

be certain that it is that of the blue buck, as the roan antelope was first seen by a white man in 1804, and the sable was only discovered in 1836 by Harris. It is most unlikely that a beautiful skull with horn cores but without horns of either the sable or the roan was added to the Hunterian Collection during the nineteenth century and without any record remaining; so we may regard it as practically certain that this is the skull of the extinct blue buck.

Mr. C. W. Parsons prepared for me numerous photographs of the skull, and I compared them with all the skulls of the allied species in the British Museum (Natural History), and there seems to be no reasonable doubt that this Hunterian specimen is a good skull of the extinct blue buck.

Having only one skull, one cannot tell how the species may vary; but in this skull there are a number of important characters which distinguish it from the skulls of the living roan antelope (*Hippotragus equinus*) and the sable antelope (*Hippotragus niger*). The length of the base of the skull is $14\frac{1}{4}$ in. (360 mm.). I have seen one specimen of the sable as small, but none of the roan.

As will be seen from the photograph, a striking feature not seen in the roan or sable is the depression of the snout below the general line of the maxillary teeth, and with it the bending down of the front of the lower jaw. The premaxilla is more slender than in the other species, and the angle made by the nasal with the front of the supra-orbital part of the frontal is less obtuse. The horn cores are slender and less curved than in most of roan or sable.

There are one or two important dental characters which seem to confirm this being the extinct *Hippotragus leucophæus*. These, and other features of the skull, will be described in a full account of it which will be published elsewhere.

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Transvaal Museum.
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Ice-Worms in Yukon and Alaska

I FOUND a considerable number of the oligochaetous annelids known as 'ice-worms' on August 7, 1949, during the Arctic Institute's "Project Snow Cornice" in the St. Elias Range, Yukon-Alaska Boundary. They were discovered on the Seward firnfield at an altitude of about 6,000 ft., and scattered sparsely over the surface of the *névé* at midday in conditions of bright sunshine. They were mostly $\frac{3}{8}$ inch or less in length and black in colour but under the hand-lens appeared brownish-black, when fresh, and before preservation in 'B.C. Fix' (alcohol + acetic acid + formalin). They quickly dried up and died at ordinary air temperature when taken from the snow or melt-water.

All the worms found seemed to be in a process of migration from one of a group of small glacial lakes to another. Incidentally, there was no silt in these lakes, nor rock exposures within them nor in the vicinity. Possibly the worms were making their way to some local areas of pink snow (*Sphaerella nivalis*), on which alga, it has been supposed by some, they may feed. But no worms were found actually in the pink snow. A few worms were seen also in the lake water, making their way through the floating ice-mush towards the shore. It was noticed, too, that a small water-bird, identified as a phalarope, was swimming about and running over the floating ice,

and it seemed as if it may have been feeding on the ice-worms.

There has been a good deal of mystery, and a lot of contention, over the subject of ice- or glacier-worms, but it appears that their occurrence ranges from Alaska to as far south as California at least, and they are practically confined to the Pacific slope. They belong to the genus *Mesenchytræus*. According to Dr. Paul S. Welch, there are known at least sixty species and varieties of this genus, of which twenty-one species and three varieties are recorded from North America¹. It is thought, however, that since 1916 further species may have been discovered.

A species of the above genus was first recorded in 1887 from the Muir Glacier, Alaska, by Dr. G. F. Wright, who stated that in the shallow enclosures on the surface, containing water and a little dirt, worms about as large round as a knitting needle and an inch long were abundant. In 1891 Prof. Israel C. Russell observed them on the Malaspina Glacier (into which the Seward icefield drains), reporting, "In the early morning before the sunlight touched the snow its surface was literally covered with small, slim black worms, about an inch long, having a snake-like appearance"². They were found again on the Malaspina Glacier by Dr. Filippo De Filippi of the Duke of the Abruzzi's expedition to Mount St. Elias in 1897. C. Emery, who describes this find, claims, however, that it constitutes a new genus of oligochaetous annelids, of which it is the only known species; from its obscure colour and light-shunning habits, he called it *Melanenchytræus solifugus*³. The validity of this genus, however, has been denied by some other authorities, notably J. P. Moore⁴.

In a recent letter to me, Mr. W. O. Field of the Department of Exploration and Field Research, American Geographical Society of New York, states: "Ice-worms are not too uncommon on Alaskan glaciers. We saw them specifically on the Geikie Glacier in 1926 and on the Muir in 1941. Specimens of the latter were brought back and some were on exhibit in Winter and Pond's show window in Juneau, Alaska, to further confuse the Juneau populace who have considered the ice-worm story a hoax since the postcard was made showing macaroni in the ice labelled as glacier-worms!"

There are now a few preserved in alcohol in the Juneau Museum, a specimen has been submitted to the Department of Zoology, University of British Columbia, Vancouver, and some others have gone to the American Museum of Natural History, New York.

Having travelled over glaciers and snowfields in various parts of the world for more than thirty years, and having seen no ice-worms at all until this last summer in Alaska, I should like to know something of their general world distribution, and especially whether they have been recorded from Europe or Asia. In a recent letter, Prof. P. S. Welch (University of Michigan) has intimated that he has not been able in later years to follow up his studies of this most interesting and peculiar life-form.

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¹ Welch, P. S., *Trans. Amer. Micro. Soc.*, 35, 2 (1916).

² Russell, I. C., *Second Expedition to Mt. St. Elias*, 13th Ann. Rep., U.S. Geol. Sur., 1891-92. Pt. II. Geology (1893).

³ "The Ascent of Mount St. Elias", Filippi, 1900, Appendix D, by Carlo Emery.