

# Notes on Some Small Mammals Collected in the Shirouma Alpine Range, Central Honshu

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The following report presents data on the distributions of small mammals (*Rodentia* & *Insectivora*) of the mountainous regions of the Shirouma Alpine Range, Central Honshu, on the basis of the materials collected by the writer. The materials were collected by snap traps during the period from August 1 to September 18, 1967, at three stations mapped out in Fig. 1; Mt. Shirouma-dake (August 1-2), Shiroumaohike (August 3-4) and Rengeonsen (September 17-18). These three areas studied belong to alpine zone, the upper limit of sub-alpine zone, and the lower limit of sub-alpine zone, respectively. The numbers of small mammals collected are shown in Table 1. This is merely a preliminary report on the small mammal fauna (*Rodentia* & *Insectivora*) of this district, but the present collection seems to cover about 70% of the whole species which is expected in the district. All specimens are preserved in the mammal collections of Kanagawa Prefectural Museum.

Before entering the subject, the writer express his sincere thanks to Dr. Yoshinori Imaizumi, Chairman of the Department of Zoology, National Science Museum, Tokyo, who has read, criticised and revised the manuscript, and also to the following people of Kanagawa Prefectural Museum, the writer must express his sincere gratitude and appreciation: To Messrs Hideo Takahashi and Tatuyuki Ohba, who kindly gave him cooperation through the collection of materials: To Messrs Yoshihide Yamaguchi and Kazumasa Arai, for aiding him in obtaining specimens, and To Mr. Kazutoshi Nakano for his kind help on preparation of this work.

The small mammal fauna of the North Japan Alps have been reported by several authors; Hanaoka (1937, 1937), Hosono (1953), Haneda *et al* (1959), Imaizumi (1960, 1965), Ueki (1965) and others.

Of *Rodentia*, four common species are here listed, and of *Insectivora*, three species, of which *Euroscaptor mizura* is considered to be a rare species, are also recorded.

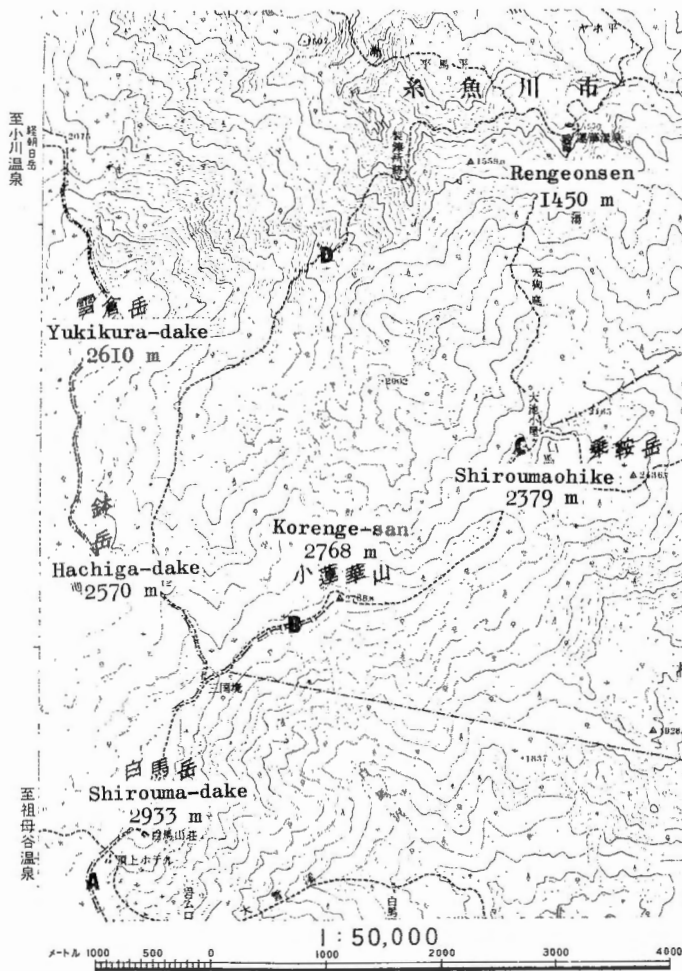


Fig. 1 Map showing the stations which collecting was carrying out (A, C and E).

Table 1. Small Mammals collected in Different Habitats  
(310 trap-nights, Shirouma Alpine Range, August-September, 1967)

Species name	Alpine zone <i>Pinus pumila</i> Community (2850m alt.)	Upper limit of sub-alpine zone <i>Abies mariesii</i> Forest (2400m alt.)	Lower limit of sub-alpine zone <i>Aesculus-Pterocalya</i> Forest (1450m alt.)
<i>Aschizomys niigatae</i>	5	0	1
<i>Eothenomys smithi</i>	0	0	2
<i>Apodemus a. argenteus</i>	4	7	6
<i>Apodemus s. speciosus</i>	0	2	6
<i>Dymecodon pilirostris</i>	0	0	1

Order **INSECTIVORA**Family **SORICIDAE**1) *Sorex shinto shinto* THOMAS, 1905

Specimen examined: A single old specimen identified as *Sorex shinto shinto* was collected as a dead shrew on a climbing road (about an altitude of 2700m) leading to the summit of Mt. Shirouma-dake (Fig. 1-A) on July 24, 1968, by Mr. Hideo Takahashi. Shinto shrew, *Sorex shinto* is the most common species of all Japanese *Sorex*, but the subspecies recorded here seems to be new to Mt. Shirouma-dake. The another extremely rare species, *Sorex hosonoi shiroumanus* originally described by Imaizumi (1954) has been recorded from Mt. Shirouma-dake.

Family **TALPIDAE**2) *Dymecodon pilirostris* TRUE, 1886

Specimen examined: A single specimen (an adult ♀) collected at an altitude of 1450m, Rengeonsen (Fig. 1-E). Measurements were as follows: Length of head and body 67.3mm; Length of tail 37.0mm; Length of fore foot *s. u* (*c. u*) 8.3mm (11.4mm); Length of hind foot *s. u* 14.0mm; Width of fore foot 4.6mm.

3) *Euroscaptor mizura ohtai* IMAIZUMI, 1955

Specimen examined: A single specimen (an adult ♀) was collected as a dead mole on a climbing road (about an altitude of 1751m) leading to the summit of Mt. Yukikura-dake (Fig. 1-D) on September 18, 1967, by Mr. Hideo Takahashi. The specimen identified as *Euroscaptor mizura ohtai* may be distinguished by the characters of body size, body colour and distribution\* from another subspecies, *E. m. mizura*. Hitherto seven specimens had only been recorded; Mizura mole has been considered to be a rare animal, but Imaizumi, Yoshiharu *et al* (1964) recorded six specimens of this subspecies on the Oze districts, Gunma Prefecture, Central Honshu. The specimen seems to be the second record to Mt. Yukikura-dake. Measurements were as follows: Length of head and body 91.8mm; Length of tail 22.8mm; Length of fore foot *s. u* (*c. u*) 14.3mm (17.2mm); Length of hind foot *s. u* (*c. u*) 13.6mm (19.2mm); Width of fore foot 14.0mm; Greatest length of skull 26.0mm; Condylbasal length 24.7mm; Palatal length 11.3mm; Breadth of braincase 13.8mm; Greatest interorbital breadth 6.6mm; Rostral breadth over canines 3.2mm; Breadth across molars 6.4mm; Length of mandible 17.4mm;  $i^1-m^3$  (crown) 11.6mm;  $i_1-m_3$  (crown) 11.3mm;  $c-m^3$  (crown) 10.3mm;  $c-m_3$  (crown) 9.3mm;  $c-m^2$  (crown) 9.3mm;  $c-m_2$  (crown) 7.5mm.

\* According to Imaizumi (1964), *Euroscaptor mizura mizura* and *E. m. ohtai* are obviously allopatric in the mountainous regions of Central Honshu.

Order **RODENTIA**Family **MURIDAE**4) *Aschizomys niigatae* ANDERSON, 1909

Specimens examined: Four specimens (3 adult ♂♂ and an adult ♀) collected in Mt. Shirouma-dake, a single specimen (an adult ♂) caught alive near Mt. Korenge-san (Fig. 1-B) and a single specimen at Rengeonsen (Fig. 1-E). Measurements were as follows: The Rengeonsen specimen (a subadult ♀): Length of head and body 95.9mm; Length of tail 58.7mm; Length of ear 13.2mm; Length of hind foot *s. u* 19.5mm; Greatest length of skull 25.9mm. The Mt. Shirouma-dake specimens: Length of head and body 104.0mm~108.4mm; Length of tail 65.0mm~69.4mm; Length of ear 12.5mm~13.5mm; Length of hind foot (*s. u*) 17.9mm~19.7mm; Greatest length of skull 26.1mm~26.5mm. The Mt. Korenge-san specimen (an adult ♂): Length of head and body 111.7mm; Length of tail 68.3mm; Length of ear 13.0mm; Length of hind foot *s. u* 19.6mm; Greatest length of skull 27.5mm.

5) *Eothenomys smithi* THOMAS, 1905

Specimens examined: Two specimens (2 adult ♂♂) collected at Rengeonsen. Measurements were as follows; Length of head and body 80.3mm, 78.9mm; Length of tail 46.5mm, 41.4mm; Length of ear 11.0mm, 11.0mm; Length of hind foot *s. u* 16.4mm, 15.5mm; Greatest length of skull 23.0mm, 22.3mm.

6) *Apodemus argenteus argenteus* TEMMINCK, 1845

Specimens examined: Six specimens (4 adult ♂♂, an adult ♀ and a juvenile ♀) collected at Rengeonsen, six specimens (4 adult ♂♂, an adult ♀ and a juvenile ♂) at Shiroumaohike (Fig. 1-C), and four specimens (2 adult ♂♂, an adult ♀ and a juvenile ♂) at Mt. Shirouma-dake (Fig. 1-A).

Measurements were as follows: The Rengeonsen specimens (except a juvenile specimen); Length of head and body 75.1mm~90.0mm; Length of tail 85.0mm~97.7mm; Length of ear 12.8mm~14.7mm; Length of hind foot *s. u* 18.3mm~20.2mm; Greatest length of skull 22.6mm~23.9mm. Pregnancy was observed in a specimen with length of head and body of 82.0mm; embryo counts were seven (right 4, left 3). The Shiroumaohike specimens (except a subadult specimen): Length of head and body 73.5mm~84.5mm; Length of tail 86.0mm~103.6mm (three specimens with short tails excluded); Length of ear 12.2mm~13.4mm; Length of hind foot *s. u* 18.5mm~20.1mm; Greatest length of skull 22.8mm~23.6mm. The Mt. Shirouma-dake specimens (except a subadult specimen); Length of head and body 77.4mm~89.8mm; Length of tail 85.4mm~93.0mm; Length of ear 12.3mm~13.8mm; Length of hind foot *s. u* 18.9mm~19.6mm; Greatest length of skull 21.5mm~24.5mm.

7) *Apodemus speciosus speciosus* TEMMINCK, 1845

Specimens examined; Six specimens (3 adult ♂♂, an adult ♀, a juvenile ♂ and a juvenile ♀) collected at Rengeonsen and two specimens (2 adult ♂♂) at Shiro-umaohike. Measurements were as follows: The Rengeonsen specimens (except juvenile specimens): Length of head and body 99.1mm~127.9mm; Length of tail 86.4mm~116.0mm; Length of ear 15.0mm~16.0mm; Length of hind foot *s. u* 23.9mm~25.0mm; Greatest length of skull 27.5mm~30.5mm. Pregnancy was found in a specimen with length of head and body of 115.5mm; embryo counts were eight (right 5, left 3). The Shiroumaohike specimens: Length of head and body 114.9mm, 116.2mm; Length of tail —, 111.3mm; Length of ear 16.7mm, 16.0mm; Length of hind foot *s. u* 24.6mm, 25.5mm; Greatest length of skull 28.4mm, 30.6mm.

*Other Mammal*

A Japanese ermine, *Mustela erminea nippon* CABRERA, was observed at p. m 5:30, on August 1, near the summit of Mt. Shirouma-dake.

**On two species of Insectivora from Mt. Aino-dake, the South Japan Alps**

The small mammal fauna of the South Japan Alps is still imperfectly known in comparison with that of the North Japan Alps; there existing only a few reports about it; Imaizumi (1960), Kobayashi (1961), and Haneda *et al* (1963).

Two species examined here belong to rare animals in this regions, especially, the present distribution record of *Mogera minor* from high mountains is very interesting, therefore they are listed.

Order **INSECTIVORA**Family **SORICIDAE**8) *Sorex hosonoi hosonoi* IMAIZUMI, 1954

Specimen examined: A single specimen was collected as a dead shrew at an altitude of 3170m in Mt. Aino-dake, the South Japan Alps on August 17, 1968, by Mr. Hideo Takahashi. The subspecies is a rare animal in Japan; the specimen obtained here is 9th record from Japan, as far as the writer knows, and at same time, seems to be new to the South Japan Alps.

Family **TALPIDAE**9) *Mogera minor* KURODA, 1936

Specimen examined: A single specimen was collected as a dead mole at the alpine meadow of an altitude of 3170m in Mt. Aino-dake (the nearly same spot which an Azumi shrew, *Sorex hosonoi hosonoi* was collected) on August 17, 1968, by Mr. Hideo Takahashi. According to the known record, the vertical distribution of *Mogera minor* is mostly confined to the mountainous regions below about 1500m (Imaizumi 1960, 1968). For example, Imaizumi, Yoshiharu *et all* (1964) recorded 19 specimens taken at an altitude of 1670m in the Oze districts, Gunma Prefecture. Hitherto the species had hardly been recorded from alpine zone. As far as the writer is aware, the highest record of this species is a specimen found from the droppings of a Japanese yellow marten, *Martes melampus melampus* WAGNER, which collected at an altitude of 2740m in Mt. Ohsawa-dake, the South Japan Alps Haneda et Hirabayashi 1963), but it will not be an accurate distribution record if some deliberations are paid to the ability of migration of the marten. Therefore the present specimen seems especially noteworthy, and then will show a considerable extension in the known vertical range of *Mogera minor*.

Skull measurements were as follows: Greatest length 32.6mm; Condylbasal length 27.0mm; Palatal length 12.4mm; Breadth of braincase 15.0+mm; Greatest interorbital breadth 7.7mm; Rostral breadth over canines 3.6mm; Breadth across molars 7.3mm; Length of mandible 19.5mm;  $i^1-m^8$  (crown) 11.6mm.

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