# STUDIES IN TASMANIAN MAMMALS, LIVING AND EXTINCT.

Number IV.

## THE CAVE DEPOSITS AT MOLE CREEK.

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(Read 13th June, 1921.)

Through the courtesy of the Director of the Tasmanian Government Tourist Bureau (Mr. E. T. Emmett), we have recently had the opportunity of visiting two of the caves at Mole Creek, and obtaining a number of specimens relating to the mammalian fauna of Tasmania. Higgins and Petterd (1883) drew attention to the osteological remains in these caves, and they were later noted by Johnston (1888). Very little attention appears to have been paid to this locality by subsequent investigators, and we, therefore, desire to submit this short preliminary note to the Society in the hope that further investigations will be made. In the near future we hope to obtain a second and deeper series of specimens, and then to transmit to the Society a paper dealing with the material in general. Until we obtain a longer and older series of specimens than we have at present, we prefer to treat the matter on very general lines.

The two caves visited were Baldock's Cave and King Solomon's Cave. In the latter there are many specimens. The more recent are quite free, but the older ones have become encrusted with a thick limestone stalactitic coating, or else have become completely covered. In some cases the floors of certain of the caverns are practically bone breccia. Careful research may yield much of interest, for it is not improbable that some remains of *Thylacoleo* should be in these caves, if that marsupial lion ever inhabited Tasmania. Considering the knowledge we have recently gained in relation to the habitats of *Nototherium*, there is no reason to exclude the possibility of *Thylacoleo* being found.

We have only had time to examine a small section of the caves mentioned, and that only in a very superficial manner. When we consider that the Mole Creek district is honey-

combed with limestone caves, and that only a few have been explored, and these only to a very limited extent, we can form some idea of the work that remains to be done in carrying out a systematic examination of the locality. Much information concerning the mammalian fauna of Tasmania is doubtless to be gained by an examination of the fossil remains in these caves, and our present note is merely to call attention to the need for this work to be carried out. In illustration of the possibilities for useful scientific research that these caves hold out to us, we may mention that during December, 1914, we induced Mr. E. C. Clarke, of Liena, to collect osteological specimens from such caves as were immediately available to him, with the following results:—

(1) From a mass of material—amounting in the total to two sack loads—we, after the laborious process of sorting and classifying, were able to show that the conditions obtaining in these caves in times past were similar to those of the great bone caves of England and France.

(2) That almost every animal living in Tasmania to-day was represented by osteological remains, in the upper strata of these limestone caverns.

(3) That such evidence as the collection yielded all tended to suggest that the Carnivorous marsupials had dragged the Herbivorous animals into the caves to feast upon their remains. In addition, the well-like openings of certain of the caves doubtless served as an effective trap, as any animals accidentally falling down these would have no hope of returning to the surface.

(4) The deepest strata investigated supplied evidence of a Wombat very closely akin to the Hairy-nosed Wombat of South Australia.

(5) Eye rings of an Owl showed that these birds found homes in the caves, and doubtless joined issue with the Carnivora in picking the bones.

Some caves on Flinders Islands were (at our suggestion) partly explored by Mr. Henwood in 1917, with the result that such evidence as the material yielded proved to be exactly similar data to that obtained at Mole Creek, and suggested a common date of deposition of the superficial strata.

As already said, the real problem of the future is to penetrate the upper layers of bone deposits, and seek for remains of the more ancient Pleistocene giants, and in this search any, or all, of the Mole Creek Caves may prove important sites.

## LIST OF WORKS REFERRED TO.

Higgins and Petterd (1883).—Papers and Proceedings of the Royal Society of Tasmania, 1883.

Johnston, R. M. (1888).—Systematic Account of the Geology of Tasmania.