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## RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 61

### A NEW SPECIES OF *RATTUS* FROM THE SNOW MOUNTAINS OF NETHERLANDS NEW GUINEA

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The rat described below is represented by a series of 57 specimens, most of which were collected by W. B. Richardson, mammalogist of the 1938–1939 New Guinea expedition. It will be remembered that the expedition flew in an amphibian airplane from Hollandia to Lake Habbema, 3225 meters, and besides making a study of the remarkable agricultural Stone Age tribe of the near-by Balim Valley, climbed to the snows of Mt. Wilhelmina. Specimens of the new rat were obtained at various levels between 3225 and 4050 meters in August and September. A summary of the field work accomplished was published by Archbold, Rand, and Brass.<sup>1</sup>

#### ***Rattus richardsoni*, new species**

TYPE: A.M.N.H. No. 150701, adult male, near Lake Habbema, north of Mt. Wilhelmina, Netherlands New Guinea, altitude 3225 meters, August 2, 1938, collector W. B. Richardson (field no. 4556). The type is a skin and skull in good condition.

GENERAL CHARACTERS: Externally similar to the long-haired, tawny brown *Melomys lanosus* found in the same general area. It

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<sup>1</sup> Archbold, R., A. L. Rand, and L. J. Brass, 1942, Results of the Archbold expeditions, No. 41, Summary of the 1938–1939 New Guinea expedition, Bull. Amer. Mus. Nat. Hist., vol. 79, art. 3, pp. 197–288.

differs from all hitherto described New Guinea *Rattus* by this hair quality and by characters of the skull and teeth. Its altitudinal range extends well above that of any previously recorded species of *Rattus* of equivalent size. Only the anomalous "*Stenomys*" *niobe* group, much smaller in actual dimensions, occurs also at such altitudes.

DESCRIPTION OF TYPE: Pelage extremely fine and silky, averaging 20 mm. in length on the back, composed of dense wool hairs, scattered, slender, channeled guard hairs, and a few fine, terete, blackish bristles. The color is a mixture of tawny and black, the bases gray. The under parts, also long haired, are buffy white with gray bases. The transition from upper parts to under parts is progressive and ill defined. Ears large and fuscous. Arms and legs tawny brown outside, whitish inside. Hands and the long, slender feet white. Tail with fine *Rattus*-type scales, each scale accompanied by three stiff black bristles, the bristles approximately three times the length of a scale. (This character serves readily to distinguish the skins from those of *Melomys lanosus*.)

Skull elongate and narrow, with rostrum elongate and tapered anteriorly; braincase moderately full; interparietal somewhat narrowed; anterior palatal foramina elongate, pointed in front, rounded behind; bullae not enlarged; interpterygoid fossa narrow; teeth of normal *Rattus* character, lacking the simplification found in teeth of *Melomys*; zygomatic plate projecting well forward, slightly sloping, well rounded off.

MEASUREMENTS OF TYPE: Skin (field measurements): head and body, 161 mm.; tail, 144; hind foot (s.u.), 39; ear from crown, 25. Skull (laboratory measurements): total length, 39.7; condylobasal length, 37; zygomatic breadth, 18; combined width of nasals, at middle, 3, near tip, 4; least interorbital width, 6.5; width of braincase, 16.6; mastoid width, 13.8; palatal length, 20; length of anterior palatal foramina, 7; combined width of same, 2.7; length of bulla, 6.2; width of mesopterygoid fossa, 2.2; width of zygomatic plate, 3.5; length, crowns of  $m^{1-3}$ , 6.3; crown of  $m^1$ , 2.1 by 1.9;  $m^2$ , 1.9 by 1.9;  $m^3$ , 1.5 by 1.6.

Besides the type, this species is represented in the Archbold collection by 24 topotypes and the following additional specimens taken between Lake Habbema and Mt. Wilhelmina: 3560 meters, 10; 3600 meters, one; 3800 meters, three; 3850 meters, five; 3900 meters, two; 3950 meters, five; 4000 meters, four; 4050 meters, two.

The affinities of *Rattus richardsoni* do not seem to be with any of the other species of New Guinea, all of which, except the *browni* and *niobe* groups, have far more massive skulls and relatively harsh pelage. The species instead seems to represent a new group. Superficially it shows a degree of likeness to *Rattus lepturus* of the mountains of Java.

