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ON THE PARTIAL ALBINO OF THE JAPANESE MINK FOUND IN HOKKAIDO

BY

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(With four text figures)

The Japanese mink, *Mustela itatsi itatsi* Temminck which abounds in the main island group of Japan including Honshu, Kyushu and Shikoku, was first introduced into Hokkaido quite accidentally about 60 years ago when communication between the island and the main island suddenly became frequent and easy. Before going further a brief history of the animal in Hokkaido may well be given. In the early days of the settlement of Hokkaido, that is around 1880, the animal which was increasing gradually in number was restricted to the southern portion near Hakodate port. In 1899 239 skins of the animal were traded for the first time in Hokkaido and after 4 years, namely in 1902, 847 peltries were collected by a fur trader, Mr. MATSUSHITA in Hakodate. In 1909 this one dealer exported 8,000 peltries to London. At that time the animal occupied about one tenth of the whole area of Hokkaido, that is only the southern peninsular part. By the end of 1921 almost all the southern half of the land had been intruded by the mink and up to the present time, within a total course of 60 years, the animal has covered all Hokkaido except the southeastern end (INUKAI, 1932).

The production of the peltries from Hokkaido has been raised to more than 50,000 in number since 1930. Last season at least 70,000 skins are said to have been obtained in Hokkaido for trade in spite of the protection law acting from December of 1933 to check the wild rats in Kitami province where more than 3,000 peltries of the best quality are expected to be produced in one season. The production of the pelts from all Japan is estimated to be approximately 700,000 in number annually.

As is well known the colour of the animal is usually uniform muddy yellow above and a little paler below but as Bachrach (1931) pointed out the peltries from Hokkaido are the silkiest and palest. It is generally stated,

however, that the young of the animal sometimes has a white pattern around the neck and an adult is occasionally found which has a white tip of the leg. No other kind of colour variety has ever been reported. It happened that in the spring of 1933 among the furs from the Shiribeshi district in Hokkaido two abnormal kinds (No. 1 and No. 2) were found which show an apparent partial albino. Another fascinating example of the same sort (No. 3) was obtained this year in Yubari.

No. 1 and No. 2 are much the same in colour. In No. 1 the albinism appears on the head, the under side of the face and the neck region being whitish in colour. On the head there is a longitudinal white marking which bifurcates anteriorly at the nose. Two small white patterns are also on the nape. The tips of the four limbs are white. Otherwise the animal makes a quite normal appearance.

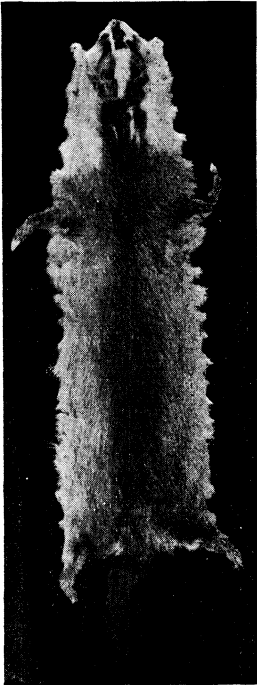


Fig. 1. No. 1. $\times \frac{1}{5}$



Fig. 2. No. 2. $\times \frac{1}{5}$



Fig. 3. No. 3. $\times \frac{1}{7}$

No. 2 is a sort of a white headed animal. There are only five minute brown markings on the face and head, two symmetrical ones on the cheeks, another pair behind the ears and one on the median line on the nape. Both

sides of the chest are also somewhat pale. The tips of the legs are white as in No. 1. The animal is normal in coloration in the posterior body part.

No. 3 proves a higher grade of albinism. The white area of the head extends farther backward covering the side and the belly as far as the hind limbs, leaving on the dorsal only a small portion of brown colour in which many white bristles are found. The nose is somewhat dark in colour and there are two symmetrical longitudinal markings of brown colour extending from the cheek to the nape. Only the posterior-most part including the tail is normally coloured.

Taking into consideration the history of the animal in Hokkaido the patterned animals above mentioned are doubtless albinic mutants which have not been known among the ancestors as far back as 50 generations at least.

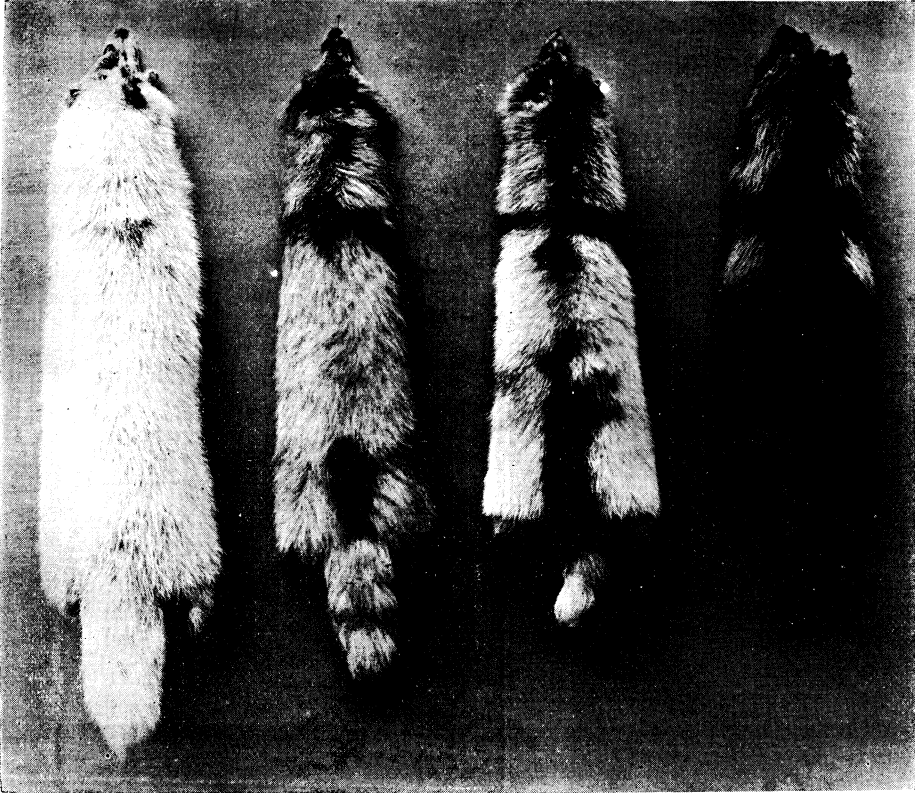


Fig. 4.

Complete and partial albinos of the racoon dog from Hokkaido, kept in the University Museum in Sapporo. $\times 14$

In this respect it is worth while to note that there are members of the same genus, namely, the ermine, *Mustela ermina* Schrenck and the pigmy weasel, *Mustela rixosa namiyei* Kuroda which inhabit the northern section of Japan including Hokkaido where an abundance of ice and snow is found in winter. These two animals turn white during the colder months. In addition to this complete and partial albinos of the racoon dog (Fig. 4) have been frequently recorded from Hokkaido (MISHIMA, 1932). The scientific name of the latter *Nyctereutes albus* Beard was in reality thus derived from this character.

In view of the above facts, therefore, the occurrence of the albinic mutant in the Japanese mink in Hokkaido is quite remarkable. It is sufficient to call the general attention of the biologist, suggesting some possible influence of the environment upon the animal as in the case of X-ray which caused abnormality in the descendants of other kinds of animals as was shown by some authentic workers (LITTLE and McPHERTERS, 1932). Moreover, the possibility of hybridization between the above white species and the Japanese mink is out of the question from the zoological as well as the genetical point of view.

Literature

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