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TWELVE APPARENTLY NEW FORMS OF MURIDAE (OTHER THAN *RATTUS*) FROM THE INDO-AUSTRALIAN REGION

BY G. H. H. TATE AND RICHARD ARCHBOLD

As explained in a previous article¹ in which new forms of *Rattus* were described, the new species proposed in the following pages are included in a series of collections brought together by Mr. Richard Archbold and deposited at The American Museum of Natural History, New York.

***Bunomys caelestis koka*, new subspecies**

TYPE.—No. 101236, Amer. Mus. Nat. Hist.; ♀, adult; Tanka Salocco, Mengkoka Mts., southeastern Celebes, 1500 meters; January 11, 1932; collector, G. Heinrich. The type is a skin and skull in good condition. (Female selected for comparison with type of *B. c. caelestis*.)

GENERAL CHARACTERS.—Smaller than true *caelestis* and with smaller hind foot, shorter claws, and shorter nasal bones.

DESCRIPTION.—Pelage soft and fine, dorsally fuscous-based, tipped with Mars brown which pales to Prout's brown on sides. Under parts with bases of hairs fuscous, their tips tawny, the tawny becoming pale russet on chest and throat. Hands and feet with backs light fuscous, digits flesh-colored. Tail fuscous above, flesh-colored beneath. Ears light fuscous. Claws, though decidedly more elongate than those of the *R. chrysocomus* rats (of which we consider *Bunomys* a derivative), shorter than those of *B. c. caelestis*.

Skull with the long rostrum and full occipital region of *Bunomys*. Zygomatic plate sloping; palatal foramina short; bullae moderate in length; back of palate level with back of m^3 ; molar teeth small. No inflation of muzzle (which, however, probably occurs as a manifestation of age and growth).

MEASUREMENTS OF TYPE.—Head and body, 135 mm.; tail, 148; hind foot, 33.5; length claw digit 3 of forefoot, 3.8; skull, occipitonasal length, 38.7; zygomatic breadth, 18.1; interorbital breadth, 6.6; breadth of brain case, 15.3×3.9 ; nasals, 15.4×4.0 ; interparietal, 5.1×9.9 ; zygomatic plate, 2.8; diastema, 10.7; palatilar length, 17.5; palatal foramina, 6.3×2.4 ; length bulla, 6.8; upper molar crown length, 6.1; length crown m^1 , 2.9; width crown m^1 , 2.0.

***Melomys tafa*, new species**

TYPE.—No. 104341, Amer. Mus. Nat. Hist.; ♀, adult; Mount Tafa, 30 miles southwest of Mt. Albert Edward, Papua, 2400 meters; September 2, 1933; collector, Richard Archbold. The type is a skin and skull in good condition.

GENERAL CHARACTERS.—A medium-sized *Melomys* of that division of the genus with one scale-hair per tail scale, with upper parts gray with a brownish cast, not fulvous however; and under parts whitish, the hairs all gray-based. Tail paler beneath.

DESCRIPTION.—Pelage long and very soft, about 10 mm. on the back. General dorsal color bone brown, paling to natal brown or Hay's brown on sides and rump. Under parts grayish white with bases of all hairs gray. Hands and feet whitish buff. Tail fuscous, beneath flesh-color. Tail slightly longer than body. Feet slender.

Skull delicate, well rounded; muzzle moderately lengthened; interorbital region not much narrowed; neither maxillary nor squamosal root of zygoma flaring abruptly; temporal ridges very slight, rather more developed in some paratypes; palatal foramina moderate in length.

MEASUREMENTS OF TYPE.—Head and body, 128 mm.; tail, 143; hind foot, 30.3; skull, occipitonasal length, 34.7; zygomatic breadth, 17.1; breadth brain case, 13.4; nasals, 12.0×4.1; zygomatic plate, 3.8; diastema, 9.7; palatilar length, 16.1; palatal foramina, 4.7; length bulla, 4.3; upper molar crowns, 6.7; length crown m^1 , 3.3; width crown m^1 , 1.9.

This new species, which appears to be closest to *rubex*, is based upon four males and five females (including the type). A male from Murray Pass is referred also to *tafa*. At Mt. Tafa the habitat of this species seems to be identical with that of the larger *mollis*.

***Melomys shawi*, new species**

In the Shaw Mayer collection from the Weyland Range is a specimen A.M. No. 101959 (field No. 93) which Dollman¹ identified as *Melomys platyops*. This animal, which agrees rather closely in general structure with our new species *tafa* and with Thomas's description of *rubex*, is certainly not referable to *platyops* (compare dimensions). The tail possesses the one hair per scale arrangement. The feet are slender and moderately long, but the dorsal color is fulvous, with an admixture of blackish medially. Ventrally the whitish hairs are all gray-based. The animal seems to have no counterpart among described species.

TYPE.—No. 101959, Amer. Mus. Nat. Hist.; ♂, adult; Weyland Range, Dutch New Guinea; 1200 meters; July 10, 1930; collector, F. Shaw Mayer. The type is a skin and skull in good condition.

GENERAL CHARACTERS.—A small-sized *Melomys* colored deep mahogany on back, under parts of gray-based white hairs. Feet slender. Tail fuscous above, paler beneath. Related most nearly to *rubex* and *tafa*.

DESCRIPTION.—Pelage 11 mm. on back. Color warm sepia (Ridgway), heavily irrorated with blackish, paling on sides to snuff brown. Ventral pelage 6 mm., color as indicated above. Line of demarcation sharp. Face somewhat grayer than back. Feet buffy.

¹Rothschild and Dollman, 1933, Proc. Zool. Soc. London, p. 214.

Skull closely resembling that of *tafa*, the muzzle somewhat slenderer but general dimensions almost identical.

MEASUREMENTS OF TYPE.—Head and body, 110 mm.; tail, 109; hind foot, 27; skull, occipitonasal length, 32.9; zygomatic breadth, 16.4; interorbital breadth, 5.7; breadth brain case, 13.4; nasals, 11.5×3.5; diastema, 9.0; zygomatic plate, 3.7; palatilar length, 15.0; palatal foramina, 4.4; length bulla, 3.9; upper molar crowns, 6.4; length crown m¹, 3.2; breadth crown m¹, 1.9.

This form is very readily distinguished from *platyops* by its subequal body/tail proportions, small size, shorter molar series, and shallower mandible.

Melomys latipes, new species

TYPE.—No. 104273, Amer. Mus. Nat. Hist.; ♂, young adult (the teeth only moderately worn); Baroka, Mekeo District, Central District, Papua, nearly sea level; April 11, 1933; collector, R. Archbold; No. 1343. Skin in good condition; skull with left maxillary portion broken.

GENERAL CHARACTERS.—A dark-colored, broad-footed *Melomys* with tail wholly fuscous; its scales with but one hair each; and its under parts white, the hairs of the median area from chin to vent white to the roots.

DESCRIPTION.—Dorsal pelage generally short (8–9 mm.) and rather crisp, colored nearest to bone brown, becoming paler on sides by admixture of snuff brown. Under parts with belly fur about 4 mm., general color white, the median area for a width of about 13 mm. with the bases of the hairs white, but this extended on throat and chin to 15 mm. White area bordered by the snuff-brown hairs of the sides, all of which have gray bases. Arms and legs snuff-brown to clay. Hands and feet darker. Tail wholly fuscous. Ears fuscous. Feet broad and strong.

Skull rather strongly built; nasals not elongate; interorbital region moderately broad, the temporal edges sharp but scarcely beaded, diverging posteriorly along the parietosquamosal suture. Widest part of zygoma at squamosal. Anterior palatal foramina rather long, as in *mollis*. Teeth strong and somewhat broadened. Bullae, though small, broad and well rounded.

MEASUREMENTS OF TYPE.—Head and body, 142 mm.; tail, 147; hind foot, 31; breadth of hind foot at level of proximal end of 5th metatarsal, 4.9; skull, condylo-incisive length, 32.1; zygomatic breadth, 17.5; interorbital breadth, 5.6; breadth brain case, 14.5; diastema, 9.1; zygomatic plate, 4.0; palatilar length, 15.6; palatal foramina, 4.9+; length bulla, 4.4; length molar crowns, 7.1; length crown m¹, 3.4; width crown m¹, 2.0.

M. laticeps agrees with none of the described species of *Melomys* even approximately, so even though it is undesirable to set up a new species based upon one complete specimen only, in this case it seems necessary.

Melomys sevia, new species

TYPE.—No. 79755, Amer. Mus. Nat. Hist.; ♂, adult; Sevia, Cromwell Range, Huon Peninsula, Mandated Territory of New Guinea; 1400 meters; March 14, 1929; collector, R. H. Beck, Whitney South Sea Expedition. The type is a skin and skull in fair condition (skull broken at back; skin measured only roughly in inches in the field).

GENERAL CHARACTERS.—A rather small species with long lax reddish-brown dorsal pelage, and ventral fur grayish white, all gray-based. The tail fuscous above and below, its scale-hairs three per scale and in length about two scale-lengths, in this respect approaching *moncktoni*. The animal, however, is far smaller.

DESCRIPTION.—Color nearest to natal brown, paling to sayal brown on sides and rump. The face and forehead, as in *moncktoni*, lightly washed with grayish. Hands and feet buffy white. Vibrissae long, reaching 47 mm.

Skull with wide brain case unbeaded, square supraorbital edges, and almost no abrupt spring of squamosal roots of zygomata. Rostrum moderately shortened; the frontal area with marked depression (possibly abnormal). Palate rather narrow, with rather long foramina for *Melomys*. Median pterygoid fossa also narrow for the genus. Bulla of the customary small size. Molars normal for *Melomys*. Anterior edge of zygomatic plate almost straight up and down, not projecting forward.

MEASUREMENTS OF TYPE.—Head and body, 124 mm.; tail, 140; hind foot, 25; skull, occipitonasal length, 31.5; zygomatic breadth, 15.3; interorbital breadth, 5.2; breadth brain case, 13.4; nasals, 10.0×3.2; diastema, 7.6; zygomatic plate, 3.3; palatilar length, 13.0 palatal foramina, 5.1, upper molar crowns, 5.7; length crown m¹, 2.5; width crown m¹, 1.6.

This animal (the type is the only specimen known to us) does not agree with the published description of any species, though apart from the quite considerable difference in size it probably comes nearest to *moncktoni*. From the quality of its fur it is readily recognized as a mountain-living species. Indeed, superficially it is quite like the animal which we have called *rubex*, but from that form it differs in lacking the russet wash over the belly hairs, in the important scale-hair arrangement, and in certain skull characters.

***Uromys neobritannicus*, new species**

TYPE.—No. 99881, Amer. Mus. Nat. Hist.; ♂, adult; New Britain, Solomon Islands, 1933; collector, W. J. Eyerdam, Whitney South Sea Expedition. The type is a skull in good condition without a skin.

GENERAL CHARACTERS.—An aberrant member of the *anak* group of *Uromys*, differing conspicuously through its remarkably developed postorbital processes, by reason of which it is totally unlike any *Uromys* hitherto described. It is open to question whether this skull may not be worthy of subgeneric separation from *Uromys*, for *Cyromys* was differentiated on the basis of characters of about equal weight.

DESCRIPTION.—The skull of a very large *Uromys*, with condyloincisive length of 66 mm., and length of molar series 13.9, thus comparable only with *Uromys anak*. The dorsal surface of the skull presents special characters of major importance, constituted by the remarkable triangular postorbital prominences whose tips are 27 mm. apart. Those processes must bring about secondary adjustments of the temporal muscles and ridges in response to their development. The processes are situated entirely on the squamosal bones, and their presence, though at a lower level within the temporal fossa and covered by temporal muscle, is clearly to be seen in Frechkop's rough drawings of several giant rat genera. It may also be noted in incipient

form in most species of *Uromys*. In *neobritanicus* the dorsal surface of the process instead of being covered by muscle attachment makes contact with the dermis of the head and thus separates the anterior part of the origin of the temporal muscle completely into two parts. The temporal ridges curve backward and medially from the processes, approaching one another most closely at the level of the front edge of the interparietal, and then turn outward to lose themselves in the lambdoidal crest. The mandible is very deep from articular process to the back of the angular process (23.7). In *anak* (♀, however) it is only 19.2. The coronoid process is short and blunt.

MEASUREMENTS OF SKULL OF TYPE.—Occipitonasal length, 67.6 mm.; zygomatic breadth, 36.8; breadth brain case, 23.4; interparietal, 7.6×14.2 ; interorbital breadth, 11.2; nasals, 24.0×6.7 ; diastema, 20.4; zygomatic plate, 10.4; palatilar length, 34.8; palatal foramina, 7.0; length of bulla, 6.4; upper molar crowns, 13.9; length crown m^1 , 6.7; width crown m^1 , 3.8.

Lenomys meyeri lampo, new subspecies

TYPE.—No. 101128, Amer. Mus. Nat. Hist.; ♀, adult; Wawa Karaing, Mt. Lampobotang, southern Celebes; 2200 meters; September 13, 1931; collector, G. Heinrich. The type is a skin (overstuffed) and skull in good condition.

GENERAL CHARACTERS.—A large grayish rat with hairs tipped with whitish and under parts buffy white, the terminal half or three-fifths of tail flesh-colored. Almost indistinguishable externally from *meyeri* and *longicaudatus*.

DESCRIPTION.—Pelage rather woolly, the guard hairs, though longer, only slightly heavier than the wool hairs. General color of head and back fuscous to chaetura drab, flecked with whitish; slightly darker toward the median line than at sides. Head colored as body. Under parts buffy white, all hairs being gray at the base. Dorsal color gradually passing into ventral color. Proportion of white terminal part to gray basal part of hairs greater on throat, chest and abdomen. Feet and hands with hairs gray brown, tipped with white. A slightly darker patch extending from the ankle almost to the end of the fourth and fifth metatarsals. Hairs subtending the claws white. Tail with distal half whitish flesh-colored, about equal in length to head and body.

Skull closely similar in general characters to that of *longicaudatus* and to the drawing by Hoffmann of that of *meyeri*. It can be distinguished from the former by its much longer palatal foramina, longer bullae, and narrower nasals more arched over the nares, and by possessing longer tooth rows. From *meyeri* it may be separated only by its long palatal openings.

The dentition of the new form differs slightly from that of *longicaudatus* in that the third lophs of m^1 and m^2 each possess an internal enamel loop, almost excluding the posterior-projecting process of the internal tubercle of their respective second lophs from the inner side of the tooth. That there exists considerable variation in the folding of the enamel in this species is shown by A.M. No. 101125, in which an accessory lamellate fold is given off from the back of the median tubercle of the third loph of both m^1 and m^2 toward the external side of the tooth. The teeth of *meyeri meyeri* drawn by Hoffmann appear closest to those of *longicaudatus*. They lack the extra lamellae described above.

MEASUREMENTS OF TYPE.—Head and body, 275 mm.; tail, 276; hind foot, 45; occipitonasal length, 57.1; zygomatic breadth, 28.3; nasals, 20.5×5.9 ; interorbital

breadth, 7.3; interparietal, 5.3×9.3; diastema, 15.8; zygomatic plate, 6.0; palatilar length, 27.7; palatal foramina, 8.8; length bulla, 8.8; upper molars crowns, 11.0; length crown m¹, 4.7; width crown m¹, 3.2.

Besides the type, *L. m. lampo* is based upon two male and three female paratypes, all from the type locality. We believe that the skull from Paré-Paré figured by Jentink¹ should also be referred to *meyeri lampo*.

Individuals of the series vary only slightly in color-tone from one another. One has a tuft of white hairs on the crown of the head, another has the under parts more strongly tinged with yellowish than has the type.

***Pogonomys lepidus huon*, new subspecies**

TYPE.—No. 79763, Amer. Mus. Nat. Hist.; ♂, Sevia, Cromwell Mts., Huon Peninsula, New Guinea; March 20, 1929; collector, R. H. Beck, Whitney South Sea Expedition. The type is a skin and skull in fair condition (both jugals missing).

GENERAL CHARACTERS.—A rufous-backed, white-bellied (white to bases of hairs) *Pogonomys* closely allied to *lepidus lepidus*.

DESCRIPTION.—General dorsal color close to snuff brown, slightly darker along the back, paler and clearer on face and sides. Under parts pure white, the hairs white to the bases. Ears brown, naked; hands and feet clothed with fine white hairs. Tail rather dark brown, but little paler beneath.

Skull with the short rostrum, flaring zygomata, and complex teeth of the genus.

MEASUREMENTS OF THE TYPE.—Head and body, 135 mm.; tail, 185; (the two foregoing, which are taken from the dried skin, are probably excessive); hind foot, 22; skull, occipitonasal length, 30.2; basal length, 26.7; zygomatic breadth, 16.4; interorbital width, 4.4; nasals, 10.4×2.9; zygomatic plate, 3.3; palatal length, 15.4; palatilar length, 13.5; palatal foramina, 3.9×1.9; length bulla, 4.2; upper molar crowns, 5.2; length crown m¹, 2.4; width crown m¹, 1.8.

The new form differs from true *lepidus* in its somewhat larger size, larger teeth and longer toothrow, and especially in its shorter palatal foramina. These last in *l. lepidus* equal 5×2.6 (*vide* Thomas).

The subspecies is based upon a series of four adults and one subadult from the Cromwell Mountains. Just as with *lepidus*, the color of the juvenal animal is duller, being less rufous and more grayish than that of the old specimens.

***Pogonomys lepidus derimapa*, new subspecies**

TYPE.—No. 101963, Amer. Mus. Nat. Hist.; ♀, adult; Mt. Derimapa, Gebroeders Gebirge, Dutch New Guinea, 1600 meters; August 16, 1930; collector, F. Shaw Mayer; collector's No. 169. The type is a skin and skull in good condition. (Note.—This specimen was identified by Dollman² as *P. sylvestris*.)

¹1890, Weber's 'Zool. Ergebniss,' I, Pl. x, figs. 4-6.

²Rothschild and Dollman, 1933, Proc. Zool. Soc. London, p. 214.

GENERAL CHARACTERS.—A dull, rufous-colored *Pogonomys*, with belly hairs white to their roots. Very closely allied to *lepidus lepidus* and *lepidus huon*.

DESCRIPTION.—Color substantially as in true *lepidus*, but slightly darker, coming nearest to bister, this color effect resulting from the admixture of considerable blackish to the russet of the back. Face and flanks paler as in other *lepidus*. Hands, feet, ears, and tail as in *lepidus*.

Skull representing the extreme of shortening of the palatal foramina to be found in *lepidus*, only 3.3 mm. in length. Tooth row and teeth large, as in *lepidus huon*.

MEASUREMENTS OF TYPE.—Head and body, 112 mm.; tail, 174; hind foot, 23; skull, occipitonasal length, 31.1; basal length, 27.5; zygomatic breadth, 17.2; interorbital width, 4.5; palatilar length, 4.1; palatal length, 16.2; palatal foramina, 3.3×1.9 ; length bulla, 4.2; upper molar series (alveoli), 5.4; upper molar crowns, 5.2; length crown m^1 , 2.3; width crown m^1 , 1.7.

This geographical race is founded upon the type and a second female in subadult pelage (Mayer field No. 133, A.M. No. 101961), which was referred by Dollman (*loc. cit.*) to *loriae*.

The Gebroeders form is darker in color than true *lepidus* and approximates the Huon Peninsula animals in general size. The shortening of the palatal foramina to be noted in *l. huon* is in the *l. derimapa* race carried still farther.

***Pogonomys (Chiruromys) forbesi satisfactus*, new subspecies**

TYPE.—No. 79828, Amer. Mus. Nat. Hist.; ♂, adult; Goodenough Island (Dauila), D'Entrecasteaux group, east of New Guinea; November 18, 1924; collector, R. H. Beck, Whitney South Sea Expedition. The type is a specimen in alcohol in good condition (skull removed and cleaned).

GENERAL CHARACTERS.—A large, short-headed arboreal rat with long tail, the tip of which is highly prehensile. It differs from its mainland relatives in its longer hind foot and proportionately decreased length of skull. It comes closest both on structural and geographical grounds to *forbesi mambatus*.

DESCRIPTION.—Color and pelage essentially as *forbesi*, a dull brownish-gray with hairs of under parts buffy white devoid of gray bases. No white mark above eye. Scale whorls of tail 6 per cm. Color of tail brownish gray. Scales keeled. The lack of white marks between eye and ear suggests *mambatus*.

Skull with very short rostrum, widely flaring zygomata, frontal processes of premaxillae extending far behind nasals, and all palatal and other characters proper to *Pogonomys (Chiruromys)*.

In length and breadth the skull of the type of *satisfactus* approximates the dimensions given by Thomas for *forbesi mambatus*. The palatal foramina, 3.8, are markedly shorter than those of *f. vulturnus* which equal 5.1. The diastema is only 9 (11.2 in *pulcher*). The molar series is rather longer, 5.9 instead of 5.7 (*mambatus*). In another male, however, it is 5.6.

MEASUREMENTS OF TYPE.—Tail, 225 mm.; hind foot, 37; skull, occipitonasal length, 35.0; zygomatic breadth, 21.7; interorbital breadth, 6.1; nasals, 11.6×3.4 ; diastema, 8.1; zygomatic plate, 37.; palatal foramina, 3.9; length bulla, 4.8; upper molar crowns, 6.0; length crown m^1 , 2.6; width crown m^1 , 1.9.

The form is based upon a series of two adult males and one juvenal male, all from the type locality.

Pogonomys (Chiruromys) pulcher major, new subspecies

TYPE.—No. 79831, Amer. Mus. Nat. Hist.; ♀, adult; Goodenough Island (Dauila), D'Entrecasteaux group, east of New Guinea; November 18, 1924; collector, R. H. Beck, Whitney South Sea Expedition. The type is a specimen in alcohol in good condition (skull removed and cleaned).

GENERAL CHARACTERS.—A russet-bellied *Chiruromys* with much longer tail and hind foot than *p. pulcher*.

DESCRIPTION.—General color and quality of pelage essentially the same as in *p. pulcher*. Above dark grayish cinnamon; beneath light russet. A dark mystacial area joining the dark area around eye. Buffy whitish chin, lips, and throat. A whitish area surrounding each axillary mamma. Hairs of feet light brown. Tail very coarsely scaled, the scales of the dorsal surface near the base markedly larger than those of the ventral surface. (In *f. satisfactus* they are subequal.) A tendency for the dorsal scales near base to become coalesced in large masses (not observed in *f. satisfactus*). Scales unkeeled (keeled in *satisfactus*). Color brownish black (gray brown in *satisfactus*).

In the skull very few differences can be noted. The palate is slightly longer than in *satisfactus* due to setting back of the molar series, and the same cause has brought the median pterygoid fossa slightly forward in relation to the posterior level of the 3d molars. In the mandible the posterior margin (between articular and angular processes) is less excavated in *major* and the articular process is heavier.

MEASUREMENTS OF TYPE.—Tail, 245 mm.; hind foot, 37; skull, occipitonasal length, 37.4; zygomatic breadth, 22.3; interorbital breadth, 5.9; nasals, 11.0×4; diastema, 10.3; zygomatic plate, 3.9; palatilar length, 15.9; palatal foramina, 4.2; length bulla, 4.9; upper molar crowns, 6.0; length crown m¹, 2.7; width crown m¹, 1.9.

Apparently *pulcher* and *forbesi* represent two thoroughly distinct species, additional characters of which we have pointed out above. It is interesting to find representatives of both on the one island.

Hydromys neobritannicus, new species

TYPE.—No. 99867, Amer. Mus. Nat. Hist.; ♀, adult; Baining, Balayang, Wide Bay, New Britain, Solomon Islands; March 4, 1933; collector, W. F. Coultas, Whitney South Sea Expedition. The type is a skin and skull in good condition.

GENERAL CHARACTERS.—The generally melanic coloration of the under parts, black dorsal surfaces of fore and hind feet, the large size of the animal (hind foot 63, length of skull 56) and its wide m¹ set this species of *Hydromys* off sharply from any others hitherto described.

DESCRIPTION.—Length of dorsal pelage 10–13 mm., of ventral pelage 7–10. Color of dorsal fur very dark, the guard hairs almost black, although relieved by a glossy sheen, the wool hairs nearest to Vandyke brown. On the sides, thighs, arms, and cheeks the black hairs are replaced by shorter brownish-black hairs, but the tops

of hands and feet are again darker—almost black. Under parts Vandyke brown with a strong blackish cast on the anterior thoracic and abdominal region, but slightly paler on the posterior thoracic region and throat and neck. Ears nearly naked, near mummy brown. Tail black, with the terminal one and one-half inches buffy and a girdle of the same color for one inch at about its middle. Mammæ 0-2=4.

Skull large and strongly built; rather similar in structure to that of *esox*. It differs, however, in the form of the pterygoids and especially in its larger and much wider molars. This added width of the molars encroaches upon the palate to such an extent that the distance apart of the two m^1 (3.7 mm.) only slightly exceeds the width of the individual molars (3.5 mm.). In *esox* the condition is quite different, the distance apart of the molars being 4.0 mm. and the width of individual molars only 2.7 mm. Differences between these two species in respect to this character can then be expressed by the very different fractions, $\frac{37}{35}$ and $\frac{40}{27}$. In the form of the hind part of the palate, yet another character appears. In *esox* the palate between the tooth rows is distinctly domed or arched upward, whereas in *neobritannicus* this part of the palate is nearly flat, being turned downward merely at the posterior margin.

MEASUREMENTS OF TYPE.—Head and body, 288 mm.; tail, 289; hind foot, 60; skull, occipitonasal length, 52.2; greatest (condylobasal) length, 54.7; zygomatic breadth, 28.4; interorbital breadth, 6.7; nasals, 17.7×5.5 ; interparietal, 6.3×9.7 ; diastema, 14.6; zygomatic plate, 3.5; palatilar length, 26.1; palatal foramina, 6.0×3.7 ; length bulla, 6.0; length molar crowns ($m^1 + m^2$), 9.4; length crown m^1 , 6.7; width crown m^1 , 3.6.

This interesting new species is based upon a single female.

