

June 1961

Surrey.

Herons, Moorhens and Rats feeding on Anodonta anatina (L.)

The River Greet, a tributary of the R. Trent, rises in Belle Eau Park near Bilsthorpe, Notts. About two miles from its source it has been deepened and widened to form the lake within the grounds of Kirklington Hall. The water from the lake passes over a weir into the stream which flows under the main drive, and then under the main A617 Mansfield to Newark road. Anodonta anatina (L.) lives at the lower end of the lake in association with Sphaerium corneum (L.), Potamopyrgus jenkinsi (Smith), Planorbis leucostoma, Millet and Lymnaea peregra (Müll.).

After heavy or prolonged rain the sluice gate by the weir is opened, and the rush of water carries both mud and mussels into the stream, the latter as far as the main road bridge. These Anodonta anatina show a great deal of variation in size and shape.

During the first two weeks of May 1957 I spent a considerable amount of time in the grounds of Kirklington Hall. I was able to make observations and record incidents of herons, moorhens and rats preying on A. anatina. Usually about mid-morning a pair of herons would fly over the lower end of the lake and alight in the stream. They would soon secure a mussel, carry it in their beaks into the adjacent field where the mussel would be firmly clamped to the ground by the foot before being pecked open. Sometimes the herons would take flight and drop the mussels from a height of 20 feet, whether by accident or design I cannot say - but the bird would always make a rather ungainly descent and proceed to feed on the mussel. The moorhens were content to attack and feed on the smaller specimens of mussels living on beds of shingle in very shallow water. These birds attack the mussels very aggressively about the ventral margin, to make an opening large enough to be able to peck at the soft parts of the mollusc.

On the right bank of the stream, I noticed several rat runs, which went towards two yew bushes at the rear of out-buildings of the adjacent farm. Around the rat holes were living and dead mussel shells. From the evidence of dead shells which lay about, the pattern of attack was much the same as that of the moorhens, part of the ventral margin and the posterior portion of the shells had been gnawed away. A few of the mussels had only a small portion of the posterior end gnawed away, but the hole thus made was large enough to see the mollusc within. May be something had disturbed the rat when it was earnestly preparing to make its meal. I have seen the water-vole taking young Anodonta for food, in the River Meden, Thoresby Park (see 'J.C.', Vol. 23, No. 10, p.338).

G. W. Pitchford

Field Meeting at Walton-on-Naze, Essex

A most successful field meeting was held at Walton-on-Naze, Essex, on Sunday 16th. April, attended by 16 members and friends, to collect from the Red Crag deposit of Lower Pleistocene age. Fine weather enabled members to obtain most of the commoner Crag fossils, and some varieties including Scaphella lamberti (Sow.).

Specimens were obtained both from the talus and the cliff face. Mr. P. Cambridge, an authority on the Crag, supplied a detailed account of the section, which was greatly appreciated by all.

During the afternoon a short visit was paid to the salt marshes of Hamford Water, where Hydrobia ventrosa (Mont) was found in considerable numbers.

T. Pain

Voucher Collection

I wish to draw the attention of the Society's members to the Voucher Collection of Land and Fresh water shells. This is far from complete and any members who have duplicates are asked to donate them to the collection. The name, locality and date of taking should be given as far as possible.

The following vice-counties are not represented at all (vice-county numbers as in 1951 Census, 'J.C.', Vol. 23, No. 6 and 7).

England and Wales:	4, 5, 7, 8, 20, 31, 35, 36, 37, 40, 42, 43, 46, 47, 52, 67, 69, 70, 71.
Scotland:	73, 75, 76, 84, 86, 87, 90, 91, 98, 99, 100-103, 105, 106, 109, 110, 112.
Ireland:	113, 122, 123, 125, 126, 128-131, 133, 134, 136-139, 140N, 140S, 141-145.

F. H. Cozens, Hon. Curator

Collecting Localities in the Cape Province, Union of South Africa

by D. H. Kennelly, Uitenhage,
by D. H. Kennelly, Uitenhage, S. Africa

The part of the Cape Province where the town of Uitenhage is situated is known as the Eastern Province. Uitenhage is 20 miles inland from Port Elizabeth.

Port Elizabeth itself was a noted collecting ground, much frequented by the older generation of collectors of 80 or more years ago. Modern 'improvements', which cover the building of a harbour, with oil storage site, etc., have now completely obliterated the reefs where the old collectors worked.

Today a locality which repays a visit is Cape Receife, some eight miles south of Port Elizabeth. From Cape Receife for about 10 miles westward to a point known as Sea View, the shore is rocky with reefs. Great care is necessary while collecting at low tide, for most of the reef is covered with sea growths making it slippery. A good road close to the shore gives ready access to any chosen point, and the collector will find several species of Patella, Siphonaria, Oxystele, Nerita, etc. obtainable alive. Two species of Ormers, Haliotis midae and H. sanguinea are also found.

On the other side of Port Elizabeth - a few miles north - the Zwartkops River enters Algoa Bay, and the estuary is worth a visit. This locality was visited in December last by a young but very keen collector. He made a most interesting collection, including the finding of live specimens of Nerita plexa and Nerita plicata. These two species were reported from the old collecting ground at Port Elizabeth over sixty years ago, but have never been seen again until their re-discovery in the Zwartkops Estuary.

Forty miles west of Port Elizabeth is the small holiday resort of Jeffreys Bay - a small dent in the far larger expanse of St. Francis Bay. Jeffreys Bay is one of the finest localities for the collector to visit for shells, and is well known to collectors all over South Africa. The writer has some 250 or more species from this locality, and with the advent of the new sport of skin diving, in the near future it may be possible to extend our present knowledge of the Jeffreys Bay molluscan fauna.

First European Malacological Congress

London, 17th. - 22nd. September 1962.

It is hoped that there will be a large gathering of Malacologists at this Congress and that most of them will be accommodated in the Queen Elizabeth College, Campden Hill Road.

There are just a few who would like to attend but find the cost a little too much for them. It would be a great help if accommodation for

them could be found with friends in London.

Whilst those who have asked for this help so far are quite unknown to me personally and I could not sponsor them, I do feel that some members of our Society may like to help. If you are living in or near London and would be willing to help a fellow conchologist from overseas, would you please write and let me know.

To date I have had only two such calls for help and they are both from Holland, one lady and one young man. More may come in and I would like to get a list of accommodation available as soon as possible.

H. E. J. Biggs

When in the Isle of Wight visit:-

PRIVATE MUSEUM of Tropical land, sea and freshwater shells

Open to Public 6 p.m. - 10 p.m.

Mr. L. C. Prebble
The Shell Museum,

[REDACTED]
Binstead Hill
Near Ryde
Isle of Wight

Buses 1, 1A, 1B, 4, 27, 28 pass door. Alight at Binstead Hill

NOTES

1. The Editor of the Journal of Conchology is always pleased to arrange for reviews of suitable books and articles of conchological interest. A copy must be submitted direct to the Editor in each case.
2. Back numbers of the Journal of Conchology are available from the Hon. Secretary as follows: Vol. 24 (except No. 7) and Vol. 23 at 10/- per number; Vols. 21 back to 14 (1913) at 5/- per number; and certain numbers before this date at 5/- each. A member's discount of 25% is allowable in each case. Certain numbers are usually available second-hand at 2/6d. each.
3. The Hon. Secretary would be pleased to hear from anyone who has available for sale a copy of the Journal of Conchology, Vol. 24, No. 7. Ten shillings is offered for copies in good condition.
4. The following have written asking for exchange correspondents; any members interested should write direct.
 - a) Mrs. C. P. Morgan, [REDACTED] Christchurch, New Zealand.
 - b) 23513226 L. Cpl. Lander, W. Survey Directorate, H.Q. Middle East Command (Aden), [REDACTED]
 - c) M. J. H. Liressidge (interest Cowries), [REDACTED] Hertfordshire.
 - d) Mr. James R. Hood, [REDACTED] Tenn., U.S.A. (Pacific and U.S.A. land and marine shells offered; interests worldwide), [REDACTED]
 - e) Mr. E. Walton, [REDACTED] Vacoas, Mauritius.
5. Communications for the Conchological News should be double-spaced, to permit editing, and preferably typewritten.

Volutes

The Volutes always seem to me to be surrounded by a slight air of mystery quite lacking from most of the other popular tropical marine families. Perhaps it is because their usual haunts are so far distant from the British Isles and the fact that they are quite unrepresented in the European seas.

A good range of specimens is usually rather harder to obtain than with most other well known types of shell, and the subtlety of their colouring rivals even the finest cowries.

There are about seventy-five species of Volute, now split into many genera, and about as many again are known fossil. They are - and always were - lovers of the warm seas, and the big majority of them now live in the Southern Hemisphere. Fossil relatives may be found in the English rocks, dating from the times when this Island enjoyed a tropical climate.

Most Volutes are deep water dwellers and often live on rocky bottoms where any kind of trawling is impossible; this is one reason for the rarity of some of the species. One or two shallow water genera however, such as Alcithoe, can be found on the Australasian beaches. Volutes inhabit deep water off the South African coasts, where the best places to seek them are often in the stomachs of certain fish; a dozen species inhabit the China Seas, eighteen off New Zealand, four are found in the Caribbean, and half a dozen on the coast of South America, where they extend almost to the cold waters of Cape Horn.

In this family the body of the animal is rather distinctive. The foot is very large, partly hiding the shell, and is used for enveloping the prey before eating it. The mantle, also, is of unusual size, and is reflected over the top of the shell as in the cowries. The shell is thus protected from incrustation and damage throughout the life of the animal and should come to the collector in a perfect glossy condition. Volutes are in fact near relations of the cowries, and when the very young shells of both are compared, it is often difficult to tell them apart. The eyes of the Volute are carried on lobes at the base of the tentacles and some species have a very small and inadequate looking operculum.

The shape of the shell is distinctive, but it is much more easily recognised than described. The columella usually bears four diagonal plaits which enlarge in size towards the aperture. Four similar plaits can be seen in Mitra, the closely allied Mitre shells, but in their case the largest is nearest the spire. The colouring of the Volutes is subtle and invariably beautiful, and it has been said that their palette is more variable than their pencil. Ivories, oranges and browns perhaps predominate, but fine and regular patterns of dots, lines or splashes in brilliant colours are often found. Maculopeplum junonia from the Caribbean is a striking example, with soft black spots scattered evenly over a cream coloured ground. It is rare enough to be much sought after by American collectors, and usually seems to fetch a high price among them.

There are of course, some much rarer species than this and perhaps the most famous in existence is the Courtier Volute, Voluta aulica, which was known for many years only by the unique type specimen. This belonged in the eighteenth century to the celebrated museum of the Duchess of Portland and was described in the catalogue of that collection by Dr. Solander, a Swedish pupil of Linné, who accompanied Captain Cook on his voyage round the World and who was afterwards employed at the British Museum arranging the valuable specimens which were brought back from that voyage. Of the Courtier Volute Dr. Solander wrote: 'No. 4021 Voluta aulica, a beautiful red-clouded species of the Wild Music kind: its country unknown, unique.' After passing through various famous collections, this specimen is now in the British Museum (Natural History), where it was joined by some similar specimens found by Cuming in the Sulu Archipelago. It was of one of these that Broderip wrote, that when considering the novelty and lovely arrangement of colour in this admirable specimen, he felt that a description would convey but a faint idea of one of the most beautiful shells he ever knew. However, he accompanied his notes with a remarkably fine illustration.

Many of the nineteenth century men of science had an attractive way of occasionally becoming lyrical over the subjects of their study, and it seems to me that we can learn something from them in this respect. As regards Volutes, the enthusiasm seems very natural, since for subtlety and beauty, few things in the animal kingdom can match them.

INTRODUCTION TO MOLLUSCAN TAXONOMY

(1) Species and Subspecies

It is hoped that this short series will fill a long felt want for a brief and reasonably simple introduction to taxonomy and to the technical terms used by zoologists in the classification of animals, both recent and fossil, and of the mollusca in particular.

The Species

The species is the most important taxonomy category, an understanding of the nature of species is indispensable for taxonomic work. The species concept of the biologist goes back to J. Ray, who in his 'Historia Plantarum' (1686) used the term species, much as it was used later by Linnaeus and the 19th. Century taxonomists.

A species definition is merely the verbalisation of a species concept. Species concepts are derived from a study of species in nature. A student of any local fauna finds that it is composed of well-defined 'Kinds' of animals and plants. In Great Britain for example there are 7 kinds of water snails of the genus Lymnaea. These are species. The individuals within a local population of such a species are freely interbreeding but are separated by a distinct gap from individuals of all other species. In spite of the morphological similarity of some of these 7 species, each one is separated from every other one by a definite gap. No intermediate has ever been found. They do not interbreed; they are reproductively isolated.

It is this discontinuity between natural populations that impressed the early naturalists, and which remains the corner-stone of the species concept of the modern systematist.

Species therefore may be defined as follows: Species are groups of actually (or potentially) interbreeding natural populations which are reproductively isolated from other such groups.

The Subspecies

The subspecies is the only infraspecific taxonomic category. It may be defined as follows: Subspecies are geographically defined aggregates of local populations which differ taxonomically from other subdivisions of a species.

When the species concept was first developed, the species was first thought to be something stable and uniform, composed of individuals that conform to type. Individuals that did not agree with the type were segregated as 'varieties'. Subsequently it was found that the 'variety' was a composite concept, including both variant individuals and variant populations. The name variety for the latter category was eventually replaced by the term subspecies.

It must be borne in mind however that all taxonomic categories are somewhat heterogeneous and that completely uniform population groups do not exist in sexually reproducing species. Not only the species but the subspecies also is an assemblage of populations, except in the rare case of exceedingly localised relict forms or insular populations, for example the land snail genus Chilinopsis on the island of St. Helena.

To qualify as a subspecies, such an assemblage of populations must be taxonomically different from other subspecies, but what is taxonomically different can be determined only by agreement among taxonomists.

Further reading

- 1) Cain, A. J., 1954, Animal Species and Their Evolution. Hutchinson's University Library.
- 2) Calman, W. T., 1949, The Classification of Animals. Methuen, London.
- 3) Huxley, J. S. (Editor), 1940, The New Systematics. Oxford University Press.

- 4) Schenk, E. T. and McMasters, J. H., 1936, Procedure in Taxonomy, Oxford University Press.

T. Pain

Field Meetings

The following field meetings have been arranged for 1961:-

- Sunday June 18th. Totland and Colwell Bays, Isle of Wight
Leaders: Messrs. T. Pain and F. R. Woodward
- Sunday July 2nd. Maidenhead, Berkshire
Leader: Mr. S. P. Dance
- Sunday August 20th. Powick, Worcestershire, R. Teme
Leader: Mr. F. R. Woodward
- Sunday September 17th. Woodbridge, Suffolk, R. Deben
Leaders: Messrs. T. Pain and M. Goodchild
- Saturday and Sunday
September 31st. and October 1st. Whitby, Yorkshire and the R. S. Esk
Leader: Mr. F. M. de Bartolome

Members wishing to attend any of the above should contact the field meeting secretary not later than two weeks prior to the date of the meeting.

T. Pain
Hon. Secretary, Field Meetings.

