

Preliminary Note upon the Mammalian Remains from Merlin's Cave.

By MARTIN A. C. HINTON (British Museum, Natural History).

In 1901 Miss D. M. A. Bate gave a short account of a bone-cave in the Carboniferous Limestone of the Wye Valley (*Geol. Mag.* (4) VIII, pp. 101-106). From this cave Miss Bate obtained a typical late Pleistocene fauna as well as remains of animals introduced at a later date. A set of her specimens is in the geological collection of the British Museum, and I would take this opportunity of thanking her for a great deal of rodent material from this cave which she most generously gave me many years ago. The Society is indebted to Miss Bate for the information which led us to the Wye Valley last September. In all probability the cave now called "Merlin's Cave" is identical with that investigated in 1901; but this matter will be definitely settled in a few months time when some of us hope to meet Miss Bate upon the spot.

Owing to the pressure of other work, and to the large size of the collection, I have not been able to complete my study of the material obtained by the party in September. I do not on the present occasion propose to offer any remarks upon the larger bones in the collection; most of them are fragmentary remains of domestic animals, and the majority at all events date from a period much more recent than the later Pleistocene. For the present, too, I will refrain from discussing the remains of bats, shrews (three species *Sorex araneus*, *minutus*, and *Neomys fodiens*), moles, carnivora (*Vulpes* and *Mustela*), and of mice of the genera *Apodemus* and *Mus*. Some of the remains belonging to these various genera are no doubt Pleistocene, but many are of comparatively recent introduction. The most interesting part of the collection is that formed by the Microtine and Lagomorphous remains. Of the species represented I can now give the following list in which the names of totally extinct species are marked with a dagger †, while locally extinct forms are indicated by an asterisk*.

†*Ochotona spelæa* Owen (Pika).

A very large number of fragmentary skulls and mandibular rami of the Pika were obtained. Remains of this species were also

found in abundance by Miss Bate. Extensive material of this kind has long been wanted for the purpose of clearing up certain questions relating to the British Pika; and a special paper on the subject is now in course of preparation.

**Castor fiber* Linnæus.

Represented by the right upper incisor of a young individual.

†*Dicrostonyx gulielmi* Sanford. (Sanford's Arctic Lemming).

Parts of 22 skulls with m^1 and m^2 in place afford the best evidence of the presence of this species. Most of the mandibular rami, of which 523, representing at least 270 individuals, were found, are no doubt to be referred to *D. gulielmi* also.

†*Dicrostonyx henseli* Hinton. (Hensel's Arctic Lemming).

Four skull fragments with m^1 and m^2 in place have these teeth of the slightly more reduced type which characterizes *D. henseli*.

**Lemmus lemmus* Linnæus. (Common Lemming).

Portions of 19 skulls and 213 mandibular rami, representing at least 110 individuals, are referable to the genus *Lemmus*. At present it is impossible to separate these remains from those of the common Scandinavian species.

Evotomys glareolus Schreber. (Bank Vole).

Bank Voles are represented by about 30 more or less incomplete skulls and 61 mandibular rami. A critical study of this material has yet to be made; but for the moment all can be referred to *E. glareolus*.

**Microtus arvalis* Pallas. (Short-tailed Voles).

†*Microtus corneri* Hinton.

Microtus agrestis Linnæus.

A large number of more or less incomplete skulls and 1,232 mandibular rami, representing at least 616 individuals, are referable to the *arvalis-agrestis* group. The majority of the specimens no doubt belong to the two species *M. arvalis* and *M. corneri*. The latter species, the Pleistocene forerunner of *M. orcadensis* and *M. sarnius* (the remarkable arvaloid voles now inhabiting the Orkney and Channel Islands), is especially abundant. Some of the skulls supply clear evidence of the presence of a member of the *agrestis* group. But the exact determination of this most difficult part of the material must be reserved for the future.

†*Microtus anglicus* Hinton.

A good many incomplete skulls and 774 mandibular rami, representing at least 387 individuals, are referred to this species. In the majority of the lower jaws m_1 is of typical form; but in many as is usual this tooth shows either arvaloid or ratticepoid variation.

**Microtus ratticeps* Keyserling and Blasius. (Northern Vole).

Many fragmentary skulls and 424 mandibular rami, representing at least 212 individuals, are referred to this species.

†*Arvicola abbotti* Hinton. (Abbott's Water Vole).

36 more or less imperfect skulls and 159 mandibular rami, representing at least 89 individuals, are referred to this species.

The above assemblage indicates that the cave deposit dates from the later part of the Pleistocene period.
