NOTES ON THE GENUS PSEUDOCHEIRUS OGILBY (MAMMALIA, MARSUPIALIA) FROM NEW GUINEA

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The present study is mainly based on material collected during the 1939-1940 Dutch New Guinea Expedition of the "Koninklijk Nederlandsch Aardrijkskundig Genootschap" (the Royal Netherlands Geographic Society) to the region of the Wissel Lakes in central West New Guinea. Professor Dr. H. Boschma, who was the zoologist of the expedition, then obtained 753 specimens of mammals. These specimens were mainly brought together by the natives of the region, who belong to the Kepaukoe tribe. In the period from 25 September to 20 November 1939 213 marsupials, 70 bats, 465 rodents, 2 New Guinea dogs and 3 skulls of the domestic New Guinea pig were collected in the neighbourhood of Enarotali and the Araboe bivouac. Enarotali, on Paniai Lake at 3° 55′ 40″ S 136° 22′ 6″ E, was the headquarters of the zoologist of the expedition; this village is situated on the eastbank of the lake, at an altitude of 1765 m. Araboe bivouac is a bivouac on the Araboe River which empties in the N.E. angle of Paniai Lake, at an altitude of 1750 m. Because most of the material was brought in by natives, the biotopes as a rule are not known (cf. Boschma, 1943).

The genus *Pseudocheirus* is represented in this material by two species, viz. *P. corinnae* Thomas and *P. mayeri* Rothschild & Dollman. A very fine series of 105 specimens of the latter species was obtained, which proves that it must be very abundant in the Wissel Lakes region.

Also the material of *P. mayeri* collected by the 1938-1939 Archbold Expedition to the central part of West New Guinea could be studied. This material consists of 41 skins with skulls obtained in the central mountain range between Mt. Wilhelmina and the Idenburg River (see Archbold, Rand & Brass, 1942, map 1). Through the kindness of the late Dr. G. H. H. Tate I received on loan from the American Museum of Natural History, New York, this collection as well as the two syntypes of *P. mayeri*. I am also very much indebted to Messrs. R. Archbold and H. M. van Deusen of that museum for permitting me to borrow the material for a rather extensive period.

When examining the specimens of the genus *Pseudocheirus* present in

the Leiden Museum, I found that some of the identifications published by Jentink (1911) are erroneous; therefore, this material is treated here also.

Tate's (1945) subdivision of the genus and species has been followed here; for the synonymy I may refer to Tate (1945) and to Laurie & Hill (1954, pp. 20-23).

It is a great satisfaction to dedicate this paper to my beloved teacher Professor Dr. H. Boschma, and to express in this way my high esteem of him and also to show my gratitude for his guidance throughout my career as a biologist, for his encouragement and for his sound advice. The fact that this paper is largely based on material collected by Dr. Boschma makes it all the more proper for this occasion.

Pseudocheirus (Pseudochirops) corinnae corinnae Thomas

Pseudochirus corinnae Thomas, 1897, pp. 142-144.

Type locality. — "Mountains of Vanapa, British New Guinea", Upper Vanapa River basin, Papua, roughly 9° S 147° E.

Professor Boschma collected one female of this species at Araboe Bivouac, 12 October 1939, altitude 1750 m (coll. no. 1902: skin only). As appears from the data found in the literature, the coat colour of the species is subject to a great variation, and consequently the systematic position of the described subspecies, based usually on very few specimens, is rather uncertain. Provisionally I consider the specimen of the Wissel Lakes region to belong to the typical form, which presumption is mainly based on the remarks made by Tate (1945, p. 20) concerning specimens from the neighbourhood of Mt. Wilhelmina, a locality situated at about 300 km east of the Wissel Lakes.

In my single specimen the rump and tail are of a bright rusty colour; the dark dorsal median zigzag line, which extends onto the head, is not sharply contrasted with the silvery tinged brownish bands on each side of the zigzag line: the thoracic part of these bands has more silver-tipped hairs than the lumbar part, the latter part therefore can hardly be distinguished from the rest of the back. In the material from Mt. Wilhelmina Tate (1945, p. 20) found also the dorsal line to be obsolescent.

I had the opportunity to compare Prof. Boschma's specimen with an adult male (reg. no. Leiden Mus. 280) from the Rawlinson Mountains, just west of the Huon Gulf, Territory of New Guinea. This specimen was acquired in November 1912 from Mr. F. Förster. It agrees very well with the original description of *P. argenteus* Förster. A blackish brown dorsal median zigzag line extends from the rump to the head, being bordered on each side by a distinct silvery coloured band; posteriorly, however, the

blackish colour of the dorsal line gradually passes into the dark brown of the rest of the back, just as in the specimen of *P. corinnae* from the Araboe bivouac; in the Huon Gulf specimen there is no trace of the golden brownish coat colour of the typical form.

The obsolescence of the median dorsal line found in the specimens from the Wissel Lakes region and Mt. Wilhelmina might be a character of subspecific significance. However, Laurie (1952, p. 284) found in a series of fourteen specimens, all from N.E. New Guinea, an adult female in which the dorsal pelage more resembles that of *P. corinnae argenteus* than that of the true *P. corinnae*.

The ventral parts in both examined specimens are of the same colour: the median area is of a buffy colour bordered by greyish areas, the breast being of a yellowish-brown colour. There is no trace of a patch of white hairs on the throat and chest as described for *P. corinnae fuscus* Laurie.

The following external measurements were taken from the dried skin of the Araboe bivouac specimen: head and body, 280 mm; tail, 265 mm; hind foot, 43 mm. When comparing these measurements with those given by Laurie (1952, p. 284) it appears that the Wissel Lakes specimen is a young animal.

Pseudocheirus (Pseudochirops) cupreus beauforti Thomas

Pseudochirus Albertisii: Jentink, 1911, p. 176 (not *Phalangista* (*Pseudochirus*) *Albertisii* Peters, 1874).

Pseudochirus beauforti Thomas, 1922, pp. 734-735.

Type locality. — "Lorentz River", South West New Guinea, south of the Snow Mountains.

During the 1909-1910 Dutch New Guinea Expedition to the Snow Mountains one adult female of a *Pseudocheirus* species was collected on 14 October 1909 in the Hellwig Mountains (about 4° 34′ S 138° 41′ E) at an altitude of about 1500 m (coll. no. 325; reg. no. Leiden Mus. 13391: skin and skeleton). Jentink (1911, p. 176) considered this specimen to belong to *P. albertisii* (Peters). Thomas (1914, p. 323) mentioned this record in his list of the mammals of the Snow Mountains; however, in the original description of *P. beauforti* the same author (Thomas, 1922, p. 735) remarked: "It is not improbably the animal from the Hellwig Mountains referred to *P. albertisi* by Jentink".

After examination of the specimen in question I found Thomas's statement to be correct, so that also the description of the skeleton given by Jentink for the Hellwig Mts. specimen is that of the true *P. cupreus beauforti*.

This very fine specimen has the belly pale pinkish-cinnamon, passing without distinct demarcation into the colour of the sides; there is an irregular patch of white on the throat and an irregular transverse whitish stripe on the breast. The dorsal parts, the sides and the feet are uniform dark coppery; a poorly marked blackish median line extends from the rump to the shoulder region, anteriorly broadening gradually into the dark colour of the neck and the crown. The dark fur of the crown and the neck is mixed with very few coppery-tipped hairs. The tail agrees perfectly with Thomas's (1897, p. 145) description for the typical form of *P. cupreus:* "Tail at its base very thickly hairy and coloured like the body, but terminally, on the part which is naked below, it is very thinly haired above as well, becoming gradually practically naked at the extreme tip. The hairs on this terminal part are black. Naked part below tip very coarsely shagreened".

Comparing the Hellwig Mts. specimen with four specimens of the true *P. albertisii* from the Arfak Mountains (Vogelkop peninsula, N.W. West New Guinea) and N.W. West New Guinea, which are present in the Leiden Museum, the following differences between the two species became apparent. The ventral parts of *P. albertisii* are uniformly whitish from the throat to the base of the tail, sharply contrasting with the colour of the sides; the coat colour of the back and the tail is much lighter and more brownish than in *P. beauforti.* In both species, however, the dorsal median line is obsolete. A striking difference is furthermore found in the hairy tail. In *P. albertisii* the tail has a woolly fur extending from the base to the tip, the length of the hairs, however, gradually decreases; as indicated above, in *P. beauforti* the posterior two-fifths of the tail has appressed hairs; distally the density of the fur diminishes gradually so that at first the skin becomes visible through the fur while the tip is practically naked.

There are also some differences in the skull of both species. In *P. albertisii* the zygomatic arch is more widened at the orbit than at the squamosal; in *P. beauforti* the greatest breadth of the zygomatic arch is across its middle. In the former species the canine is subequal to the anterior premolar, in the latter the canine is more robust than this premolar both in length and in height. In both species, however, the canines are shorter than the third incisives. In *P. corinnae,* however, the canine is more robust and longer than the third incisive.

I found also differences in the intertemporal breadth, which in the single specimen of *P. beauforti* is 5.9 mm, while in my three specimens of *P. albertisii* it varies from 7.6 to 8.1 mm. In *P. albertisii* the cristae of the frontal bone are parallel both on the frontal bone and on the parietals; in *P. beauforti* the cristae of the frontals converge in the anterior part of the

parietals. In this respect *P. beauforti* agrees with the examined skull of *P. corinnae* from Mt. Rawlinson. Lack of material makes it impossible for me to decide whether the above listed differences are due to age or sex, or whether they possess diagnostic value. As to the ratio of the length and breadth of the nasals, there is a striking difference between *P. corinnae* on the one hand, and *P. albertisii* and *P. beauforti* on the other: in the former species this ratio is more than two, whereas in the latter it is less than two.

Since Jentink (1911, p. 176) did not give any measurements of the above mentioned specimen of *P. cupreus beauforti* it may be of some interest to provide those here. External measurements taken from dried skin (in mm): head and body, 275; tail, 250. Skull measurements (in mm): total length, 65.7; condylo-incisive length, 64.1; basal length, 61.0; palatal length, 35.4; length of nasals, 20.1; breadth of nasals, 11.0; zygomatic width, 41.0; greatest breadth on bullae, 34.7; width across meaticus, 37.3; intertemporal breadth, 5.9; breadth of braincase, 22.0; height of skull from sphenobasion, 20.6; length of proc. praeoccipitalis, 6.5; length c^1-m^4, 35.2; length p^4-m^4, 22.1; length p^4 × width p^4, 4.6 × 3.5; length m^1 × width m^1, 5.1 × 4.1; length m^4 × width m^4, 3.9 × 3.5; breadth across m^3 × m^3, 20.5; total length of mandible, 47.1; coronoid height, 28.1; length p_4 × m_4, 23.8.

Pseudocheirus (Pseudocheirus) schlegelii Jentink

Pseudochirus schlegelii Jentink, 1884, p. 110.
Type locality. — "Arfak Mountains", the peninsula Vogelkop, N.W. West New Guinea.

The type specimen of *Pseudocheirus schlegelii,* an adult male, is still present in the collections of the Leiden Museum (= Jentink's 1887 and 1888 *Pseudochirus schlegelii,* no. a: damaged skull and mounted specimen, respectively; new reg. no. 13388). This specimen was procured (for 10 guilders) on 29 April 1879 from the dealer G. A. Frank, Sr., of Amsterdam.

After having described the species as new in 1884, Jentink later (1911, p. 177) assigned a second specimen to this rare species. This second specimen was collected 17 October 1909 in the Hellwig Mountains at an altitude of 2528 m (coll. no. 352, reg. no. Leiden Mus. 12222: skin and skeleton, juv. male). Thomas (1914, p. 323) inserted this record in his list on the mammals from the Snow Mountains. As pointed out below (p. 571), however, Jentink's Hellwig Mountains specimen does not belong at all to *P. schlegelii* but is *P. mayeri.* The characters distinguishing both species are given under the latter.

Tate & Archbold (1937, p. 463: table) recorded a young female from "Ditschi in Arfak", but they queried the correctness of the identification. In his 1945 paper Tate referred this specimen to *P. forbesi lewisi* Dollman.

In the original description of the present species Jentink (1884, p. 110) gave as the only measurements of the type specimen the total length of the four upper and of the four lower molars, being respectively 13 and 13 mm. On taking the same measurements from the type, however, I found them to be 12.5 and 13.4 mm respectively. In a later paper, Jentink (1907, p. 191) provided the length of head and body of the type (260 mm), the tail length (250 mm), the basal length of the skull (51 mm) and the greatest breadth of the skull (30 mm). It is impossible to measure exactly the external measurements, since the specimen has been mounted. However, as far as I can see, the length of head and body is not more than 230 mm. The present state of the damaged skull of which the occipital region and the basioccipital are lacking, makes it impossible to measure the basal length. Tate (1945, p. 25: table) gave the measurements of the upper teeth, which I found to be correct; furthermore he indicated the zygomatic width as being 30.0 mm, while I found it to be 29.6 mm.

Since, as far as known to me, no other measurements of the skull of the type of *P. schlegelii* have been published, some are given here (in mm), as far as these could be taken from this damaged skull and mandible, the latter lacking the coronoid processes. The anteriormost point of the premaxillary is broken off, so that as landmark the anterior alveolar border of the first incisive is used. Palatal length, 26.6; length of nasals, 16.1; breadth of nasals, 7.1; zygomatic width, 29.6; intertemporal breadth, 5.8; length c^1-m^4, 27.0; length p^4-m^4, 15.0; length p^4 × width p^4, 2.8 × 1.9; length m^1 × width m^1, 3.5 × 2.5; length m^4 × width m^4, 2.6 × 2.3; width across m^{3-3}, 14.8; total length of mandible, 35.0; length p_4-m_4, 16.3.

Pseudocheirus (Pseudocheirus) mayeri Rothschild & Dollman

Pseudochirus Schlegelii: Jentink, 1911, p. 177; Thomas, 1914, p. 323 (not *Pseudochirus schlegelii* Jentink, 1884).

Pseudochirus mayeri Rothschild & Dollman, 1932, p. 15.

Type locality. — "The Gebroeders, Weyland Range, Dutch New Guinea". The Gebroeders Mountains are situated at about 3° 38′ S 135° 55′ E.

Netherlands New Guinea Expedition 1909-1910

Hellwig Mountains, Central Mountain range, at about 4° 32′ S 138° 41′ E, altitude 2528 m, 17 October 1909: 1 juv. ♂, coll. no. 352, reg. no. Leiden Mus. 12222 (skin and skeleton).

Netherlands New Guinea Expedition 1939-1940

Prof. Dr. H. Boschma, the zoologist of the expedition, published an account of the zoological collecting done by him (Boschma, 1943). In this narrative the position of the various localities, all in the Wissel Lakes region (roughly 3° 56′ S 136° 20′ E) of the

Central Mountain Range of West New Guinea, are given. The indications i-iv in the following text stand respectively for: (i) skin, (ii) complete skeleton, (iii) skull with miscellaneous parts of skeleton, and (iv) skull only.

Araboe bivouac, altitude 1750 m. 12 October 1939: 1 ad. ♀, coll. no. 1924 (i, iv). 13 October: 1 juv. ♂, coll. no. 1925 (i, iv). 14 October: 2 ad. ♂ ♂, coll. nos. 1828 (ii) and 1935 (i, iv); 1 juv. ♀, coll. no. 1859 (ii). 15 October: 2 add. ♂ ♂, coll. nos. 1840 (iii) and 1961 (iii); 7 ad. ♀ ♀, coll. nos. 1832 (iii), 1834 (iii), 1835 (ii), 1841 = 1295 (i, iv), 1959 (iii), and 1962 (ii). 16 October: 1 ad. ♂, coll. no. 1974 (i, iv); 1 ad. ♀, coll. no. 1975 (i, iii); 1 juv. sex unknown, coll. no. 1968 (iii). 17 October: 1 juv. ♀, coll. no. 1946 (ii). 18 October: 1 ad ♀, coll. no. 1858 (iii). 19 October: 1 ad. ♀, coll. no. 1863 (i, iv). 24 October: 1 ad. ♀, coll. no. 1567 (ii). 25 October: 2 ad. ♂ ♂, coll. nos. 1544 (ii) and 1556 (iii); 1 ad. ♀; coll. no. 1541 (iii). 27 October: 3 ad. ♂ ♂, coll. nos. 1529 (ii), 1540 (ii), and 1597 (ii); 1 ad. ♀, coll. no. 1519 (ii). 28 October: 2 ad. ♂ ♂, coll. nos. 1736 (ii) and 1769 (iii); 1 ad. ♀, coll. no. 1732 (ii); 4 juv. ♀ ♀, coll. nos. 1733 (iii), 1761 (iii), 1766 (iii) and 1771 (ii). 29 October: 2 ad . ♂ ♂, coll. nos. 1717 (iii) and 1772 (iii); 1 ad. ♀, coll. no. 1708 (ii). 30 October: 1 ad. ♂, coll. no. 1749 (ii); 1 juv. ♂, coll. no. 1472 (ii); 2 ad. ♀ ♀, coll. nos. 1451 (iii) and 1466 (ii); 1 juv. ♀, coll. no. 1456 (ii). 31 October: 2 ad. ♂ ♂, coll. nos. 1467 (ii) and 1468 (iii); 3 ad. ♀ ♀, coll. nos 1415 (ii), 1417 (ii) and 1470 (iii). 1 November: 1 ad. ♂, coll. no. 1777 (iii). 4 November: 4 ad. ♂ ♂, coll. nos. 1629 = 3860 (i, iii), 1667 (iii), 1669 (iii) and 1672 (ii); 3 juv. ♂ ♂, coll. nos 1602 (iii), 1609 (iii), and 1637 (i, iv); 4 ad. ♀ ♀, coll. nos 1601 (iii), 1607 (iii), 1638 (ii) and 1641 (iii); 5 juv. ♀ ♀, coll. nos 1606 (iii), 1608 (ii), 1666 (iii), 1668 (iii) and 1671 (iii). 5 November: 1 ad. ♀, coll. no. 1031 (iii). 7 November 1939: 2 ad. ♂ ♂, coll. nos 1033 (iii) and 1146 (iii); 3 juv. ♂ ♂, coll. nos 1121 (ii), 1698 = 3899 (i, iv) and 1699 (iii); 8 ad. ♀ ♀, coll. nos 0484 (ii), 1030 (ii), 1034 (ii), 1036 (iii), 1120 (iii), 1148 (ii), 1170 (iii) and 1697 (iii); 1 juv. ♀, coll. no. 1029 (ii).

Enarotali, altitude 1765 m. 2 November 1939: 1 ad. ♀, coll. no. 1289 (iii). 4 November: 2 ad. ♀ ♀, coll. nos 1431 (ii), and 1434 (iii); 1 juv. ♀, coll. no. 1499 (iii). 5 November; 2 ad. ♂ ♂, coll. nos 0022 (iii) and 0056 (iii); 1 juv. ♂, coll. no. 0053 (i, iv); 3 ad. ♀ ♀, coll. nos 0050 = 3731 (i, iii), 0051 (i, iii), 0052 = 3729 (i, iii); 1 ad. sex unknown coll. no. 0045 (iii). 6 November: 2 ad. ♂ ♂, coll. nos 0351 (iii) and 1246 (iii); 1 juv. ♂, coll. no. 1243 (ii); 1 ad. ♀, coll. no. 1245 (ii). 13 November: 1 ad. ♂, coll. no. 1385 (i, iv). 15 November: 1 ad. ♂ coll. no. 0179 = 3964 (iv). 16 November: 1 ad. ♀, coll. no. 0195 = 3814 (i, iii). 17 November: 1 ad. ♀, coll. no. 0502 (i, iv). 18 November: 1 juv. ♂, coll. no. 0512 (i, iii); 1 ad. ♀, coll. no. 0511 (i, iii). 19 November 1939: 1 ad. ♂, coll. no. 0524 (i, iii).

Archbold Netherlands New Guinea Expedition 1938-1939

The specimens, which were all collected in 1938, are preserved as skin and skull in the American Museum of Natural History, New York.

Bele River, 18 km north of Lake Habbema, altitude 2200 m. 10 November 1938: 1 ad. ♂, coll. no. 5450, reg. no. 109616. 15 November: 2 ad. ♀ ♀, coll. no. 5610, reg. no. 109617, and coll. no. 5611, reg. no. 109618; 1 juv. ♀, coll. no. 5617, reg. no. 109619. 18 November: 1 ad. ♀, coll. no. 5773, reg. no. 109620. 22 November: 1 juv. ♂, coll. no. 5972, reg. no. 109622; 2 ad. ♀ ♀, coll. no. 5952, reg. no. 109621, and coll. no. 5973, reg. no. 109623. 23 November: 1 ad. ♀, coll. no. 6032, reg. no. 109624. 24 November: 1 ad. ♂, coll. no. 6042, reg. no. 109625; 1 ad. ♀, coll. no. 6043, reg. no. 109626; 1 juv. ♀, coll. no. 6044, reg. no. 109627. 26 November: 1 juv. ♂, coll. no. 6160, reg. no. 109628. 30 November: 1 ad. ♂, coll. no. 7010, reg. no. 109629. 2 December 1938: 1 ad. ♀ coll. no. 7080, reg. no. 109630.

9 km northeast of Lake Habbema, altitude 2800 m. 24 October 1938: 1 ad. ♀, coll.

no. 5217, reg. no. 109610. 26 October: 1 ad. ♂, coll. no. 5231, reg. no. 109611. 1 November: 1 ad. ♂, coll. no. 5308, reg. no. 109612; 1 juv. ♂, coll. no. 5313, reg. no. 109614; 1 ad. ♀, coll. no. 5312 reg. no. 109613. 5 November 1938: 1 juv. ♀, coll. no. 5365, reg. no. 109615.

Lake Habbema, altitude 3225 m. 6 August 1938: 1 juv. ♂, coll. no. 4611, reg. no. 109595. 7 August: 1 ad. ♀, coll. no. 4627, reg. no. 109596. 10 August: 1 ad. ♂, coll. no. 4658, reg. no. 109597. 12 August: 1 juv. ♂, coll. no. 4684, reg. no. 109598. 18 August: 1 juv. ♀, coll. no. 4717, reg. no. 109600. 20 August: 2 ad. ♂ ♂, coll. no. 4763, reg. no. 109601; coll. no. 4764, reg. no. 109602. 21 August: 1 juv. ♂, coll. no. 4781, reg. no. 109603; 1 juv. ♀, coll. no. 4782, reg. no. 109604. 24 August: 1 ad. ♂, coll. no. 4700, reg. no. 109599; 2 ad. ♀ ♀, coll. no. 4812, reg. no. 109606; coll. no. 4804, reg. no. 109605. 26 August: 1 ad. ♀, coll. no. 4821, reg. no. 109607. 28 August: 1 ad. ♀, coll. no. 4842, reg. no. 109608. 3 September 1938: 1 ad. ♂, coll. no. 4856, reg. no. 109609.

7 km north-east of Mount Wilhelmina, altitude 3560 m. 13 September 1938: 1 ad. ♂, coll. no. 4898, reg. no. 109755. 15 September: 1 ad. ♀, coll. no. 4957, reg. no. 109752; 1 juv. ♀, coll. no. 4958, reg. no. 109753. 17 September: 1 ad. ♂ coll. no. 5005, reg. no. 109756. 28 September 1938, altitude 3950 m: 1 ad. ♀, coll. no. 5024, reg. no. 109754.

American Museum of Natural History

The Gebroeders Mountains, Weyland Range, western part of the central mountain range of Western New Guinea, altitude 1500-1800 m. 3 July 1930; syntype 71 of *Pseudocheirus mayeri* collected by F. Shaw Mayer, reg. no. 101990: semi ad. ♂, skin and skull. 10 July 1930; syntype 89; reg. no. 101991: ad. ♀, skin and skull.

Range. — Beside the above mentioned localities, all in West New Guinea, *P. mayeri* has also been reported from Tomba, on the south-western slopes of the Hagen range, N.E. New Guinea (Laurie, 1952, p. 281). The type locality of *Pseudochirulus pygmaeus* Stein which as Laurie has clearly shown is a junior synonym of *P. mayeri*, is Sumuri Mountain, Weyland range, altitude about 2500 m (Stein, 1932, p. 257).

The species is restricted to the central mountain region of New Guinea, its horizontal range approximately extending from 3° 50′ S 135° E to 5° 50′ S 145° E, the vertical range from 1500 to 3600 m.

Figures. — A coloured plate of the animal was published by Rothschild & Dollman (1933, pl. 2), photographs of the skull in dorsal and palatal view by Rothschild & Dollman (1933, pl. 4 figs. 5, 6), and a figure of the skull in palatal view by Tate & Archbold (1937, fig. 11B).

Description of the coat colour. — The large series of specimens collected on the above mentioned localities shows that the coat colour of *P. mayeri* is quite variable. I could not detect any correlation between the colour on the one hand and age, sex or locality on the other. The general colour of the upper parts varies from cinnamon-brown (e.g., Boschma nos. 1629 ♂, 1698 ♂, 1925 ♂, 1935 ♂, 1974 ♂, 0052 ♀, 0502 ♀, 1924 ♀; A.M.N.H. reg. nos. 109611 ♂ from Lake Habbema, 101991 ♀ from the Gebroeders Mountains, Weyland Range, and syntype no. 71 ♂) to dark mummy brown (e.g.,

Boschma nos. 0524 ♂, 1637 ♂, 0050 ♀, 0051 ♀ and 0195; A.M.N.H. reg. nos. 109602 ♂ from Lake Habbema, 109754 ♀ from Mount Wilhelmina, and 109595 juv. ♂ from Lake Habbema). The colour generally is quite uniform, it may be slightly mottled by the presence in the darker fur of patches of hairs which have the tips paler. All intergradations between the two extremes occur (e.g., Boschma nos. 1385 ♂, 0511 ♀, 1841 ♀, 1842 ♀, 1863 ♀, and 1975 ♀; A.M.N.H. reg. nos. 109622 ♂ from Bele River, 109597 ♂ from Lake Habbema, 109756 ♂ from Mount Wilhelmina; 109613 ♀ from Lake Habbema, 109630 ♀ from Bele River). It is impossible to distinguish two or more sharply defined groups on the basis of the coat colour.

Generally a dark median band may be seen extending over the full length of the back of the animals being more distinct in the posterior half. Sometimes, however, very little of this band can be observed.

The upper parts of the tail are of the same colour as the body; in it as well as in the posterior part of the body there generally are some hairs with silvery tips, which are less distinct in the fur of the anterior part of the body.

Also the face markings show some variation. The colour of the upper parts generally extends some distance between the eyes. The eyes are surrounded by dark colour, which, however, in some specimens is reduced to a dark spot below the inner corner of the eye. A narrow dark median line may extend over the forehead, but is absent in most specimens. The white spot below the ear is present in all the material examined, though its colour varies from almost pure white to very pale brown. Also the size of this spot is variable. The area between the ears is of a lighter colour (more rufous or more brown) than the rest of the dorsal fur, the latter showing generally a greyish tinge caused by the grey colour of the basal part of the hairs.

The colour of the under parts too shows a very large variation. Two extremes are found. One of this is represented in the collection by A.M.N.H. reg. no. 109611 ♂ from Lake Habbema, which has the underside of the body pure white, being greyish in some places where the grey basal portions of the hairs cover the white tips of other hairs. The white colour is separated from the brown colour of the sides by a rather sharp demarcation. The other extreme is very distinctly shown by Boschma no. 1974 and a number of other specimens (e.g., A.M.N.H. reg. nos. 109755 ♂ from Mount Wilhelmina, and 109607 ♀ from Lake Habbema). In these specimens the colour of the ventral parts lies between ochraceous-tawny and tawny-olive, showing a greyish tinge in some places where the basal parts of the hairs become visible; this colour rather gradually passes into the cinnamon-brown of the sides. All transitions between the two extremes occur in

the examined material, though the brownish under parts are more common than the whitish.

The colour of the under parts extends onto the tail as a narrow median band of appressed hairs, which is sharply set off from the rest of the tail, where the hairs are more erect, with exception, however, of the proximal third which has short hairs. The end of the tail is naked on the undersurface. Dorsally the distal two-thirds to three-fifths of the fur consists of appressed hairs, the proximal part having a woolly fur, which gradually (in some specimens rather abruptly) merges with the distal part.

Sometimes the legs are slightly more rufous than the rest of the body; the fingers, especially those of the hind feet, are often covered by white hairs. The soles of the fore and hind feet of all specimens are brownish, except when the specimens have been preserved for a long time in alcohol (e.g. Boschma coll. nos. 0511, 1841, 1637, 0512, 0053, 1975 and 0051).

In his unpublished diary of the 1939-1940 expedition Prof. Boschma provided the following notes on the colour of the eyes, based on his nos. 1858 and 1863: eyes brown to dark brown, nearly black; pupils small; the eyes strongly resemble the beady eyes of a rat.

TABLE I

External measurements (in mm) of male specimens of *Pseudocheirus mayeri* Rothschild & Dollman collected by the Archbold Expedition 1938-1939 as noted on the field labels.

reg. no. A.M.N.H.	Locality	head + body	tail length	$\frac{100 \times (h+b)}{\text{tail length}}$	hind foot	ear
109614, juv.	Lake Habbema	137	131	104.6	20	20
109603, juv.	Lake Habbema	168	165	101.8	23	23
109622, juv.	Bele River	170	187	90.9	23	24
109595, juv.	Lake Habbema	172	160	107.5	25	20
109598, juv.	Lake Habbema	173	175	98.9	24	24
109628, juv.	Bele River	173	168	102.9	23	20
109611	Lake Habbema	187	185	101.1	22	24
109629	Bele River	189	182	103.9	23	23
109612	Lake Habbema	189	176	107.4	23	26
109616	Bele River	191	174	109.8	26	21
109599	Lake Habbema	195	197	98.9	25	24
109625	Bele River	196	165	118.8	22	21
109602	Lake Habbema	208	178	116.9	26	25
109601	Lake Habbema	208	172	120.9	26	25
109755	Mt. Wilhelmina	208	194	107.2	23	22
109609	Lake Habbema	209	183	114.2	24	27
109756	Mt. Wilhelmina	214	196	109.2	26	27
109597	Lake Habbema	215	180	119.4	26	26

Note. In the juveniles m^4 is not erupted; in juvenile no. 109614 neither m^3 nor m^4 are erupted.

TABLE II

External measurements (in mm) of the female specimens of *Pseudocheirus mayeri* Rothschild & Dollman collected by the Archbold Expedition 1938-1939 as noted on the field labels.

reg. no. A.M.N.H.	Locality	head + body	tail length	100 × (h + b) / tail length	hind foot	ear
109627, juv.	Bele River	146	138	105.8	18	22
109753, juv.	Mt. Wilhelmina	147	148	99.3	22	23
109615, juv.	Lake Habbema	155	155	100.—	22	20
109618, juv.	Bele River	157	131	119.9	21	19
109619, juv.	Bele River	164	158	103.8	23	20
109604, juv.	Lake Habbema	167	158	105.7	23	22
109600	Lake Habbema	170	170	100.—	25	23
109624	Bele River	181	164	110.4	22	21
109617	Bele River	186	152	122.4	21	23
109621	Bele River	193	178	108.4	22	21
109630	Bele River	196	182	107.7	25	23
109626	Bele River	198	176	112.5	22	22
109620	Bele River	198	162	122.2	25	23
109610	Lake Habbema	200	185	108.1	24	23
109608	Lake Habbema	205	175	117.1	23	25
109754	Mt. Wilhelmina	207	165	125.5	25	26
109606	Lake Habbema	210	182	115.4	24	26
109613	Lake Habbema	210	178	118	25	25
109623	Bele River	210	178	118	22	25
109752	Mt. Wilhelmina	212	188	112.8	24	27
109596	Lake Habbema	220	175	125.7	26	25
109605	Lake Habbema	223	176	126.7	22	25
109607	Lake Habbema	233	191	122	24	22

Note. In the juveniles of nos. 109627 and 109753 m^3 and m^4 are not yet erupted; in nos. 109615, 109618, 109619, and 109604 m^4 is not erupted.

External measurements. — The external measurements of the animals from the Wissel Lakes region have been taken by Javanese preparators. There are so many apparent mistakes in these measurements that it seems not justified to publish them. Therefore, I give here only the measurements indicated on the labels of the material from the Archbold Expedition (see tables I and II). On the labels the total length, the length of tail (measured from base of tail to tip), the length of the hind foot without claw, and the length of ear (measured from the crown) are noted. In the tables, however, instead of the total length, the length of head and body (= total length minus tail length) is given, and also the ratio (× 100) between length of head and body, and tail length.

An examination of these measurements shows that with the exception of a few cases the length of the head and body in all age groups is greater

than the tail length. There is an indication in the examined material of a variation with age: allometry may result in the disproportionate size development of head and body in relation to the tail. There is also a minor indication that this disproportion is greater in females than in males. But more than an indication can not be found in the material at hand, since the number of specimens in each age group is very small.

From the given external measurements it may be concluded that the females are larger than the males. However, taking the total length of the skull as a criterion for body size, it seems that in the Boschma collection the males are somewhat larger than the females. The whole question of absolute maximum size is very complicated. Taking the total length of the skull as the starting point then the examined specimens show that the absolute size of the animals in the Wissel Lakes region is smaller than that of those from the Lake Habbema region. As, however, *P. mayeri* is one of the animals of the region which are excellent eating, it is most likely that the natives of the Wissel Lakes area, from whom Dr. Boschma obtained his material kept the largest specimens for their own culinary purposes. In this connection it is interesting to note, that, judging by the notes on the labels of the Archbold Expedition, of the sixteen specimens of *P. mayeri* which were brought in by the natives, seven were juveniles, eight specimens were smaller than 198 mm (head and body), and only one specimen had a head and body length of 210 mm. The largest specimens, therefore, have been collected by the members of the expedition.

Skull measurements. — In table III the skull measurements of the adult specimens of *P. mayeri* of the Archbold Expedition 1938-1939 to the central part of West New Guinea are given; in the tables IV and V those of the Boschma collections from the Wissel Lakes region. All specimens dealt with have the four molars full grown, but this fact does not indicate that the animals are of the same biological age. The following linear measurements, all in millimeters, were taken with a vernier calliper to the nearest tenth of a millimeter (the letters "a", "b", etc. given in parentheses correspond with those of the columns of the tables). Total length (a): distance between the posteriormost projection of the occipital bone and the anteriormost projection of the premaxillary bones. Condylo-incisive length (b): distance between a line connecting the posteriormost projection of the condyles occipitales, and the anteriormost border of the first incisives. Basal length (c): distance between the anteriormost inferior border of the foramen magnum and the anteriormost border of the first incisives. Palatal length (d): distance between the median point of the posterior border of the palate and the anteriormost border of the first incisives. The other measurements are those

TABLE III. Skull measurements of the adult male and female specimens of *Pseudocheirus mayeri* Rothschild & Dollman collected by the Archbold Expedition 1938-1939 (for explanation of the letters see pp. 566, 570).

reg. no. A.M.N.H.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	r		
109611, ♂	41.0	39.6	35.5	18.7	12.8	5.7	22.8	18.9	21.7	4.6	15.5	15.8	19.3	11.4	10.6	25.8	14.0	12.6
101990, ♂ [1]	41.3	40.6	36.3	20.1	13.4	5.8	23.6	18.1	19.9	4.4	14.0	14.1	20.2	12.3	11.6	26.5	14.1	13.4
109625, ♂	41.4	40.1	36.2	20.1	12.5	5.7	25.3	20.6	—	4.3	16.5	16.3	20.0	11.0	11.4	27.1	16.0	12.3
109616, ♂	42.1	41.1	36.3	20.0	12.6	6.1	24.0	18.7	21.0	4.3	15.4	15.6	20.7	11.9	11.8	26.3	15.2	13.1
109629, ♂	42.1	41.2	36.6	19.8	12.7	5.4	24.0	19.3	21.7	4.7	15.2	15.5	19.9	11.6	11.0	27.3	15.1	12.8
109609, ♂	42.8	41.6	37.7	19.6	13.2	6.1	25.0	20.5	24.0	5.0	16.3	16.1	20.1	11.7	11.2	27.0	—	12.6
109612, ♂	42.9	41.6	37.4	19.7	14.0	6.4	24.6	19.3	21.4	5.1	16.4	15.5	19.8	11.2	11.0	25.6	15.2	12.5
109755, ♂	43.6	42.8	39.0	20.8	13.8	6.1	25.2	19.8	23.5	4.9	16.9	16.1	20.5	11.9	11.8	28.0	15.2	12.8
109599, ♂	44.5	42.9	37.7	20.4	14.2	6.3	25.9	20.2	23.7	5.0	15.6	16.6	21.0	12.0	11.5	27.2	15.7	13.2
109601, ♂	44.5	43.2	38.7	20.5	13.6	6.3	25.5	20.6	23.9	4.9	16.7	17.1	20.0	11.4	11.0	28.2	15.8	12.8
109597, ♂	44.7	44.0	39.8	21.3	14.6	6.4	25.3	20.2	23.4	5.0	15.6	16.1	20.9	11.9	11.5	28.9	15.9	13.0
109756, ♂	44.8	43.5	38.9	21.0	13.2	7.3	25.0	20.4	22.4	5.1	16.5	16.2	20.5	11.4	11.1	28.9	16.1	12.2
109602, ♂	45.3	44.5	39.7	21.6	14.1	6.1	25.6	20.3	24.0	4.1	15.7	15.9	20.9	11.9	11.5	28.5	16.0	13.1
101991, ♀ [2]	38.2	37.7	33.6	—	12.6	5.5	22.7	18.0	20.1	4.8	14.8	14.3	18.9	11.1	11.2	25.8	13.2	12.3
109617, ♀	39.5	38.4	34.8	19.3	12.5	5.5	22.9	18.7	21.7	4.5	15.5	15.3	19.4	11.8	9.9	24.9	14.0	13.0
109620, ♀	40.6	40.4	35.7	19.5	13.2	6.0	23.0	18.2	21.0	4.5	15.6	15.1	19.8	11.2	10.8	26.4	14.7	12.3
109624, ♀	40.6	39.7	35.1	18.5	12.1	5.5	23.1	19.0	20.7	4.6	15.7	15.1	19.4	11.1	10.8	25.6	14.0	12.1
109621, ♀	40.7	40.1	36.4	19.1	11.4	6.3	23.7	19.5	21.8	4.5	16.8	15.4	19.2	11.2	11.5	26.4	14.7	13.0
109630, ♀	40.9	40.5	36.4	19.9	11.3	5.5	23.2	19.0	22.0	4.0	15.1	15.1	19.6	11.2	10.6	27.2	14.5	12.6
109613, ♀	41.4	40.4	35.8	19.1	—	—	23.3	18.2	21.5	4.5	15.2	15.5	19.4	11.2	10.9	27.2	16.0	12.1
109754, ♀	41.7	40.8	36.8	19.8	12.5	5.8	24.0	19.2	22.5	4.5	15.6	15.1	19.8	11.5	11.0	26.5	15.8	12.5
109623, ♀	42.8	42.5	37.9	20.8	13.5	6.4	24.3	20.0	21.3	4.7	16.5	15.3	20.4	11.4	11.1	27.7	16.2	11.9
109610, ♀	42.9	42.5	38.1	20.0	14.4	6.2	24.4	19.8	23.1	4.6	15.6	16.5	19.8	11.4	10.8	27.7	15.7	12.3
109626, ♀	43.0	41.8	37.2	20.5	13.7	5.4	24.6	19.3	22.9	4.6	15.0	15.8	20.0	11.3	11.1	27.4	15.4	12.3
109608, ♀	43.6	42.9	38.4	20.7	14.0	6.7	25.4	19.6	24.3	5.6	15.9	16.1	20.2	11.2	12.4	29.2	16.2	12.4
109596, ♀	43.7	42.8	38.5	19.8	14.4	6.3	24.6	20.7	24.0	4.9	15.4	15.7	20.0	11.8	12.0	28.6	16.4	13.1
109752, ♀	44.2	43.7	39.6	21.5	13.6	6.5	25.5	20.3	22.7	4.4	16.3	15.1	21.4	11.9	11.8	29.8	16.7	13.0
109606, ♀	45.2	43.9	40.0	21.8	14.1	5.7	25.8	20.1	23.5	5.1	15.6	16.3	21.3	11.7	11.6	29.4	16.6	12.7
109605, ♀	45.6	44.6	39.9	21.0	13.8	6.8	27.0	20.7	23.6	5.2	17.0	16.4	20.6	11.3	11.9	29.3	16.5	12.5
109607, ♀	47.2	46.5	42.5	22.4	15.2	8.5	26.3	21.5	25.5	5.2	17.2	16.5	21.5	11.6	11.8	31.3	17.8	13.0

[1] reg. no. 101990 = syntype 71. [2] reg. no. 101991 = syntype 89.

TABLE IV. Skull measurements of the adult male specimens of *Pseudocheirus mayeri* Rothschild & Dollman collected by Professor Dr. H. Boschma in the Wissel Lakes region (for explanation of the letters see pp. 566, 570).

Coll. no.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
1717	40.0	39.4	35.3	19.1	13.2	5.5	22.9	19.0	21.2	4.7	16.3	13.4	20.1	11.9	11.3	26.0	14.3	13.1
1736	40.0	39.1	35.9	19.6	12.5	5.2	23.0	18.7	20.8	4.4	16.6	12.9	20.2	11.8	11.3	25.7	13.9	13.0
1840	40.2	39.2	35.4	18.8	12.3	5.8	23.2	19.0	21.0	5.2	16.1	13.4	19.9	11.9	11.5	25.4	14.1	13.2
1669	40.5	39.8	35.4	20.2	—	5.9	24.0	19.6	21.9	5.2	16.5	13.8	20.0	11.7	11.6	27.2	15.0	13.0
1556	41.0	40.3	36.7	19.4	—	5.8	22.9	19.0	21.4	5.0	15.7	13.3	19.3	10.9	11.0	25.7	14.0	12.3
0524	41.2	40.2	36.0	19.8	13.6	5.6	23.2	18.4	21.2	5.1	15.5	13.3	20.0	11.8	11.2	26.5	15.6	13.4
1597	41.3	40.5	36.4	—	13.1	5.8	23.3	18.5	21.9	5.0	16.5	13.3	19.5	11.5	11.1	26.5	14.3	12.3
1672	41.5	40.9	37.3	21.0	14.1	6.2	23.6	19.6	22.5	4.7	16.1	13.0	20.3	11.3	11.8	27.4	15.1	12.5
1769	41.6	41.0	37.2	20.4	14.1	5.5	25.3	20.0	22.4	5.2	16.9	13.9	21.0	12.0	12.4	28.7	15.5	13.5
1667	41.7	40.9	36.1	20.6	13.1	5.7	24.1	18.7	21.8	5.5	17.2	13.9	20.1	11.6	11.5	26.6	14.2	12.8
1468	41.7	41.3	36.9	—	13.7	6.4	23.8	20.1	22.1	5.6	16.1	13.2	20.2	11.5	11.4	27.2	15.1	12.3
0056	41.8	41.0	36.8	—	—	6.2	24.6	18.7	21.2	5.1	17.2	13.7	20.0	11.8	11.4	27.5	—	13.2
1772	42.1	41.4	37.1	20.4	—	—	22.9	19.1	21.7	4.8	16.7	13.6	20.2	11.5	11.5	26.7	15.1	12.8
1974	42.2	41.6	37.6	20.3	—	6.1	23.8	19.6	22.0	4.6	16.4	13.7	20.4	11.7	11.6	27.1	15.6	13.2
1961	42.3	41.8	37.9	20.9	14.0	6.0	24.1	18.8	21.2	4.4	15.8	13.1	20.2	11.1	11.6	27.7	—	12.3
1529	42.4	41.2	36.9	20.6	14.7	6.7	23.2	18.8	20.9	5.1	16.2	13.6	20.6	12.0	11.4	27.2	15.2	12.9
0045	42.4	41.6	37.9	21.5	—	—	24.5	18.8	21.3	5.4	16.3	13.8	21.0	11.9	11.7	28.1	16.0	13.2
1385	42.5	41.8	37.9	21.2	14.1	6.6	23.7	18.9	21.0	5.3	16.7	13.7	20.6	11.2	11.3	27.8	14.6	12.4
0022	42.6	42.0	38.3	—	14.3	6.5	25.7	20.2	—	5.1	16.9	13.8	21.1	11.9	12.1	28.0	16.2	13.2
1467	42.8	42.2	37.5	20.1	—	6.3	23.7	19.0	22.2	5.1	17.0	13.4	20.2	11.2	11.2	27.4	14.6	12.6
1540	42.8	41.9	38.0	20.6	14.1	5.3	25.3	19.9	22.5	5.0	16.8	14.0	21.1	12.1	12.4	28.7	15.5	13.5
1033	42.9	42.1	38.0	20.2	13.3	6.5	24.9	20.0	21.0	5.5	16.2	13.7	19.2	10.5	11.9	28.1	15.3	12.0
0179	43.0	42.4	38.3	—	13.4	5.8	24.3	18.3	21.0	5.2	16.5	13.8	20.6	12.1	12.0	27.6	15.1	13.3
1629	43.2	42.6	38.2	20.4	13.0	6.7	24.2	18.8	21.6	5.3	16.8	13.3	20.6	11.7	11.6	27.4	14.7	13.1
1935	43.4	43.0	39.1	21.2	14.2	6.2	25.2	19.1	21.6	5.5	17.2	14.2	20.8	11.5	11.4	27.9	14.8	12.6
1146	43.7	42.9	38.8	21.6	—	6.2	24.5	18.7	20.8	5.0	16.2	13.5	21.2	12.1	11.4	27.8	15.0	12.8
1749	44.0	43.5	39.4	21.1	13.1	6.0	24.9	19.2	22.9	5.4	17.2	14.4	21.4	11.9	12.3	28.5	15.1	13.5
1544	45.0	44.3	40.5	22.0	14.0	6.6	25.0	19.9	23.7	4.5	16.3	13.9	21.1	11.5	12.0	29.5	15.1	12.5

TABLE V. Skull measurements of the adult female specimens of *Pseudocheirus mayeri* Rothschild & Dollman collected by Professor Dr. H. Boschma in the Wissel Lakes region (for explanation of the letters see pp. 566, 570).

Coll. no.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
0484	38.6	38.0	34.5	18.8	11.0	5.5	23.3	18.7	20.6	5.2	15.9	13.0	19.1	11.3	11.1	25.5	14.3	12.9
1697	39.5	38.8	35.7	19.1	13.3	5.6	22.5	18.4	21.0	4.7	15.6	13.0	19.8	11.5	11.3	25.3	14.0	13.0
1148	39.6	38.5	35.0	19.5	12.0	5.5	22.7	18.7	21.5	4.4	15.6	13.2	19.2	11.6	11.6	25.8	13.8	12.6
1567	39.9	38.9	35.5	19.1	11.4	6.1	23.8	18.8	21.2	5.3	16.5	13.8	19.6	11.3	11.9	25.8	15.5	12.7
1708	39.9	39.0	35.2	19.6	13.1	5.7	23.4	19.0	21.4	5.0	16.6	13.5	19.5	11.5	11.2	25.6	14.3	12.5
1036	40.1	39.5	35.7	19.2	12.3	5.6	22.2	18.6	19.8	5.0	15.8	13.2	19.6	11.5	11.5	26.5	14.0	13.1
1417	40.1	39.7	36.5	19.4	13.6	5.7	23.8	19.2	21.2	4.6	15.9	12.7	19.2	11.0	11.6	26.2	15.5	12.2
1466	40.3	40.5	36.6	—	13.3	5.7	23.9	18.7	21.6	4.6	15.7	12.9	20.3	11.7	11.7	26.6	15.0	12.3
1415	40.4	40.0	36.3	18.8	12.8	5.9	22.7	19.0	20.7	4.6	15.9	12.9	19.5	11.8	11.4	26.7	15.0	12.4
1638	40.6	39.2	35.4	19.5	13.2	5.4	23.1	18.7	20.9	4.4	16.2	13.7	20.1	11.8	11.2	25.7	13.6	12.9
1030	41.0	40.2	36.4	19.6	13.1	5.9	22.9	18.4	21.2	5.0	15.5	13.6	19.4	11.0	11.5	26.9	15.2	12.3
1289	41.0	40.9	36.6	20.0	12.5	5.5	24.5	19.2	22.1	4.6	17.1	13.4	20.3	11.9	11.9	26.9	15.4	13.6
1245	41.1	41.2	37.0	20.7	13.6	6.3	24.3	18.3	20.8	5.2	16.3	14.2	20.2	11.6	12.0	26.7	15.4	12.9
1034	41.2	40.4	36.9	20.0	12.8	5.9	24.3	19.6	22.5	4.9	16.2	13.1	19.6	11.1	11.4	26.7	15.0	12.4
1834	41.4	41.2	37.5	20.1	12.8	6.2	24.5	19.2	22.0	5.0	16.1	13.1	21.0	12.1	12.2	27.0	15.6	13.1
1120	41.4	41.2	37.7	21.6	13.2	6.1	24.6	18.5	21.1	5.0	15.6	12.9	20.2	11.7	11.6	27.2	15.4	13.0
1607	41.7	41.5	37.7	20.3	13.2	5.5	23.5	19.6	20.8	4.7	15.7	13.3	20.4	11.4	11.9	27.5	15.2	12.7
1975	41.7	41.2	37.3	20.5	13.1	5.8	23.6	18.4	20.4	4.6	15.7	13.1	20.1	11.7	11.9	27.1	15.1	13.1
1959	42.0	41.5	37.0	20.5	13.2	5.8	23.2	19.0	20.2	4.4	15.8	13.6	19.9	11.1	11.2	26.6	15.5	12.6
1031	42.1	41.2	37.6	20.9	13.3	5.8	24.3	19.6	—	4.8	15.8	13.2	20.3	11.0	11.6	27.0	14.3	12.3
1863	42.1	41.4	37.7	20.8	12.2	5.8	24.2	18.6	21.0	4.5	16.3	13.6	20.4	11.7	11.4	27.2	15.7	12.7
1732	42.2	41.5	37.7	20.5	13.3	6.4	22.9	19.2	21.2	5.3	15.2	13.2	20.2	11.7	11.3	27.2	15.3	13.2
1470	42.2	41.6	37.8	20.8	13.7	6.6	25.0	19.7	22.3	5.0	16.0	13.3	20.2	11.4	12.0	27.6	15.7	12.3
1924	42.5	42.0	37.1	20.1	13.5	5.8	23.5	20.2	21.9	4.8	16.4	13.6	20.5	11.8	11.3	27.1	14.6	13.2
1519	42.5	42.0	37.6	20.0	13.1	5.7	23.4	18.0	20.8	4.6	16.0	13.4	20.7	11.8	11.6	27.3	15.5	13.4
1431	42.6	42.4	38.4	20.8	13.0	5.6	24.3	19.3	21.9	4.6	15.7	13.7	20.9	11.7	12.1	28.1	16.0	13.5
1601	42.7	42.4	38.2	20.4	13.2	5.7	24.0	19.3	20.8	4.7	16.0	13.5	19.5	11.2	11.3	28.1	15.3	12.6
0050	42.8	42.1	38.2	21.0	11.9	6.1	24.7	19.2	22.0	5.2	16.0	—	20.9	12.4	12.9	28.5	16.0	13.7
1962	43.1	42.3	38.7	21.5	13.7	6.0	24.2	19.5	21.2	4.5	16.1	13.3	20.9	12.2	11.5	27.5	15.6	12.6
1641	43.4	43.1	39.3	20.7	13.5	6.3	24.3	20.0	22.0	5.1	16.2	13.7	20.7	11.6	11.9	28.1	15.5	13.1
1170	44.2	43.9	40.0	21.5	13.4	7.0	25.6	20.7	23.1	5.0	16.3	13.3	20.4	11.2	11.5	29.3	16.5	12.7

adopted by most modern authors: length of nasals (e); breadth of nasals (f); zygomatic breadth (g); mastoid breadth (h); width across meatus auditivus (i); interorbital breadth (j); breadth of braincase (k); height of skull from sphenobasion (l); length of upper tooth-row, i^1-m^4 (m); length of p^4-m^4 (n); width across m^{3-3} (o); length of mandible (p); coronoid height of mandible (q); length of p_4-m_4 (r). The length of the mandible is the distance from the lingual anteriormost border of the incisive alveolus to the posteriormost border of the condyles of the mandible.

Biology. — Syntypes 71 and 89 of *P. mayeri* were collected in July 1930, as indicated on the labels. I presume that also syntype 68 was collected in the same month, though Rothschild & Dollman (1933, p. 216) in their paper do not mention any date. The authors give the following field note of the collector Mr. Shaw Mayer: "Cotype 68 was found in its nest of moss three feet from the ground with one young in its pouch". It is, therefore, of great importance that Prof. Boschma in his diary has made notes of all cases where a captured female was with young. These observations are tabulated in table VI. It appears from these data that 40% of the adult females of the Wissel Lakes region had young in the period from 12 October to 19 November.

TABLE VI

Field notes of Professor Dr. H. Boschma concerning the female specimens of *Pseudocheirus mayeri* Rothschild & Dollman from the Wissel Lakes Region with young.

Coll. no.	Locality	Date	Observations
1924	Araboe bivouac	12 Oct. 1939	Female with young
1832	„	15 Oct. 1939	Female with young
1834	„	15 Oct. 1939	Female with young in the pouch
1841	„	15 Oct. 1939	Female with large young
1842	„	15 Oct. 1939	Female with small young
1975	„	16 Oct. 1939	Female with young in the pouch
1858	„	18 Oct. 1939	Female with young
1863	„	19 Oct. 1939	Female with large young in the pouch
1541	„	25 Oct. 1939	Female with living young
1519	„	27 Oct. 1939	Female with living young in the pouch
1466	„	30 Oct. 1939	Female with young
1417	„	31 Oct. 1939	Female with young
1289	Enarotali	2 Nov. 1939	Female with small young
1431	„	4 Nov. 1939	Female with young
0050	„	5 Nov. 1939	Female with young in the pouch
1245	„	6 Nov. 1939	Female with small young in the pouch
0195	„	16 Nov. 1939	Female with young in the pouch

In this same period Prof. Boschma obtained 42 males and 58 females

of *P. mayeri*. The material of the Archbold Expedition consists of 18 males and 23 females. In both cases the number of females exceeds the number of males. This may suggest that in the populations of this species the number of females is greater than that of the males. It is also possible, however, that it was more easy for the natives to capture these pregnant females which evidently were slower than the males. Our information is too incomplete to permit the drawing of any conclusion about the sex ratio in this species. This can only be done if we know more about the sex ratio of the newborn young, the mortality during the first months, etc. Too often one finds in the literature conclusions about sex ratio drawn exclusively from the numbers of collected specimens of each sex; in my opinion such conclusions as a rule are next to worthless.

Remarks. — The above listed specimen collected in the Hellwig Mountains by the 1909-1910 expedition was identified by Jentink (1911, p. 177) as *Pseudochirus schlegelii* Jentink. Examination of this specimen proved that it does not belong to *Pseudocheirus schegelii*, but actually is *P. mayeri*.

P. schlegelii in all its dimensions is larger than *P. mayeri* as appears clearly from the measurements of both species as given in the present paper. The coat colour of both species shows no striking differences, taking hereby into account that in my material *P. schlegelii* is represented only by the type specimen, which could be compared with the large series of *P. mayeri*. However, a striking difference is shown by the fur of the tail of both species. In *P. schlegelii* the basal two-thirds of the tail has a woolly fur which gradually merges into the appressed pubescence of the distal third. In *P. mayeri* the basal one-third or two-fifths of the tail has a woolly fur, which (in some specimens rather abruptly) passes into the distal two-thirds or three-fifths of which the hairs are appressed. The differences between *P. schlegelii* and *P. bernsteinii* have been dealt with by Jentink (1884, p. 110; see also Husson, 1955, p. 296).

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