

Lawrence, Douglas Co., Kansas

Dec 8, 1956

The following letter received from Richard M. Hance¹, assistant biologist, Experiment Station, Colorado Agricultural and Mechanical College, Fort Collins, Colorado.

My reason for writing is in regards to your remarks on the pelage and molts of varying lemmings in mammals of northern Alaska, on the Arctic Slope. In reference to the brown pelage on the back and head of animals in winter pelage you stated that this pelage was "in fact is part of the winter pelage". A number of authors have commented upon this characteristic both for animals in the wild and in laboratory colonies. However, they all agree that this brown hair is always summer pelage. I maintained a colony of varying lemmings, breeding stock from Umiat, for a year here in Fort Collins. I must have raised several hundred lemmings and had as many as fifty in the colony at one time. However, I never found the brown hair to ever be winter pelage, when the animal was in a mixed color molt. I did observe the occasionally an animal in white winter pelage occasionally possessed numerous yellowish tipped guard hairs. Winter pelage and summer pelage are easily distinguished by texture and length of guard hairs as well as by other means. In my laboratory animals that were in part-summer - part winter pelage or during molt, the brown pelage was always of the summer texture. The brown head or brown back in specimens of mixed pelage always resulted from an arrested molt into summer pelage or an incomplete molt into winter pelage. Of course, in the broad sense, one could say that an animal trapped during the winter was in winter pelage regardless of color or texture. However, I did not gain this interpretation from your text. Would you mind letting me know if you meant that the brown hair on the heads and backs of animals in mostly winter pelage was of winter texture or summer texture in the specimens examined by you.

I am also interested in knowing how you arrived at the conclusion that (winter texture) brown hair resulted from a genetic factor which resulted in dark winter pelage in an earlier period of the Pleistocene.