

sides, not on the upper surface. Palatal foramina about the length of the molar series, not extending back to the level of the front of m^1 . Front of upper incisors pale whitish yellow, of lower ones white.

Dimensions of the type (measured in the flesh):—

Head and body 130 mm.; tail 150; hind foot 35; ear 5, length of conch 2.

Skull: greatest length 30.5; basilar length 24; zygomatic breadth 15.5; length of nasals 10.8; interorbital breadth 5.6; breadth of brain-case 14.4; palatilar length 13.5; diastema 7.8; palatal foramina 5×2.2 ; length of upper molar series 4.8.

Hab. Tres Rios, Costa Rica.

Type. Male. Collected 5 May, 1905, by Mr. C. F. Underwood.

This beautiful animal forms a striking addition to the fauna of Central America, and it is with much pleasure that I name it in honour of Mr. Underwood, who had known of its occurrence for some time, but had hitherto been unable to obtain a specimen.

This makes the third mammalian genus discovered by Mr. Underwood, the other two being *Glyphonycteris* and *Hylonycteris*.

LVIII.—*New Asiatic Mammals of the Genera Kerivoula, Eliomys, and Lepus.* By OLDFIELD THOMAS.

Kerivoula picta bellissima, subsp. n.

Essential characters as in *picta*, but size larger and fur longer.

Size decidedly larger than in *picta*, the forearm about 3 mm. longer. Fur long, thick and woolly; hairs of back about 9 mm. in length. Interfemoral membrane and hind limbs more thickly and extensively covered above than in *picta*. Colour practically as in *picta*, except that the fur of the back is more strongly contrasted blackish slaty for about 2 mm. at its base, only a faint indication of a darker basal shade appearing in *picta*. Face more white than rest of body. Tail-vertebræ apparently only six in number instead of seven, the individual joints longer, especially the proximal ones.

Skull as in *picta*, except for its larger size.

Dimensions of the type (a skin):—

Forearm 39 mm.

Skull: greatest length 15; palate length in middle line 7; front of i^1 to back of m^3 7.5.

Hab. Pak-hoi, S. China.

Type. Skin. B.M. no. 6. 1. 13. 1. Collected by Dr. Hayley Bell. Presented by Miss M. A. Bell.

If the difference in the caudal vertebræ above noted proves to be constant, this bat will, of course, have to be regarded as a distinct species; but, owing to the distortion of the parts, due to the skinning, so that there is some difficulty in making sure of the facts, and to there being only one specimen, I think it wise for the moment to ignore this character. The difference in size and in length of fur may easily indicate merely subspecific distinction, corresponding to the difference in locality.

Eliomys (Dryomys) angelus, sp. n.

A large Central-Asian representative of *E. nitidula* (*E. dryas*, auct.).

General characters, structure of teeth, and other details as in *E. nitidula*, the type of the subgenus *Dryomys*. Size conspicuously larger than in that animal, exceeding it by as much as it in turn is surpassed by *E. quercinus*. Fur thick and firm; the ordinary hairs of the back about 10 mm. in length, a few longer and finer ones intermixed attaining 13–14 mm. General colour (specimen skinned out of spirit) dull clay-colour with a suffusion of rufous, but the latter is probably due to alteration in spirit. Under surface from nose to anus sharply defined creamy white, the hairs of this colour to their bases on the throat, centre of chest, and inguinal region, slaty at base elsewhere. Crown like back; muzzle whitish, even on the sides, the black eye-mark commencing about 3 mm. in front of the eye, passing across the eye to the base of the ear, a marked tuft of black hairs on the forwardly turned base of the outer margin. Hands and feet pure white. Tail imperfect in the type, apparently from an accident during life, the hairs of the basal two inches about twice as long as in *E. nitidula*, above mixed brown and buffy, below dull whitish.

Skull conspicuously larger in every dimension than in *E. dryas*; its form very similar. Palatal foramina short, little open, their dividing septum broad behind. Bullæ proportionally large.

Teeth small in proportion to the skull, not larger than in *E. nitidula*, their structure apparently, so far as can be seen on a rather worn example, very much as in that animal.

Dimensions of the type (measured as a spirit-specimen):—

Head and body 110 mm.; tail damaged in life; hind foot 21; ear 15.

Skull: greatest length 30; basilar length 23·2; greatest

breadth 17; length of nasals 10; interorbital breadth 44; brain-case, breadth 13·5; palatilar length 10·2; diastema 7·3; palatal foramina $3\cdot2 \times 2$; length of bulla 7·9; length of upper tooth-series 3·7.

Hab. Thian Shan.

Type. Male (skinned from spirit). Collected by Mr. A. A. Kutsenko. One specimen.

This species is readily distinguished by its much greater size from its only near ally, the European and Persian *Eliomys* (*Dryomys*) *nitidula*. It is chiefly interesting by the immense reduction which its discovery in Central Asia effects in the great geographical gap between the Japanese dormouse (*Glirulus japonicus*) and all the other members of the sub-family Glirinæ.

The type specimen had had its tail broken during life, and had then produced a bony continuation to the vertebral column, supporting the thickened tail-end, as described elsewhere*.

Lepus Vassali, sp. n.

A small species allied to *L. hainanus*, but much paler in colour.

Size about as in *L. hainanus*, conspicuously smaller than in *L. peguensis* and *siamensis*. Fur rather short, the longer hairs of the back about 25 mm. in length. General colour above heavily lined drab, the light rings on the hairs near "cream-buff," the resulting colour very different to the cinnamon of *L. hainanus*. The wool-hair whitish slaty at base, darkening to black terminally, without an intermediate buffy or fulvous ring. Sides inconspicuously washed with pale cinnamon; chin and belly white; chest-band coarsely grizzled buffy drab. Top of muzzle cinnamon, sides white, a whitish-grey line running through the eye to the base of the ear; crown like back. Ears of medium length; proectote grizzled drabby, the long fringe-hairs nearly white; metectote mostly naked, inconspicuously black terminally; metentote thinly haired, dull whitish, with a darker band along the middle of the outer edge, its extreme edge white. Nuchal patch dull rufous. Fore limbs cinnamon, hind limbs similar but paler; palmar and plantar hairs dirty whitish. Tail black above, white on sides and below.

Skull short and stout, its upper profile strongly curved. Postorbital wings decidedly larger than in *L. hainanus*.

Incisors with their enamel foldings as in *L. hainanus*†.

* P. Z. S., 12th December, 1905.

† See Major, Trans. Linn. Soc., 2nd ser. Zool. vii. p. 468 (1899).

Dimensions of the type:—

Head and body 353 mm.; tail 65; hind foot 74; ear 70.

Skull: greatest length 73·5; basilar length 55; greatest breadth 36; nasals, length diagonally 33, breadth 17; intertemporal breadth 13·7; breadth of palatal bridge 5·5; diastema 19·5; palatal foramina $18 \times 8\cdot5$.

Hab. Nha-tiang, Annam. Sea-level.

Type. Adult female. Original number 16. Collected 25th December, 1905, and presented by Dr. J. Vassal.

This very interesting little hare, which I have much pleasure in naming after its discoverer, is widely different from any of the Burmese and Siamese species, and is only related to that of Hainan, from which it differs by its conspicuously paler colour.

LIX.—*Spinning Slugs and Snails.* By L. LINDINGER*.

In observing land- and water-mollusks I was struck by a faculty apparently widely spread among these animals, which appears to be known to but few malacologists, namely the power of drawing out threads of mucus which harden, and by means of which the creatures are able to let themselves down from firm objects.

I could find but few statements in literature. Almost all notices mention slugs of the genus *Limax* (and *Agriolimax*). Thus Schilling ('Grundriss der Naturgeschichte') states with regard to *Agriolimax agrestis*:—"From the slime on the surface of the body it forms threads, by which it is able to let itself down from the branches to the ground." Geyer ('Unsere Land- und Süßwasser-Mollusken,' 1896, p. 13) is acquainted with the same fact in the case of *Limax arborum*. Precise statements as to the nature of the spinning and as to experimental observations on the length of the thread in the case of *Agriolimax agrestis* are given by M. Ballerstedt in the 'Naturwissenschaftliche Wochenschrift' (Neue Folge, i. pp. 463-465). This author isolated the subjects of his experiment upon a leaf, which was attached to a thread. The leaf was then exposed to the sun, which caused the animals to change their temporary sojourning place; they did not, however, crawl up the thread supporting the leaf, but descended from the latter by means of their mucus which

* Translated by E. E. Austen from the 'Zoologischer Anzeiger,' xxix. Bd., No. 19 (29th December, 1905), pp. 605-610.



Thomas, Oldfield. 1906. "LVIII.—New Asiatic mammals of the genera Kerivoula, Eliomys, and Lepus." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 423–426.

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