

## RECORD OF MOLLUSCA.

SINCE the publication in the Society's Report for 1903 of a record of Mollusca found within a radius of five miles from Oxford, the following new species and varieties have been found by us, and may be added to the list, bringing the number of species up to 88. The new species are :—

*Zonites excavatus*.  
*Helix sericea*.  
*Helix lapicida*.  
*Vertigo pusilla*.

The varieties new to the list are :—

*Limnaea palustris*, var. *tinota*.  
*Limnaea maxims*, var. *maculata*.  
*Helix aspersa*, var. *marmorata*.  
*Helix arbustorum*, var. *alpestris*.  
*Helix capemata*, var. *major*.  
 " " var. *alba*.  
*Helix virgata*, var. *albida*.  
*Helix rufescens*, var. *rubens*.  
*Azeca labeion*, var. *fusca*.  
 " " var. *lubricoides*.

Within a radius of 20 miles from Oxford further species and varieties have been found. These are :—

*Limax arborem*.  
*Zonites purus*, var. *margaritacea*.  
*Helix fusca*.  
*Bellium montanus*.  
*Pupa secale*.  
*Clausilia rugosa* (decollated specimens).  
*Clausilia laminata*.  
 " " (decollated specimens).

Of the rare *H. fusca* only one specimen was found, and this unfortunately came to grief on the way home. It was obtained in the beech-woods on the Chilterns. The following quotation may be of interest ("On the Land and Fresh-Water Mollusca inhabiting the neighbourhood of Oxford," by J. F. Whitcaves. Printed for the Ashmolean Society, 1857):—

"*H. fusca* has been taken, though very rarely, at Henley-on-Thames by Mr. Strickland. I have never found it in this neighbourhood: it is generally considered a northern shell."

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## WHERE TO FIND SHELLS ROUND OXFORD.

THE following notes, it is hoped, may be useful to those who are trying to form a representative collection of the Mollusca of Oxford. It is not to be thought that every locality in and around Oxford has been thoroughly explored, probably there are several other species yet to be found. Thus in an old record of the Ashmolean Society mention is made of the rare *Limnaea glutinosa* having been found in Oxford (1857), but I have not as yet found this shell. The following species seem to be more or less common in ditches and streams in Oxford. *Bithynia tentaculata* and *B. Leachii*; *Vivipara vivipara* and *V. contracta*; *Limnaea peregra*, *L. auricularia*, *L. stagnalis*, *L. palustris*; *Planorbis vortex*. *P. spirorbis*, *P. complanatus*, *P. corneus*; *Physa hypnorum*.

In the Cherwell may be found in the mud at the bottom, *Anodonta cygnea* and *A. anatina*; *Unio tumidus* and *U. pictorum*. By worrying among the roots of the willows with a net, *Sphaerium cornutum* may be taken in plenty; of the univalves, *Limnaea stagnalis* and *L. auricularia* with both species of *Vivipara*, are some of the larger shells which can be taken on the weeds.

In the canal may be found the "Zebra mussel," *Dreissensia polymorpha*, firmly attached to the stones of the bank, and with it *Neritina fluviatilis*. By fishing about amongst the weeds there may be found *Bithynia tentaculata* and *B. Leachii*, both species of *Vivipara* in plenty, *Limnaea auricularia* also in plenty; *Valvata piscinalis* and *V. cristata* can also be found.

The streams about Ferry Hincksey abound in *Limnaea palustris*, and in one of them I have also found *Neritina fluviatilis*.

There is a ditch in the Binsey Meadows which lies parallel with the towpath, and it is crowded with *Limnaea palustris*, *Planorbis corneus*, and other species. Both species of *Valvata* can be found in this ditch; and on the stems of the rushes the curious little "fresh-water limpet," *Ancylus lacustris*.

I have taken two varieties of *Limnaea peregra* in Oxford: one has a thin shell and expanded margin to the mouth, and approaches the variety *labiosa*: the other is the variety *acuminata*.

A very good locality for *Pianorbis complanatus*, *P. vortex*, *P. spirorbis*, and *P. contortus* is under Walton Bridge, in a very stagnant pool which lies between the canal and the railway. *P. carinatus* I have only found in one locality near the Cherwell, together with its flattened variety *disciformis*.

In the ditch which surrounds the first field at the bottom of the lane leading to Marston Ferry many of the common species can be found; *Physa hypnorum* is abundant; and *Ancylus lacustris* may be found in plenty on the reeds. Finally it is interesting to find on the water-lilies in the tank in the Botanical Gardens a foreign species of *Bulinus*, which must have been introduced.

The following terrestrial species I have found in Gee's old nursery gardens in the north of Oxford by searching among nettles, under stones or logs of wood, or on walls, &c., *Limax agrestis*, *L. maximus*, and its spotted variety *maculata*, *Amalia marginata*, and *A. gagates*, *Vitrina pellucida*, *Zonites cellarius*, *Z. nitidulus*, *Arion ater*, *Helix aspersa*, *H. nemoralis*, *H. rufescens*, *H. rotundata*, *Bulinus obsoletus*, *Clausilia rugosa*, and *Azeca lubrica*. *Helix aspersa* varies greatly. Some are smaller and approach the variety *minor*, some larger and more globose, and some are much more conical. One specimen I obtained was of a yellowish brown colour with three rather narrow longitudinal dark bands and no other markings. Another specimen was nearly all dark brown with very little of the lighter markings. The variety *marmorata*, which is dark with light zig-zag markings, can also be found in this locality. Of *Helix rufescens* the reddish variety *rubens* may be taken plentifully; and I have also found very flattened specimens of *H. rotundata* amongst nettles. By digging in the garden, especially in the autumn, I have found the "snail-slug," *Testacella haliotidea*, and *Cacilianella acicula*: both subterranean in their habits. The following common species may be found by examining the hedge along the canal between Wolvercote and Oxford after rain: *Helix nemoralis*, *H. arbustorum*, *H. cantiana*, *H. virgata*, and *H. ericetorum*. Also the following varieties of these species: *nemoralis* var. *castanea* (brown), *libellula* (yellow), and *rubella* (pink). I have taken one *nemoralis* on the canal bank which had a very much more conical shell than is usual. The variety *alpestris* of *H. arbustorum*, variety *albida* of *H. cantiana*, and varieties *minor* and *alba* of *H. rufescens* can also be found in this locality. I have found two specimens of *H. cantiana* here with a much more raised spire, approaching the variety *pyramidata*. The occurrence of *H. ericetorum* in such a damp locality is curious: it has lately quite disappeared from the spot

where I used to find it. The best place to find this species that I know of is a field near Henwood on Cumnor Hill, through which runs a footpath from Ferry Hincksey. This field dips down suddenly to a little valley, and on this slope may be found *Helix ericetorum*, *H. virgata*, and *H. caperata*. Many of the specimens of *ericetorum* are distorted and poorly marked: I have taken the dirty-yellowish variety *lutescens* and the variety *alba*, besides specimens with the spire very much raised. The white variety *albicans* of *H. virgata* can also be taken here; and a curious brownish variety with a tendency to a lighter band round the periphery, which approaches the variety *leucazona*.

The heaps of unbroken stones for road mending which are deposited by the roadside on the top of Cumnor Hill I have found to be very good hunting-ground for *Pupa marginata*, which may be taken in numbers: and an occasional *Vertigo pygmaea* occurs in the same locality: but I have found this most plentifully in a similar hiding-place near to Woodstock. By turning over stones in a lane on Headington Hill I have found *Helix arbustorum* and its variety *alpestris*, and also the garlic-smelling *Zonites alliarius*. *Arion hortensis* is much more common up here than down in Oxford.

On Shotover Hill *Helix caperata* can be found plentifully, but the specimens seem rather poorly marked, and to tend rather towards a uniform earth-colour. The best marked specimens I have found in the following locality. Just after the roads to Wantage and Faringdon have diverged from each other there is a cross-road uniting them, and by the side of this road specimens of *H. caperata*, with bold black markings, can be found among the roots of the short grass. I have also found here its variety *ornata*: which is white with a pronounced black band, and one specimen of the raised variety *subscalaris*.

By searching among fallen leaves in Marston Copse the following species may be found: *Carychium minimum*, *Zonites purus*, *Z. crystallinus*, *Z. fulvus*, *Helix aculeata*, *H. rotundata*, *H. pygmaea*, and *Vertigo edentula*.

This last autumn I discovered a ditch which has yielded two good local shells. It is by the side of the Bicester Road just after crossing the Cherwell. Among the iris roots and dead leaves at the bottom I found *Helix sericea* and a *Zonites* which has been identified for me as the very local *Z. excavatus*, which is only found, I believe, in thirteen of the counties of Great Britain. Neither *sericea* or *excavatus* are recorded for Oxford in the old list of 1857, published by the Ashmolean Society. Other species which I found at the bottom of this ditch are *Limnaea palustris*, *Physa fontinalis*, *Limax lewis*,

*Zonites purus*, *crystallinus* and *fulvus*, *Helix arborum*, *hispida* and *concinna*, *Carychium minimum* and a thin shelled variety of *Succinea putris*. Both *Succinea putris* and *S. elegans* I found in the Iffley meadows last spring. *S. elegans* is very common along the banks of the Cherwell.

There is an old wall by the roadside in Wood Eaton, opposite to the church; and under the loose top stones of this may be found very fine specimens of *Helix pulchella* and its ribbed variety *costata*; as well as *Pupa marginata* and *Clausilia rugosa*. A few *Helix rupestris* may also be found here, but a splendid locality for this species is an old wall by the side of the road between Islip and Stow-wood. This wall is close by the road which goes off to Noke; and by turning over the loose top stones *H. rupestris* may be found in thousands, almost to the exclusion of everything else.

All the above localities are within about five miles of Oxford. If the range be extended to the Chilterns (under twenty miles) the following species may also be found:—

On the trunks of the beech trees are *Clausilia laminata* and a decollated variety, and *Bulinus montana*. Other common species occur in plenty on the beech trees, *Clausilia rugosa* and a decollated variety of it, and *Bulinus obscurus*. Among the fallen leaves I found *Limax arborum* and *Zonites purus* variety *margaritacea*. *Helix aculeata* seemed very common, and I also found *H. lapicida*. On the open downs are *H. ericetorum* (fine, well marked specimens, typical in every way), *H. virgata*, *H. coperata*, and *H. cantiana*. The specimens of *H. coperata* from the Chilterns are larger than the Oxford specimens and whiter, many of them being pure white, forming the variety *alba*. *H. cantiana* seems to have rather thinner and more delicate shells on the Chilterns than it does in Oxford itself.

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