



Mola lanceolata from the Rho Archipelago.

Notes on the Malayan races of *Ratufa affinis* (Raffles)

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Systematic.—

Ratufa affinis interposita subsp. nov.

Ratufa affinis frontalis subsp. nov.

A re-examination of the series of squirrels of this group from the Malay Peninsula in the Raffles Museum amounting to sixty skins and skulls shows that it can be divided fairly readily into a larger number of races than has hitherto been accepted. There is a regular gradation from the northern form, *R. a. pyrsonota* with dark, grizzled uppersurface, orange-buff belly and black feet to the typical form found in Singapore with pale, uniform upper surface, white belly and white feet.

In certain cases in the intermediate areas I admit that I should be hard pressed to assign to an isolated specimen a definite name and the proposed subspecies, or names, are therefore to be regarded as marking nodal points in the course of continuous variation: the majority of specimens could be identified sub-specifically without hesitation.

Working from south to north it seems possible to recognize the following forms.—

✓ 1. *R. affinis affinis* (Raffles).

Trans. Linn. Soc., 13, 1822, p. 258 (Singapore Island).

Uppersurface pale and uniform: underparts and feet white, the latter contrasting with the limbs.

So far as is known confined to Singapore Island and the islet of Pulau Ubin in the Straits of Johore. Ten specimens examined.

✓ 2. *R. affinis johorensis* Rob. and Kloss.

Journ. Fed. Malay States Mus., 4, 1911, p. 244 (Padang Tuan, Segamat, north-west Johore).

Generally whiter, the feet concolorous with the rest of limbs and the dark areas on the cheeks and ears reduced.

Ten specimens examined from the type locality, the Sembrong River in central Johore; and Pelepak and Kota Tinggi in south Johore. *There is also one specimen, 2 not without locality*

✓ 3. *R. affinis aureiventer* (Is. Geoff.): *R. a. malaccensis*?

Mag. Zool. Cl., I, 1832, pl. 5 (Java errore: Malacca, Rob. and Kloss 1918).

Under parts never white: feet washed with brown.

Thirteen specimens examined from Gunong Tampin, Malacca; Gunong Angsi and Bukit Tangga in Negri Sembilan; Triang in west Pahang; and various localities in Selangor north to Rawang.

✓ 4. *R. affinis interposita* subsp. nov.

Feet and under parts darker than in *R. affinis aureiventris*.

Type.—Adult male (skin and skull) collected at Ulu Gombak, Selangor, Malay States, 1,600 feet on 13th September, 1909. Mus. No. 2091/09.

Nine specimens examined from the type locality; Klang Gates, Ulu Gombak and Ginting Bidei in Selangor; Kuala Lipis, Kuala Tahan and Kuala Teku in Pahang.

✓ 5. *R. affinis frontalis* subsp. nov.

Differs from all other forms in having a frontal band of greyish white behind the brownish black muzzle. Feet blackish brown. Upper parts markedly annulate.

Type.—Adult male (skin and skull) collected at Taiping, Perak, Malay States, on 20th June 1911. Mus. No. 1034/11.

Seven specimens examined from the type locality, Bukit Gantang near Taiping and Pondok Tanjong, northwest Perak.

✓ *R. affinis pyrsonota* Miller.

Proc. Acad. Sci. Wash., 2, 1900, p. 75 (*Trang, Peninsular Siam*).
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This form has the darkest and richest colouring of all and in fresh pelage is very strongly speckled on the whole of the upper surface. Feet dark. No grey frontal band.

Eleven specimens examined. Peninsular Siam: Kao Luong near Nakon Sritamarat; Kao Tung Song; Trang (paratype); Chong, Trang; Ongut, Trang; Trang-Patalung border; Lamra, Trang; Bangnara, Patani. Malay States: Changkat Mentri on the Bernam River (Perak-Selangor boundary). Occurs as far north as Victoria Point, Tenasserim but no specimens have been obtained¹.

The specimens from Lamra (Trang) and Bangnara (Patani) south to Perak are paler, less richly coloured and more uniform on the upper parts than more northern examples: in general appearance they are rather like *interposita* but have the upper surface and feet darker and the hairs, especially of the rump, distinctly annulated. They may represent yet another race worthy of separation but all the skins are "bleached" and for the present are placed with *pyrsonota*.

1. Vide Kloss, Journ. Nat. Hist. Soc. Siam, 2, 1916, p. 15.