A FOOD-HOARD OF *OCHOTONA* FROM TAISETSUZAN, THE CENTRAL MOUNTAINS OF HOKKAIDO

BY

TETSUO INUKAI

大雪山産ナキウサギ(ハツカウサギ)の食物貯藏所に就て

犬　飼　哲　男

In a previous paper writing with SHIMAKURA, the author gave a short history of finding of *Ochotona*[1], the pica, from Kitami in Hokkaido together with some œcological notes of the animal. Furthermore, quite recently it has become known that *Ochotona* is also a common inhabitant on the rocky part of the central high mountains of the island, many specimens having been actually collected. The mountains are a little more than 2000 meters above the sea level and being volcanic in origin the tops are rocky in most parts. Alpine meadows or frigid zone plants are developed above 1400 meters whence a rich flora of alpine plants is found.

In winter the land of Hokkaido except the south eastern part is completely under snow for months and it is particularly deep in the mountainous region where the weather is exceptionally severe with much ice and cold. Despite these conditions it has been found that the fauna in the frigid zone of the mountains is also very abundant with *Ochotona* and the striped ground squirrel or the striped chipmunk throughout the year. The former lives chiefly in rocky crevices or among crumbling rocks making a great association while the latter

1) *Ochotona* yezoensis KISHIDA.

[Transact. Sapporo Nat. Hist. Soc., Vol. XI, Pt. 4. March, 1931]

is the constant inhabitant of bushes of *Pinus pumila*. The visits of brown bears, foxes and ermines which are the regular summer visitors of the mountain do not occur so often in this region. Other kinds of rodents, hares, rats, mice and grey squirrels are generally found below in the shrubby zone.

The peculiar shrill cry or the whistling of the pica and that of the chipmunk closely resemble each other. They make together an almost continuous noise in some parts of the mountain particularly in the foggy or cloudy days and in the dimness of the morning and the evening. Since the pica as well as the chipmunk do not take the winter sleep or not hibernate they are diligent food-hoarders during summer. As generally understood the food of the striped squirrel consists of almost anything, including even small animals, besides vegetables,

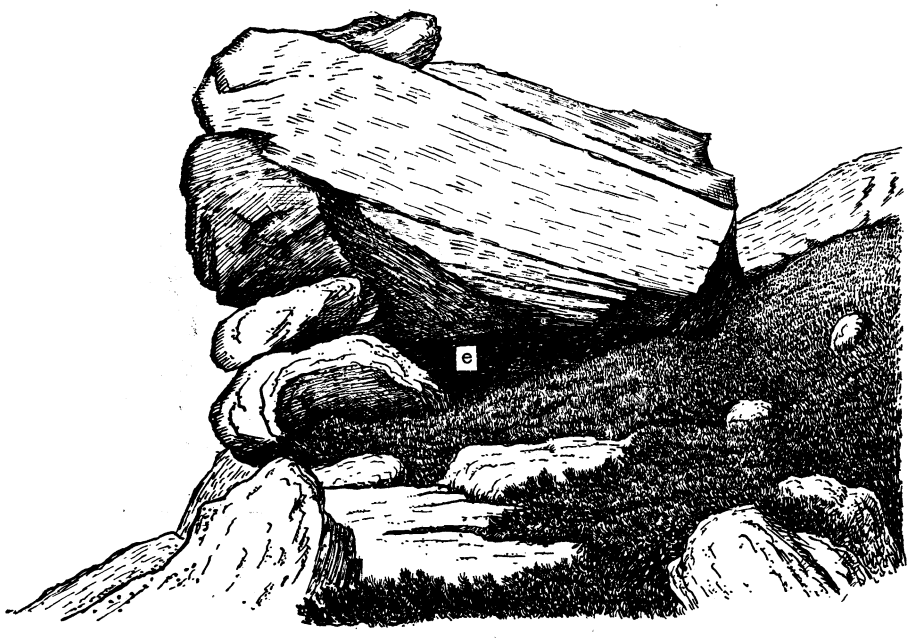

Fig. 1.

This shows the entrance (e) of the storage under a big rock.
It is hardly recognizable from outside.

with a preference for fruits, seeds and nuts for the winter use. They are abundant around the dwelling of the animal in the mountain. As already

noted *Ochotona* in Kitami does severe damage to the forest plantings, as the food of the animal in that district comprises the saplings of the larch and the wild raspberry which it cuts into pieces to lay up in storage. Whether the animal from Kitami is the same species as that from Taisetsuzan is not yet dicided[2]. However, it is true that the food of the pica in Taisetsuzan is composed mostly of alpine plants which are the only growth on these mountains.

It was the end of August of 1926, in fact, when the present writer engaged in the collection of animals in the central mountains as a member of the Surveying Committee of Taisetsuzan that a large food-hoard was found on the rocky side of Haku-undake in Taisetsuzan (Fig. 1). It was a natural, horizontal crevice among rocks, measuring about 16 cm in height and 60 cm

Fig. 2.

Inferior of the storage, showing the leaves and twigs taken in by *Ochotona*. $\times \frac{1}{8}$

in width at the entrance, the depth being about the same as the width. At the time of finding about two-thirds of the room was filled up with leaves and twigs of plants which were all cut about 6 cm in length by the animal (Fig. 2 and 3). The whistling of the pica around this place was heard particularly

2) Mr. KISHIDA of the Imp. Agr. Exp. Station in Tokyo is going to publish on the subject.

boisterously. By examining the kinds of plants 16 different species of alpine plants were identified as follows[3].

Fig. 3.

Details of the contents of the hoard given as exsamples. 1. *Cetraria* sp. 2. and 4. *Cassiope lycopodioides*. 3. *Arcteria nana*. 5. *Phyllodoce aleutica*. 6. *Phyllodoce caerulea*. 7. *Salix Reinii*. 8. *Cladonia* sp. 9. *Rhododendoron chrysanthum*. 10. *Salix yezo-alpina*. 11. *Pentstemon frutescens*. ×¼

Salix yezo-alpina KOIDZ.
Salix Reinii FRANCH. et SAV.
Phyllodoce aleutica A. HELLER
Phyllodoce caerulea BAB.
Empetrum nigrum L.
Vaccinium Vitis-idaea L.
Rhododendron chrysanthum PALL.
Pentstemon frutescens LAMB.
Arnica unalascensis LESS.
Arcteria nana MAKINO
Saussurea sp.
Cassiope lycopodioide D. DON
Lagotis borealis BAIL.
Arctous alpina NIED. var. *japonica* TAKEDA
Cladonia sp.
Cetraria sp.

The first snow fall in Taisetsuzan occurs anually in October and by the middle of November the whole mountain is completely covered with snow. The melting of snow first begins in the mountain at the end of June. Therefore the animals must store the food to afford a supply more than 8 months in this region. Thus during summer the storage fever seems actually to take possession of the animal.

(Zoological Institute, Hokkaido Imp. Univ.)

3) Mr. M. TATEWAKI in the Botanical Institute of Hokkaido Imperial University kindly helped me in identification of the plants.

Literature

INUKAI, T. and SHIMAKURA, K.: On *Ochotona*, a New Rodent Unrecorded from Hokkaido. Transact. Sapporo Nat. Hist. Society. Vol. XI, pt. 2. 1930

KISHIDA, K.: A diagnosis of a new piping hare from Yeso. Lansania. (Journal of Arachnology and Zoology). Vol. 2, No. 13. 1930

要　　綱

ナキウサギなる名稱は昔て余が、島倉學士との共著に於て北見國置戸地方に、北海道に初めて發見された *Ochotona* の發見記及びその生態的調査の報告の際に附した名稱である。然るに近來岸田氏等はこれに廿日兎なる名稱を固持し、朝鮮產 *Ochotona* にも用ひ又他の人は鼠兎等とも稱してゐるので、斯界の當惑を避くるため余もハツカウサギなる名稱を併用するのである。

偖この動物は、昭和三年十月初めて置戸で捕獲されたのであるが、その後大雪山系にも多數に棲息することが判明し、既に旭川營林區署員等に依り標本も數多採集せられた。大雪山系は火山系の高山で山頂には岩石峨々としてゐるが、海拔二千余米を超へ千四百米以上には所謂、高山植物帶、即ち、寒地植物帶がよく發達し豊富な植物相を現はしてゐる。冬期は全山氷雪に閉され殊に山頂部は酷寒を示すのである。それにも拘らず山頂には四季を通じて二種の哺乳類が棲息する。即ち、一はシマリスで多くハイマツ中に棲み、他はハツカウサギで岩石の多い箇所を根據とし、何れも好んで群居して共同生活を營んでゐる。この二つの動物はその鳴き聲も非常に類似してゐるため、濃霧の日又は薄明薄暮に至ればその棲息所附近を通過する人の殆ど耳を聾するばかりである。

春期から秋期迄は羆、狐、エゾイタチ、貂、兎、野鼠、栗鼠等が時々山頂近くに出沒するが、冬期は前記のシマリス、ハツカウサギを殘し羆は冬眠し、他は山麓の森林帶に下つてゐる。然しシマリス及びハツカウサギは氷雪期に於てすら冬眠することがなく、專ら夏期貯藏した食料を食ひつゝ籠居生活を續けるのである。北見地方のハツカウサギの食物は、既に報告した如く落葉松及びキイチゴの稚樹で、このため植林地で大被害を見たのであるが、大雪山系のものは全く高山植物のみである。一言すべきは、シマリスは夏期に植物の芽葉根皮を食することがあれど、晩夏、秋期は特に好んで種子、果實を貯藏し冬期に備ふることである。余は既に大正十四年八月廿五日大雪山調査會會員として動物調査中、大雪山系の白雲岳東斜面で偶然にもハツカウサギの食物貯藏所を發見したのである。該貯藏所は大なる岩石の下で (Fig. 1) 入口は高さ十六センチ、幅六十センチ、深さ約六十センチの水平孔で、當時はその約三分の二が寸斷された植物の莖葉で充塡されてゐた。(Fig. 2) その中の植物は多くは先端部丈で悉く、約六センチの長さに切られてゐた。(Fig. 3) 余は館脇學士の援助により下記の十六種の植物を檢出し得た。即ち

マルバヤナギ、ミネヤナギ、アチノツガザクラ、エゾノツガザクラ、ガンコウラン、コケモヽ、キバナノシヤクナゲ、タルマヒサウ、ウサギギク、コメバツガザクラ、トウヒレン屬、イワヒゲ、ホソバウルツブサウ、ウラシマツツジ、ハナゴケ類、依蘭苔類。

大雪山に於ける初雪は、毎年十月で十一月中旬より全山雪に埋れ六月末に初めて融雪がある。このため前記山頂に棲むシマリス及びハツカウサギは少くとも八ヶ月の食料を貯藏しなくてはならない。從つて夏期はこれ等の動物は專らその貯藏に忙殺されるのである。

(北海道帝國大學動物學教室)