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DIAGNOSES OF NEW MAMMALS FROM THE SOUTH-WEST PACIFIC.

By ELLIS TROUGHTON.

During the past year various "animal reservoir" collections of rats and marsupials have been submitted for determination at the Australian Museum by several United States research units, especially the U.S.A. Typhus Commission, as represented in the South-West operational areas by Lieutenant-Colonel Cornelius B. Philip and Major Glen M. Kohls.

The complexity of the mammalian fauna of New Guinea and the adjacent islands has been strikingly emphasized by examination of these important collections, and more or less tentative identifications have had to be supplied for the better known groups.

It has also become essential to provide new names for some outstanding forms in accordance with their physical and zoo-geographical relationships. It is hoped to provide a representative set of the "animal reservoir" collection for the U.S. National Museum at Washington. With this object in view, an effort will be made to amplify existing material during the period of service of the author with the Tropical Scientific Section of the A.I.F., under the direction of the Commonwealth Scientific Liaison Bureau.

The following preliminary diagnoses will be amplified in the course of a general revision of the animal reservoir collections associated generally with the scrub typhus collections.

Echymipera philipi sp. nov.

Diagnosis.—A diminutive species of the genus, distinguished from its nearest ally, *cockerelli* of the New Guinea mainland, by its smaller proportions and darker coloured and more spinous pelage.

Ear small and broadly triangular, a small indentation behind the tip; tragus triangular, simple, unfoliated. Tail definitely shorter than the head and faintly or smoothly ringed, with 19–20 scale-rings to the centimetre. Mammae 6.

Dimensions of young holotype male: External, female allotype in parentheses—head and body 170 (203); tail 52 (72); pes 35.5 (40); ear 23.5 × 16.5 (21.5 × 15.5) mm.

Skull: Greatest length 46.6; zygomatic width 21.2; palatal length 27.2; post-palatal foramina (one) 6 × 3.1; interorbital width 12.2; nasals 16.5 × 4.6; molars 1–3, 10.1 mm.

Holotype male M.6999, allotype female M.7028, and paratypes, male and female, in the Australian Museum, collected by Lt.-Col. C. B. Philip and Major G. M. Kohls on Owi Island, in the Schouten Group, New Guinea.

Petaurus kohlsi sp. nov.

Diagnosis.—A small but long-tailed insular species, warranting specific distinction because of the dark fuscous brown body-coloration, which almost eliminates the characteristic dorsal stripe; the somewhat paler ventrum is relieved only by a strongly defined creamy-white irregular patch in the middle of the somewhat paler centre of the belly. There is no trace of the yellowish edging to the side membranes, or the pale grey or yellowish tipping characteristic of races of *papuanus*, while the tail is proportionately much longer.

Coloration of back, head, and forelimbs about dark mummy-brown (Ridgway); hind part of legs and basal three-fourths of tail decidedly paler, about deep olive-buff flecked with buffy-brown, contrasting with the dark brown of the body and outer fourth

of the tail. Undersurface about dark buffy-brown, with blackish mummy-brown edging to the membranes; a sharply contrasted irregular whitish patch on the mid-ventrum.

Dimensions.—Adult female holotype with head and body 128 and tail 180, contrasted with 135 and 155 respectively in the young adult male holotype of *P. papuanus tafa*, described from Mt. Tafa, Central Division of Papua; pes 24; ear 22×13.5 , reaching to middle of eye.

Skull: Greatest length 33.6; zygomatic width 23.3; palatal length 17.5; nasals 12.2×3 ; interorbital, greatest width across strong processes 9.5, least width 7.4; teeth, p^4-m^4 7.4, m^{1-3} 5 mm.

Holotype male M.6998 in the Australian Museum, collected by Lt.-Col. C. B. Philip and Major G. M. Kohls on Owi Island of the Schouten Group.

Rattus owiensis sp. nov.

Diagnosis.—A small species, allied with the *ringens* group by the mammary formula 1-2-6, and in general appearance, but with a sparser and less spinous pelage, relatively longer and less rugose tail. Skull specially distinguished by a disproportionately heavy rostrum, and lack of well-defined supraorbital ridging, characters specifically distinguishing it from both the typical *ringens* and *mordax*. Coloration a softer buffy-brown streaked with blackish-brown, and lacking the coarse speckling or strongly spinous hairs of the New Guinea species. Tail relatively longer and darker, and scale-rings (9 to cm.) decidedly less rugose than in true *ringens*.

Dimensions of adult female holotype, and young adult allotype in parentheses: Head and body 170 (156); tail 166 (174); pes 36-38 (37-38.5), the measurement differing on each foot; ear 20.5×13.5 (20.3×15) mm.

Skull: Holotype female, greatest length 45; zygomatic width 21.5; palatal length 24.4; interorbital width 6.8; palatal foramina 8.4×3.6 ; nasals 18.2×6 ; rostrum, greatest width 7, depth 8.1; upper molar row 7.8, width of m^1 2.2 mm.

Holotype male M.6993, and allotype female M.6992, in the Australian Museum, collected by Lt.-Col. C. B. Philip and Major G. M. Kohls in August, 1944, on Owi Island in the Schouten Group.

Rattus browni gawae subsp. nov.

Diagnosis.—This small and richly fuscous race is definitely separated from the type series in the Australian Museum, and other geographical races, by the bright ochraceous coloration of the throat and chest, unusually dark pigmentation of the manus and pes, relatively very long tail, and proportionately lighter rostrum as indicated by the dimensions of the nasalia and palatal foramina.

Head tawny to cinnamon-brown, a darker Prout's brown (Ridgway) between the eyes and ears. General dark fuscous-brown of the back a mixture of ochraceous-tawny and mummy-brown tips; sides a clearer ochraceous-buff to tawny. Throat and chest a rich ochraceous-tawny, toning to a paler cinnamon-buff on the inguinal area. The dark brown of the mid-dorsum contrasts markedly with the clearer buffy sides, which are even more strongly contrasted with the tawny-red of the ventrum. Tail-scales 13 to centimetre. Mammae 2-2=8.

Dimensions of the holotype female: Head and body 109; tail 116; pes 25.5; ear 15.5×12.5 mm.

Skull: Greatest length 30.3; zygomatic breadth 14.5; palatal length 15.8; palatal foramina 5.3×1.9 ; interorbital width 4.8; nasals 10.5×3 ; upper molar row 5.3 mm.

The holotype female M.6370 in the Australian Museum, presented by Lieut.-Commander W. H. Harrington, then of H.M.A.S. *Swan*, who collected it "on the Gawa Island atoll" of the Marshall Bennett Islands on 27.7.1937. The isolation of this race on a small island between the Trobriands and Woodlark Island emphasizes its distinctness, while the dark pigmentation of the manus and pes and warmth of the colouring are suggestive of an unusual habitat, such as in some mangrove-haunting forms of *Melomys*.

Rattus rennelli sp. nov.

Diagnosis.—A medium-sized rat, more robust than *browni*, and averaging larger than *exulans*. Distinguished from both species by the decidedly larger skull, larger and much broader nasalia, and wider expansion of the palatal foramina.

General colour of the back ochraceous-tawny to Prout's brown. Underfur of the ventrum greyish, washed with a tipping of light buff. Ear reaching to posterior canthus of eye. Tail-scales 10–11 to centimetre. Mammae 2–2=8.

Holotype male M.4213 in the Australian Museum, presented by Mr. G. A. V. Stanley, who collected on Rennell Island, situated about 90 miles south-westward of San Christoval Island, Eastern Solomons.

Dimensions of the holotype male, and allotype female in parentheses: Head and body 149 (142); tail 156 (157); pes 30.5 (29.5); ear 18 × 14 (17.5 × 13.8) cm.

Skull: Greatest length 35.8; zygomatic width 17.2; palatal length 19.1; palatal foramina 6.9 × 2.8; interorbital width 5.5; nasals 13.6 × 4.5; upper molar row 5.5 cm.