ON SOME SMALL MAMMALS COLLECTED ON THE ISLANDS OF OKI

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ONE FIGURE AND ONE PLATE

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The Islands of Oki lie in the Japan Sea about 50 miles off Matue, on the north coast of Hondo, the main island of Japan. The largest of these islands is named Dôgo. In 1905 M. P. Anderson visited this island on the occasion of the Duke of the Bedford's Zoological Exploration in Eastern Asia, and collected some small mammals. These were studied by Thomas and the report was published in Proc. Zool. Soc. London 1905. He describes in this report the following five subspecies.

1. *Mogera wogura kobeæ.*
2. *Urotrichus talpoides.*
3. *Apodemus speciosus navigator.*
4. *Apodemus geisha celatus.*
5. *Lepus brachyurus okiensis.*

Of these five, Nos. 3, 4 and 5 are reported as new subspecies.

During my collecting trip on this island last winter, I obtained some specimens of small mammals. Among all the five kinds obtained, there are, besides the ordinary *Rattus rattus rattus*, two subspecies of *Apodemus* which agree perfectly with Thomas' original descriptions of *Apodemus speciosus navigator* and *Apodemus geisha celatus*. Two specimens of *Clethrionomys rufocanus* and two specimens of *Urotrichus talpoides*, however, show sufficient differences to distinguish them from the subspecies known in Hondo, and seem to be referable each to a new subspecies.

MURIDÆ

Subfamily Microtinæ

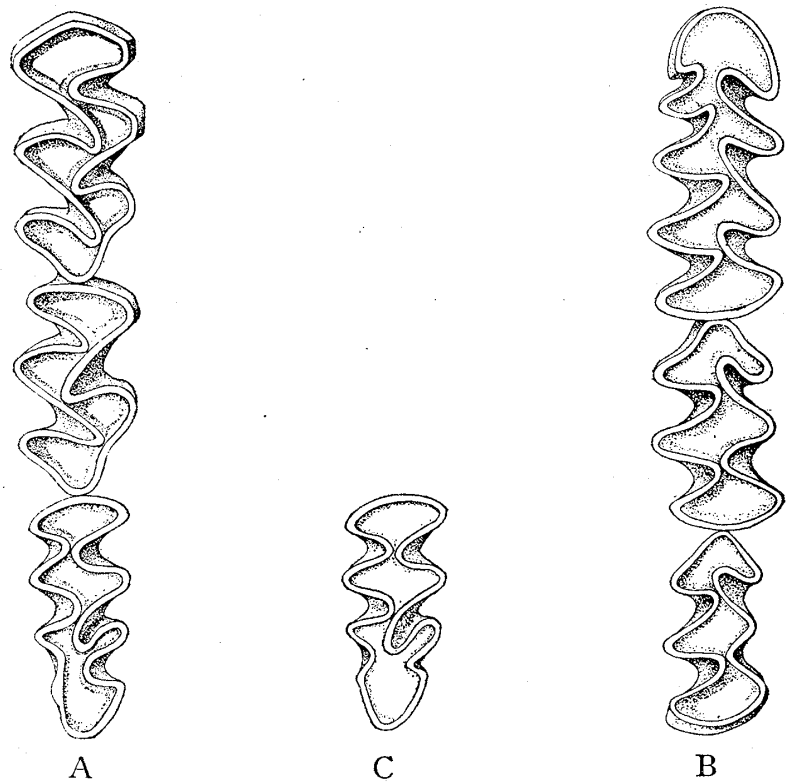
Genus *Clethrionomys* Tilesius, 1850.

1. *Clethrionomys rufocanus okiensis* subsp. n. (Pl. 35 fig. 1a-c).

Type: Adult male, *cotype:* young (skin and skull in winter pelage).

Type locality: Dôgo Island of Oki, Japan, (16 Jan. 1932).

Diagnosis: Color as in *Clethrionomys rufocanus smithii* of Hondo: upper surface "russet-brown" of Ridgway, but lacking the reddish color of *Clethrionomys rufocanus bedfordiae* of Hokkaidô, even in mature state. Tail short, being about 2/5 as long as head and body. Width of m1 of upper molar 1 mm. in adult. The second and the third triangles of m3 are nearly on the same level and form together a square throughout the stages from young to adult.



Clethrionomys rufocanus okiensis subsp. n.

A. Upper molars of the type; B. Lower molars of the type; C. The third upper molar of the cotype. × 15.

Color: No tangible difference from that of *smithii*. Under surface cream-buff. Boundary of upper and under surface indistinct. Tail bicolored, dark brown above and cream-buff below. Ears concolorous with the flank.

Skull and teeth: General appearance characteristic of *rufocanus* group. Skull massive and angular. Zygomatic arch well expanded. Cheek teeth more slender if compared with those of *bedfordiae* and have rounded angles in young stage. m3 is complex throughout the age and retains the fourth inner salient angle to the adult stage, but the most characteristic point may be found in the shape of the pair of triangle following the anterior loop, as mentioned in the diagnosis.

Dimension: (measured in the flesh).

	Head and body;	tail;	hind foot;	ear;
Type ♂	105 mm.;	40;	17;	12.5;
Cotype ♂	93.5;	33;	16.5;	11.5.

Remarks: Hinton (1926) has arranged all the *Clethrionomys rufocanus* group known in Japan including Hokkaidô into a series and concluded that they are nothing else than the different stages of development of one *Clethrionomys rufocanus smithii*. But Kuroda (1931) has separated *bedfordiae* of Hokkaidô from *smithii* of Hondo. My specimens from Oki show close relationship with *smithii* of Hondo and can be distinguished from *bedfordiae* by the slender structure of cheek teeth and the rounded angles of molars in the young stage. However, it has sufficient characteristics to distinguish it from *smithii* (including *niigatae* and *andersoni* named by Thomas), as above mentioned.

Subfamily Murinæ

Kaup Genus *Apodemus* Kaup, 1829.

2. *Apodemus geisha celatus* Thomas (Pl. 35, fig. 2 a-c).

Thomas, Proc. Zool. Soc. London, 1905, Vol. 2, p. 359.

A male was caught in a bush of a slope facing the sea. The measurements in the flesh agree with those of Thomas' female specimen:

Dimension:

Head and body;	tail;	hind foot;	ear;
79 mm.;	74;	19;	13.

Remarks: The very short tail seems to the characteristic of this subspecies, as mentioned by Thomas. The size also seems to be smaller than that of true *geisha*. In addition, the specimen before me which is in a winter pelage, has a more reddish color on the anterior part of the body, especially on the head and neck, than in the type species.

3. *Apodemus speciosus navigator* Thomas, (Pl. 35, fig. 3a-c).

Thomas, Proc. Zool. Soc. London, 1905, Vol. 2, p. 358.

Two male specimens were caught in a field where mulberry-trees are cultivated.

Dimension: (measured in the flesh).

Head and body;	tail;	hind foot;	ear;
113 mm.;	80.5;	24.5;	15.5;
112;	81;	25;	16.5.

Remarks: As mentioned by Thomas, this subspecies has a shorter tail than the true *speciosus*. The pelage does not show any difference, except that the feet are more greyish in color. The pterygoid fossæ are somewhat larger than in *speciosus*, and the pterygoid are more divergent posteriorly, instead of being nearly parallel to each other.

Genus *Rattus* Fisher, 1803.

4. *Rattus rattus rattus* Linnaeus.

Trapped in a house in the town of Saigô.

Dimension:

	Head and body;	tail;	hind foot;	ear;
Male	115 mm.;	125;	27.5;	20.

TALPIDÆ

Genus *Urotrichus* Temminck, 1842.

5. *Urotrichus talpoides minutus* subsp. n.

Type and *cotype:* adult male and female (skin and skull).

Type locality: Interior of Dôgo Island (16 Jan. 1932).

Diagnosis: Distinguishable from *Urotrichus talpoides hondonis* by the smaller body and longer tail, and *Urotrichus talpoides* of other

localities by the smaller body and also by the slaty color of the pelage. Tail well clothed with long stiff hairs, forming a terminal pencil 13-15 mm. long. Dental series more robust than that of Hondo and Kyûshû.

Color: Nearly the same as in *Urotrichus talpoides hondonis*, being slaty-black with a slight tinge of "mouse-grey."

Dimension: (measured in the flesh).

	Head and body;	tail;	forehand;	hind foot;
Type ♂	78 mm.;	31;	10.2;	14.5;
Cotype ♀	77;	33.5;	10;	15.

Remarks: Thomas identified the specimen caught by Anderson in this island with the form described previously from Kyûshû. The specimens before me, however, show a closer affinity to the form of Hondo than to that of Kyûshû. This is the fact which might be expected by the location of the islands which are nearer to Hondo than to Kyûshû. The specimens, however, differ from the form of Hondo in the more robust teeth, the smaller body and in the longer tail.

Note: I trapped these specimens with wheat flour as the bait.

Cranial Measurements. (*mm.*)

	C.r.o. (*Type*).	*A. g. c.*	*A. s. n.*
Greatest length	25.5	24	30
Basilar length	22.5	20	25
Zygomatic breadth	16	13	16
Length of nasals	7.2	7.8	11
Interorbital breadth	4	3.7	5.8
Distema	7	7	8.5
Palatilar length	11.2	10.2	14
Foramen incisivium	4.8	4.5	6
Length of upper molar series	5.8	3.5	4.5
Breadth of m1	1	1	1.2
From alveolar ridge of m2 to supraorbital ridge	6.9	5.2	7

LITERATURE

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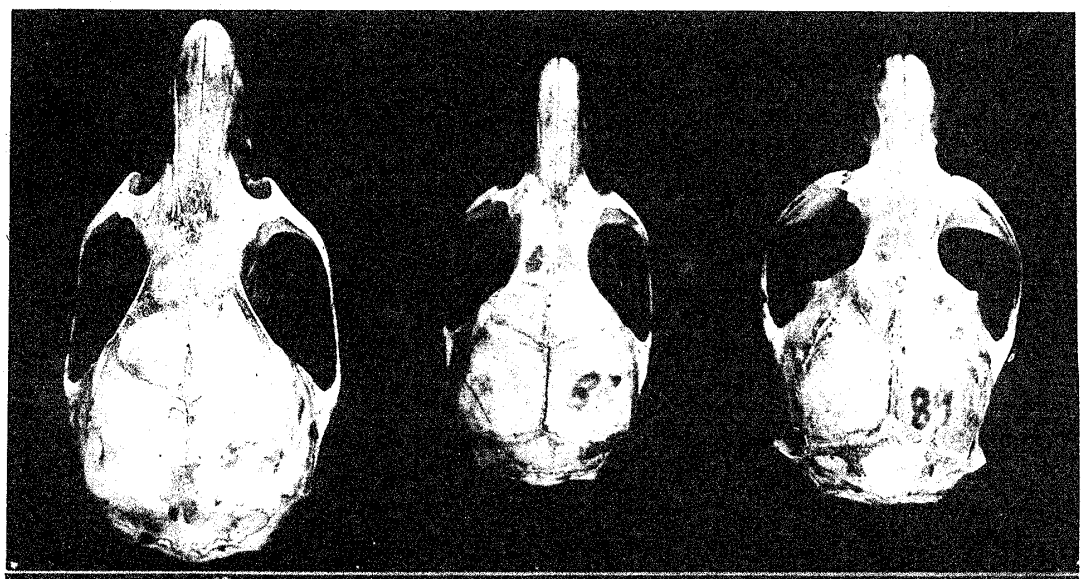
PLATE

PLATE 35

1. a-c. *Clethrionomys rufocanus okiensis* subsp. n., type. ♀ × 2.
2. a-c. *Apodemus geisha celatus* Thomas. ♂ × 2.
3. a-c. *Apodemus speciosus navigator* Thomas. ♂ × 2.

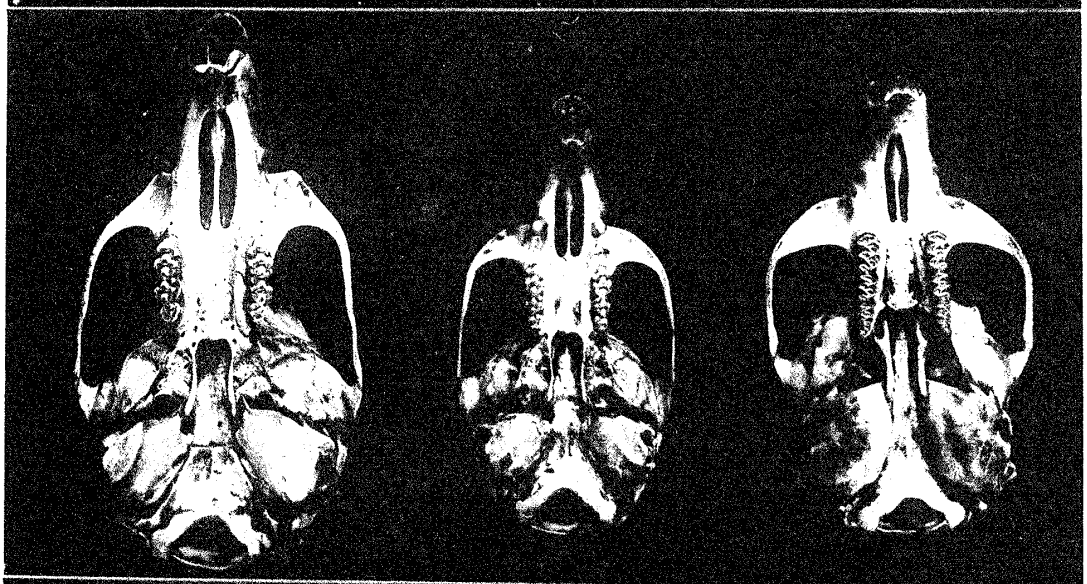
2a
2b

3c



1a

3b



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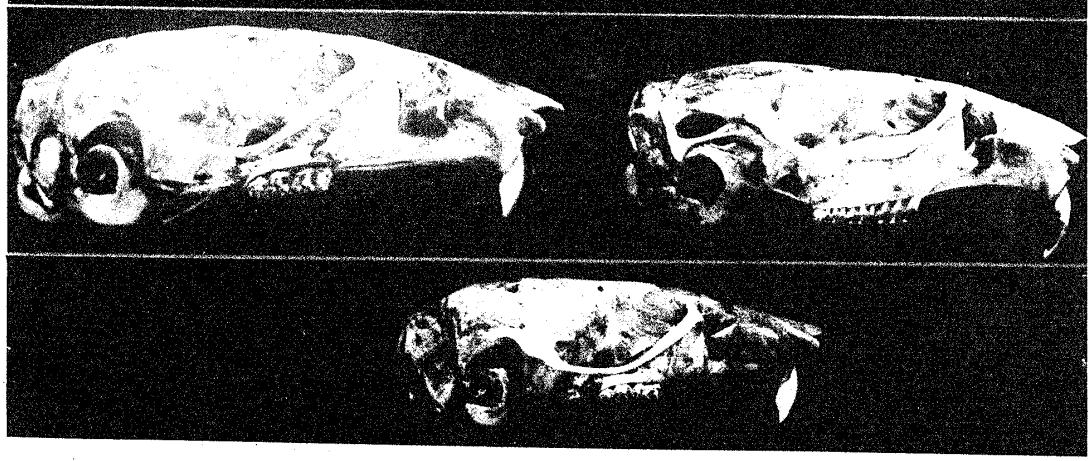

1c

2c