt.	NF	NF	L 84 Cypr. isl.	X
X	G 42 Litt. sax.	NF	NF	L 87 Card. ech.	X
X	G 45 Litt. obt.	NF	NF	L 92 Card. ex.	X
NF	G 55 Cing. semic.	X	NF	L 94 Card. cras.	X
X	G 56 Cing. semistr.	NF	NF	L 99 Ven ven.	X
NF	G 58 Alv. crassa	X	NF	L105 Ven. rhomb.	X
X	G 71 Riss. parva	X	X	L106 Ven. pull.	X
X	G 74 Riss. memb.	NF	X	L107 Ven. sax.	X
X	G 90 Bitt. ret.	X	NF	L108 Ven. dec.	X
NF	G157 Turb. eleg.	X	NF	L110 Pen. phol.	<u>NR</u>
	<u>NR</u> 20th. Cent.		X	L126 Abra. alb.	X
X	G168 Cal. chin.	X	X	L135 Ens. arc.	X
X	G169 Crep. forn.	A	NF	L142 Spis. ell.	X
NF	G170 Aporh. pespel.	A	X	L144 Spis. subt.	NF
X	G176 Nar. cat.	NF	NF	L145 Lut. lut.	X
X	G177 Nat. pol.	NF	X	L150 Corb. gibb.	NF
X	G184a Triv. mon.	A	NF	L151 Hiat. arct.	X
X	G184b Triv. arct.	A	X	L156 Phol. dact.	X
X	G190 Nuc. lap.	NF	NF	L158 Barn. parv.	X
X	G192 Ocen. ocen.	X			
X	G204 Bucc. und.	A			
X	G206 Chauv. brunn.	NF			
X	G207 Nass. ret.	X			
X	G208 Nass. incrass.	A			

J. Llewellyn Jones

Whereas a similar field meeting at Lyme Regis in 1969 was much hampered by appalling weather conditions, the contrary was the case during the field meeting arranged this year. Brilliant sunshine prevailed throughout Saturday and partly during Sunday. The sea was calm and the visibility was good.

The diving had been arranged in such a way that it would be possible to collect specimens from two distinctly different areas. Throughout Saturday, the diving took place in the Eastern part of Swanage Bay. There is a reef here, mainly consisting of large boulders, but otherwise the bottom consists of sand and fine silt. There are also certain formations of hardened clay protruding from the bottom, which is inhabited by a vast colony of Piddocks.

Each diver was provided with a nylon "shopping bag", and he was instructed to bring up all the interesting shells he could come across, without looking for anything specific. The depth varied from 25' to 35'. Members of the Conchological Society were taken by boat to see for themselves the exact areas from which the samples were brought up. One non-diving member of the Conchological Society was present in the boat during one of the dives to witness the techniques followed. The contents of the "shopping bags" were subsequently handed over to Mr. J. Llewellyn-Jones for proper evaluation.

On Sunday the diving took place near the lighthouse, west of Swanage, and the bottom here is quite different. It consists of rocks and large boulders, all of them covered with a vigorous growth of laminaria. To reach the bottom, one had to swim through kelp forest, and whereas the marine biological life was, in certain respects, richer than that witnessed on the flat bottom in Swanage Bay, the shell life here is not very abundant. The reason for the lack of molluscs was presumably that during the winter months, when the protective laminaria plants had lost their fronds, the backwash from huge billows, hitting the nearby rocky cliff, would scour through all the gulleys and openings amongst the boulders where, in more sheltered conditions, there might well have been abundant shell life. The collection of shells during the second day was therefore rather poor, both in respect of the number of individuals brought up and the number of species which they represented.

G. Dinesen

PUBLICATIONS RECEIVED

Circular No. 120 (July 1970)
Conchological Society of Southern Africa.

A useful issue, containing articles or notes on Conus milneedwardsii and C. janus by A. F. P. Hawkins, Luponia alfredensis Schilder, now raised to specific rank, by F. A. and Mrs. Schilder: further notes on the African Marginellidae by D. H. Kennelly (who has made a contribution to practically every circular since they were first issued), and the usual activity records of a very active Society.

Editor: R. Carlsson, [REDACTED], Pinelands, C.P., South Africa.

A Sheller's Directory of Clubs, Books, Periodicals and Dealers (2nd. Edition 1970), Ed. T. C. Rice.

This conchologist continues to provide a most useful service for collectors and this edition of the Directory is now surely the most complete source of non-technical information available anywhere.

'Of Sea & Shore' Publications, P.O. Box 33, Port Gamble, Washington 98364, U.S.A. \$ 1.00

T.E.C.

MEETING OF NATIONAL BIOLOGICAL SOCIETIES, 1970

A meeting of representatives from the Biological Record Centre and National Biological Societies was held at Juniper Hall Field Centre, Dorking on 24th. October 1970 to discuss mapping schemes.

Topics for discussion included evaluation of sites of nationally rare species using as criteria the number of populations, rate of decline, attractiveness, accessibility to the general public and to avid collectors, the reserve status and notes on interrelationships (e.g. food plants) with associated flora and fauna. It was suggested that an evaluation be made of the status of a list of rare species, including Mollusca, with a view to the publication of a booklet. Doubt was expressed whether enough information was available but it was decided that the project should at least proceed on groups which are well studied. Concern was expressed over excessive collecting and attention drawn to the need for conservation of the national flora and fauna and for soundly based management of nature reserves. A publication of the S.P.N.R. on "Policy on Introductions to Nature Reserves" was circulated.

Mr. John Heath gave an introductory talk and distributed preliminary notices on the "European Invertebrate Survey" which, by international co-operation aims to extend grid mapping on a European basis and for this the Biological Record Centre is acting as operational centre. Mapping is done on the U.T.M. grid using 50 km. squares and 10 - 5 km. squares for those countries and regions where more detailed information is available. Any good localised material of non-marine Mollusca collected on the Continent is thus of use and anyone with data to contribute should contact Mr. Heath*. This is a trial scheme and support is essential in the early stages.

J. E. Chatfield

*Mr. J. Heath, Biological Record Centre, Monk's Wood Experimental Station, Abbots Ripton, Huntingdon.

GENERAL NOTES

IT ONLY GOES TO SHOW - - - -

Most of our great scientific writers and leaders in Natural History in the past have not only been interested in their own subject but have had many other widely varying interests. Mr. A. E. Ellis, whose book British Snails Oxford 29 has recently been reprinted, has been no exception to this as I found out when reading the B.S.B.I. Newsletter for July 1970 and I quote from it.

EPSOM COLLEGE HERBARIUM "This herbarium, which is listed in Kent's British Herbaria, was presented to Lancaster University in 1970 and is now incorporated in the herbarium of the Department of Biological Sciences. The main components are my own collection made over more than 40 years and a considerable part of the herbarium (excepting Rubus) of W. Moyle Rogers, which was presented to Epsom College by his son, the Revd. Frederick Arundel Rogers (1876-1944), an Old Epsomian".

(from J. Llewellyn Jones)

CAVE NAMED AFTER HIM

A new cave system discovered at Perryfoot, Derbyshire, has been named after Dr. J. Wilfrid Jackson, of Buxton, in honour of his 90th. birthday. The cave was discovered by two members of the Stockport-based Derbyshire Caving Club.

JUNIOR MEMBERSHIP

Elected 23rd. November 1970

BARNSDALL, Margaret T., [REDACTED], Bow, London, [REDACTED]
BETTON, Mary, [REDACTED], Alford, Lincolnshire.
BLACK, Gordon, [REDACTED], Ashted, Surrey.
BURNETT, Christine, [REDACTED], North End, Portsmouth, Hampshire.

COLE, Susan, [REDACTED], London, S.W.10.
COOK, David Anthony, [REDACTED], High Wycombe,
Buckinghamshire.
CUMMING-BRUCE, Edward, [REDACTED], London, S.W.3.
CURRANT, Andrew P., [REDACTED], Carshalton Beeches, Surrey.
DUNFORD, Paul, [REDACTED], Chadwell Heath, Romford, Essex.
FORDHAM, David John, [REDACTED], Whittlesea, Nr. Peterborough.
HIGHAM, Maria, [REDACTED], Manchester [REDACTED]
MARSH, Susan, [REDACTED], Exeter [REDACTED]
TAIT, Andrew J., [REDACTED], Stonehaven, Kincardineshire.
TOPLEY, Peter, [REDACTED], West Wickham, Kent.

Elected 19th. December 1970

TURNER, Evelyn J., [REDACTED], Woollaton, Nottingham.

SHELLS FOR SALE

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391)

EXCHANGES & CORRESPONDENTS WANTED

Mrs. M. Neale, [REDACTED], Balclutha, South Island, New Zealand, is keen to contact other collectors and to exchange shells in order to increase her small collection.

M. Michel Lambiotte, [REDACTED], B-1410 Waterloo, Belgium, requires information and specimens, especially alcohol preserved ones, of British Unionacea. He offers in exchange Belgian molluscs.

FIELD MEETING ARRANGEMENTS, 1971

Summer Field Meetings will be held as under. Members requiring details of a particular meeting should write to the Field Meetings Organiser at the address below. The 5/- charge for notices is discontinued. A separate application must be made in respect of each meeting and a stamped, self-addressed envelope enclosed.

Sunday April 4th. - Isle of Sheppey, Kent. Director, A. J. Rundle.
(Fossil Mollusca of the London Clay)

Sunday May 2nd. - Hayley Wood, Cambridge. C. R. C. Paul.

Friday May 21st. to Sunday May 23rd. - Coast of Pembroke, S. Wales. Miss J. T. Sawyer. (Marine mollusca of South Wales)

NOTE: Application for details and accommodation for this meeting should be made direct to Miss Sawyer, [REDACTED], London, N.W.2. as soon as possible.

Saturday June 5th. - Leicester Area. I. M. Evans.

July (date not yet available). Dredging trip in the Blackwater Estuary, West Mersea, Essex. Mrs. J. Llewellyn Jones. (Party limited to 20).

Details of further meetings will appear in the next number of the Newsletter.

T. Pain, Field Meetings Organiser; [REDACTED], Millbank, London, S.W.1.

1971 SUBSCRIPTIONS: Members are reminded that the new subscription of £3 p.a. became due from 1st. January 1971 - for which full members will receive all publications. Hon. Treasurer.

FIELD STUDIES COUNCIL - JUNIPER HALL FIELD CENTRE, DORKING, SURREY. (Tel: Dorking 3849). ENVIRONMENTAL SCIENCE COURSE, 14th. - 21st. April 1971 (Wednesday to Wednesday). Tutors: June Chatfield, Ph.D., and Brian Barrett, B.Sc., City of Portsmouth College of Education.

A COURSE ON SLUGS AND SNAILS, Wednesday 18th. August - Wednesday 25th. August 1971. Tutor: Dr. June Chatfield, City of Portsmouth College of Education.

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

IN THE SHADOW OF CADER IDRIS: A WELSH EXCURSION

Cader Idris is situated at the south-western end of the Snowdonia National Park and rises high above the town of Dolgellau, Merionethshire, to a height of 2,927 feet. Several conchologists have made collections in this mountainous region, none more successfully than Charles Oldham (1865-1942) who discovered Vertigo alpestris Alder (Oldham, 1914) and Vertigo pusilla Müller (Oldham, 1923) at Dolgellau, and Pisidium lilljeborgii Clessin at Llyn Gwernan, a lake on the northern flank of Cader Idris (Oldham, 1922). The presence of these species, and that of the planorbid snail Menetus dilatatus (Gould) in Llyn Trawsfynydd, a dozen miles north of Dolgellau (Dance, 1970), were sufficient reasons for organising an excursion to the area. It was also hoped that the bare northern slope of Cader Idris at 1,300 feet and above would be found to support a limited molluscan fauna, there being a broad band of base-rich soil at that height and above which is known to support calcicole plants. A thorough sampling of the 10-kilometre square in which Dolgellau is situated (23/71) would also give indications of the entire molluscan fauna of this outlying part of the National Park.

Fourteen persons assembled at Dolgellau on 3 April 1970, made plans, and next day climbed the north slope of Cader Idris as far as Llyn-y-Gadair (ca. 1,800 ft.). No molluscs were found here and the party descended to Llyn-y-Gafr (1,350 ft.) where Acroloxus lacustris (L.) has its highest foothold in the British Isles (Lloyd-Evans, 1956a, 1956b). A concentrated search brought to light several extremely fragile specimens of this species and one or two specimens of Planorbis contortus (L.) (its highest recorded altitude in Wales). Pisidium obtusale (Lamarck), P. personatum Malm, and Lymnaea peregra (L.) were also found. Around the lake, under dead sedges, was a limited molluscan fauna comprising Columella edentula (Draparnaud), Punctum pygmaeum (Draparnaud) (both altitude records for Wales), Vitrea crystallina (Müller), Agriolimax reticulatus (Müller), A. laevis (Müller), Arion circumscriptus Johnston, and A. intermedius Normand. Above the lake, at about 1,400 feet, two specimens of Discus rotundatus (Müller) were found, and Lymnaea truncatula (Müller) occurred at that height and wherever water trickled. Slugs were scarce although Arion ater (L.) and Lehmanna marginata (Müller) are known to be common on Cader Idris above 1,400 feet. On the basis of these occurrences it is not clear that the base-rich soil has had a marked influence on the molluscan fauna of Cader Idris at 1,350 feet and above. Further collecting would be necessary before drawing conclusions either way.

At a much lower level the party collected molluscs in and around Llyn Gwernan, hoping to find Pisidium lilljeborgii. This was not found, but the dozen or so fresh-water species which were scooped up included Valvata piscinalis (Müller), scarce in North Wales, and Planorbis crista (L.), a species needing confirmation for the vice-county of Merioneth. Later the party visited Penmaenpool, 3 or 4 miles west of Dolgellau. In 1892 G. W. Chaster discovered a rich molluscan fauna somewhere in Merionethshire and wrote an account of it (Chaster, 1892). He did not mention a precise locality, but 'Penmaenpool' occurred on the labels of several of the species he listed, specimens of which are preserved in his collection at the National Museum of Wales. As his list included Acanthinula lamellata (Jeffreys), Lauria anglica (Wood), and the pure white form of Acicula fusca (Montagu), all scarce and local in Wales, it was hoped that his locality could be re-found. In the only substantial piece of woodland at Penmaenpool a small colony of A. fusca comprising all-white forms was discovered, but the other two species were not found with it. This, presumably, was Chaster's site.

The next day the party visited Llyn Trawsfynydd, an artificial lake whose waters are warmed by the reactors of the nuclear power station on its north bank,

and selected the northernmost of the two sites known to be inhabited by Menetus dilatatus. It was so abundant at this site that there was no danger of fourteen conchologists decimating the population. There is every reason to suppose that this species is on the increase in this lake, and the possibility of its occurrence in other Welsh lakes should not be overlooked. (On 16 May 1970 S. P. Dance found 10 living specimens on leaves and flat stones in Llyn Mair, a natural lake north of Maentwrog, about 4 miles north of Llyn Trawsfynydd. Further discoveries in comparable lakes may now be confidently expected).

For the final part of the programme the party visited Torrent Walk, a wooded beauty spot east of Dolgellau, and a known haunt of Acanthinula lamellata and Vertigo alpestris. Only one specimen of A. lamellata was found, but the discovery of several specimens of Lauria anglica (previously unrecorded there) was ample compensation. Rain and ill-concealed avarice drove the party to seek out Oldham's original site for V. alpestris. On the wall forming the northern boundary of the Torrent Walk is a single well-established ivy bush. In leaf debris on the wall under the bush is a thriving colony of this species and necessarily small samples of leaf litter, removed by members of the party for subsequent sorting, contained several specimens. The only other British sites for this species are in the north of England, principally the Lake District, and the island of Mull. After the scheduled programme was completed several participants collected V. alpestris elsewhere around Dolgellau, and in one place it was associated with and outnumbered by V. pusilla.

This concentrated assault on the Dolgellau 10-kilometre square had a gratifying and unexpected outcome. Together with records already available the total number of species recorded is 63. Most of that total was realised by members of this party which, considering the terrain and the early date, is a tribute to their skill and enthusiasm.

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S. P. Dance, Zoology Department,
National Museum of Wales, Cardiff.

NAMES OF BRITISH MARINE MOLLUSCA

A recent criticism of some of the names in the list of British marine Mollusca used for recording distribution prompted the Compiler of the Newsletter to ask me to draw up a list of those names which have been placed on the Official Lists by the International Commission on Zoological Nomenclature, where those names differ from those in Winckworth's List (J. Conch. 19:211-252, 1932) or the Additions and Corrections (J. Conch. 23:131-134, 1951), not as being an authority on marine Mollusca (far from it), but as being a retired layabout with leisure for this chore. The list has been vetted by Mrs. McMillan, so it should be all right.

Chaetoderma Lovén, type species C. nitidulum Loven (vice Crystallophrisson Möbius): Opinion 764, 1966.

Littorina Férussac, type species Turbo littoreus L. (non T. neritoides L.): Application, Bull. zool. Nomencl. 27:53, 1970.

Truncatella Risso, type species T. laevigata Risso (vice Acmea Hartmann): Opinion 344, 1955.

Retusa Brown: the following have been placed on the Official List of Specific Names: truncatula (Bruguière) and umbilicata (Montagu), Opinion 549, 1959; obtusa (Montagu) and alba (Brown), Opinion 568, 1959.

Scaphander Montfort, type species Bulla lignaria L. (vice Tricla Retzius):
 Opinion 287, 1954.
Runcina Forbes, type species R. hancocki Forbes (vice Pelta Quatrefages):
 Opinion 811, 1967.
Cavolinia Abildgaard (vice Cavolina): Bull. zool. Nomencl. 21:46, 1964.
Cratena Bergh, type species Doris peregrina Gmelin, and Trinchesia Ihering, type
 species Doris caerulea Montagu, are both on the Official List of Generic Names:
 Opinions 776 & 777, 1966.
Cadlina Bergh, type species Doris repanda Alder & Hancock (vice Echinochila
Mörch): Opinion 812, 1967.
Aeolidiella Bergh, type species Eolida soemmerringii Leuckart (vice Aeolidiella
occidentalis Bergh): Opinion 780, 1966.
Antalis H. & A. Adams, type species Dentalium entalis L.: Opinion 361, 1955.
Crassostrea Sacco as a genus: Opinion 338, 1955.
Pseudamussium Mörch as a genus: Opinion 714, 1964.
Psammobia Lamarck, type species Tellina fervensis Gmelin, and Gari Schumacher,
 type species G. vulgaris Schumacher, are both on the Official List of Generic
 Names: Opinion 910, 1970.

Some other nomenclatural changes, so far relating only to Bivalves, are
 advocated by Bowden & Heppell in their "Revised List of British Mollusca,"
J. Conch. 26:99-124 & 237-272.

As was pointed out when replying to the criticism, it would be quite
 impracticable to incorporate every change in nomenclature in a faunal list
 intended for the convenience of collectors and students, and such a working list
 lays no claim to be an authoritative up-to-the-minute catalogue. After nearly
 forty years, however, a revised list of British marine Mollusca is called for,
 which should be compiled by a committee of specialists representing the two
 societies in this country concerned with the study of Mollusca.

A. E. Ellis

SANTA CAROLINA ISLAND - PORTUGUESE EAST AFRICA

The Island mentioned, also known as Paradise Island, is one of a small
 group, situated in the Mocambique Channel, approximately half way between the
 Ports of Lourenco Marques and Beira.

From available information it appears there are four main Islands, viz:-
 Bazaruto (the largest), Benguera, Santa Carolina (northernmost), and Magaruque
 (southernmost).

Access to these Islands is from the small town of Vilauculos on the adjacent
 mainland, and a boat trip of about eight miles is necessary to reach the selected
 locality.

For some ten or more years the Mocambique Channel has attracted deep sea
 anglers - men who go out in pursuit of the big game fish such as Marlin, Tunny,
 etc. Fishing is reported to be good in the vicinity of this group of Islands and
 the Portuguese, with an eye to business, have erected huts on the Islands, to
 accommodate anglers and visitors.

The accounts brought back by anglers about these coral Islands, have roused
 the interest of members of the Conchological Society of Southern Africa. Two or
 three visited Margaruque Is. in 1967, but the writer has not heard any details of
 the trip.

In 1968, Mrs. Thelma Trow - a beginner of one year's membership - accompanied
 her husband to Santa Carolina Is. Mr. Trow is an enthusiastic deep sea angler,
 but so much interest was created by the shells collected by Mrs. Trow, that fish-
 ing was abandoned in favour of shell collecting.

Time was limited to a stay of five days on this Island, and search for shells
 was possible only at low water. Nevertheless Mrs. Trow returned with a total of
 about 116 species of shells, all collected alive.

The writer had the pleasure of visiting Mrs. Trow, and viewing the shells,

plus the interesting chore of identifying the "catch".

Apparently these Islands have not been thoroughly worked over as yet, and the shells recorded. Also there is a decided scarcity of literature, and it is evident that further investigation and collecting will reveal interesting finds in the mollusca of the region.

South African collectors are fortunate in having such a rich field awaiting investigation, just at their "back door".

D. H. Kennelly,
East London, South Africa

Footnote. The Compiler was very sorry to hear of the death of Mr. Kennelly recently. It seems interesting to append an extract from his letter of 11th. May 1969 enclosing this article and List.

"Working up this lot has reminded me of my own experiences on the mainland of Portuguese East Africa some thirty odd years ago.

I can visualise the type of hut erected on the Islands for the use of visitors. These "Banda" huts - as they are termed, consist of poles set in a rectangle, or a circle, the walls consist of thin branches stripped of leaves, and laid horizontally between the poles. The whole hut is thatched for protection against rain, etc.

There are plenty of gaps and chinks in the walls to admit air, and one night when sleeping in one of these huts, I was awakened by a curious snuffing sort of noise just where the head of the stretcher neared the wall. It was a leopard nosing round. I shouted and the cowardly brute departed in a hurry, and I went to sleep again.

The Islands mentioned are all coral formation mainly, and the unwary novice at shell collecting has to be careful about the deadly stone fish, the trigger fish, and the vicious Moray eels. In addition there are Sea Urchins with poisonous spines, and stinging corals.

But who worries? Certainly not the keen angler, or the avid shell collector. They return with the spoils and all is well.

My one regret is that I am now too old to go off on these collecting jaunts. You have to be young and active to stand up to a rough trip - unless you go by air -, and adapt yourself to the rather primitive accommodation available."

MARINE MOLLUSCA COLLECTED ALIVE AT SANTA CAROLINA ISLAND, MOZAMBIQUE COAST,

BY MRS. T. TROW - OCTOBER 1968

PELECYPODA

<u>Family Mytilidae</u>	Sep-tifer bilocularis, Linne
<u>Family Pteriidae</u>	Pinctada vulgaris, Schumacher
<u>Family Pectinidae</u>	Chlamys senatorius, Gmelin
<u>Family Limidae</u>	Lima lima, Linne
<u>Family Ostreidae</u>	Pycnodonta hyotis, Linne
<u>Family Lucinidae</u>	Loripes clausus, Philippi
<u>Family Carditidae</u>	Cardita variegata, Bruguiere
	Cardita pectunculus, Bruguiere
<u>Family Trapeziidae</u>	Trapezium rostrata, Lamarck
<u>Family Cardiidae</u>	Cardium assimilis, Reeve
<u>Family Tridacnidae</u>	Tridacna squamosa, Lamarck; Tridacna maxima, Roding
<u>Family Veneridae</u>	Gaffrarium pectinatum, Linne
<u>Family Mesodesmatidae</u>	Meso-desma (Atactodes) glabratum, Gmelin
<u>Family Mactridae</u>	Mactra hians, Philippi

GASTROPODA

<u>Family Fissurellidae</u>	Scutus elongatus, Lamarck
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<u>Family Haliotidae</u>	<i>Haliotis pustulatus</i> , Reeve
<u>Family Trochidae</u>	<i>Trochus mauritianus</i> , Gmelin
	<i>Clanculus puniceus</i> , Philippi
	<i>Stomatella orbiculata</i> , Adams
	<i>Infundibulops cariniferus</i> , Reeve
<u>Family Turbinidae</u>	<i>Turbo argyrostomus</i> , Linne
	<i>Turbo marmoratus</i> , Linne
<u>Family Neritidae</u>	<i>Nerita polita</i> , Linne
	<i>Nerita undata</i> , Linne
	<i>Nerita textilis</i> , Gmelin
<u>Family Planaxidae</u>	<i>Planaxis sulcatus</i> , Born
<u>Family Cerithiidae</u>	<i>Cerithium morus</i> , Linne
	<i>Cerithium echinatum</i> , Lamarck
	<i>Cerithium caeruleum</i> , Sowerby
	<i>Cerithium vertagus</i> , Linne
<u>Family Solariidae</u>	<i>Architectonica perspectiva</i> , Linne
	<i>Heliacus variegatus</i> , Gmelin
<u>Family Vermetidae</u>	<i>Vermetus natalensis</i> ? Morch
<u>Family Strombidae</u>	<i>Strombus mutabilis</i> , Swainson
	<i>Strombus gibberulus</i> , Linne
<u>Family Naticidae</u>	<i>Natica marochiensis</i> , Gmelin
<u>Family Cypraeidae</u>	<i>Polynices mamilla</i> , Linne
	<i>Cypraea diliculum</i> , Reeve
	<i>Cypraea felina</i> , Gmelin
	<i>Cypraea caurica</i> , Linne
	<i>Cypraea lynx</i> , Linne
	<i>Cypraea histrio</i> , Gmelin
	<i>Cypraea scurra</i> , Gmelin
	<i>Cypraea mauritiana</i> , Linne
	<i>Cypraea carneola</i> , Linne
	<i>Cypraea erosa</i> , Linne
	<i>Cypraea caputserpentis</i> , Linne
	<i>Cypraea helvola</i> , Linne
	<i>Cypraea isabella</i> , Linne
	<i>Cypraea fimbriata</i> , Gmelin
	<i>Cypraea vitellus</i> , Linne
	<i>Cypraea moneta</i> , Linne
	<i>Cypraea annulus</i> , Linne
<u>Family Amphioeratidae</u>	<i>Calpurnus verrucosus</i> , Linne
<u>Family Cymatiidae</u>	<i>Cymatium nicobaricum</i> , Roding
	<i>Cymatium pyrum</i> , Linne
	<i>Cymatium grandimaculatum</i> , Reeve
	<i>Cymatium pileare</i> , Linne
	<i>Cymatium rubeculum</i> , Linne
	<i>Cymatium labiosum</i> , Wood
	<i>Cymatium durbanense</i> , Smith
	<i>Cymatium</i> Sp?. (Juvenile)
<u>Family Ficidae</u>	<i>Ficus subintermedius</i> , d'Orbigny
<u>Family Muricidae</u>	<i>Murex ramosus</i> , Linne
	<i>Murex torrefactus</i> , Sowerby
	<i>Murex cichoreus</i> ?, Gmelin
	<i>Murex brevispina</i> , Lamarck
	<i>Drupa morum</i> , Roding
	<i>Drupa spathulifera</i> , Blainville
	<i>Drupa ricina</i> , Linne
	<i>Drupa margariticolor</i> , Broderip
	<i>Rapana rapiformis</i> , Born
	<i>Urosalpinx heptagonalis</i> , Reeve
	<i>Thais rudolphi</i> , Lamarck
	<i>Thais pica</i> , Blainville
	<i>Thais armigera</i> , Lamarck
<u>Family Buccinidae</u>	<i>Cantharus undosus</i> , Linne
	<i>Engina mendicaria</i> , Linne
<u>Family Melongenidae</u>	<i>Volema pyrum</i> , Gmelin
<u>Family Nassidae</u>	<i>Nassa kraussiana</i> , Dunker
	<i>Nassa coronata</i> , Bruguiere
	<i>Nassa arcularia</i> , Linne
	<i>Nassa fenestratus</i> , Marrat

<u>Family Fasciolaridae</u>	<i>Pleuroploca trapezium</i> , Linne <i>Fusinus longicaudus</i> , Bory <i>Fusinus colus</i> , Linne <i>Latirus polygonus</i> , Gmelin <i>Peristernia nassatula</i> , Lamarck
<u>Family Olividae</u>	<i>Oliva bulbosa</i> , Roding
<u>Family Mitridae</u>	<i>Strigatella litterata</i> , Lamarck
<u>Family Vasidae</u>	<i>Vasum ceramicum</i> , Linne <i>Vasum cornigerum</i> , Lamarck
<u>Family Harpidae</u>	<i>Harpa major</i> , Roding
<u>Family Conidae</u>	<i>Conus lividus</i> , Hwass <i>Conus flavidus</i> , Lamarck <i>Conus chaldeus</i> , Roding <i>Conus ebraeus</i> , Linne <i>Conus ceylanensis</i> , Hwass <i>Conus pusillus</i> , Chemnitz <i>Conus fulgetrum</i> , Sowerby <i>Conus rattus</i> , Hwass <i>Conus textile</i> , Linne <i>Conus miles</i> , Linne <i>Conus terebra</i> , Lamarck <i>Conus catus</i> , Hwass <i>Conus virgo</i> , Linne <i>Conus gubernator</i> , Hwass <i>Conus praelatus</i> , Bruguiere
<u>Family Terebridae</u>	<i>Terebra maculata</i> , Linne <i>Terebra subulata</i> , Linne <i>Terebra dimidiata</i> , Linne <i>Terebra hectica</i> , Linne <i>Terebra duplicata</i> , Linne
<u>Family Hydatinidae</u>	<i>Hydatina physis</i> , Linne <i>Hydatina velum</i> , Gmelin

REMARKS:- The foregoing List is not complete, nor is it presented as such. The species listed were collected in ONE week by our Border Group member - Mrs. Thelma Trow, and indicates the variety of Mollusca obtainable at Santa Carolina Is.

Further collecting would undoubtedly produce very interesting results - particularly if attention is given to the Bivalves.

D. H. Kennelly, East London

REDISCOVERY OF SPHAERIUM TRANSVERSUM (SAY) IN LONDON

Sphaerium transversum (Say) (= *S. pallidum* Gray), a species introduced from America, was discovered in Britain in 1856 in the Grand Junction Canal at Kensal Green, London (Ann. Mag. Nat. Hist. (Series 2) 17: 465). Further specimens are known to have been collected in the 'Paddington Canal' (very probably at or near the same place) in 1875. I know of no more recent records, and the species has been presumed extinct (e.g., see J. Conch. 25 (1962): 110), no doubt owing to the unprepossessing appearance of London's canal, seemingly capable of supporting little in the way of molluscan life.

The only other records for the London area are based on very old finds from the New River (v.c.21) and from the Camberwell Canal (v.c.17) (both Joshua Alder collection, and therefore probably circa 1830-1850).

In March 1971 I had the good fortune of seeing a short section of the Regent's Canal (the easterly continuation of the Grand Junction Canal to the Docks, opened in 1820) partially drained. The spot is between the two locks directly north of Hawley Crescent, Camden Town, N.W.1 (TQ 288841). The bottom is a silty mud, littered with coal, cinders, old bricks and a great deal of other rubbish. Surprisingly there is a thriving molluscan fauna. The commonest species are *Viviparus viviparus*, *Bithynia tentaculata*, *Lymnaea peregra* (some curiously deformed), *Anodonta anatina*, *Sphaerium corneum*, *Pisidium subtruncatum* and *P. nitidum*, with smaller numbers of *Potamopyrgus jenkinsi*, *Lymnaea auricularia*, *Physa* cf. *heterostrophia* (1), *Planorbis albus* (1), *P. crista*, *Acroloxus lacustris*,

Ancylus fluviatilis (1), Sphaerium rivicola, S. transversum, S. lacustre, Pisidium casertanum and P. henslowanum. It is remarkable that all four British species of Sphaerium should be found together. I collected about half-a-dozen freshly dead valves of S. transversum in about ten minutes.

M. P. Kerney

AN ACTIVE OLD LADY IN WESTERN AUSTRALIA

Mrs. Daniel McDaniel of Broome, Western Australia, is 81 - a time of life when most people would prefer a restful existence.

But her only complaint is that the days are not long enough to allow her to carry out all her many activities.

She lives alone in a big house that from the street is virtually invisible behind and under such lush tropical vegetation as poinsettia, poinciana, bougainvillea and mango trees.

Here she tends her priceless shell collection.

Apart from this, she keeps her house in order, looks after her garden, feeds her turkeys, maintains a full correspondence with fellow shell enthusiasts all over the world, reads the literature of conchology (and plenty of novels too), walks miles in search of shells on Broome's fantastic beaches, prepares new finds, entertains a near constant stream of visitors, and keeps up old friendships with the men of half a dozen nationalities with whom she and her late husband dealt in the grand days when Broome was a world centre of the pearling industry.

A tiny old lady who is not quite so fast on her legs as she used to be, she still snatched up an axe handle and pursued, unsuccessfully, a midnight thief who got away from her house with her money box, but she gave police so good a description of the miscreant that they tracked him down and arrested him at Derby, nearly 200 miles away.

He is now in gaol for six months and no doubt wishing he had kept well clear of the little old lady who appeared to be so frail.

For 56 years Broome has formed the centre of Mrs. McDaniel's life.

Broome is a small tropical town at the south-western tip of the Kimberley region of Western Australia, 18 degrees south of the equator. It is 1380 sea miles, 1570 road miles and 1255 air miles north of Perth, the State capital.

William Dampier, English sea dog, buccaneer and adventurer, visited the area in 1699 in HMS Roebuck. Roebuck Bay, Dampier Creek and Buccaneer Rock are features of Broome that reflect this, by Australian standards, ancient visit.

Out from Broome the seas yield a bountiful harvest of pearl shell, the motivator that brought pearl seekers to the area in the 1880s and led to the establishment of the town. Before long the town had a polyglot population of Australians, Europeans, Japanese, Malays, Chinese, Manilamen and Koepangers (natives of Koepang, Timor).

The Japanese proved to be the best divers. So many of them came to Broome in the good days that the local cemetery has nearly 1000 Japanese graves.

At 1925 more than 400 pearling luggers were operating out of Broome. With normal ups and downs the industry maintained itself until the second world war, which brought about a complete cessation of activities.

These activities were not to resume again on the grand scale because of the impact of cultured pearls on the world market. Only 47 Broome luggers were operating at 1957 and six at 1963. The fleet has now increased to 11 to supply a demand for live shell for the cultured pearl industry at Kuri Bay, 250 miles north of Broome.

During the early years of this century when Broome was establishing itself

as a world pearl centre, Mrs. McDaniel, then Phyllis Bardwell, was establishing a reputation for herself in other fields at Perth.

She was born in Melbourne in 1889, the daughter of a legal man and classical scholar. Early in her life her father decided to retire from the practice of law to seek his fortune in the Kalgoorlie goldfields of Western Australia, but he changed his mind in Perth and returned to his profession.

Phyllis was eight years of age when she came to Perth, then a small, quiet provincial city. She soon discovered she had a great affinity with water and rapidly became a first rate swimmer, keen oarswoman and proficient under sail.

During the first decade of the century she (and other girls with her encouragement) entered a five mile swimming race on the River Swan at Perth. This quite novel and revolutionary decision startled the male competitors and brought expressions of disapproval from many of the citizenry; men of course. No one however, attempted to stop the girls. Phyllis came first of the women and third in the overall results.

Around this time she also won honours as an oarswoman (single sculls and pairs) and as skipper of an 18-footer yacht with an all-girl crew she had trained.

Her father then moved to Geraldton, 300 miles north of Perth, where she set about instructing the local youth (both sexes) in swimming and life saving to such good effect that the Royal Life Saving Society presented her with an inscribed silver tray when she married Daniel McDaniel in 1915.

Soon after the South African war, Phyllis' brother Bernard, an ex-serviceman, went into the pearling business with two boats at the Monte Bello Islands off the north-west coast of Western Australia. Eventually he moved to Broome.

Phyllis visited him on 4 August 1914 and there met Daniel McDaniel, a tall handsome Irishman whom she married a year later at Geraldton.

"Daniel was a successful pearler," Mrs. McDaniel said. "In those days the men went out in little cockleshells of things to dive in anything up to 25 fathoms. They thought it was marvellous to bring in five tons of shell."

"During the 1914-18 war they built bigger boats and put in engines. This of course produced better results.

Daniel had eight luggers up to his death in 1961.

During the second world war, when the Japanese attacked Broome, the women and children had to leave. My three boys were overseas in the services, so I took a farm at Dardanup, south of Perth, and worked that successfully for a few years until I could return to Broome.

After Daniel's death I ran the business with two of my sons until 1967, but the good times had finished."

Broome has a 40ft. tide. These big tides bring in thousands of living shells which they deposit on the beaches. At low tide Mrs. McDaniel often walks for miles to gather more rarities for her collection.

A portion of her work consists of preparing these shells for the big display cabinets that are a feature of the huge enclosed verandah surrounding her house.

Patrick Davidson
(With acknowledgements to 'News & Information Bureau', Canberra, Australia)

FIELD MEETING - TO THE HAMPSHIRE DOWNS NEAR NEWBURY, OCTOBER 18th. 1970

A party of 8 members and three visitors met at Newbury on October 18th. for the "Autumn Slug Foray". They arrived in two waves, the early birds being rewarded with an extra trip to Adbury Park, Burghclere, Hants. (41/4962) to search for Aplexa hypnorum in a dry ox-bow of the stream running through the meadow there. The director had found two living specimens and a number of dead shells

under decomposing vegetation in this place six months before, but since then a dry summer and the trampling of cattle had destroyed the habitat and not a trace of the mollusc was found. Later that day, the director tried to make up for this by providing some of the party with dead shells collected on his first visit. As this area of the park is to be drained and reseeded in 1971, it is unlikely that the species will be found there again. However, a few characteristic water-meadow species were collected, viz: Carychium minimum, Lymnaea truncatula, Planorbis leucostoma, Succinea pfeifferi, Agriolimax reticulatus, A. laevis and Pisidium personatum.

After a hurried dash back to town to collect the late arrivals, the now complete party drove out to Facombe Wood (41/383558), a fairly undisturbed belt of mixed woodland containing some magnificent beech trees, on a steep chalky hillside above a long dry valley. The broad strips of grass flanking the road are a favourite picnic place in summer, but there is something forbidding about the high, silent wood, perhaps atavistic memories of the men who hunted there and scratched a living from the "field system" on the opposite hillside a thousand years ago, so the wood suffers little from trampling and litter. Here the great ash-black slug (Limax cinereo-niger) finds a safe retreat - a very safe one, for it was nearly an hour before the beasts were found; two classic examples, one chestnut brown and one deep greyish-black, resting under a log with a big mass of their yellowish white eggs. The wood also yielded Pomatias elegans, Carychium tridentatum, Azeca goodalli, Cochlicopa lubrica, Acanthinula aculeata, Marpessa laminata, Clausilia bidentata, C. rolphi, Helix hortensis, H. nemoralis, Hygromia striolata, H. hispida, Punctum pygmaeum, Discus rotundatus, Arion circumscriptus, A. hortensis, A. subfuscus, A. ater agg., Euconulus fulvus, Vitrea crystallina, V. contracta, Oxychilus cellarius, O. alliarius, Retinella pura, R. nitidula, Vitrina pellucida, Lehmannia marginata, and Agriolimax reticulatus.

Having dined and photographed the big slugs, the party then moved off to Coombe Wood, Linkenholt (41/3559), where patches of coppice wood alternate with scrub and pasture on a steep chalk slope. Here they found Pomatias elegans, Carychium tridentatum, Cochlicopa lubricella, Vertigo pygmaea, Pupilla muscorum, Vallonia costata, Ena obscura, Marpessa laminata, Clausilia bidentata, Ceciliodes acicula (on a molehill, of course), Helicodonta lapicida, Helix hortensis, H. nemoralis, Hygromia striolata, H. hispida, Helicella caperata, Helicella virgata (dead shell), Discus rotundatus, Vitrea contracta, Oxychilus cellarius, O. alliarius, Retinella pura, R. nitidula, Vitrina pellucida, and Agriolimax reticulatus.

The list was just filling out nicely and Helicella virgata (oddly scarce for such a habitat) had just been added, when an unsociable-looking individual materialised, demanding "Who be charge-hand o' your lot?" The "charge-hand" presented himself (sheepishly) and was informed that the land was the private game preserve of an even more crusty gentleman referred to as "the Gaffer" (which may have explained the shortage of Helicella virgata, much loved by pheasants). "The Gaffer", it seemed, "would play merry 'ell if he saw us, and I thought I'd tell yer as yer might as well be chucked off by me as by the Gaffer". The party settled for the latter course rather than interview the Gaffer and allowed themselves to be "chucked off", or to be precise, chased off with a tractor. A sight-seeing tour along the top of the Downs and a much-needed "cuppa" at the director's home concluded the meeting.

Michael R. Block

L. W. STRATTON - 1900-1971

The loss of one of our Vice-Presidents, Mr. L. W. Stratton was announced at the meeting of the Society on 27th. February. We understood that only floral tributes from family should be sent, but that if anyone cared to make a contribution to the Sir Malcolm Sargent Cancer Fund for Children it would be appreciated; this was in accordance with his wishes.

The Council decided that no collective action be taken but that any members who would like to make a contribution to this fund, which would be sent in as a joint contribution from his friends in the Society, should hand their contributions to me. Some responded immediately. However, the Council also decided that their action should be notified to all through the "Conchologists' Newsletter"

so that any who were not present at the meeting could contribute if they so wished. Please send any gift you may wish to make, in memory of Mr. Stratton, to me at [REDACTED], Bromley, Kent.

H. E. J. Biggs

GENERAL NOTES

FREEZING SNAILS OUT

We used to remove snails from their shells by dropping them briefly in boiling water and then going to work with a bent pin. Recently, however, we have found a more satisfactory method which we have not seen reported by anyone else. Having a large number of snails in polythene bags and no time even to spread them in boxes to dry out, we put them in the deep-freeze. When we got round to dealing with them we found that they could be removed from their shells with ease.

We must stress that we have only tried the method with the larger helicids. For them, at least, it has great advantages. If the snails are moist when put in the deep-freeze they usually die in a less contracted state than if boiled. Furthermore, freezing does not make the flesh brittle as boiling does so the bodies can always be removed completely - we find that even with a well bent pin and considerable practice one tends to leave behind the tip of the body of at least some boiled snails. There is the additional advantage that one avoids the thrills and spills of removing snails from boiling water and bodies from still-hot shells.

We cannot say whether snails suffer more pain when boiled quickly than when frozen slowly. Ours have smiles on their faces after both treatments.

Irene Blair, Jeremy Greenwood

JUNIOR MEMBER ELECTED 27th. FEBRUARY 1971

ENGLISH, Athene, [REDACTED], Peterstow, Ross-on-Wye, Herefordshire.

MARINE CENSUS REPORT

The Marine Recorder hopes to have her Annual Report ready for inclusion in the September issue of the Newsletter.

CONSERVATION AND MOLLUSCAN HABITATS

The Society is currently trying to improve liaison with County Nature Trusts, Managements of Nature Reserves and similar bodies actively concerned with Natural History interests with a particular aim of making more widely known the specialised knowledge and advice potentially available from this Society. If you are interested, please ensure that your own County Nature Trust and any other Natural History organisations are fully aware of the expert knowledge available for their assistance in any matter related to the conservation of the mollusca, both Recent and Fossil.

P. E. Negus

THE NEWSLETTER

The Compiler will be very pleased to receive further contributions for forthcoming issues. One or two medium to long articles would be specially welcome. Because of the heavy cost of postage and the need for economy by all concerned, no acknowledgements are sent unless there is some specific reason. Nevertheless, the Compiler is grateful for all contributions (Literary or financial)!

SHELLS FOR SALE

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

HON. SECRETARY - CHANGE OF ADDRESS

Please note that Miss J. T. Sawyer, B.A., has now moved to:-

██████████, ██████████, Wembley Park, Middlesex.

MR. Ph. BOUCHET, ██████████, 56-Auray, France, would be pleased to know a member of the Society having a good knowledge of Turridae spp. for determination of French and Spanish (Atlantic) species.

CONCHOLOGIST REQUIRED FOR THE EAST LONDON MUSEUM, SOUTH AFRICA

An absorbing position for the right person with the prospect of new discoveries on the nearby fascinating coast.

A University Degree is required and the salary scale is as follows:-
R2700 (£1350) x R150 (£75) - 4200 (£2100 / R4200 (£2100) x R150 (£75) - R4800 (£2400) x R300 (£150) - R5400 (£2700)

Apply to:- Dr. M. Courtenay-Latimer, Director, East London Museum, East London, South Africa.

FIELD MEETING ARRANGEMENTS, 1971
(continued from Newsletter No. 36)

Saturday, late June or early July - Dredging trip off the Blackwater Estuary, from West Mersea, Essex. Mrs. J. Llewellyn Jones (Party limited to 20, members wishing to take part should apply as soon as possible. Definite date not yet available).

Saturday August 14th. East Suffolk, Orford (Coralline Crag) and the Butley River area. P. Cambridge.

Sunday September 5th. Thrapston, Northants. G. Osborn. (Joint meeting with the Northampton N.H.S.).

Sunday October 17th. Autumn Slug Foray. M. P. Kerney.

NOTE: Members are reminded that a stamped, self-addressed envelope must be sent when applying for details.

██████████,
Millbank, London, S.W.1.

T. Pain,
Field Meetings Organiser

CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

ANNUAL SUBSCRIPTIONS, 1971

The Annual Subscription of £3 was due on 1st. January, but there are still over 170 Members who have not yet paid their Subscriptions for this year, and in addition a number of Members are still owing a balance of £1, due to their Subscriptions having been paid on obsolete bankers' orders.

Members will, I am sure, appreciate that with the present high cost of postage a considerable expense is incurred in sending individual reminders, in addition to a good deal of extra work for the Treasurer.

Will all Members concerned please accept this as a reminder, and forward the arrears as soon as possible.

Please note that to allow for conversion charges the rate of 2.75 U.S. dollars to £1 applies.

MARJORIE FOGAN, Hon. Treasurer

██████████, Atherton,
Manchester ██████████

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

COLUMELLA IN BRITAIN

In 1966 Waldén described a new European species of the minute vertiginid land snail Columella under the name C. aspera and remarked that it occurred in Britain (p.55). Since then the new species has been recognised in Germany (Schmid 1967); Bornholm (Plate 1967); Finland (Valovirta 1967) and Holland (Gittenberger et al. 1970). Apparently there are two distinct forms of Columella in Britain and they may well be separate species. Certainly they are no more difficult to distinguish on shell characters than the aggregate species of Vitrea, Cochlicopa or Carychium and in Irish localities where the two forms occur together there are no intermediates. I am planning to give a detailed account of the distribution of Columella in the British Isles and will welcome any specimens or records. To help others distinguish the two forms a brief account of their morphological and ecological differences follows:-

C. edentula (Drap.) is longer and narrower (both relatively and absolutely). Initially the whorls expand less rapidly and the last whorl is often slightly wider than the preceding whorl which gives the shell a slightly tapered appearance. There are 6-7 convex, narrow whorls with moderately to deeply impressed sutures. The shell is ornamented with fine irregular colabral striae and tends to be glossy when fresh but frequently loses the periostracum.

Length 2.2 - 2.8 mm. (6-7 whorls), width 1.23 - 1.31 mm. (5-7 whorls).

C. aspera Waldén is shorter and fatter, the whorls expand more rapidly and reach maximum width at the fourth whorl which gives the shell a cylindrical appearance. There are 5-6 whorls which are usually more strongly convex, broader and have more deeply impressed sutures than C. edentula although these characters vary in British material so far seen. The shell is ornamented with fine regular colabral striae which are more strongly developed than in C. edentula and resemble those of Vertigo substriata.

Length 1.85 - 2.13 mm.; width 1.26 - 1.36 mm. (5-6 whorls).

C. edentula occurs in wet woods, fields and marshes which are calcareous and generally 'good' localities for molluscs. C. aspera prefers more acid woods, marshes and peat bogs etc.: habitats which are generally 'poor' for molluscs. In woods C. aspera frequently accompanies Acanthinula lamellata and occurs with the calcifuge Zonitoides excavatus in the Wicklow Mountains in Ireland and at Burnham Beeches, Bucks.. C. aspera will probably prove to be more northerly and westerly in distribution than C. edentula.

References:

- *Gittenberger, E., Backhuys, W. and Ripken, T.E.J., 1970. De Landslakken van Nederland.
- Plate, H.P., 1967. Zum Vorkommen van Columella aspera Waldén auf Bornholm. Mitt. berl. Malak. 19: 19-20.
- Schmid, G., 1967. Columella aspera Waldén auf dem Spitzberg bei Tübingen (Vertiginidae). Mitt. dt. Malakozool. Ges. 9: 157-160.
- Valovirta, I., 1967. List of Finnish land gastropods and their distribution. Ann. zool. Fenn. 4: 29-32.
- *Waldén, H.W., 1966. Einige Bemerkungen zum Ergänzungsband zu Erhman's "Mollusca" in "Die Tierwelt Mitteleuropas". Arch. Molluskend. 95: 49-68, 6 figs.

*Excellent figures of both forms of Columella are given in these two papers.

C. R. C. Paul
Sedgwick Museum, Cambridge

FIFTH PROGRESS REPORT ON THE MARINE CENSUS

The Chinese have a saying "He who speaks, does not know: he who knows does not speak". They evidently have no category for the person who does not speak because he does not know, this being apparently the outcome of neither wisdom nor foolishness. The present Progress Report should have contained a definite statement about the marine mollusc Record Card being prepared for 10-kilometre square recording, for up to June of this year the scene appeared to be set for the mere typing of the abbreviated names, using the old but well-known Winckworth list, in systematic order and with his numbering. Such in fact had been agreed with Dr. F. H. Perring and the members of the Marine Census Subcommittee. However development at the Biological Records Centre is broadening the spectrum of all recording projects, and many of the European schemes are being processed there, and European maps produced. It therefore becomes increasingly important to standardize the presentation of the cards so that non-technical staff can deal with them, and to impose a system of numbering which allows for "entry into Europe" and therefore the incorporation of additional genera within the same framework: normally this involves using alphabetical order of genera within the major groups, and counter-indicates any extraneous numbering scheme. Although Mr. John Heath, zoologist at the B.R.C. has said that he would adapt to the system to which we are thus far committed, reflection prompts one to embrace a less insular presentation which will not debar us from later development and the possibility of helping map the distribution of 'our' species over a wider area - for many indeed over their whole range. This is not only invaluable for zoogeographical studies, but may have important implications for conservation, in the widest sense. With this changed presentation and the prospect of Europeanisation, involving allowance for more than twice the present number of species, we are faced with a new crop of problems. It must be realized that once one is committed to a list, and the first data are computerized there can be no question of sudden change, or even gradual adaption but only correlation of the names after processing. Although their use as "symbols of symbols" can continue indefinitely, and the actual names on the maps or on any reports can be hot from the taxonomists oven, so to speak, one has to attempt to minimise future difficulties likely to be engendered by out-of-date nomenclature. However it is hoped that a solution acceptable to the Biological Records Centre and the Census Subcommittee will soon emerge, and production of Record Cards will be not too long delayed.

Since my last Progress Report in the September 1970 Newsletter, a few thousand more records have been entered in the species notebooks, and these books have been photocopied by the B.R.C.. Carbon copies have been taken of all entries made after the return of the books, and these slips will be forwarded soon. Good basic reference lists have now been written up fully for Census Areas 3, Orkney; 7, Firth of Forth (being minutely combed by Dr. Shelagh Smith for field and published records); 11, Yorkshire; 13, Thames; 14, East Channel; 15, Wight; 16, Portland; 18, West Channel; 19, Scilly Isles; 21, Bristol Channel; 24, Liverpool Bay; 26, Isle of Man; 29, Clyde and Argyll; 30, Minch; and 35, Mayo: a good number of species for C.A.'s 20 and 22 will soon be entered. It is an enormous help when an individual or group adopts an Area for special attention, as has been done for C.A.'s 3 and 24. Currently Mr. A. Norris of Leeds City Museum is engaged in special research on the marine molluscs of the Yorkshire coast (covered by C.A. 11 and part of C.A. 12) and it is anticipated that he will be able to add to the basic list for Area 11 and upgrade some of the existing records.

One member, Mrs. Jean Charlish, and one non-member, Mr. H. B. Sargent have given invaluable help in sorting and naming micro-species. Indeed Mr. Sargent is at present engaged working on some pounds of substrate collected by divers, led by Flt. Lt. D. A. J. Taylor, from off St. Abbs Head. It would be a great help to know of others prepared to assist with any stage of this sort of work. It can be divided into separate tasks: firstly the selecting of shells themselves from debris (this could be 'occupational therapy' work for anyone with time and a lens, no knowledge of shells being necessary); sorting into 'like kinds', which could be done by anyone with only a moderate knowledge of shells; sorting into species, a more precise sorting programme; identification and listing, the list and queried specimens being forwarded to the Recorder, who would then indicate and check new records for the Area. Identification and checking of specimens is often required by beginners, and again a panel of helpers could provide the necessary assistance.

Small light boxes are constantly needed for posting shells: polystyrene boxes of the sort often used for medical samples are especially suitable. Any size from, say, 3" x 3" x 2" to 6" x 6" x 6" could be utilized.

Members will be pleased to know that the first maps, showing the distribution of records for the three Patella species, have been produced by the Biological Records Centre as a 'trial run'. As these were based on records gathered for Census Area recording, the dots are few and far between! A crop of limpet sightings would be very useful at present. One hopes that the present indecisive state regarding the cards for 10 kilometre square recording will soon be resolved, and the actual cards will become available. Meantime anyone may like to anticipate this by making a list within any one square, ready to mark the names off on the cards in due course.

A small book, packed with useful information, called 'Discovering Sea Shells' by Barry Charles, has just been published (in the 'Discovering' Series) by Shire Publications, Tring, Herts. This book contains an outline of the Marine Census work, together with a copy of the Marine Area map, and it is written by one of our members, under a pseudonym. Its price is 30p, or 33p direct from the publishers.

Stella M. Turk

A PRELIMINARY NOTE ON THE MOLLUSCS OF THE FIRTH OF FORTH (CENSUS AREA 7)
AND ADJACENT SEAS

On investigating the literature on the molluscs of the Firth of Forth and adjacent seas I have discovered references to many species not on the list for C.A.7. Nearly 200 additions could thus be made, some being new records, others improved ones, and the total of species for Census Area 7 now stands at just under 300, including 6 Loricata, 166 Gastropoda, 2 Scaphopoda, 109 Lamellibranchia and 13 Cephalopoda.

Of these 224 were found live during the last century, 41 were only found dead and 68 have not been found again this century. A few of them are doubtful records. 106 species were found live in the period 1900-1950, 37 were only found dead, and there are 15 additions to those from the last century. The considerable drop in numbers reflects the lack of literature covering this period, and the record would have been very poor but for the unpublished list of the late Mr. D. K. Kevan. Most of the additions are Cephalopoda. Little has been published since 1950 and for recent information I have so far to rely chiefly upon my own records together with those of friends, and the list thus consists largely of species found above L.W.M., cast-up or dead shells only. However, 84 have been found live or cast-up, 108 only as dead shells, and there are 13 additional records.

I have recorded the old and new records where possible on maps with 10km grid, my area covering sea to the west and south of grid ref. 47/000600 which includes the coast from Berwick-upon-Tweed to Montrose. This enlarged area covers that fished by Firth of Forth fishermen and thus can embrace old and vaguely localised records which one otherwise can only assume belong to C.A.7. Each species has its individual map (duplicated at small cost from an original blank map) with symbolic reference to the age of the record, status and abundance of the species and thus I have a basis for future investigation which will also tie in well with proposed work at B.R.C..

Of prime importance are expeditions to places where in the past many species have been found live in order to ascertain if there have been any population changes. One of these is the Granton - Leith area where most animals and plants have been overwhelmed by sewage - over 50,000,000 gallons per day. No records to speak of have been made from the upper reaches of the Firths of Tay and Forth, west of the bridges. While more information from all sources is welcomed, with complete lists (there can never be too many) rather than just additions to previous ones, there is particular need to improve upon the offshore records and to discover which species live just below L.W.M. in the "Skin-diver Zone".

Below is a list of species found. Winckworth numbers are given, but an

attempt has been made to up-date the nomenclature, for which acknowledgement is made to Dr. T. E. Thompson and Mr. D. Heppell.

a, b last century live and dead; A, B 1900-1950; (A), (B) 1950-.

? indicates that the presence of a species, not its status, is in doubt.

Lo	1	<i>Lepidopleurus asellus</i>	a		
Lo	5	<i>Tonicella marmorea</i>	a		
Lo	6	<i>T. rubra</i>	a	A	(B)
Lo	7	<i>Lepidochitona cinereus</i>	a	A	(A)
Lo	8	<i>Callochiton achatinus</i>	a		
Lo	9	<i>Acanthochitona fascicularis</i>	a	A	(A)
G	2	<i>Emarginula fissura</i>	a		(B)
G	7	<i>Patella vulgata</i>	a	A	(A)
G	9	<i>P. aspera</i>	a		(A)
G	10	<i>Helcion pellicuda</i>	a	A	(A)
G	12	<i>Acmaea testudinalis</i>	a	A	(A)
G	13	<i>A. virginea</i>	a	A	(A)
G	17	<i>Margarites helicina</i>	a	A	(A)
G	20	<i>Calliostoma zizyphinum</i>	a	A	(A)
G	23	<i>Gibbula magus</i>	b		
G	24	<i>Gibbula tumida</i>	a		(B)
G	25	<i>Gibbula cineraria</i>	a	A	(A)
G	26	<i>Gibbula umbilicalis</i>	b?		(B)?
G	28	<i>Jujubinus montagui</i>	a		
G	32	<i>Skenea serpuloides</i>			(A)
G	37	<i>Lacuna vineta</i>	a	A	(A)
G	38	<i>L. crassior</i>	a	A	(B)
G	39	<i>L. puteolus</i>	a		(B)
G	40	<i>L. pallidula</i>	a	A	(A)
G	41	<i>Littorina littorea</i>	a	A	(A)
G	42	<i>L. saxatilis</i>	a	A	(A)
G	43	<i>L. neritoides</i>	a	A	(A)
G	45	<i>L. littoralis</i>	a	A	(A)
G	47	<i>Potamopyrgus jenkinsi</i>			(A)
G	48	<i>Hydrobia ulvae</i>	a	A	(A)
G	52	<i>Cingula alderi</i>	a		
G	53	<i>C. vitrea</i>	b		
G	54	<i>C. proxima</i>	a		
G	55	<i>C. semicostata</i>	a	A	(A)
G	56	<i>C. semistriata</i>	a	A	(A)
G	57	<i>C. cingillus</i>	b		(A)
G	60	<i>Alvania beanii</i>	b		
G	64	<i>A. carinata</i>	b		
G	67	<i>A. punctura</i>	a		(A)
G	68	<i>Rissoa crassa</i>	a	A	(B)
G	70	<i>R. inconspicua</i>	b		
G	71	<i>R. parva</i>	a	A	(A)
G	73	<i>R. violacea (sic.)</i>	b?		
G	75	<i>Barleeia unifasciata</i>	b?		
G	78	<i>Tornus subcarinatus</i>		B	(B)
G	80	<i>Skeneopsis planorbis</i>	a	A	(B)
G	81	<i>Omalogyra atomus</i>	b		(B)
G	82	<i>Ammonicera rota</i>	b		
G	88	<i>Caecum trachea</i>	a		
G	89	<i>C. glabrum</i>	a		(B)
G	90	<i>Bittium reticulatum</i>	b		
G	102	<i>Clathrus trevelyanus</i>	a		
G	105	<i>Graphis albida</i>	b		
G	107	<i>Aclis minor</i>		B	(B)
G	112	<i>Eulima bilineata</i>	a		(B)
G	114	<i>E. albida</i>	a		(B)
G	115	<i>E. lubrica</i>	b		
G	122	<i>E. devians</i>	b		
G	124	<i>Pelseneeria stylifera</i>	a		
G	166	<i>Trichotropis borealis</i>	a		
G	167	<i>Capulus ungaricus</i>	a	B	(B)
G	170	<i>Aporrhais pespellicani</i>	a	B	(B)
G	173	<i>Bulbus islandica</i>	b		
G	176	<i>Lunatia catena</i>	a	B	(A)

G 177	<i>L. alderi</i>	a	A	(B)
G 178	<i>L. montagui</i>	a	A	
G 179	<i>Velutina velutina</i>	a	B	(B)
G 180	<i>V. flexilis</i>	a		(B)
G 181	<i>Lamellaria perspicua</i>	a	A	(A)
G 182	<i>L. latens</i>			(A)
G 183	<i>Erato voluta</i>	a		
G 184a	<i>Trivia monacha</i>	b	B	(B)
G 184b	<i>T. arctica</i>	a	B	(A)
G 187	<i>Trophonopsis truncatus</i>	a	A	(B)
G 188	<i>T. barvicensis</i>		B	(B)
G 189	<i>T. muricatus</i>	a?		
G 190	<i>Nucella lapillus</i>	a	A	(A)
G 192	<i>Ocenebra erinacea</i>	a	B	(B)
G 197	<i>Volutopsius norwegicus</i>	a		
G 199	<i>Colus gracilis</i>	a		(B)
G 200	<i>C. propinquus</i>	a		(B)
G 201	<i>C. jeffreysianus</i>	b		
G 203	<i>Neptunea antiqua</i>	a	B	(A)
G 204	<i>Buccinum undatum</i>	a	A	(A)
G 207	<i>Nassarius reticulatus</i>	b		(B)
G 208	<i>N. incrassatus</i>	a	A	(A)
G 211	<i>Haedropleura septangularis</i>	b		
G 212	<i>Propebela turricula</i>	a	A	(B)
G 212b	<i>P. turricula rosea</i>	a		
G 213	<i>Oenopota trevelli</i>	a		
G 214	<i>O. rufa</i>	a		(B)
G 218	<i>Bela costulata</i>	b		
G 219	<i>Cytherea coarctata</i>	a		(B)
G 222	<i>Bela nebula</i>			(B)
G 225	<i>Philbertia leufroyi</i>			(B)?
G 228	<i>P. linearis</i>	a	B	(B)
G 230	<i>Acteon tornatilis</i>	a	A	(B)
G 231	<i>Diaphana minuta</i>	b		
G 237	<i>Retusa mammillata</i>	a		(B)
G 238	<i>R. truncata</i>	a	B	(B)
G 239	<i>R. obtusa</i>	a	A	(B)
G 240	<i>R. umbilicata</i>	a		(B)
G 241	<i>R. nitidula</i>	a		(B)
G 243	<i>Cylichna cylindracea</i>	a	A	(B)
G 245	<i>Scaphander lignarius</i>	a		(B)
G 247	<i>Philine aperta</i>	a	B	(B)
G 248	<i>P. scabra</i>	a	B	(B)
G 249	<i>P. catena</i>	a		(B)
G 251	<i>P. punctata</i>		B	(B)
G 254	<i>Laona pruinosa</i>	a		
G 125	<i>Chrysallida obtusa</i>	b		(B)
G 126	<i>C. indistincta</i>	b		(B)
G 127	<i>C. clathrata</i>	b		(B)
G 128	<i>C. decussata</i>	b		(B)
G 131	<i>C. spiralis</i>	b		(B)
G 133	<i>Menestho divisa</i>	a		
G 142	<i>Odostomia unidentata</i>	b		(B)
G 144	<i>O. acuta</i>	a		(B)
G 146	<i>O. conoidea</i>			(B)
G 148	<i>O. albella</i>	a	A	(B)
G 149	<i>O. scalaris</i>	b		(B)
G 150	<i>O. eulimoides</i>	b		(B)
G 155	<i>Eulimella gracilis</i>	b		
G 156	<i>E. nitidissima</i>	b		
G 157	<i>Turbonilla elegantissima</i>		B	(B)
G 159	<i>T. innovata</i>		B	
G 161	<i>T. crenata</i>	b		
G 162	<i>T. fulvocincta</i>	a		
G 256	<i>Aplysia punctata</i>	a	A	
G 257	<i>Limacina retroversa</i>	a	A	
G 265	<i>Clione limacina</i>	a	A	
G 267	<i>Hermaea bifida</i>	a		
G 268	<i>H. dendritica</i>	a		

G	270	<i>Alderia modesta</i>	a	A	
G	273	<i>Limapontia capitata</i>	a	A	
G	274	<i>L. depressa</i>		A	
G	275	<i>Berthella plumula</i>		A	
G	277	<i>Tritonia hombergii</i>	a		(A)?
G	279	<i>T. plebeia</i>	a		
G	281	<i>Aegires punctilucens</i>	a		
G	282	<i>Limacia claviger</i>	a	A	(A)?
G	287	<i>Palio dubia</i>	a		
G	288	<i>P. nothus</i>	a		
G	289	<i>Polycera quadrilineata</i>	a	A	
G	290	<i>Acanthodoris pilosa</i>	a	A	(A)
G	291	<i>A. subquadrata</i>	a		
G	294	<i>Lamellidoris bilamellata</i>	a	A	(A)
G	295	<i>L. muricata</i>	a	A	
G	296	<i>L. sparsa</i>		A	
G	302	<i>Goniodoris nodosa</i>	a	A	(A)
G	306	<i>Okenia aspersa</i>	a		
G	308	<i>Ancula cristata</i>	a		
G	309	<i>Cadlina laevis</i>	a	A	(A)
G	312	<i>Archidoris pseudoargus</i>	a	A	(A)
G	314	<i>A. stellifera</i>			(A)?
G	317	<i>Jorunna tomentosa</i>	a	A	(A)
G	319	<i>Armina loveni</i>	a		
G	320	<i>Dendronotus frondosus</i>	a		
G	330	<i>Doto coronata</i>	a		
G	331	<i>D. fragilis</i>	a		
G	355a	<i>Coryphela rufibranchialis</i>	a		(A)
G	336	<i>C. pedata</i>	a		
G	338a	<i>C. gracilis</i>			(A)
G	339b	<i>Eubranchus pallidus</i>			(A)
G	340	<i>E. exiguus</i>	a		
G	348	<i>Tergipes tergipes</i>	a		
G	349	<i>Cuthona nana</i>	a		
G	358	<i>Trinchesia foliata</i>	a		(A)
G	359	<i>T. viridis</i>	a		
G	366	<i>Facelina longicornis</i>	a	A	(A)
G	370	<i>Aeolidia papillosa</i>	a	A	(A)
G	373	<i>Leucophytia bidentata</i>	b?		
G	374	<i>Phytia myosotis</i>	a	A	(B)
S	1	<i>Dentalium entalis</i>	a	A	(B)
S	2	<i>D. vulgare</i>	a		
L	1	<i>Nucula sulcata</i>			(B)
L	2	<i>N. nucleus</i>	a	A	(A)
L	4	<i>N. nitidosa</i>	a	A	(B)
L	6	<i>N. tenuis</i>	a	A	
L	7	<i>Nuculana minuta</i>	a	A	(B)
L	12	<i>Glycymeris glycymeris</i>	a		(B)
L	13	<i>Arca tetragona</i>	a		(B)
L	16	<i>Anomia eppiphium</i>	a	A	
L	17	<i>Pododesmus patelliformis</i>	a	A	(A)
L	19	<i>P. squamula</i>	a	A	(A)
L	20	<i>Mytilus edulis</i>	a	A	(A)
L	21	<i>M. galloprovincialis</i>	a?		
L	22	<i>Modiolus modiolus</i>	a	A	(A)
L	23	<i>M. barbatus</i>	b?		
L	29	<i>Modiolarca tumida</i>	a		(A)
L	28	<i>Musculus discors</i>	a	A	(A)
L	30	<i>M. costulatus</i>			(B)
L	31	<i>M. niger</i>	a		
L	32	<i>Crenella decussata</i>	a		(A)
L	35	<i>Ostrea edulis</i>	a	B	(B)
L	39	<i>Pecten maximus</i>	a		(A)
L	42	<i>Chlamys varia</i>	a		(B)
L	43	<i>C. distorta</i>	a	B	(B)
L	44	<i>Aequipecten opercularis</i>	a	A	(A)
L	45	<i>Pseudamussium septemradiatum</i>	a		
L	47	<i>Palliolum tigrinum</i>	a		(B)
L	48	<i>P. striatum</i>	a		

L 50	<i>Similipecten similis</i>	a	(B)
L 52	<i>Limea loscombi</i>	a	
L 54	<i>Limatula subauriculata</i>	a	
L 56	<i>Astarte sulcata</i>	a	A
L 57	<i>Tridonta elliptica</i>	a	(B)
L 58	<i>T. montagui</i>	a	A (B)
L 59	<i>Goodallia triangularis</i>	b	B (B)
L 60	<i>Thyasira flexuosa</i>	a	A (B)
L 64	<i>Loripes lucinalis</i>	a	
L 66	<i>Lucinoma borealis</i>	b	B (B)
L 67	<i>Diplodonta rotundata</i>	a	
L 69	<i>Kellia suborbicularis</i>	a	A (A)
L 70	<i>Lasaea rubra</i>	a	(A)
L 72	<i>Lepton squamosum</i>	b	
L 73	<i>Erycina nitida</i>	a	(B)
L 78	<i>Montacuta substriata</i>	a	
L 79	<i>Tellimya ferruginosa</i>	a	B (B)
L 80	<i>Mysella bidentata</i>	a	A (A)
L 84	<i>Arctica islandica</i>	a	A (A)
L 85	<i>Glossus humanus</i>	a?	
L 87	<i>Acanthocardia echinata</i>	a	B (B)
L 90	<i>Parvicardium ovale</i>	a	(B)
L 91	<i>P. scabrum</i>	a	(A)
L 92	<i>P. exiguum</i>		(B)
L 93	<i>Cerastoderma edule</i>	a	A (A)
L 94	<i>Laevicardium crassum</i>	a	B (B)
L 95	<i>Dosinia exoleta</i>	a	B (A)
L 96	<i>D. lupinus</i>	a	B (B)
L 97	<i>Gouldia minima</i>	a	(B)
L 99	<i>Venus verrucosa</i>	a	
L 100	<i>Circomphalus casina</i>	a	B (B)
L 101	<i>Timoclea ovata</i>	a	A (B)
L 102	<i>Clausinella fasciata</i>	a	B (B)
L 103	<i>Chamlea gallina</i>	a	A (A)
L 105	<i>Paphia rhomboides</i>	a	(B)
L 106	<i>Venerupis senegalensis</i>	a	A (A)
L 107	<i>V. saxatilis</i>	a	B (B)
L 108	<i>Tapes decussata</i>	b	(B)
L 71	<i>Turtonia minuta</i>	a	(B)
L 111	<i>Mysia undata</i>	a	B (B)
L 112	<i>Donax vittatus</i>	a	A (A)
L 116	<i>Tellina tenuis</i>	a	A (B)
L 117	<i>T. fabula</i>	a	A (A)
L 118	<i>T. donacina</i>		(B)?
L 119	<i>T. pygmaea</i>	a	A (B)
L 120	<i>T. crassa</i>	a	B (B)
L 123	<i>Macoma balthica</i>	a	A (A)
L 124	<i>Scrobicularia plana</i>	a	A (A)
L 125	<i>Abra tenuis</i>	a	
L 126	<i>A. alba</i>	a	A (B)
L 127	<i>A. nitida</i>	a	A (B)
L 128	<i>A. prismatica</i>	a	A (B)
L 129	<i>Psammobia fervensis</i>	a	A (B)
L 130	<i>P. depressa</i>	b	(B)
L 131	<i>P. tellinella</i>	a	(B)
L 136	<i>Phaxas pellucidus</i>	a	A (A)
L 137	<i>Ensis ensis</i>	a	A (B)
L 138	<i>E. arcuatus</i>	a	(B)
L 139	<i>E. siliqua</i>	a	A (A)
L 139a	<i>E. minor</i>	a	(A)
L 141	<i>Mactra stultorum</i>	a	A (A)
L 142	<i>Spisula elliptica</i>	a	A (B)
L 143	<i>S. solida</i>	a	A (A)
L 144	<i>S. subtruncata</i>	a	A (A)
L 145	<i>Lutraria lutraria</i>	a	A (A)
L 147	<i>Mya truncata</i>	a	A (B)
L 148	<i>M. arenaria</i>	a	A (A)
L 150	<i>Corbula gibba</i>	a	B (B)
L 151	<i>Hiatella arctica</i>	a	(A)

L	154	<i>Saxicavella jeffreysi</i>		(B)
L	155	<i>Gastrochaena dubia</i>	b	
L	156	<i>Pholas dactylus</i>	a	
L	157	<i>Barnea candida</i>	a	B (A)
L	158	<i>Zirfaea crispata</i>	a	B (A)
L	161	<i>Xylophaga dorsalis</i>	a	
L	164	<i>Psiloteredo megotara</i>		(A)
L	168	<i>P. navalis</i>	a	A
L	169	<i>Cochlodesma praetenu</i>	a	(A)
L	170	<i>Thracia phaseolina</i>	a	B (B)
L	173	<i>T. convexa</i>	b	
L	174	<i>T. distorta</i>		(B)
L	179	<i>Cuspidaria cuspidata</i>	a	
		<i>Architeuthis harveyi</i>		A
C	1	<i>Ommastrephes pteropus</i>		A
C	2	<i>O. caroli</i>		A
C	3	<i>Sagittatus sagittatus</i>	a	A (A)
C	6	<i>Alloteuthis subulata</i>	a	A
C	7	<i>Loligo forbesi</i>	a	A
C	9	<i>Sepia officinalis</i>	a	B
C	12	<i>Sepiola atlantica</i>	a	A
C	13	<i>S. steenstrupiana</i>		A
C	14	<i>Sepietta oweniana</i>		A
C	15	<i>Rossia macrosoma</i>	a	
C	17	<i>Octopus vulgaris</i>	a	
C	18	<i>Eledone cirrhosa</i>	a	A (A)

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Shelagh M. Smith

AN ADDITION TO THE SYMPOSIUM ON RARE AND ENDANGERED SPECIES

Rare and endangered species of river snails and mussels were a major topic of concern to scientists and shell collectors representing universities, museums, and shell clubs from coast to coast who attended the American Malacological Union's 1970 annual meeting at Key West, Florida.

About 250 of the approximately 1,000 native North American river mollusks are now in danger of becoming extinct, according to Dr. D. H. Stansbery, president of the AMU. A number of species of river snails and mussels have already become extinct since pioneer days, because of water pollution and the destruction of their habitats.

North America's fresh-water mollusk fauna is the most varied and extensive of any in the world, and it constitutes an irreplaceable national heritage of great interest to scientists. Many of the larger bivalve mollusk species were formerly used as raw material in button manufacture, and hundreds of tons of these shells are now being exported annually to Japan to be used in the cultured pearl industry. Various species are admired and eagerly sought by shell collectors around the world.

Io, the large and beautiful river snail which is the emblem of the American Malacological Union, was widespread in the rivers of the southern Appalachian Mountains as recently as the 1920's. It is a fitting symbol of the national organisation for the study of mollusks because it is a truly American species, never having been found outside North America. Today it stands high on the list of vanishing species.

Large boulders in the waters of the larger streams in the Tennessee River system have been Io's only habitat for thousands of years. This habitat has now been almost completely eliminated. Today only a very few, tiny populations of this beautiful snail survive in a few headwater streams which have thus far escaped both severe pollution and impoundment.

America's most spectacular freshwater bivalve is probably Canthyria spinosa, the Spiny Naiad. Its long slender spines are believed to serve as stabilisers in the shifting sand bars in the clean, swift waters of the Altamaha River system in Georgia. It has never been found in any other river in the world. The survival of this endemic freshwater species is now threatened by proposed plans for the commercial development of the only river where it and its ancestors have lived for millions of years.

All 250 of these rare and endangered mollusk species are the products of hundreds of thousands of generations in unbroken lines of descent from past ages. AMU scientists note that most, if not all, of them are much older than mankind himself. Now the once-widespread populations of these mollusks have become so restricted that their ancient lines of descent can be broken in a single season. Just one slug of pollution, or the elimination of the last remnant of their habitat by dredging, siltation, or building dams, can eliminate these ancient animals forever.

The establishment of selected rivers as natural preserves for these rare mollusks and for other endangered species of aquatic animals is proposed by the American Malacological Union's new Conservation Committee. Certain rivers contain relict populations of several of the endangered molluscan species. Such refuges, AMU members point out, would not only preserve vanishing American snails, mussels, and other river animals, but would also maintain wild stretches of natural streams for popular outdoor recreational activities such as canoeing, hiking, and birdwatching.

Carol B. Stein
Assistant Curator of Natural History
Ohio State Museum, Columbus

(From New York Shell Club Notes, No. 167, December 1970)

PUBLICATIONS RECEIVED

'Achatina' No. 1 (June 1970) and No. 2 (February 1971).

This new publication, issued by the Musee Royal de l' Afrique Centrale, Tervuren, Belgium, is intended to provide basic information for working malacologists and its concept is a new and extremely useful one. For its motive one cannot do better than to quote the introduction -

"'Achatina' is meant to be an annual newsletter solely devoted to the interests of malacologists working on the non-marine molluscs of the Ethiopian region. The editors do not intend to publish original papers. The newsletter will contain bibliographies of authors working on African molluscs, with annual supplements, lists of names and addresses of participants in these projects, enquiries, notes on expeditions and collecting trips, notes on current research projects, location of types of African molluscs, palaeontological data, etc.. Annual lists of new taxa will be considered for the future, data on the bibliography project are to be found in the minutes of the meeting at Tervuren, 1969."

This was the meeting at which the issue and scope of the publication were arrived at, and is fully reported in the first issue, which also contains a full bibliography of the African molluscan papers by B. Verdcourt and a list of the African freshwater types and paratypes at the Geneva Museum compiled by E. Binder.

Details of research work at present in hand complete the issue.

The second issue contains the African molluscan bibliographies of E. Binder, A. C. van Bruggen, J. B. Burch and T. Pain; uncritical lists of type material in the U.S. National Museum at Washington and in the Academy of Natural Sciences at Washington with references to three important papers for tracing types. There are also notes and news of research progress.

This publication is of the utmost value in saving time and smoothing the path of the research worker, and must be warmly welcomed by anyone with an interest in African mollusca since it cannot fail to be of continuing use and a permanent record.

The Editors are Dr. J. J. van Mol and Dr. A. C. van Bruggen.

'Argamon'

Journal of the Israel Malacological Society. Vol. 1, No. 2, 12/1970.

This Journal is being issued by a recently organised Society to which we send our very good wishes for its future prosperity. The format of the Journal indicates that its intention is to support serious study of the local mollusca and original research into all branches of the subject. Articles in this number include 'A Checklist of Terebridae from the Northern Part of the Red Sea', by Henk K. Mienis, well illustrated with line drawings: this work includes some recent fairly basic revision of the group. 'On Aeolidioidea, Coelenterata and Nematocysts' by Ruth Rosin throws some light on a very mysterious natural connection. Also 'Some Notes on Freshwater Mollusca from the Marshes of Kurdani, Galilee' by H. K. Mienis; notes on recent publications of interest to the Israel region; book reviews, Editorial post and several items in Yiddish which your reviewer is by no means competent to appreciate!

The practical nature of this publication should have considerable influence in fostering the study of malacology throughout Israel, and its increasing popularity in the country is to be confidently expected.

T.E.C.

FIELD MEETINGS ON FEBRUARY 20, MARCH 13 AND APRIL 17, 1971,
TO THE SOUTH LANCASHIRE COAST

Three field meetings, held in successive months in contiguous parts of the south Lancashire coast yielded a total of 43 species of marine Mollusca. Several are additions to our list for Southport though not to Census Area No. 24.

During these three field meetings the sandy coastline from Freshfield to Southport pier and thence north to the Wildfowl Reserve (where mud and saltmarsh replace sand) was explored.

Our regular visits are now yielding useful data, not so much on the rarer species found, but on the common ones. Occasional "wrecks" (to borrow a useful expression from the ornithologists) of some of the common species occur, and it is noteworthy that the specimens involved are often immature. Mactra corallina (L.) is the species most often affected, but vast numbers of young Lutraria lutraria have been cast up once or twice.

Dr. Chaster in his two lists of Southport Mollusca (published in 1st. Rept. Southport Soc. Nat. Sci. pp. 32-381, 1891, and 2nd. Rept. pp. 73-5, 1895) records 141 marine species obtained on the shore between Freshfield and Southport, and in the same area we have so far taken sixty species. Our desiderata include many of the smaller gastropods, especially Rissoa and Odostomia spp. upon which Chaster was an expert.

We are grateful to Messrs. Aldridge and Fox, wardens of the Ainsdale National Nature Reserve, for their help (and welcome tea!) on our Freshfield visit on March 13th.

W. F. Edwards, D. R. B. Harrison, N. F. McMillan

REPORT OF THE FIELD MEETINGS HELD ON THE 17th. & 18th. APRIL 1971

On Saturday morning the 17th. April 1971, prior to the northern meeting of the Society held at the Leeds City Museum, a number of members and friends made a visit to the Hetchell Woods Nature Reserve near Thorner, situated a few miles to the north-east of Leeds.

The reserve lies on the western edge of the Magnesian Limestone and is divided in two by this and the underlying East Carlton Grits. The rough rocks of the grits forming vertical crags which stand high above Bardsey Beck, the western boundary of the reserve. At the foot of these crags, bordering the beck, there is a small area of marsh and some Alder Carr, it was to this area of the reserve that the main body of the party was taken.

An intensive survey of the reserve has been in progress over the last few years, and it was hoped that the party might turn up a few additions to the list of species recorded, and to this extent the meeting was a success. Six new species were found bringing the total for the reserve to 47. A full list of the species now recorded for the area is given below.

The two most interesting records of the morning, both new to the reserve, were Vertigo antivertigo (Drap.) which was found in association with Vertigo substriata (Jeff.) in the marsh, and Hygromia subrufescens (Miller) a single juvenile of which Dr. M. P. Kerney located in the area of Alder Carr.

List of Species recorded for the Hetchell Woods Nature Reserve (Grid Ref.44/37-42-)

- | | |
|------------------------------------|--------------------------------|
| *Potamopyrgus jenkinsi (E.A.Smith) | *Discus rotundatus (Muller) |
| *Carychium minimum Muller | *Arion intermedius Normand |
| *C. tridentatum (Risso) | *A. circumscriptus Johnston |
| *Lymnaea truncatula (Muller) | A. sylvaticus |
| *L. peregra (Muller) | *A. hortensis Ferussac |
| Ancylus fluviatilis Muller | **A. subfuscus (Drap.) |
| *Succinea pfeifferi Rossmassler | *A. ater agg. |
| *Cochlicopa lubrica (Muller) | *Euconulus fulvus (Muller) |
| *C. lubricella (Starabile) | *Vitreola crystallina (Muller) |
| *Columella edentula (Drap.) | *V. contracta (West) |
| **Vertigo antivertigo (Drap.) | *Oxychilus cellarius (Muller) |
| *V. substriata (Jeffreys) | *O. alliarius (Miller) |
| Lauria anglica (Wood) | *O. helveticus (Blum) |
| **Acanthinula aculeata (Muller) | *Retinella radiatula (Alder) |
| **Vallonia excentrica Sterki | *R. pura (Alder) |
| *Marpessa laminata (Mont.) | *R. nitidula (Drap.) |
| Clausilia bidentata (Strom) | *Vitrina pellucida (Muller) |
| **Arianta arbustorum (L.) | *Limax maximus L. |
| *Helix nemoralis (L.) | Lehmannia marginata (Muller) |
| **Hygromia subrufescens (Miller) | *Agriolimax reticulatus Muller |
| *H. striolata (C. Pfeiffer) | *A. laevis (Muller) |
| *H. hispida (L.) | Pisidium casertanum (Poli) |
| *Monacha cantiana (Mont.) | *P. personatum Malm |
| *Punctum pygmaeum (Drap.) | |

* = Species found during the field meeting.

** = New species to the reserve.

Sunday 18th. April 1971

The day following the northern meeting of the Society, a party of 28 members and friends left Leeds by coach to visit another of the nature reserves belonging to the Yorkshire Naturalists' Trust. This reserve situated in the centre of Grass Woods near Grassington is woodland broken up by large areas of scree formed at the foot of large crags, a feature of so much of the scenery of the Yorkshire Dales National Park.

The main object of the visit to Grass Woods was to try and locate specimens of the new species of Vitrea, V. diaphana (Studer), a species which had not been located before in the valley of the River Wharfe. The nearest record of this species to Wharfedale being from the crags above Malham Tarn to the west of the valley.

The dry conditions that prevailed in the woodland made it very difficult to locate many of the species in numbers, but a few interesting finds were made. A full list of which is given below.

The party also made a second stop at a small marsh, and a piece of woodland known as Lythe Woods on the banks of the River Wharfe down-stream from Grassington. These woods have for many years been known as a site for Pomatias elegans (Muller) but there is no evidence of this species having been found alive in this locality for over 100 years. A short time was spent looking for living specimens but only dead shells could be located.

The marsh yielded only one of the two species of Vertigo which are known to live in this locality, and a wall above the marsh produced a third species. A full list of the species recorded at the two localities visited is given below.

List of species recorded from Grass Woods (34/988654), and Lythe Woods (44/012628)

- | | |
|--|--|
| o <u>Pomatias elegans</u> (Muller) (Dead only) | * o <u>Hygromia hispida</u> (L.) |
| * o <u>Carychium minimum</u> Muller | o <u>Monacha granulata</u> (Alder) |
| * o <u>C. tridentatum</u> (Risso) | * <u>Punctum pygmaeum</u> (Drap.) |
| o <u>Lymnaea peregra</u> (Muller) | * o <u>Discus rotundatus</u> (Muller) |
| o <u>Ancylus fluviatilis</u> Muller | * o <u>Arion intermedius</u> Normand |
| o <u>Succinea pfeifferi</u> Muller | * o <u>A. circumscriptus</u> Johnston |
| * <u>Azeca goodalli</u> (Muller) | * <u>A. fasciatus</u> (Nilson) |
| * o <u>Cochlicopa lubrica</u> (Muller) | * o <u>A. hortensis</u> Ferussac |
| * <u>C. lubricella</u> (Strabile) | o <u>A. subfuscus</u> (Drap.) |
| * <u>Pyramidula rupestris</u> (Drap.) | * o <u>A. ater</u> agg. |
| * <u>Columella edentula</u> (Drap.) | * o <u>Euconulus fulvus</u> (Muller) |
| o <u>Vertigo antivertigo</u> (Drap.) | * o <u>Vitrea crystallina</u> (Muller) |
| o <u>V. pygmaea</u> (Drap.) | * <u>V. contracta</u> (West) |
| * o <u>Lauria cylindracea</u> (da Costa) | * <u>V. diaphana</u> (Studer) |
| * <u>Acanthinula aculeata</u> (Muller) | * <u>Oxychilus cellarius</u> (Muller) |
| o <u>Vallonia excentrica</u> Sterki | * o <u>O. alliarius</u> (Miller) |
| * o <u>Ena obscura</u> (Muller) | o <u>O. helveticus</u> (Blum.) |
| * <u>Marpessa laminata</u> (Mont.) | * <u>Retinella radiatula</u> (Alder) |
| * o <u>Clausilia bidentata</u> (Strom) | * o <u>R. pura</u> (Alder) |
| * <u>C. dubia</u> (Drap.) | * o <u>R. nitidula</u> (Drap.) |
| * <u>Helicigona lapicida</u> (L.) | o <u>Zonitoides nitidus</u> (Muller) |
| * o <u>Arianta arbustorum</u> (L.) | * o <u>Vitrina pellucida</u> (Muller) |
| * <u>Helix hortensis</u> (Muller) | o <u>Limax maximus</u> L. |
| * o <u>H. nemoralis</u> (L.) | * <u>Lehmannia marginata</u> (Muller) |
| * o <u>Hygromia striolata</u> (C. Pfeiffer) | * o <u>Agriolimax reticulatus</u> Muller |
| | o <u>A. laevis</u> (Muller) |

also,

- o Lymnaea truncatula (Risso)

- * = Records from Grass Woods, Grassington
- o = Records from Lythe Woods, Grassington

A. Norris,
City Museum, Leeds. June 1971

AN UNUSUAL EXAMPLE OF HYGROMIA STRIOLATA (G.PFEIFFER)

While searching for C. dubia during a Conchological Society field excursion at Grasswoods, Yorkshire, on April 18th., I came across a group of five live H. striolata. This is a common snail said to have a wide distribution, however what made this group of above average interest was the presence among them of one so unusual as to make this note worthwhile.

The snails were discovered on a dry patch of soil below a stone which butted out of a wall adjacent to the road past the wood at Grasswoods. There is a verge of about two foot wide between the road and the wall, this was covered with grass. There was an ample covering of moss on the stone wall. As noted, the soil below the stone where the snails were discovered was bone dry, although in general H. striolata appears to prefer damp conditions.

Four of the snails conformed to the published description, the odd one out

though, was termed by Dr. Kerney, who was asked to confirm identification, as "fantastic". The spire of H. striolata is variously described as convex or low, blunt and slightly elevated. Such descriptions do not fit this particular specimen, the spire of which rises with sharp steps in a pyramid-like manner. From base to apex the specimen measured 8mm., with a breadth of 7mm. There are $5\frac{1}{2}$ whorls, the largest of which at the mouth measures 3mm. The fifth whorl measures, at maximum, $2\frac{1}{2}$ mm., the fourth 1mm., and the remaining $1\frac{1}{2}$ mm. between them.

Ellis (1926) calls attention to a variety prevalent in the west and north-west of the British Isles, var abuludens Locard, = minor Jeffreys, as having a taller spire, however, those I have seen do not match this specimen.

It is sheer speculation as to why this specimen of H. striolata should differ in such a marked degree from normal. Does it represent a new variety, or is it just an odd abnormality? Perhaps it is an example of abnormal growth as described in marine species from Robin Hood's Bay, Yorkshire, by Dr. R. Wynne Owen in a lecture the previous day to the society at Leeds Museum. I have, at present, no way of answering along any of these lines, but it just might be possible to check on the first one way or the other by further work at Grasswoods.

R. W. Morrell

Reference

Ellis, A. E., 1926 (reprinted 1969) British Snails, Oxford.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE A.(n.s.)87

ANNOUNCEMENT

Required six-month's 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.Nomencl.27, pts.3/4, 23 December 1970):

- 1901. Validation of, and designation of type-species for, Littorina Ferussac, 1822 (Gastropoda)
- 44. Validation of, or suppression of, Orthoceras Bruguiere, 1789; Validation of Nodosaria [Lamarck, 1816] (Cephalopoda)
- 1923. Validation of Donax variabilis Say, 1822 (Bivalvia)
- 1824. Validation of Vanikoro Quoy & Gaimard, 1832: Rulings on gender and stem of Vanikoro and unjustified emendations (Gastropoda)
- 1931. Suppression of Idalla and Idalla caudata Ørsted, 1844 (Opisthobranchia)
- 1927. Validation of Terebra variegata Gray, 1834 (Gastropoda)

Comments should be sent in duplicate, citing case number, to the Secretary, International Commission on Zoological Nomenclature, c/o British Museum (Natural History), Cromwell Road, London, S.W.7, England. Those received early enough will be published in the Bulletin of Zoological nomenclature.

GENERAL NOTES

Meeting - October 16th.

Due to the recent sad loss of Mr. Stratton it has been necessary to find another speaker to take his place at the October 16th. Meeting and Rev. H. E. J. Biggs has kindly offered to do this. His talk will be entitled "Some Problems with Persian Gulf Marine Mollusca".

Miss J. T. Sawyer, Hon. Secretary

Reminder - Hon. Secretary - Change of Address

Please note that Miss J. T. Sawyer, B.A., has now moved to:-
[REDACTED], Wembley Park, Middlesex.

Report from a Weather Ship

My present employment on Ocean Weather Ship "Weather Reporter" involves sailing to various points in the Atlantic Ocean, keeping station there, taking weather observations by means of a series of radiosonde balloons and assisting trans-Atlantic air traffic fix their positions by means of various navigational radio aids. We also act as air-sea rescue ship, to bale any unfortunates out of "the drink".

Before joining my ship, I had thought of dredging for Monoplacophora - reluctantly abandoned the idea because of the depths involved and the difficulty of even improvising a suitable dredge.

My next thought was the contents of fishes stomachs (no *Cypraea leucodon*, but perhaps some other new species?). So far, the fish have failed to co-operate! Last trip we had on board a scientist from an Oceanographical Institute doing a marine survey, mainly of Copepods/Plankton - density at various depths and daily movements in the vertical plane. I was usually hovering, marginally hopeful, when the dredge was hauled inboard. On one occasion I was fortunate, two small animals, approximately 10mm. x 7mm. and shaped like an old-fashioned peg top were in the net. Chris identified them for me as *Clione limacina* and suggested order of Nudibranchiata (Sea Slugs - I confess the shell-less molluscs had slipped my memory, and I would not have been able to identify the animal as a mollusc, even). Taking the classification to be correct, and doing my homework, I found that "Shell Life" (E. Step, F.L.S., 1927, p. 305) gives:- "Pteropoda suborder of Opisthobranchiata - those in adult state without shell or mantle constitute Gymnosomata - purely pelagic. *Clione limacina*, which belong to the shell-less section and has a distinct head. It is an Arctic species, and is one of the constituents of the food of whales. Leach captured a living example on the coast of Mull 90 years ago; McIntosh reported it in considerable numbers at St. Andrews in 1887, and T. Scott took a specimen at Inchkeith in 1889".

The specimen mentioned in this letter was taken at 400 metres 59°N, 19°W approximately 180 nautical miles on a bearing of 300° from Rockall.

I would be pleased to hear from any reader who could enlarge my knowledge of this specimen, or who would like a similar specimen in the event that an opportunity occurs.

R. N. Elliott, Radio Technician, Ocean Weather Ship "Weather Reporter".
Home address:- [REDACTED], Barcombe, Near Lewes, Sussex.

More "giant" *Anodonta cygnea*

Additional to my note on this subject (Conchologists' Newsletter No. 34, p. 174, Sept. 1970) my attention has been drawn to large mussels recorded in the Angling Times of 3 June 1971. These are from the Linford Hall Lake, near Thetford, Norfolk, and were collected by Mr. Bob Blandford in 1970. One measured L. 195mm. and H. 95mm., the other L. 190mm., H. 95mm. (both converted from inches).

Nora F. McMillan

Exchanges, Correspondents, etc.

Mr. Fritz Seidl, Jnr., [REDACTED], A5280 Braunau am Inn, Austria, is interested in Land and Freshwater shells of Great Britain and the Commonwealth and has many varieties of recent land and freshwater shells available from Austria, Germany, Italy, Spain, Yugoslavia and Bulgaria. Most of these are 'live-taken' and have full and precise data. Mr. Seidl is able to write in English. Any exchanges, please?

Mr. F. J. Springsteen, [REDACTED], Oak Park, Melbourne, Victoria, Australia, Postcode 3046, is interested in exchanging common marine gastropods from his area with members. He offers the miniature species in particular. He is a member of the Malacological Society of Australia and looks forward to hearing from any of our members who may be interested. He is prepared to collect bivalves if requested.

Mr. and Mrs. A. P. Dow - 'Abu Dhabi', c/o Foreign and Commonwealth Office,

King Charles Street, London, S.W.1 have recently gone to Abu Dhabi and would be very pleased to attempt answers to queries or send samples to Britain from that part of the Arabian Gulf. Anyone interested in this area, please write.

The Polish Academy of Sciences - Institute of Systematic Zoology - Slawkowska 17, Krakow, Poland. The Librarian is anxious to receive the Journal of Conchology regularly in exchange for their publication Acta Zoologica Cracoviensia. This is mainly in English and French and the volume for 1970 (8 parts) contains ornithological, entomological and general zoological articles; there does not appear to be any conchological material.

Any member prepared to pay the subscription for the 'Journal' in exchange for the Krakow publication, please contact the Hon. Secretary.

Shells for Sale

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

SHELL EXHIBITION

Very few public exhibitions of shells are held in this country, and in view of the fascination which is the usual reaction among visitors, it is a pity that this should be so. We who have become interested in the subject can rarely understand the absolute revelation it can be to some person who has never before been introduced to shells in all their variety. Certainly the exhibition of shells recently held by Mrs. Saul at her home near Little Malvern was well designed to catch the imagination of the visitor. Although the place is a little out of the way, direction signs were a help, and the resulting contribution to the fabric fund of Little Malvern Priory is witness to the popularity of the occasion. The set theme, 'Man and Mollusc' involved a great deal more than a striking series of marine mollusca; there were examples of shells as ornamentation, as useful objects from trumpets through window panes to buttons; shells as menaces to human and animal health, as food, pests, art-forms, currency and medicine. Labelling, a matter of the greatest importance in such cases, was brief but adequately informative. An exhibition of this kind involves a great deal of work but judging by the interest which seems to have been aroused, must have brought a corresponding feeling of satisfaction to Mr. & Mrs. Saul and their assistants.

T. E. Crowley

FIELD MEETING

The next meeting will be held on Sunday 17th. October 1971 at Selbourne, Hampshire (of Gilbert White fame). The Director will be Dr. M. P. Kerney.

Field Meetings Organiser - T. Pain, [REDACTED], Millbank, London, S.W.1.

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

COLLECTING SNAILS IN HUNGARYIII. Dr. Krolopp shows famous sites of calcareous tufa
containing remarkable Mollusca

I have told already of my friend Dr. Krolopp from the Central Geological Institute at Budapest. You know how we went to the Bukk mountains to look for Orcula dolium. We collected many interesting species but did not succeed in finding the one we were hunting for.

As we are both working professionally on quaternary shells, we took a great interest in looking at calcareous tufas containing fossil Mollusca. I have already told of our visit to Monósbél near Eger, but after having revised all my Hungarian material, I must correct the list of the youngest tufa examined thus:

Sadleria pannonica
Carychium tridentatum
Radix peregra ovata
Orcula doliolum apex
Discus rotundatus
Oxychilus cellarius
Zonitoides nitidus juv.
Laciniaria plicata fragment

Laciniaria cana fragment
Clausilia sp. apex
Bradybaena fruticum
Euomphalia strigella
Helicodonta obvoluta juv.
Helix pomatia juv.
Pisidium personatum

On the right side of the Danube, not far from Budapest upstream, i.e. northward, there are several tufa layers of different ages. We visited three of them. At Peterhegy near Budapest we found in the quarry the lowest accessible stratum crowded with shells. I took two samples that I washed later on, but the fauna in it was rather uninteresting, more than a thousand specimens of Valvata piscinalis and as many of Gyraulus acronicus, some fifty Radix peregra obtusa and one Pupillid apex. The matrix was a fine tufa grit mixed with lacustrine chalk. This is the fauna of a large body of moving water.

Near Budakalasz we visited a very extensive quarry of an old and mostly solid tufa of the Günz-Mindel-Interglacial. But Dr. Krolopp showed me a lens of loose material out of which we collected:

Fagotia acicularis
Radix peregra ovata
Planorbis planorbis
Planorbis carinatus
Cochlicopa lubricella
Gastrocopta serotina Lozek

Pupilla triplicata
Abida frumentum
Vallonia enniensis
Chondrula tridens
Discus ruderratus
Helicella striata

That is indeed an incomplete fauna, as are all lists based on small samples, but it shows some interesting features from my point of view. Gastrocopta serotina was new to me, it does not occur in my country. Abida frumentum immigrated into Thuringia not before the Holocene, and there is used as an indicator species for Holocene age, e.g. in the tufas of Weimar. The Helicella we found is called H. hungarica by the Hungarians, but since I revised the whole stock of "H. hungarica" in the Hungarian National Museum I do not now believe that it is a genuine species, for I then saw a lot of transitional forms between the coarsely-ribbed H. striata as it also occurs in Germany and the finely-ribbed or even only striated so-called H. hungarica. Their anatomy shows no difference according to Mr. Pintér.

The third tufa we visited there was that of Kiscell plata, where we collected from two different horizons. There was a stratum near the base containing a fauna of a rather cold period, perhaps an interstadial, but we collected only a few shells, all very fragile and damaged. There we found three common species:

Radix peregra ovata, Chondrula tridens, and Zonitoides nitidus.

But the upper stratum, just beneath the covering firm tufa, contained more shells and in better condition.

Bithynia tentaculata
Carychium tridentatum
Physa fontinalis juv.
Stagnicola turricula
Radix peregra ovata
Radix peregra obtusa
Planorbis planorbis
Anisus spirorbis

Armiger crista nautilus
Hippeutis complanatus
Abida frumentum
Vallonia enniensis
Succinea oblonga
Bradybaena fruticum juv.
Helix pomatia apex

As already stated, fossil Abida frumentum is in Hungary no indicator for the age of its site, for this species occurs there also in the Pleistocene. Also my small list cannot give any information as to whether the climate at the time of deposition was different from that of today or not. We see simply the fauna of a pond surrounded by a level zone with rich vegetation - or of a swamp with pools of open water - and a dry slope. In the fauna collected we find no traces of woodland. It may be different, if one has enough material to get the complete list of species, but forest surely is not dominant.

The calcareous tufa of Tata, a small town 60 km. to the NW of Budapest near the Gerecse Mountains has long been famous, and it is said that in the 18th. century a travelling Englishman first mentioned "fossil univalves" from this place. A team of geologists, palaeontologists and prehistorians has worked here from 1958-1961 under the direction of Prof. László Vertes, and Dr. Krolopp dealt with the Mollusca. The results of this research have been published in a large monograph (1964), and in 1968 Dr. Krolopp gave a report at our 3rd. international colloquium at Weimar, that has also been published (1969). The tufa is accessible in some large quarries, and beneath it there are several strong thermal springs. Undoubtedly the tufa is a thermal deposit.

Dr. Krolopp mentions 12 different strata, five of which contain mollusca and have been investigated by him. I do not intend to mention all his complete lists already published twice, but only want to tell what I saw there. You may imagine, that we had a hot day, and the first thing that impressed me was the emerald lizard (Lacerta viridis) climbing up and down the steep rocks, really emerald green on the white stone, the males' heads steel-blue. The good doctor smiled when I admired them. He showed me three of the strata and we collected there. I will give the results in a table: Stratum 3, from the end of the last Interglacial. Stratum 5/6, early Würm I. Stratum 5 containing bone- and stone-tools as well as hearths of palaeolithic man. Stratum 8, early Würm II, climate somewhat colder.

	3	5/6	8
<u>Theodoxus prevostianus</u>	x	x	x
<u>Pomatias elegans</u>	x	-	-
<u>Belgrandia tataensis</u> Kormos	-	-	x
<u>Fagotia acicularis</u>	x	x	x
<u>Fagotia esperi</u>	x	x	x
<u>Amphimelania holandri</u> afra	-	-	x
<u>Stagnicola turricula</u>	-	x	-
<u>Radix auricularia</u>	-	-	x
<u>Abida frumentum</u>	x	x	-
<u>Vallonia pulchella</u>	-	-	x
<u>Succinea oblonga</u>	-	x	x
<u>Aegopinella</u> cf. <u>minor</u>	x	-	-
<u>Oxychilus</u> cf. <u>draparnaudi</u>	-	-	x
<u>Cochlodina laminata</u>	x	-	-
<u>Euomphalia strigella</u>	x	-	-
<u>Helicopsis striata</u>	-	x	-

<u>Cepaea vindobonensis</u>	x	-	-
<u>Pisidium casertanum</u>	-	-	x
Species	9	7	10

We see here by the constant occurrence of Theodoxus prevostianus, as well as both species of Fagotia that the tufa is a genuine thermal deposit. Furthermore we find even in my incomplete list the presence of woodland snails only in the interglacial stratum: Pomatias, Aegopinella, Cochlodina, their disappearance means a change of climate, a lowering of temperature.

When we went back to the station, we passed a street that had been dug up so as to put down a water pipe or an electric cable, and on the heaps of excavated soil we also saw shells. As we had not much time, we took only a few with us: Theodoxus sp., covered with a thick incrustation, Stagnicola corvus and St. turricula, Bradybaena fruticum. Dr. Krolopp supposed that this stratum opened might belong to Holocene deposits.

Another calcareous tufa, not even far from Tata, that also contains palaeontological and prehistoric remains, has been worked later, and the monograph on it has not yet appeared. And yet it is still more famous: Vertesszöllös, the place where Homo palaeohungaricus has been found, his artefacts as well as his bones, and even his footprint! Here also Dr. Krolopp was the official worker on the Mollusca, and I look forward to his publication.

A part of the great quarry has been made an open-air museum. There is a glass pavilion covering the surface of a stratum, and if you look into it you see the tufa crowded with bones, artefacts - both intact and in fragments - and between them all sorts of footprints. At the edge you find a copy, e.g. the hoofprint of a cow, from that to the genuine print a red thread leads your eye. And between the prints of animals you find also a human one, of a small foot as of a child of ten years. This surface must have been soft for a time and hardened later on.

On one side the succession of strata is shown as in nature but covered with glass. They have chosen an interesting part, with a hearth and other interesting remains in situ. All those places shown to the public are indeed very fine. We looked at them, I admired them, but then we both climbed over an iron railing that separated the museum part from the rough quarry. But as Dr. Krolopp is known at Vertesszöllös the inspector did not forbid anything to us. We climbed up to the accessible strata, looked and collected, and Dr. Krolopp explained. There were the so-called Helicigona strata, a hard tufa with a lot of holes filled with loose material or empty. And in them here and there we found shells of a large Helicigona, about the same size as H. preslii or H. cingulata, not yet described or named! I have got some specimens and I think my friend trusted me a good deal in letting me take them. But it is his business, not mine, to describe and name them. Fagotia acicularis and Theodoxus prevostianus also occurred with them. Dr. Krolopp assigns these strata to Mindel I/II Interstadial.

Somewhat younger, but still belonging to the Mindel, is the Fagotia stratum. Here we found only F. acicularis and Th. prevostianus, but in greater quantities, and many of them washed out of the matrix by rain. Among them we collected some recent Discus rotundatus, fallen down from the margin.

The top stratum is a loess of the Würm. Here we got only two species: Helicopsis striata (- H. hungarica) and Cepaea vindobonensis, which is today one of the common species in this country.

Though the tufa of the great quarry furnished only a few species I was very interested in it, for at home I never saw thermal deposits, our tufas are all deposited by cold water.

But then Dr. Krolopp took me to a smaller quarry, evidently abandoned, situated further down the slope, and at first glance not at all attractive: "And that is Eem Interglacial", he said, and within a short time we had collected the following species:

Pomatias elegans

Chondrula tridens

Bithynia tentaculata
Fagotia acicularis
Stagnicola corvus
Stagnicola turricula
Radix peregra ovata
Planorbis planorbis
Abida frumentum

Succinea oblonga
Bradybaena fruticum frag.
Helicopsis striata
Helicella obvia juv.
Perforatella bidentata frag.
Cepaea vindobonensis frag.
Helix pomatia frag.

Here we have not met with so many woodland snails as in the Eem of Tata, but we must not forget that our list is incomplete. One woodland species occurs here and there: Pomatias elegans. Tata and Vertesszöllös are the only places in Hungary from whence this species has been recorded in the Pleistocene. Living, it occurs only at a few places near the Balaton.

The day we visited Tata and Vertesszöllös was a hot and strenuous but happy day. Dr. Krolopp was pleased that he had been able to show such fine sites to a colleague, and I was most impressed by them, the molluscan species new to me, and the experience and information he had helped me to get. Again I thank him for his kindness and hope to see him again one day either in Hungary or in Germany.

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SLUGS AND THE POETS

In an article with the above title in the Newsletter, No. 35 (December 1970), several instances of slugs having achieved the ascent of Helicon were omitted. Walter de la Mare's little poem "Old Shellover" (Peacock Pie) is about a snail and its pal 'Creep', a slug. The following lines occur in "The Haunted House" by Thomas Hood (line 211):

The slug was crawling on the vacant chair,--
The snail upon the settle.

Benham's Book of Quotations cites this couplet:

When black snails cross your path,
Black clouds much moisture hath.

As in Clare's poems, the black snail is the slug, Arion ater. One of the petitions in "The Prayer of the Little Ducks" by Carmen Bernos de Gasztold (Prayers from the Ark, translated by Rumer Godden) is 'Give us plenty of little slugs / and other luscious things to eat,' while another gastronomic reference to slugs is contained in a nursery rhyme:

"Croak!" said the Toad, "I'm hungry, I think;
To-day I've had nothing to eat or to drink;
I'll crawl to a garden and jump through the pales,
And there I'll dine nicely on slugs and on snails."
"Ho, ho!" quoth the Frog, "is that what you mean?
Then I'll hop away to the next meadow stream;
There I will drink, and eat worms and slugs too,
And then I shall have a good dinner like you."

This reflection is from "The Tent-Maker's Story" by Robert Barnabas Brough:

Of all the lunacies earth can boast,
The one that must please the devils most
Is pride reduced to the whimsical terms
Of causing the slugs to despise the worms.

Here follows a stanza from "The Knight and the Lady", Ingoldsby Legends:

Now Sir Thomas the Good,
Be it well understood,
Was a man of a very contemplative mood,--
He would pore by the hour,
O'er a weed or a flower,
Or the slugs that come crawling out after a shower.

From the nursery comes the defamatory answer to the question, 'What are little boys made of?': "Slugs and snails and puppy-dogs' tails."

The slug has at long last insinuated itself into Holy Writ: Psalm 58, verses 7 & 8, The Jerusalem Bible:

May they drain away like water running to waste,
may they wither like trodden grass,
like a slug that melts as it moves,
like an abortion, denied the light of day!

In most versions the Hebrew Shablûl is translated 'snail'. The only other mention of the snail in the Bible is in Leviticus chapter 11, verse 30, Authorised Version, where it is listed amongst the unclean animals, sandwiched between the lizard and the mole in an esoteric pre-Linnaean classification.

Finally Coleridge ("Work without Hope") saw slugs as harbingers of spring:

All Nature seems at work. Slugs leave their lair--
The bees are stirring--birds are on the wing--
And Winter slumbering in the open air,
Wears on his smiling face a dream of Spring!

A. E. Ellis

SHELLING IN GLAMORGAN AND PEMBROKESHIRE (CENSUS AREA 21)
AND THE SCILLY ISLES (CENSUS AREA 19)

1. During a 2½ year overseas posting to Singapore I became interested in both sea shells and Scuba Diving, became a member of the Conchological Society of Great Britain and Ireland and amassed a fair collection of Singapore shells. As a complete novice I was eventually put in touch with, and given considerable assistance by Mr. T. E. Crowley and acting on one of his suggestions advertised in 'Hawaiian Shell News'. This led to a number of exchanges with collectors all over the world, one of whom was Mrs. Gladys McCallum (President of the Pittsburgh Shell Club).
2. All good things must come to an end and eventually the Royal Air Force transferred me from Singapore to St. Athan in Glamorganshire. Here having dipped the tip of one finger in the sea and suffered near frostbite I decided my diving days were over. However there was much to do, as exchange shell parcels had still to be made up until at last the better South China Sea exchanges were gone - much to the family's relief when they realised they could afford to eat again instead of buying postage stamps.
3. Time had gone by, a number of the Society's meetings had been attended, considerable benefit obtained from advice by Mr. S. P. Dance, the Society's Newsletters and a world-wide circle of shell collecting friends. I feel the friendship aspect cannot be over emphasised - Mr. & Mrs. McCallum broke a journey to Austria just to say "Hallo" fortunately on a day (15 February 1969) when I could introduce them to members at a Society Meeting and this in its turn

has led to a friendship between them and the late Mr. L. W. Stratton.

4. The passage of time had not only resulted in the thickening of blood but apparently also in the warming up of the sea and eventually for the first time I dived in Britain and for the first time wore a wet suit. This dive was just after the issue of Mrs. S. M. Turk's Paper for Students' No. 11 and a couple of days later, off went my first parcel of shells from Census Area 21. During the following eighteen months many more parcels were sent and thanks to the advice by Mrs. Turk and assistance given by Mrs. J. L. Charlish molluscs were collected from Census Areas 19, 21, 23 and 12. British shells proved to be a problem, as when one wears spectacles to read it is impossible to find Rissoa parva (G71) - particularly when 100 feet down in British waters. Brachystomia eulimoides on the ears of Pecten maximus (Linn.) or Pelseneeria styliifera on a sea urchin are easily seen but anything smaller is in my case impossible. Eventually there was only one answer and that was first find a sheltered spot on the sea bed, the sort of place I thought would be suitable for molluscs and then fill a 5 gallon bucket with substrate from this area, take it home, dry it off and then with paint brush and magnifier go through it grain by grain. This way accurate sampling can be obtained but the cost in time is somewhat prohibitive. Once again I was given all possible assistance. Mr. H. B. Sargent of Dunstable sorted out pounds of substrate and packed the shells he found in small boxes ready for Mrs. Turk to identify. Without their assistance this report would never have been written. Incidentally the physical effort, when equipped with aqua lung, regulator, wet suit, mask, snorkel, flippers, knife, etc. in carrying a heavy bucket of wet sand can be recommended for muscle development but it is suggested one changes arms frequently to avoid fiddler crab movement.

5. A list is attached of molluscs found in Census Areas 19 and 21. All have been identified, or identity confirmed by the Marine Recorder except for G.144 which is still being studied.

D. A. J. Taylor Flt. Lt., RAF Scampton

CENSUS AREA 19 - SCILLY ISLES

Key to Stations

1. New Grimsby Channel Tresco SV 884150: sandy mud with some small rocks. Depth 15-30 feet: collected on 11th. June 1970 from about 3 lbs. substrate.
2. Cannon Gully, Outer Gilstone: SV 832053: sandy rust-stained debris under cannons - all that is left of wreck of the Association (lost in 1707) - depth 60 feet. Collected on 9th. June 1970 from 3-4 lbs. of substrate.
3. Wingletang Ledges on wreck of the Italia SV 885070: sandy pockets in rocks. Depth 105 feet: collected from about 1 lb. of substrate on 31st. May 1970.
4. Penninis Outer Head on wreck of Criccieth Castle SV 910093: sandy bottom at base of rock face: depth 110 feet: collected from about 2 lbs. substrate on 6th. June 1970.
5. Porth Cressa Bay SV 903101: sandy bottom: depth 35 feet: collected from about 5 lbs. substrate on 5th. June 1970.
6. Porth Cressa Beach SV 902104: weed-covered rock on sand.
7. Bishops Rock/Crebinicks on wreck of Romney SV 807064: white sand pockets in rocks: depth 90 feet: collected from 2 lbs. substrate on 11th. June 1970.
8. Lethargus Rocks on wrecks of Hathor and Plympton SV 878072: sandy pockets in rocks: depth 80 feet: collected from 1 lb. substrate and in the case of Pelseneeria styliifera off the large edible Sea Urchin, Echinus esculentus (a further 120 species were examined for these octoparasites but no more were found) on 30th. May 1970.
9. Steval, on wreck of tug Blazer SV 893104: stoney bottom: depth 30 feet: 1 lb. of substrate collected on 4th. June 1970.

Key to Status

- A. Live animal
- B. Shell only
- C. Worn shell or valve
- R. Verified by Marine Recorder
- V. Specimens accepted as new examples from Census Area 19 (Scilly Isles) for the Central Voucher Collections which form part of the National Collections in the British Museum (Natural History).

<u>Winckworth List</u>	<u>Name</u>	<u>Status</u>	<u>Station</u>	<u>Comments & Quantity</u>
<u>Number</u>				
LO (Loricata)				
7	<i>Lepidochitona cinerea</i>	AR	6	9
G (Gastropoda)				
2	<i>Emarginula reticulata</i>	BR	1, 2	1, 1
6	<i>Diodora apertura</i>	BR	2	1
7	<i>Patella vulgata</i> (var <i>picta</i>)	AR	2	1
9	<i>Patella athletica</i>	AR	9	3
10	<i>Patina pellucida</i>	BR	1, 4, 7, 2	3, 6, 3, 6
13	<i>Patelloida virginea</i>	BR	1, 4, 7	1, 3, 2
20	<i>Calliostoma zizyphinum</i>	AR	2, 3, 4, 7	3, 2, 1, 5
23	<i>Gibbula magus</i>	AR	1	4
25	<i>Gibbula cineraria</i>	AR	2, 4, 6	1, 20, 30+
26	<i>Gibbula umbilicalis</i>	AR	1, 6	30, 30+
31	<i>Monodonta lineata</i>	AR	6, 1, 3, 4	20+, 10, 5, 4
32	<i>Skaenea serpuloides</i>	BR	2, 7	1, 1, New 20th. cent. record
36	<i>Tricolia pullus</i>	BR	1, 4, 7, 2	5, 15, 4, 3
42	<i>Littorina saxatilis</i>	ARV	1, 4	2, 8
42E	<i>Littorina saxatilis</i> <i>nigrolineata</i>	ARV	6	20+
43	<i>Littorina neritoides</i>	BR	8	3
45	<i>Littorina littoralis</i>	AR	1, 3, 4, 6	20, 5, 7, 30+
55	<i>Cingula semicostata</i>	BR	1, 4, 7, 2	146, 142, 30, 6
57	<i>Cingula cingillus</i>	BR	4, 7, 7	3, 8
58	<i>Alvania crassa</i>	BR	7	3
60	<i>Alvania beanii</i>	AR	1	11, New 20th. cent. record
63	<i>Alvania cancellata</i>	BR	4, 1, 7	3, 5, 11
64	<i>Alvania catinata</i>	BR	1	1
67	<i>Alvania punctura</i>	BR	1, 7, 7	2, 3, 1, New 20th. cent. record
70	<i>Rissoa inconspicua</i>	BR	7	1, New 20th. cent. record
71	<i>Rissoa parva</i>	AR	1, 4, 2	70, 200, 50
75	<i>Barleeia unifasciata</i>	BR	1, 4, 7	2, 35
80	<i>Skeneopsis planorpis</i>	BR	7	1, New 20th. cent. record
81	<i>Omalogyra atomus</i>	BR	2	1, New 20th. cent. record
87	<i>Turritella communis</i>	BR	4	3
90	<i>Bittium reticulatum</i>	BR	4, 1	14, 3
91	<i>Cerithiopsis tubercularis</i>	BR	4	1
98	<i>Triphora perversa</i>	BR	4, 1	14, 2
103	<i>Clathrus clathratulus</i>	BR	2, 7	2, 1
112	<i>Eulima trifasciata</i>	BR	7	1, New 20th. cent. record
114	<i>Balcis alba</i>	BR	1	1, New 20th. cent. record
122	<i>Balcis devians</i>	BR	7	1, New 20th. cent. record
124	<i>Pelseneeria styliifera</i>	AR	8	2, New record
125	<i>Chrysallida obtusa</i>	BR	1, 7	1, 2, New 20th. cent. record

138	<i>Odostomia nivosa</i>	BR	7	8, New 20th. cent. record
163	<i>Turbonilla jeffreysii</i>	BR	1	2
177	<i>Natica poliana</i>	BR	1	1
184A	<i>Trivia monacha</i>	AR	1	1
184B	<i>Trivia artica</i>	AR	1, 8	1, 1
185	<i>Simnia patula</i>	ARV	3, 4	8, 2
190	<i>Nucella lapillus</i>	AR	1, 5	1, 7
192	<i>Ocenebra erinacea</i>	BR	4	2
199	<i>Colus gracilus</i>	BR	1	1, New 20th. cent. record
206	<i>Chauvetia brunnea</i>	BR	3	1
207	<i>Nassarius reticulatus</i>	AR	1, 5, 7	7, 15, 36
208	<i>Nassarius incrassatus</i>	AR	1, 2	20, 28
214	<i>Lora rufa</i>	BR	9	1
217	<i>Mangelia attenuata</i>	BR	1	1, New 20th. cent. record
Only one found previously - in 1886, in Crow Sound				
228	<i>Philbertia linearis</i>	BR	1, 2, 8, 7	1, 1, 2
238	<i>Retusa retusa</i>	BR	1, 2	1, 6
257	<i>Spiratella retroversa</i>	BR	1, 2	2, 2
375	<i>Otina ovata</i>	BR	1	1
L (Lamellibranchia)				
13	<i>Arca tetragona</i>	BR	2, 7	1, 2
117	<i>Monia patelliformis</i>	CR	Held by Marine Recorder	New 20th. cent. record
18	<i>Monia squama</i>	CR	7	3, New 20th. cent. record
20	<i>Mytilus edulis</i>	ARV	) Held by	
23	<i>Modiolus barbatus</i>	ARV	) Marine Recorder	
26	<i>Modiolus phaseolus</i>	AR	1, 2, 4, 7, 8	6, 1, 7
28	<i>Musculus discors</i>	ARV	3, 7	3, 2
29	<i>Musculus marmoratus</i>	AR	1, 6	2, 4
39	<i>Pecten maximus</i>	CR	1	1
42	<i>Chlamys varia</i>	BR	2	1
43	<i>Chlamys distorta</i>	CR	2, 5	1, 1
44	<i>Chlamys opercularis</i>	CR	1	1
59	<i>Astarte triangularis</i>	BR	2	5
66	<i>Phacoides borealis</i>	AR	5, 1	1, 1
69	<i>Kellia suborbicularis</i>	BR	2, 1	6, 4
70	<i>Lasaea rubra</i>	BR	1	4
80	<i>Mysella bidentata</i>	BR	2	1
90	<i>Cardium ovale</i>	AR	1, 4, 7, 2	4, 4, 1, 4
93	<i>Cardium edule</i>	CR	1	4
95	<i>Dosinia exoleta</i>	AR	1, 5	2, 20+
96	<i>Dosinia lupinus</i>	BR	1	1, New 20th. cent. record
101	<i>Venus ovata</i>	BR	4	4
102	<i>Venus fasciata</i>	AR	6	1
105	<i>Paphia rhomboides</i>	CR	6	1
106	<i>Paphia pullastra</i>	AR	1	1
114	<i>Ervilia castanea</i>	BR	7	5
115	<i>Tellina squalida</i>	AR	5	1
116	<i>Tellina tenuis</i>	AR	5	3
118	<i>Tellina donacina</i>	BR	4, 1	2, 1
120	<i>Tellina crassa</i>	CR	4	1, New 20th. cent. record
129	<i>Gari fervensis</i>	CR	5	1, New 20th. cent. record
131	<i>Gari tellinella</i>	BR	7	3
138	<i>Ensis arcuatus</i>	BR	1	6
139	<i>Ensis siliqua</i>	CR	1	1
145	<i>Lutraria lutraria</i>	BR	1, 4	3, 9
145A	<i>Lutraria augustior</i>	CR	1, 4	1, 12
150	<i>Aloidis gibba</i>	BR	4	3, New 20th. cent. record
151	<i>Hiatella arctica</i>	AR	1, 2, 7, 2	17, 56, 48, 8

CENSUS AREA 21 - GLAMORGAN AND PEMBROKESHIRE ONLY

Key to Stations

- | | | | | | |
|----|---|-----|--------|-----------------|-----------------|
| 1. | Martins Haven | NGR | SM | 761094 | 60-100 ft. down |
| | Comes within the collecting area for the Dale Fort Marine Fauna (1966, Supplement to Vol. 2 of <u>Field Studies</u>) | | | | |
| 2. | Llantwit Major | ST | 955672 | Middle Shore | |
| 3. | Breaksea Point | ST | 020659 | Low Spring Tide | |
| 4. | Wooltack Point | SM | 755096 | 80 ft. down | |
| 5. | Skomer Island (Pigstone Bay) | SM | 713095 | 70 ft. down | |

Key to Status

- A. Live
- B. Shell only
- C. Worn
- R. Identity confirmed by Marine Recorder
- V. Donated to Voucher Collection

Winckworth List					Comments &
Number	Name	Status	Station	Quantity	
Lo	Loricata				
1	Lepidopleurus asellus	ARV	1, 2	Plenty	
7	Lepidochitona cinerea	AR	2	1	
G	Gastropoda				
2	Emarginula reticulata	BR	1	3	
6	Diodora apertura	AR	1	Several	
7	Patella vulgata	AR	1	Plenty	
10	Patina pellucida	AR	1	Several	
13	Patelloida virginea	BR	1, 4	Few	
20	Calliostoma zizyphinum	AR	5	Few	
24	Gibbula tumida	ARV	1, 4	Several	
25	Gibbula cineraria	AR	1, 3, 4	Few	
26	Gibbula umbilicalis	BR	1	Few	
31	Monodonta lineata	ARV	1	1	
36	Tricolia pullus	BR	1	Plenty	
37	Lacuna vineta	BR	1	2	
40	Lacuna pallidula	BR	3	Several	
41	Littorina littorea	AR	1, 3	Plenty	
42	Littorina saxatilis	ARV	1	Plenty	
45	Littorina littoralis	AR	1, 3	Plenty	
55	Cingula semicostata	BR	4	Plenty	
56	Cingula semistriata	BR	1, 4	Plenty	
57	Cingula cingulus	BR	1, 4	4	
58	Alvania crassa	BR	1, 4	Plenty	
60	Alvania beanii	BR	1	1, New record	
67	Alvania punctura	BR	1	4, New record	
68	Rissoa albella	BR	1	1, New record	
70	Rissoa inconspicua	BR	1, 4	1	
71	Rissoa parva	BR	1	Plenty	
78	Tornus subcarinatus	BR	1	Few, New to Dale Fort Marine Fauna	
84	Rissoella diaphana	BR	3	1	
87	Turritella communis	ARV	1	Plenty	
90	Bittium reticulatum	BR	1	Plenty	
94	Cerithiopsis jeffreysi	BR	1	1, New record	
98	Triphora perversa	BR	1	3	
115	Balcis lubrica	CR	1	3	
125	Chrysallida obtusa	BR	1	2, New record	
126	Chrysallida indistincta	BR	1, 4	2, New record	

128	<i>Chrysallida decussata</i>	BR	1	1, New to Dale Fort Marine Fauna
131	<i>Chrysallida spiralis</i>	BR	1	4, New to Dale Fort Marine Fauna
133	<i>Menestho divisia</i>	BR	1	3, New record
135	<i>Menestho obliqua</i>	BR	1	1, New record
142	<i>Odostomia unidentata</i>	BR	1	6, New record
143	<i>Odostomia conspicua</i>	BR	1	New record
144	<i>Odostomia acuta</i>	A	1	Several, New record
146	<i>Odostomia conoidea</i>	AR	1	1, New record
149	<i>Brachystomia scalaris</i>	BR	1	3
150	<i>Brachystomia eulimoides</i>	ARV	1	Plenty
157	<i>Turbonilla elegantissima</i>	BR	1, 4	Several
161	<i>Turbonilla crenata</i>	BR	1	1
163	<i>Turbonilla jeffreysii</i>	BR	1	1
168	<i>Calyptraea chinensis</i>	AR	1	Plenty on Pecten
190	<i>Nucella lapillus</i>	AR	1, 3	Plenty
192	<i>Ocenebra erinacea</i>	AR	1, 4, 3	12, 1, Plenty
204	<i>Buccinum undatum</i>	AR	1	1
208	<i>Nassarius incrassatus</i>	ARV	1	Plenty (some on Pecten)
218	<i>Mangelia costulata</i>	BR	1	1, New record
228	<i>Philbertia linearis</i>	BR	1	1, New record
238	<i>Retusa retusa</i>	BR	1	Few, New to Dale Fort Marine Fauna

L Lamellibranchia

1	<i>Nucula sulcata</i>	AR	1	Many
2	<i>Nucula nucleus</i>	AR	1, 3	Plenty, few
4	<i>Nucula turgida</i>	ARV	1	1
7	<i>Nuculana minuta</i>	BR	1	3
13	<i>Arca tetragona</i>	CR	1	1
17	<i>Monia patelliformis</i>	ARV	1	1
18	<i>Monia squama</i>	BR	1	1
19	<i>Heteranomia squamula</i>	BR	1	Many
20	<i>Mytilus edulis</i>	AR	2, 3	Plenty, few
26	<i>Modiolus phaseolinus</i>	AR	1	Several
29	<i>Musculus marmoratus</i>	CR	1	1
36	<i>Ostrea virginica</i>	BR	1	Plenty
39	<i>Pecten maximus</i>	ARV	1	Plenty
42	<i>Chlamys varia</i>	BR	1	Several
43	<i>Chlamys distorta</i>	BR	1	2
44	<i>Chlamys opercularis</i>	BR	1	4
47	<i>Chlamys tigerina</i>	BR	1	2
56	<i>Astarte sulcata</i>	AR	1	2
65	<i>Myrtea spinifera</i>	BR	1	1
69	<i>Kellia suborbicularis</i>	BR	1	Several
70	<i>Lasaea rubra</i>	BR	4	2
80	<i>Mysella bidentata</i>	BR	1	Several
90	<i>Cardium ovale</i>	BR	4	2
91	<i>Cardium scabrum</i>	CR	1	2, New record
92	<i>Cardium exiguum</i>	BR	1	2
93	<i>Cardium edule</i>	AR	1	Few
94	<i>Cardium crassum</i>	AR	1	5
95	<i>Dosinia exoleta</i>	AR	1	2
96	<i>Dosinia lupinus</i>	AR	1	1
97	<i>Gafrarium minimum</i>	BR	1	1
100	<i>Venus casina</i>	ARV	4, 1	1, 2
101	<i>Venus ovata</i>	BR	1, 4	Several
102	<i>Venus fasciata</i>	ARV	1	
103	<i>Venus striatula</i>	CR	1	1
105	<i>Venerupis rhomboides</i>	AR	1	3
106	<i>Venerupis pullastra</i>	BR	1	2
112	<i>Donax vittatus</i>	BR	1	1
118	<i>Tellina donacina</i>	BR	1	1
120	<i>Tellina crassa</i>	BR	1	1
124	<i>Scrobicularia plana</i>	ARV	3	1
126	<i>Abra alba</i>	CR	1, 4	Plenty

129	Gari fervensis	CR	1	2
131	Gari tellinella	BR	1	1
132	Gari costulata	CR	1	1, New record
139	Ensis siliqua	BR	1	4
150	Aloidis gibba	CR	1	1
151	Hiatella arctica	BR	1	Plenty
152	Hiatella gallicana	AR	1	1
156	Pholas dactylus	CR	3	4
157	Barnea candida	ARV	3	6
158	Barnea parva	BR	3	6

FIELD MEETING - TO AINSDALE NATURE RESERVE, 26th. JUNE 1971

Five members and two friends visited the Reserve on June 26th. and examined the dunes, dune-slacks and ditch beside Fisherman's Path. We were told that the water-table under the Reserve has fallen alarmingly in recent years and slacks that were previously under water for much of the year are now seldom flooded.

The following species were recorded, all in Square 34/20:-

On dunes -

Helix nemoralis	Discus rotundatus
Helicella caperata	Vitrina pellucida

In dune-slacks -

Carychium minimum	Euconulus fulvus
Aplexa hypnorum	Vitrea crystallina
Cochlicopa lubrica	Retinella radiatula
Vertigo antivertigo	Retinella pura
Vallonia pulchella	Agriolimax laevis
Arion ater agg.	

In ditch -

Potamopyrgus jenkinsi	Pisidium personatum
Aplexa hypnorum	Pisidium milium
Succinea pfeifferi	

Predators of molluscs noted on the Reserve included Common Frog (*Rana temporaria*), Common Toad (*Bufo bufo*) and the local Natterjack (*Bufo calamita*).

We are most grateful to Mr. Neil Robinson, the Warden-Naturalist, for permission to visit the Reserve.

L. Lloyd-Evans

PUBLICATIONS RECEIVED

'List of European Malacologists 1971'. Compiled by Dr. Oliver E. Paget, Museum of Natural History, Burgring 7, A-1014 Vienna, Austria.

This extremely useful booklet lists above 900 addresses of European malacologists, and where information is available, gives details of their special interests, collections and in some cases, their readiness to determine material for other workers.

Information on which to compile a book of this kind must be difficult to obtain with any completeness, and no doubt its compilation has taken some considerable time; as the writer has good cause to know, any list of names and addresses becomes out of date in a week, and no doubt European malacologists move restlessly from town to town, or change their names in marriage quite as frequently as members of our own Society insist on doing. It is difficult to know how Dr. Paget is able to keep up with more than a few of them; in fact the inclusion in the listings of such well known scientists as Bloomer (1866-1960),

Diver (1892-1969), Grensted (1884-1964), Laidlaw (1876-1963), Watson (1885-1959) and others, as well as the exclusion of a few younger people of proved merit, serve to assure us that his sources of information are as fallible as other people's. Nevertheless, the listing should be invaluable to all workers, particularly those who care to set up liaison with other people working in the same field.

The booklet can readily be obtained by sending five international reply coupons with a request to Dr. Paget, Naturhistorisches Museum, Burgring 7, Wien 1, A1014 Austria.

T.E.C.

GENERAL NOTES

Eine Kleine Schnecke-Musik

"Beethoven's melodious thunder, Handel's choral might, Mozart's tender grace, Bellini's languorous sweetness, are even more lost on them than on the lymphatic dowagers in the grand tier, who chatter audibly of guipire and the last drawing-room, while Grisi's impassioned expression, and Mario's cantabile, are entrancing the rest of the audience. The Mollusc can only perceive noises."

George Henry Lewes, "Sea-side studies at Ilfracombe, Tenby, the Scilly Isles, and Jersey" (Blackwood, Edinburgh & London, 1860), p.374.
(guipire or guipure is a kind of lace). Compare "Eine Kleine Snailmusik," Newsletter No. 29, p. 97, June 1969.

"The Animal-Lore of Shakspeare's Time" by Emma Phipson (London, Kegan Paul, Trench & Co., 1883), chapter 18, deals with 'Shellfish,' mainly Mollusca, with numerous quotations from old writings besides those of the Bard.

(from A. E. Ellis)

First International Congress of Systematic and Evolutionary Biology

The Society of Systematic Zoology and the International Association for Plant Taxonomy have joined forces in sponsoring a major mid-term Congress of a botanical/zoological interaction at the international level. Thus, the First International Congress of Systematic and Evolutionary Biology will be held at the University of Colorado, Boulder, Colorado, 4-11 August 1973.

Anyone interested should write for full details to:-

Secretary: James L. Reveal, Department of Botany, University of Maryland, College Park, MD 20742, U.S.A.

Shells for Sale

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

Exchange Wanted

John W. Jennings, [REDACTED], Magnetic Island, via Townsville, Queensland 4810, Australia, is very keen to obtain a collection of English shells - a good variety - in exchange for good quality Australian tropical marine shells with full data. Any offers, please?

Christmas 1971

The Compiler sends Best Wishes & Seasonal Greetings to every reader for Christmas and the New Year.

FIELD MEETING

March 19th. (Sunday) 1972. Near Fareham, Hampshire. River Wallington from source to estuary.

Field Meetings Organiser: T. Pain, [REDACTED], Millbank, London, S.W.1.

[REDACTED],
Atherton,
Manchester, [REDACTED]

Dear Members,

I am very sorry to have to say that an unusually large number of Annual Subscriptions for 1971 still remain unpaid. All Members concerned have been sent reminders, and it must be pointed out that non-payment will entail removal from the 1972 mailing lists.

In addition, certain Members have still paid only £2 in respect of this year's Annual Subscription, although the rate of subscription has been raised to £3 with effect from 1st. January 1971. In many cases this has occurred because the Subscription was paid under an out of date Banker's Order. Will all Members paying in this way please check that the amount of their Orders has in fact been amended to £3, and that this amendment was in force for the current year; amended Bankers' Orders sent to banks after 1.1.71 will not have been carried out, and will apply only in 1972, so that Members concerned should send a supplementary remittance of £1 to make the 1971 total correct.

I should like once more to ask all Members who are eligible to do so to consider the possibility of paying the Annual Subscription by means of Seven Year Covenants. This method of payment does not involve extra expense for the Member, but the Society is entitled to reclaim from the Inland Revenue the amount of income-tax paid upon the amount of the Subscription. This year the Covenants have brought in about £100. All Members are eligible who pay income-tax in the U.K. at Standard rate, and who do not claim the Subscription as a professional expense. I shall be happy to supply a Form of Covenant and explanatory letter to anyone who would like to consider this.

MARJORIE FOGAN
Hon. Treasurer

DUPLICATES FOR SALE:

J. E. Gray, Guide to the systematic distribution of Mollusca in the British Museum, Part I, 1857 (cover water stained) £1.25;

J. W. Williams, J. W. Taylor, W. Denison Roebuck, Land and Freshwater Shells (Young Collector) 1889, 65p;

March 1969 National Geographic Magazine with article by Zahl, The Magic Lure of Sea Shells, 40p.

All post paid. Charles Pettitt, [REDACTED], Cheadle, Cheshire, [REDACTED]
Additional item - Kennelly, D.H., Marine Shells of Southern Africa, 1964, 85p.

ANNUAL GENERAL MEETING, 26th. FEBRUARY 1972

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 Annual General Meeting*, and shall be accompanied by a signed declaration of the candidate's willingness to serve.

*To be received not later than Saturday 8th. January 1972.

Produced by THE CONCHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND

10-KILOMETRE SQUARE MAPPING SCHEME FOR NON-MARINE MOLLUSCA

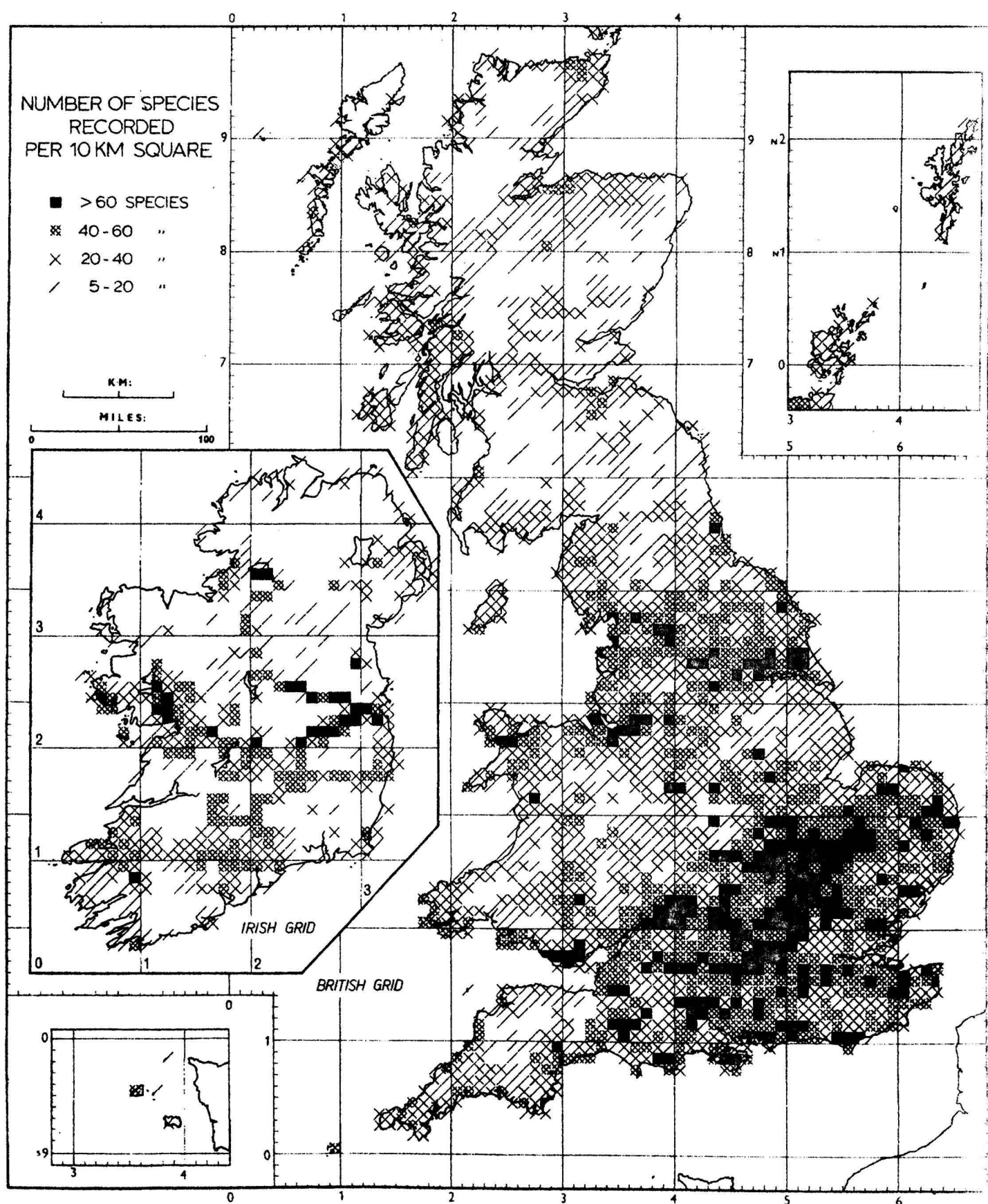
During the 1971 season approximately 10,000 new 10-kilometre square field records were incorporated. My best thanks are due to all contributors. Two expeditions to Ireland were made, in March and in August, providing nearly 5,000 records between them, and resulting in several interesting discoveries, most notably a site for Vitrina (Semilimax) pyrenaica in Co. Waterford, the first record for south-east Ireland (for a general account of the August expedition, see forthcoming issue of Irish Naturalists' Journal).

The number of new records is a slight drop on previous seasons. This is partly because the richest and most easily accessible parts of the British Isles have now been fairly well covered, and recording in the poorer areas is of course much less productive in terms of effort. Duplication of records is also becoming increasingly evident. To avoid this, I am always glad to forward copies of master cards for 10-kilometre squares, so that the recorder may concentrate on the obvious gaps in the lists; for example, even well recorded squares may lack records of species from certain overlooked habitat categories, such as woodland species, or common garden anthropophiles (Milax, etc.).

A basic aim of the survey is to obtain a coverage of the British Isles which, although necessarily imperfect, should be reasonably even. This is of course a very difficult proposition. There will always be a strong bias in favour of the densely populated south-east of England, which already is the richest area for molluscs because of its favourable geology, physiography and climate. This means that unless concerted efforts are made to record systematically in the bleaker northern and western parts of the British Isles, a number of misleading distribution maps will result, particularly for so-called "common" species. Discus rotundatus is a good case in point. Although this snail is very widespread, it is by no means ubiquitous at a 10-kilometre square level, but unless all parts of these islands can be sampled the areas from which it is truly absent will not be revealed, and ascribed merely to "collection failure".

It is often helpful when doing field work to estimate roughly the maximum number of species present in each 10-kilometre square entered. This can be gauged with experience, and can vary from fewer than twenty in bleak upland areas to over a hundred in favourable calcareous lowlands with good freshwater habitats. A reasonable aim is to try and strike off on the field card at least 60% of these "possibles". To do this, a variety of habitats should be examined in each square; e.g., a river, a marsh, open grassland, woodland, waste ground, stone walls, etc.. An examination of a one-inch ordnance map will often suggest the best places to stop on a car journey. River crossings are often good spots, giving a range of habitats in close proximity. It is often a good plan to collect bags of flood debris for later examination, as these may provide records of small species easily missed on a quick stop. Similarly, in woods it is very tedious and time-consuming searching by eye for the smaller species (Punctum, Acanthinula, Columella, etc.), and much better results are achieved either by taking away bags of leaf-litter for sorting later, or by using sieves directly in the field (I will send on request details of a simple but very effective sieving device which can easily be made up at low cost).

From the point of view of the mapping scheme recording should be extensive rather than intensive; i.e., it is always preferable to cover a fair number of squares with only moderate efficiency than to search intensively in one or two only. The truly common and representative species are usually picked up quite quickly in their appropriate habitats, while further search results only in finding isolated stations for the rarer species, which will in any case turn up



Map showing the number of species of land and freshwater Mollusca recorded to January 1972 for each 10-kilometre square of the British and Irish National Grids (post-1950 records only)

sporadically in neighbouring squares according to the laws of chance during a widely ranging survey. This has certainly been our experience in Ireland, where each day we would plan our itinerary so as to stop in about five squares, and attempt in each to record about 50 or 60% of the estimated fauna. By trying to maintain this reasonably uniform level of recording over large areas of country, a much better picture of species frequency is obtained than by a concentrated attack in a few places.

As may be seen from the accompanying progress map, large blanks still remain. Once again, I should be specially glad of Scottish or Irish data, but even in England and Wales poorly-worked stretches remain, not all in remote areas. In England, some of the worst deficiencies are north and central Devon, Herefordshire, Shropshire, west Staffordshire, the area around Birmingham, north Lincolnshire and the adjacent parts of Nottinghamshire, Cumberland, and Northumberland. Please do all you can in 1972! It is important that best use is made of the two remaining field seasons before map-making begins in late 1973; if blanks can be filled or at least adequately sampled the scientific value of our atlas will be greatly enhanced. As before, I am glad to identify material, especially Pisidium (slugs should be sent to Mr. A. E. Ellis, [redacted], Carshalton, Surrey).

Recording cards

For those (relatively few) recorders who have been filling in special punch cards for individual records, a new larger pink 80-column card has been designed by the Biological Records Centre, and now replaces the old 5" x 2" 40-column card. These cards are particularly useful for extracting information on old museum material, especially for the rarer species, and I should be grateful for offers from members prepared to do this. I will send further information on request.

Extraction of data contained in the Conchological Society's Census notebooks has been started with a view to filling blanks in the 10-kilometre square coverage, and this is now complete for v.c.'s 1 to 56 inclusive.

Notes on certain species

Planorbis vortex and P. leucostoma. This pair of species can sometimes be difficult to separate. P. vortex is essentially a lowland species, restricted in distribution in Scotland, Wales and Ireland, and special care should be taken in these areas.

Succinea spp. Only well-characterized shells can be named with certainty. In cases of doubt, reasonably mature living or preserved individuals may be forwarded to Dr. L. Lloyd-Evans, [redacted], New Mill, Huddersfield [redacted].

Columella edentula (seg.) and C. aspera. Columella should be sent for identification to Dr. C. R. C. Paul, Dept. of Geology, The University, Whiteknights, Reading RG6 2AB. It is becoming apparent that C. aspera is widespread in Britain, especially in oligotrophic habitats in the north and west.

Helicella gigaxi. Still probably under-recorded due to confusion with the commoner H. caperata.

Arion circumscriptus (seg.), A. silvaticus, A. fasciatus (seg.). For confirmation of these segregates of the old Arion "circumscriptus", specimens should be forwarded to Mr. A. E. Ellis.

Oxychilus helveticus. This species is persistently wrongly recorded, dark forms of O. cellarius often being confused with it. In living animals the jet-black mantle edge is a diagnostic feature.

Limax flavus. There is a possibility that more than one species of Limax may have been confused under this name. Any specimens which are greenish in colour (not the usual yellow) should be sent to Dr. June Chatfield, College of Education, Locksway Road, Milton, Portsmouth PO4 8JF.

Pisidium. Remember that to retain the smallest species a fine-mesh scoop is required. P. moitessierianum and P. tenuilineatum are less than 1.5 mm in maximum diameter.

M. P. Kerney, Hon. Recorder for
non-marine Mollusca, Dept. of Geology,
Imperial College, London, S.W.7.

MORE ABOUT MOLLUSCA or
THE JOYS OF BEING AN AMATEUR

It all started when some bright person in the Society* suggested that we start a group project. Among the possibilities put forward by other members, one appealed to me instantly. This was a survey of Mollusca in our area. Much good work was done some years ago by a member of our Society who found a lot of material in the area, especially in the canals. As the canals are now disused and irreparably damaged, and as the fields, ponds and ditches are being constantly ousted by new housing estates, we thought it possible to record the changes in occurrence and distribution of this group of animals. What a worthwhile idea.

With this in mind, I started to read up about them and found them wonderfully fascinating. I read about cuttle fishes fifty feet long, scallops that swim by opening and closing their shells, slugs that shoot darts at each other, and many more interesting facts. It was marvellous. My new-found enthusiasm prompted me to lecture to my Society*, even to write an article in the "Athene", and in a very short time I became the 'expert' on Mollusca.

After which I really started to work and to examine these creatures in greater detail.

My first problem concerned the identification of a Ramshorn snail that I found in every stretch of the canal and in many ponds. The Ramshorns *Planorbis* spp. are members of a group of snails that are said to have returned to the water from land ancestors. They have a cavity richly lined with blood vessels and filled with air which functions very like our lungs, and although they spend their lives in water, they frequently come to the surface to replenish the air. Their shell is a flat coil, hence the name Ramshorn.

There are several species which are easily distinguished from each other and two which are very much alike. Indeed no text book I know, mentions any difference at all in the soft parts of the body, they are separated into species merely by variations in the shape of the shell. They are called The Ramshorn *P. planorbis*, and the Keeled Ramshorn *P. carinatus*, both having 5 to 6 flattish whorls, both having a keel round the outside whorl. The differences are in the position of the keel in relation to the centre-line of the coil, the shape of the aperture and the width of the last whorl compared to the full width of the shell.

As you will no doubt have gathered by now, my specimens were one of these two - but which? The books gave a difference in the diameters of shells of adult specimens. The Ramshorn being 18 mms., and the Keeled Ramshorn 14 mms., but I had no way of telling an adult from one not-so-adult, and they vary within each species anyway. As for the other differences, these are merely comparative between the two species, so that to me, our local material seemed to be some horrible in-between creature resembling first one and then the other. And so, after many weary hours of measuring and considering, I rather hesitatingly called them The Ramshorn and moved on to the next.

This was also a fresh-water snail, or to be more exact, a fresh-water winkle *Viviparus*. These are our largest fresh-water snails, and as well as their home, they also carry a door on their backs so that when they retire into the house, they pull the door into place and shut themselves in. Now there are only two species and my job should have been easy - but was it? According to illustrations the shell of the River Snail *V. viviparus*, is taller and thinner than Lister's River Snail *V. fasciatus* and the latter also has a hole up the centre of the whorls called an umbilicus. Now I found specimens with and without an umbilicus but could discern no difference at all in the ratio of width to height. Turning to the text-book for other distinctions, I read that the body of one was dark grey in colour with golden spots whereas the other was dark with burnished mottlings. Whether the author was indicating an actual difference in colour, or trying to avoid having to use the same phrase twice I really do not know. If the presence or absence of an umbilicus is sufficient to differentiate between the species, there is no problem, but is this really enough?

My next problem was, and still is, my greatest. Pea Shells *Pisidium* spp., are tiny bivalves which vary in size from 7 mms. to $1\frac{1}{2}$ mms. Before studying Mollusca, I had never heard of Pea Shells but when I came to look, I found these tiny fresh-water mussels alive, alive-oh, in ponds, canals, and even ditches quite near to my own home. As with other bivalves, they have no eyes, no feelers, nor even a head. The body is mainly a ribbon of tissue that searches blindly amongst weeds, mud and grass roots, pulling its twin shelled retreat behind it, clumsily and jerkily by muscular expansions and contractions. There are quite a lot of species of Pea Shells and these are identified mainly by the shape of the interlocking teeth present on each valve and also by other features such as the outline of the shells being oval, trigonal or rhomboidal, or the surface being glossy or silky, flecked or porous, smooth or ribbed and so on. But these last properties again, are only matters of comparison as the differences between species are not very great and subject to variation anyway. To look at the shape of the teeth I had to use a microscope, but first I had to find the right sort of illumination which would reveal the contours of hills and valleys only fractions of a millimetre long in shiny mother-of-pearl material. Then I had to find some means of mounting these shells with left and right valves in position so that they could be handled without breaking and easily compared with specimens from other stretches of water. After breaking umpteen specimens and practising some oaths I thought I had forgotten, I mastered a more-or-less successful technique, but then found that two species were differentiated by the presence or absence of a knob on the end of one of the teeth and I had specimens, in the same batch, some with the knob and some without. In all other ways these specimens were identical. Finally I got some specimens from one box mixed up with those of another box and retired for the meantime in some confusion.

Later, I tried a completely different section of Mollusca for a change. In my garden one day, I disturbed a pile of old linoleum (awaiting disposal), and found a number of slugs. These I was able to separate into four different species, one of them being common all over the British Isles and very well known by gardeners who grow lettuce and cabbage so that it may prosper. This is the Field Slug which in most text-books is given the Latin name of *Agriolimax agrestis*. In a fairly recent publication however, it was stated this species should be known as *Agriolimax reticulatus*, for the true *A. agrestis* was found and identified in 1940 from a place in Norfolk and had not been identified from anywhere else in Britain. Another species common in this area, I identified as *Milax gracilis* (no English name) and read that this was first recorded in 1930. Prior to that it had been confused with young specimens of the Jet Slug *Milax gagates*. Help! if the experts didn't know the difference till 1940 in the first case and 1930 in the second case, what chance have I got?

Not entirely daunted (yet), whilst on holiday in South Wales this Summer (1964), I went a-snailing. I even managed to identify three or four snails that were new to me before I got stuck. This time my struggles arose over a snail that looked like a small Garden Snail *Cepaea hortensis*, but as there were several hundreds of them around me in the sand dunes, I assumed they were a separate species. So I took some home and consulted my text-books, but could not find one species described or illustrated, which exactly fitted the snails I had. So I carefully made lists of properties such as size, shape, colour, number of whorls, size of umbilicus, etc. of all the snails which might be my darling (Grrrrr) and tried a very painful system of elimination. I finished up with the Striped Snail *Helicella virgata*, only my snail was not very striped. My only hope of being right lay in the fact that this snail, like so many others, is extremely variable, especially in its stripiness. For example, it varies in height from 7 to 18 mms., and in width from 8 to 25 mms., and there are 16 named varieties. One which corresponded more closely to my specimen was a variety named *lineata* which is common on the West coast.

I have related here but a few of my difficulties, my only hope now is to give up my job and devote the whole of my life to the study of Mollusca. If any kind philanthropic reader therefore, has a small fortune to spare, I would be very grateful if they would donate it to the upkeep of myself, my wife and my family while I try to sort out these countless numbers of species and varieties that exist to plague all decent amateur naturalists.

W. F. Edwards

(Reprinted from 'Athene' by permission of the author and the Editor)

*The Oldham Microscopical Society.

The Cowrie Currencies of West Africa by Marion Johnson.
 Journal of African History, XI, Part I 1(1970) pp.17-49; PartII 3(1970) pp.331-353.

Anyone who imagines that cowries formed an unsophisticated medium of exchange in savage Africa will be amazed by the complexity and adaptability of this form of currency, which had behind it centuries of useful existence before its breakdown. The shells used were almost invariably Cypraea moneta from the Maldives and C. annulus from East Africa, especially Zanzibar; they were in general use as money up to the present century and are still a regular market currency for small purchases in certain West African areas. In 1515 the import was calculated at a hundred million shells rising in the 18th. century to four hundred million. In those days the main purpose was payment for slaves and in 1806 when slaving was abolished the English export of cowries dropped from 100 tons to 6 tons p.a. It revived with the development of the palm oil trade and by 1850 the Gold Coast alone was importing 150 tons p.a. Value varied widely with both time and place and the author has been at some pains to establish it as well as possible in the absence of any fixed medium of exchange; even British colonial silver money was regarded as goods to be bartered and hence without fixed price; it is concluded that the hen may be regarded as the best universal standard of comparison. On the Niger in 1831 cowries were reckoned at a shilling per thousand, based on European value; by 1849 there was a large price rise on the English market and on the Niger the shells were fetching up to £6 per cwt. (about 45,000). This is possibly a result of overfishing in the Maldives: East African cowries were then imported direct and had their own value: larger species were sometimes acceptable but were regarded far less highly. Zanzibar cowries also, were over twice the weight of moneta and freightage charges were higher. The long journeys inland by camel, donkey or head-load were largely responsible for the variation in value of the shells from place to place and the transport managers had to calculate the arrival value of their pack animals or the cowrie payment to their labourers.

Marco Polo was well acquainted with the cowrie trade and the shells in those days were known as 'Porcelains' meaning 'little pigs', this being the derivation of the word.

Trade routes are traced and much difficulty is evident here because secrecy surrounded them at the time. Even the importation from Zanzibar, mostly by ships from Hamburg, was conducted in a cloak-and-dagger fashion, the various firms trying to eliminate each other from the business. Cost of transport by canoe with necessary hire and subsistence charges was calculated with considerable accuracy and tolls were frequently met with. The profit margin was calculated to cover risks of damage or loss; a good camel could carry 4-5 cwt., i.e. up to 150,000 shells. It was transport costs which caused the cowrie to vary in value from place to place. Donkeys could carry 30,000 or 40,000 shells, depending on whether they were 'sorted', and a slave's load was a sack of 20,000. However, his effective capacity was much less than this owing to the need for transporting food, whereas donkeys would be expected to eat off the land. By the end of the 19th. century, inflation meant that a carrier would consume his whole load in 2-3 weeks and the system as a long-distance currency, slowly broke down.

Cowrie arithmetic is extremely complex and the use of shells for large transactions depends on a rapid system of counting them. In many places they were strung together in batches, in others used as a small change for gold currency. In the north a pile of 80 shells was known by the word for hundred (a 'Bambara' hundred). This was possibly a discount designed to favour petty trade - goods can be bought for 80 cowries and sold piecemeal 'at the same price' for a total of a hundred. In later days, cowries were much used as money of account, literate merchants keeping detailed accounts in terms of cowries but never handling the actual shells. In the earlier days, as long as cowries were linked to gold, as the other stable currency, their value in any one place varied little: if they were forced off the gold standard in times of temporary gold shortage, the currency immediately went off balance. The great inflation, which started in 1850, appears to have been due to the appearance of European goods and coinages and the over-importation of Zanzibar shells.

Marion Johnson's treatment of the internal exchange economy in various parts of West Africa and the effects on it of the slave trade and the introduction of other currencies form a paper of fascinating erudition.

T. E. Crowley

FIELD MEETING AT SOUTHPORT, LANCASHIRE,

SATURDAY, 11th. DECEMBER 1971

Three stalwart members met at the railway station at 1300 hrs. and proceeded to the shore near the pier. The wind was fairly strong and rather cold, but since this was a period of low tides and fairly calm weather, much of the shell material was old and broken. An exception to this however, was a large number of undamaged and still paired valves of Abra alba, found on a strand line well below high water mark. At Southport, these are usually found as odd specimens, so I suppose these delicate little shells must have been washed up gradually by a low tide. Because of the prevalent conditions too, it was not surprising that our list of species was not as large as usual and apart from the specimen of Calliostoma papillosum, found by Mrs. McMillan, nothing unusual was found and no new species were added to the Southport list. Finally, the following is a list of those species recorded on this meeting.

Gastropods

Calliostoma papillosum (da Costa)
one old and broken shell
Littorina littorea (L.)
Turritella communis Risso
Clathrus clathrus (L.)
C. turtonis (Turton)
Aporrhais pespelicani (L.) Juveniles only
Natica catena (da Costa)
N. poliana Chiaje
Nucella lapillus (L.)
Ocenebra erinacea (L.)
Colus gracilis (da Costa)
Neptunea antiqua (L.)
Buccinum undatum L.

Bivalves

Mytilus edulis L.
Ostrea edulis L.
Cardium echinatum L.
C. edule L.
Venus striatula (da Costa)
Donax vittatus (da Costa)
Tellina tenuis da Costa
T. fabula Gmelin
Macoma balthica (L.)
Scrobicularia plana (da Costa)
Abra alba (W. Wood)
Pharus legumen (L.)
Solen marginatus Montagu
Mactra corallina (L.)
Spisula subtruncata (da Costa)
Lutraria lutraria (L.)
Mya truncata L.
M. arenaria L.
Barnea candida (L.)

Wm. F. Edwards

SOME OBSERVATIONS

1. The most isolated limestone in Britain is in Glen Dessary (Grid ref. 17/960935) in the west Highlands of Scotland at the head of Loch Arkaig. As the crow flies the nearest naturally lime-rich rocks are 40 kms. away to the east. The nearest cultivation of any importance is over 20 kms. away. Glen Dessary supported a considerable crofting population more than 150 years ago, of which traces such as field outlines and lazy beds remain, but after the 'Clearances' only three houses were left standing, inhabited by shepherds and keepers, and there was no more crofting. Now only two houses are lived in for part of the year. There is a potato patch 2 kms. from the limestone. The limestone occurs as small patches in otherwise non-calcareous rocks.

The indigenous molluscan fauna at the head of these west Highland glens is very sparse (Smith, 1970). The land 10 kms. down this glen was found to contain only Arion intermedius, A. ater and Agriolimax reticulatus, together with Pisidium hibernicum in Loch Arkaig. The Glen Dessary limestone, however, yielded Cochlicopa lubrica, Discus rotundatus, Oxychilus alliarius, Arion subfuscus, A. ater and Agriolimax reticulatus, the latter mis-shapen with parasites, with Lymnaea truncatula, L. peregra, Pisidium casertanum and

P. personatum in an adjacent bog. In the circumstances this fauna is unusually rich and must be directly attributable to the presence of the limestone rather than to any human influence.

2. A favourite haunt of Pisidium is in dead leaves, particularly beech, washed up beside lakes and extending above the average flood line. P. casertanum and P. obtusale have been thus found beside Loch Lochy, and P. casertanum and P. personatum beside Loch Oich, both in the Great Glen of Scotland. I have also found P. casertanum in a more grassy environment beside lakes and rivers in the English Lake District. Dr. M. P. Kerney tells me that this sort of environment for these species is not uncommon.

3. Teredo navalis infestations were found in July 1971 in three different types of timber washed up in one place, Loch nan Uamh, western Inverness-shire (Grid ref. 17/710850). The most extensive infestation was in a pine tree trunk with roots, obviously washed into the sea some considerable time ago, another was in a balk of pine or spruce which had been cut to serve some useful purpose, and the third was in a stump of bog pine. (Bog pine is dead pine wood commonly found in peat in the Scottish Highlands).

4. Outsize Cerastoderma edule and other shells (McMillan, 1971) are not uncommon in Scotland. I have not searched with special intention of finding the biggest one, but I have in my collection C. edule from the Firth of Forth measuring 45 mm. x 53 mm., from near Kyle of Lochalsh as big, and from Kinlochhourn 42 mm. x 50 mm., the latter being a carefully chosen average-sized shell. Drimindarroch, near Arisaig at the mouth of Loch nan Uamh, is the home of Mytilus edulis up to 100 mm. long, and Spisula subtruncata 30 mm. x 35 mm., occur near Kyle of Lochalsh. Gibbula magus 40 mm. across the base has been found at Loch Kishorn. These are but a few examples, I have others just a little larger than the generally accepted maximum sizes. With the exception of C. edule from the Firth of Forth, all the shells came from very sheltered localities, Kinlochhourn being 24 kms. from the open sea. The relationship of size not only to the basic necessity of food available but also to other environmental factors is worth further consideration.

References

- McMillan, N.F., 1971. Large Cardium edule L. and Mytilus edulis L. J. Conch. 26: p.353.
- Smith, S.M., 1970. The effect of environment on the distribution of molluscs in Glen Garry and Glen Moriston, Scottish Highlands. Conch. News. 32: p.136-138.

Shelagh M. Smith

GENERAL NOTES

STRATTON MEMORIAL FUND

We are gratified to announce that the sum of £21.40 has been sent to The Malcolm Sargent Cancer Fund for Children as a memorial to our late Vice-President, L. W. Stratton.

The Council of the Society has decided that the list of subscribers should not be made public but that it should be filed with the archives of the Society.

Mrs. Irene Stratton has expressed her great appreciation of the response to the appeal and has asked that her thanks to all who have contributed should be conveyed through the medium of the Newsletter.

H.E.J.B.

A SINISTRAL ARION INTERMEDIUS NORMAND

Sinistral individuals may occur in slugs, as in other normally dextral species of snails, but perhaps they are more likely to escape observation. No records of sinistral slugs have been found, and a photograph published without comment is likely to have been reversed inadvertently.

The subject of this note is a sinistral Arion intermedius, which died in late August, at the age of 13 months, without breeding. It originated in an unintended domestic culture as follows. A single slug was picked up near Kirkby Malham in Yorkshire, in September 1969, and forgotten. In October it made itself obvious by laying eggs. The progeny were neglected too, but before they needed cleaning out or throwing out they drew attention to themselves by starting to breed at the beginning of January. The next generation started to lay in June, and the sinistral individual was one of those hatching in July 1970. Some of its generation were breeding in October, so that three generations were actually completed in one year, but others took longer, some not breeding until a year old. Most of those which had not bred, including the sinistral one, spent June and July in cells which they chambered out in damp moss. They emerged and started to feed again normally, but many failed to breed. The culture continues, since it thrives on neglect, but sinistrality has not appeared again.

S. M. Davies

SOCIETY FOR THE BIBLIOGRAPHY OF NATURAL HISTORY

c/o. British Museum (Natural History), Cromwell Road, London, SW7 5BD

INDEX TO NATURAL HISTORY COLLECTIONS

Where is the ----- Collection? By C. Davies Sherborn, D.Sc.,
Cambridge University Press, 1940:141.

This catalogue, published in 1940, contains about 1,700 entries that give the whereabouts of past natural history collections and, in some cases, a brief account of their history. Its compiler, C. Davies Sherborn, an eminent bibliographer, made a significant contribution to scientific literature through the reference works he produced, e.g. Index Animalium, 1758-1850 and his painstaking labours in establishing publication dates of important works. In the course of these duties, he amassed details relating to the older collections concerned and subsequently, by diligent searching in miscellaneous records, sales catalogues and popular journals he was able to augment his notes so that they would provide a useful reference guide for systematists. Sherborn recognised that this catalogue was far from complete, but his reviewers, while praising his intentions, criticized its contents and particularly mentioned the omission of many famous collections housed in the major museums and institutions of Great Britain.

It is felt that a complete revision of this reference book would be of value to many taxonomists, both zoological and palaeontological, and others interested in the history of the natural sciences. In addition to rectifying incomplete and inaccurate entries, including the important omissions mentioned by critics and incorporating information on the later history and present whereabouts of the collections listed by Sherborn, entries concerning more recent collections will be provided, particularly those appertaining to branches of the natural sciences that have developed since 1940. It is also intended to widen the scope of the catalogue, although retaining its essentially British and European coverage, by mentioning important material available in scientific institutions throughout the world. However, information on botanical collections will not be included since this field is thoroughly covered in the Index Herbariorum. The inclusion of further biographical details of the collectors and information on hand-writing and portrait collections, together with a complete bibliography, should also increase the value of this catalogue as a reference tool.

Initially, the reference resources of the various libraries in the British Museum (Natural History) and the knowledge of the Museum's scientific

staff will be used to compile this revision, but it is hoped that Members of the Conchological Society will be prepared and encouraged to collaborate in providing details of collections and collectors, if possible on the following lines, please:

1. Name of Collector, Collection or Expedition, etc.
2. Period collection formed, or biographical dates.
3. Subject of collection.
4. Geographical region.
5. Size of collection (i.e. approx. number of specimens or drawers, etc.)
6. Information on Collection.
i.e. Present location, collection has been moved, destroyed, lost, dispersed, sold, etc.
7. Method of acquisition.
i.e. Purchased, presented, bequeathed, etc.
8. Is the collection maintained separately? YES/NO.
9. Is there any MSS material with it? YES/NO.
10. Any Literature references to Collection.
11. Any Biographical reference to Collector, e.g. obituary, biography, etc.

Any information that will be of value to the project should be addressed to, either Mr. A. Wheeler, Secretary, Society for the Bibliography of Natural History; or, Mr. R. J. Cleavelly, Department of Palaeontology, both at the British Museum (Natural History), Cromwell Road, London, SW7 5BD, England.

INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE A.(n.s.)88

ANNOUNCEMENT

Required six-month's 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.Nomencl.28, pts.1/2, 10th. August 1971):

- 1938 Emendation to CASSIDAE of CASSIDIDAE Latreille, 1825 (Gastropoda)
- 1939 Grant of precedence to CYMATIIDAE Iredale, 1913, over RANELIIDAE Gray, 1854, PERSONINAE Gray, 1854, LOTORIIDAE Harris, 1897, LAMPUSIDAE Cossman, 1901, SEPTIDAE Dall, 1904, AQUILLIDAE Pilsbry & Vanatta, 1904, and NYCTILOCHIDAE Dall, 1912 (Gastropoda)
- 1940 Type-species for Pleuroacanthites Canavari, 1883 (Cephalopoda)
(see Bull.zool.Nomencl.28, pts.3/4, 8th. December 1971)
- 1945 Suppression of Ctenodonta elongata Salter, 1873 (Bivalvia)
- 1960 Suppression of Cylindrella Swainson, 1840 (Gastropoda)
(see Bull.zool.Nomencl.28, pts.5/6, 31st. December 1971)
- 1963 Type-species for Homoceras Hyatt, 1884 (Cephalopoda)

Comments should be sent in duplicate, citing case number, to the Secretary, International Commission on Zoological Nomenclature, c/o. British Museum (Natural History), Cromwell Road, London, S.W.7, England.

Margaret Doyle
Scientific Assistant

SHELLS FOR SALE

Browse in baskets full of shells from all parts of the world - at Eaton's Shell Shop, 16 Manette Street, off Charing Cross Road, London, W1V 5LB (01-437 9391).

NATURE OF THE WORLD, 33 Lodge Close, Fetcham, Leatherhead, Surrey.

Send 3p stamp now for illustrated catalogue of Natural History specimens, including 160 different shells, and many other interesting shore life specimens. Or visit our showroom: 19 Bridge Street, Leatherhead, Surrey.

WANTED

Copies of Volumes 1-10 and 15-22 inclusive of the Journal - reasonable price only please - Dr. Barry Colville, [REDACTED], West Park, Leeds, [REDACTED]

RECEIVED AS CHRISTMAS PRESENT DUPLICATE COPY of "500 Million Years of Inspired Design", Authors - Hugh and Marguerite Stix and R. Tucker Abbott, Photographs Landhoff, Publishers Abrams.

Would consider Sale/Exchange Books/Specimens. R. N. Elliott, [REDACTED], [REDACTED], Nutley, Sussex.

INDEX TO CONCHOLOGISTS' NEWSLETTER

An Index to Nos. 21-40 inclusive is included with this issue. Once again Mr. A. E. Ellis has kindly undertaken the considerable amount of work involved and the Compiler would like to express his grateful thanks.

PLEASE NOTE - CHANGE OF SECRETARY

Mrs. Beryl Rands, [REDACTED], Luton, Bedfordshire, [REDACTED] to whom correspondence should now be addressed.

Mrs. Slator, [REDACTED], Clevedon, Somerset [REDACTED], would like to exchange Cowries, Volutes, Murex and others from W. Australia, with members interested. All live-taken. Have also British species.

Duplicate and Unwanted Conchological Literature for sale. Prices start at 2 $\frac{1}{2}$ p. Write for a list to Charles Pettitt, [REDACTED], Cheadle, Cheshire [REDACTED]

The Journal of Conchology, Vol. 27, Part 4 (the last part issued) is urgently wanted by The Society to make up certain deficiencies in orders. Will any member who no longer requires their copy and is prepared to sell it back to the Society for £2.00, please send to - Mrs. C. Pain, [REDACTED], Millbank, London, [REDACTED], as soon as possible. The Treasurer, Mrs. M. Fogan, will make the appropriate payments.

FIELD STUDIES COUNCIL

Slug and Snail Course at Juniper Hall, Dorking, Surrey. 30th. August - 6th. September 1972. Tutor: J. Chatfield.

Identification, population, experimental ecology, economic aspects, land and freshwater collecting. For all interested in molluscs.

Details from: The Warden, Juniper Hall, Dorking, Surrey.

THE CONCHOLOGISTS' NEWSLETTER

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