

ON THE MAMMALS OF ENGGANO

by

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The small but well prepared collection of mammals, in 1936 made on this island by Dr. J. K. DE JONG, and placed in my hands for determination by the Director of the Buitenzorg Zoological Museum, consists of 44 specimens which represent the following 9 species and subspecies, three of which had to be provided with new names.

(The external measurements have always been taken by the collector).

1. *Rousettus amplexicaudatus* (GEOFFROY) subsp.

Pteropus amplexicaudatus, GEOFFROY, Ann. Mus. Hist. Nat., XV, 1810, p. 96 (Timor).

Xantharpyia amplexicaudata, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 108;

VAN BALEN, De Dierenw. v. Insul., I, 1914, p. 110.

Rousettus amplexicaudatus, WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p.

275; MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 824; ANDERSEN, Cat. Chir. Br.

Mus., I, 1912, p. 40, 48.

Rousettus amplexicaudatus amplexicaudatus, ANDERSEN, Cat. Chir. Br. Mus., I, 1912, p. 812, 829.

2 ♂, 1 ♀.

It is impossible for me to determine the subspecies here. The two races which need consideration, *amplexicaudatus* and *minor*, very much overlap in their measurements and the Enggano specimens are intermediate. Indeed also geographically the division, as given by ANDERSEN, is but little satisfying. To *amplexicaudatus* he reckons animals from Cambodja, Philippines, Borneo, Sumatra, Enggano, Flores, Savoe, Alor and Timor (from the last named locality — the type locality — he only had one immature specimen, from Enggano nothing at all), the name *minor* is restricted to Java. It is certain that he Javanese average smaller than the Timorese of which now a fine series of 8 specimens could be measured.

Measurements of the Enggano series:

Number	Sex	Head & body	Tail	Foot	Ear	Forearm	Skull: great. length	Teeth c - m ²	Teeth p ³ - m ²
305/36	♂	122	16	17	17	81	37.6	12.5	9.4
307/36	♂	112	17	17	17	76	—	12.7	9.5
306/36	♀	120	17	17	18	81	35.3	12.7	9.4

Comparison with examples from Timor (*amplexicaudatus*) and Java (*minor*):

	Forearms	Teeth, c-m ²	Teeth, p ³ -m ²
Timor	77 - 80.6 - 84 (8)	12.4 - 12.74 - 13.1 (8)	9.3 - 9.56 - 10.0 (8)
Enggano	76 - 79.3 - 81 (3)	12.5 - 12.63 - 12.7 (3)	9.4 - 9.43 - 9.5 (3)
Java	70 - 76.5 - 81.5 (90)	12.0 - 12.66 - 13.3 (15)	9.0 - 9.40 - 9.8 (2)

I am not able to say more than that the Enggano specimens are roughly intermediate between *amplexicaudatus* and *minor*. Also comparison with specimens from other localities did not bring any elucidation.

2. *Pteropus hypomelanus enganus* MILLER.

Pteropus enganus, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 822, 824 (Pulo Dua, off Enggano).

Pteropus hypomelanus, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 106; TROUESART, Cat. Mamm., I, 1897, p. 82; WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 274.

Pteropus (Spectrum) hypomelanus, MATSCHIE, Megachir., 1899, p. 24.

Pteropus hypomelanus enganus, ANDERSEN, Cat. Chir. Br. Mus., I, 1912, p. 107, 111; CHASEN & KLOSS, Proc. Zool. Soc., 1927, p. 833.

6 ♂, 3 ♀.

Measurements:

Number	Sex	Head & body	Foot	Ear	Forearm	Skull: great. length	Zygomatic breadth	Teeth, c-m ²	Teeth, p ³ -m ²
231/36	♂	210	41	25	143	63.5	35.5	23.8	16.3
222/36	♂	179	40	23	(135)	63.8	34.3	22.9	16.2
217/36	♂	215	41	24	129	64.6	34.9	23.9	16.1
232/36	♂	203	40	24	140	63.9	33.3	24.0	17.0
208/36	♂	172	40	25	121	54.6	26.9	20.4	15.3
227/36	♂	212	41	26	131	62.3	34.5	22.5	16.0
215/36	♀	205	41	23	129	61.4	32.5	22.9	15.9
223/36	♀	162	36	21	(124)	59.5	30.7	22.0	15.4
216/36	♀, juv.	145	35	21	102	46.8	24.6	—	—

The form has been described as averaging smaller than any other race of the species. Now in the present series the forearms seem too large to warrant this conclusion. The teeth measurements, however, furnish an excellent confirmation.

All specimens show light-coloured heads except No. 208 and especially No. 216. The p¹ is present at one side in Nos. 217 and 215, at both sides in Nos. 208 and 216.

3. *Pteropus modiglianii* THOS.

Pteropus modiglianii, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1884, p. 106 (Kifajuc, Bua-Bua, Enggano).

Pteropus modiglianii, TROUESSART, Cat. Mamm., I, 1897, p. 81; MILLER, Proc. U.S. Nat. Mus., XXX, 1906, p. 823; MILLER, Fam & Gen. of Bats, 1907, p. 56, 58; ANDERSEN, Cat. Chir. Br. Mus., I, 1912, p. 232, 235.

Pteropus nicobaricus a. modiglianii, MATSCHIE, Megachir., 1899, p. 17; TROUESSART, Cat. Mamm., Suppl., 1904, p. 50; WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 275.

Pteropus melanotus, RENSCH, Die Gesch. d. Sundabogens, 1936, p. 72.

7 ♂.

Measurements:

Number	Sex	Head & body	Foot	Ear	Forearm	Skull: great. length	Zygomatic breadth	Teeth, c-m ²	Teeth, p ³ -m ²
212/36	♂	223	42	29	145	62.1	36.7	24.3	17.9
211/36	♂	222	41	28	143	63.1	36.7	24.2	17.5
230/36	♂	230	43	28	150	64.3	36.0	25.3	18.4
221/36	♂	184	41	24	(139)	64.3	35.8	24.3	17.3
213/36	♂	223	42	30	152	61.2	36.3	24.6	17.4
210/36	♂	206	41	28	136	65.1	35.2	25.0	17.9
209/36	♂	177	42	27	122	± 57	29.6	22.8	16.7

The p¹ is present at one side in No. 211, at both sides in No. 209.

DE JONG (Natuurk. Tijdschr. Ned. Ind., XCVIII, 1938, p. 36) describes the way in which on Enggano kalongs take the place of squirrels in gnawing a round hole in the still soft skin of young coconuts to eat the young fruit flesh.

4. *Cynopterus brachyotis concolor* subsp. n.

3 ♂, 2 ♀.

Type: ♂ ad., Meok, Enggano, sea-level, coll. SAÄN, 27 June 1936. In Buitenzorg Museum, No. 225/36.

Diagnosis: Size about as in *brachyotis* of Borneo, but very well distinguished by the colour, especially darker and without the handsome rufous or russet which is shown so finely by old males and even old females of *brachyotis* and *javanicus*. Moreover it is very striking that there is no lightening of the skin covering the finger bones, in which respect the form agrees with *babi* LYON of Pulo Babi. From this, in colour closely resembling form, our race is geographically separated by the very small *minutus* of Nias, while also the large Pagi (Pagai) form (*pagensis* MILLER, according to ANDERSEN, however, = *angulatus*) clearly shows the light fingers. Moreover, *babi* is larger (greatest length of the skull 30.0; c-m¹ 10.2 mm).

Measurements:

Number	Sex	Head & body	Tail	Foot	Ear	Forearm	Skull: great. length	Teeth, C-m ¹	Teeth, p ⁴ -m ¹
314/36	♂	92	9	14	15	63	29.1	9.5	6.6
313/36	♂	98	9	12	16	64	—	9.7	6.8
225/36	♂	100	14	15	16	65	29.0	9.3	6.6
312/36	♂	99	8	13	15	63	28.8	9.3	6.7
226/36	♂	101	11	15	16	66	29.4	9.3	6.3

Some more measurements of the type: 3rd. metacarpal 41.3; skull: condylobasal length 28.1; basal length 26.0; zygomatic breadth 19.1; cranial width 12.2; interorbital constriction 6.8; postorbital processes, tip to tip, 10.9; lower teeth, c-m₂, 10.4 mm.

(It seems good to fix special attention to this striking conformity between P. Babi and P. Enggano, the more so as there exists another case which seems to point to the same direction. It is Pocock's conception of uniting the Simaloer and Enggano specimens of *Paradoxurus hermaphroditus* into the race *parvus*, while at the same time he takes together the animals of the Mentawai Archipelago and of N. Pagai under *lignicolor*).

5. *Hipposideros diadema masoni* (DOBS.).

Phyllorhina masoni, DOBSON, Journ. As. Soc. Beng., XLI, 1872, p. 338 (Moulmein, Tenasserim).

Hipposideros diadema, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 108; WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 281; MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 824; VAN BALEN, De Dierenw. v. Insul., I, 1914, p. 126.

Hipposideros diadema enganus, ANDERSEN, Ann. Mus. Civ. Genova, XLIII, 1907, p. 8.

2 ♂, 4 ♀.

Partly the 7 new races, added by ANDERSEN to the existing number of 3, seem founded on extremely weak argument. Personally I have no objections against separating races on differences in averages of the measurements only, but then, of course, sufficiently large series should be available and, by preference, the average of the one series should lie beyond the limits of the other. In reality ANDERSEN distinguished all his 10 races in a total series of about 40 specimens (in which one series of 7 and one of 8). So he established DOBSON's *masoni* as a good subspecies after 2 specimens, with the remark that *masoni* (Malay Peninsula) and *diadema* (Timor and Java) "can only be distinguished by average characters", and immediately after he separates *enganus* from *masoni*, again after 2 specimens, with the remark that he has "no doubt that in a large series of the Enggano form individuals will be found which are practically indistinguishable from *masoni* and *diadema*".

I am now in a position to compare the measurements of the 6 Enggano specimens from the collection DE JONG with those of 12 specimens from Java and more easterly islands.

Measurements of the Enggano series:

Number	Sex	Head & body	Tail	Foot	Ear	Forearm	Skull. great. length	Ante-orbital width	Teeth c-m ²
218/36	♂	101	48	16	31	90	35.5	10.2	13.0
220/36	♂	100	52	15	31	87	33.9	9.8	12.2
309/36	+ ♀	92	48	15	30	86	—	9.5	11.9
310/36	+ ♀	90	54	16	30	84	33.5	9.8	12.0
311/36	+ ♀	90	50	15	29	84	33.5	9.9	12.2
308/36	+ ♀	91	51	16	28	87	33.2	9.7	12.0

Comparison of these measurements (increased with the two Enggano measurements of ANDERSEN for forearm and anteorbital width, but not with those of the teeth, as I suppose that he did not use the same — alveolar — measurement as I did) with examples from Malaya and from Java gives:

	Forearm		Anteorbital width		Toothrow, c-m ² , alv.
<i>masoni</i>	85 - 87.5 - 90.5	(3)	9.8 - 9.90 - 10.0	(2)	— — — —
" <i>enganus</i> "	84 - 87.6 - 93	(8)	9.5 - 9.87 - 10.2	(7)	11.9 - 12.22 - 13.0 (6)
<i>diadema</i>	85 - 88.3 - 93	(12)	9.0 - 9.37 - 9.9	(10)	11.5 - 11.92 - 12.8 (12)

It is the difference in the anteorbital width which leads me to acknowledge a separation between *diadema* and *masoni* + *enganus*. Between *masoni* and *enganus*, however, no difference is known to me, nor can I conclude to such a difference from ANDERSEN'S description.

6. *Rattus rattus diardi* (JENT.).

Mus diardi, JENTINK, Notes Leyden Mus., II, 1880, p. 13 (W. Java).

1 ♂, Poeloe Doea (No. 229/36).

Measurements: Head and body 156; tail 159; hind foot 29 (certainly too small); ear 20; skull: greatest length 38.2; condylobasal length 36.9; basal length 34.7; palatal length 21.3; zygomatic breadth 17.7; cranial width 14.6; interorbital constriction 4.9; length of nasals 13.2; breadth of combined nasals 3.8; diastema 10.3; incisive foramina 7.8; upper toothrow 6.9 mm.

These measurements and the colour sufficiently justify a determination to *R. r. diardi*, to which race I also reckon the houserats of Java, Bali, Lombok, Banka, Sumatra, Sipora and Malaya.

7. *Rattus rattus vernalis* subsp. n.

?*Mus rattus* var., THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 109.

?*Mus near rattus*, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 821.

Rattus rattus, DE JONG, Natuurk. Tijdschr. Ned. Ind., XCVIII, 1938, p. 35.

2 ♂, 4 ♀.

Type: ♀ ad., Kajaäpoe, Enggano, sea-level, coll. Dr. J. K. DE JONG, July 1936. In Buitenzorg Museum, No. 316/36. Skull badly damaged.

Diagnosis: While in some parts of the Archipelago *R. rattus* seems rather overnamed, as regards the islands west of Sumatra only a few races of this so variable species have been described. And these races (*mentawi* CHASEN & KLOSS of Sipora and Siberoet, *maerens* MILLER of Nias) so strongly differ from the Enggano series that detailed comparison is unnecessary. The forms *lugens* MILLER of Pagai, *simalurensis* MILLER of Simaloer, *babi* MILLER of P. Babi, *lasiae* LYON of P. Lasia, in my opinion do not at all belong to *R. rattus*, but, I think, to *R. mulleri*. The nearest relative of the Enggano rats seems to be *R. r. jalorensis* of the Malay Peninsula. But there are differences. Firstly the teeth of *vernalus* are somewhat smaller (upper toothrow 6.1 - 6.6 - 6.8 mm in 6 specimens, against 6.5 - 7.0 - 7.5 mm in 10 *jalorensis*). But the main difference lies in the colour of the underside. Though in all specimens this underside shows much white (this being the main colour), they all possess a rather to very clear dark median stripe, whereas the lateral demarcation of the colours is rather unsharp because, from there onward, over some distance the white belly hairs continue showing grey bases.

Measurements:

Number	Sex	Head & body	Tail	Huid foot	Ear	Skull: great. length	Condy-lobasal length	Basal length
315/36	♂	181	171	34	18	± 43	41.2	39.0
219/36	♂	166	164	34	19	—	—	—
303/36	♀	153	175	32	17	41.0	39.1	37.2
302/36	♀	167	172	33	17	—	38.8	36.4
316/36	♀	152	166	34	17	± 38	—	—
317/36	♀	136	152	34	17	—	—	—
Palatal length	Length of nasals	Breadth of comb. nasals	Zygomatic breadth	Interorbital constriction	Breadth of brain-case	Diastema	Incisive foramina	Upper toothrow
24.1	15.4	5.1	19.5	6.6	15.1	12.3	8.0	6.7
—	—	4.0	—	6.1	15.8	—	—	6.1
23.3	14.5	4.5	19.6	6.6	15.2	11.9	7.7	6.4
22.6	15.4	4.6	19.6	6.6	15.0	11.5	7.6	6.7
—	—	—	19.0	6.5	15.2	—	—	6.7
—	—	—	—	5.1	15.0	—	—	6.8

In the fur white spines are very numerous, as well as long black piles, but in the majority of specimens they are rather thin and slender and do not make the pelage feel harsh to the touch.

I am not at all sure that THOMAS's "*Mus rattus* var." (from Poeloe Doea) relates to the present rat. For the mammae he gives 3—3 = 12, while I can only find 2 pairs pectoral and 3 pairs inguinal.

8. *Rattus adustus* sp. n.

Type: ♀ ad., Kiojoh, Enggano, sea-level, coll. SAÄN, 15 April 1936. In Buitenzorg Museum, No. 304/36.

Diagnosis: Of course our first thought goes to MILLER's *Mus enganus*, with the type of which the skull measurements of the present specimen agree rather well (though I certainly would not especially compare the skull of this rat to that of "a large *Mus norvegicus*", as MILLER did for his specimen). However, there are large external differences:

1. Though MILLER's skull is somewhat smaller than that of the present specimen, he gives the total length of the whole animal 48% larger.

2. MILLER's rat has a tail of 113% of head and body, our specimen of 82%.

3. Furthermore there are large differences in the length and composition of the fur. MILLER says that in his animal it is "of a soft almost silky texture, except along the middle of back where it becomes somewhat harsh". He only mentions the presence on the back of "slender grooved bristles, 35 mm long". Our specimen, however, on the whole back, included the sides, is abundantly furnished with hard spines. The fur is also shorter.

Measurements: Head and body 180; tail 148; hind foot 42; ear 22; skull: greatest length \pm 46.5; condylobasal length 44.3; basal length 41.2; palatal length 28.5; breadth of combined nasals \pm 6.6; zygomatic breadth \pm 22.4; interorbital constriction 7.2; cranial width \pm 18.4; diastema 13.0; incisive foramina 9.2; upper toothrow 8.7 mm.

Colour: Above very dark brown, below dark brownish grey. Tail black, with 9 rings to the cm.

It is impossible for me to insert this new, very spinous form into any polytypic species. (As for MILLER's *enganus* I suppose it to be a race of *R. mulleri*).

9. *Sus scrofa babi* MILLER.

Sus babi, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 752 (Pulo Babi).

Sus scrofa, OUDEMANS, Tijdschr. Kon. Ned. Aandr. Gen., 2, VI, 1889, p. 160.

Sus babi?, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 752, 820.

Sus babi enganus, LYON, Proc. U. S. Nat. Mus., LII, 1916, p. 454.

Sus vittatus, VON ROSENBERG, Der Malay. Arch. 1878, p. 219; DE JONG, Natuurk. Tijdschr. Ned. Ind., XCVIII, 1938, p. 35.

2 ♂, 4 ♀ (6 skulls, 5 skins; only 1 ♂, 1 ♀ nearly adult).

Material for comparison from the other islands west of Sumatra is not available. From these islands MILLER and LYON described 5 new races after totally 16 skulls, only 8 of which adult and these distributed over both sexes. This already makes it improbable that all these races can be sufficiently founded. Confining us to *enganus* (based on one old female) we see that first MILLER

wrote of this material that it was "not sufficient to make possible definite identification of the Enggano pig", and LYON himself says, after his separation of the subspecies, that "the status of this pig is very unsatisfactory". His separation exclusively depends on three measurements of the one old skull, which he compared with the conformable figures of one male skull of *babi* and one female skull of *tuancus*. On this ground he declares *enganus* to be "intermediate in characters between *Sus babi babi* (P. Babi) and *S. babi tuancus* (P. Tuangku)". This latter race had been separated from *babi* by LYON on the score of the short nasals and premaxillary bones and the long nutrient artery groove in frontal bone. *Enganus* should be intermediate in so far that the nasals and premaxillaries are long as in *babi*, the artery grooves of the frontal bones long as in *tuancus*. LYON's complete figures may be given as follows:

		Nasals	Premaxillaries	Artery grooves
<i>babi</i>	♂	151 mm	(115 mm)	"short"
<i>enganus</i>	♀	140 mm	115 mm	39 mm
<i>tuancus</i>	♂	127 mm	93 mm	35/40 mm

Adding the new Enggano measurements we get:

♂	143 mm	118 mm	39/42 mm
♀	139 mm	102 mm	34/35 mm

For me it is impossible to see in these figures a sufficient foundation for a race *enganus*. Series of skulls from all islands will be necessary to give us an insight into the question of the formation of races in these islands. Provisionally I bring our Enggano pigs to *babi* (accepting — also provisionally — the older race *niadensis*, founded on 3 adult skulls with clearly enlarged posterior two molars, both above and below, as a second race of the Barussan chain of islands).

The incorporation of the "*vittatus* pigs" into *S. scrofa*, as implied in the name given above, means that we now definitely wish to accept this opinion which has already been growing for a long time and was lastly maintained by KELM (Zeitschr. Tierz. & Zücht. Biol., XLIII, 1939, p. 362 - 369).

Measurements:

Number	Sex	Head & body	Tail	Huid foot	Ear	Skull: upper length	Condyl- basal length	Basal length	Palatal length	Length of premaxillary
228/36	♂	1388	257	268	106	302	289	277	196	118
214/36	♀	1205	257	280	99	283	268	258	184	102
224/36	♂	1136	195	249	92	271	—	—	—	—
300/36	♀	1050	220	220	100	257	—	—	—	—
299/36	♀	740	150	180	80	183	—	—	—	—
208a/36	♀	—	—	—	—	142	—	—	—	—

11. *Hipposideros galeritus* CANTOR.

- Hipposideros galeritus*, CANTOR, Journ. As. Soc. Bengal, XV, 1846, p. 183 (Pinang).
Hipposideros galeritus, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 108;
 WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 282; MILLER, Proc. U.S.
 Nat. Mus., XXX, 1906, p. 824.

12. *Hipposideros gentilis major* K. AND.

- Hipposideros gentilis major*, ANDERSEN, Ann. Mag. Nat. Hist., 9-II, 1918, p. 380
 (Bua-Bua, Enggano).
Hipposideros bicolor, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 108; WILLINK,
 Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 283; MILLER, Proc. U. S. Nat. Mus.,
 XXX, 1906, p. 824.

13. *Pipistrellus imbricatus macrotis* (TEMME).

- Vespertilio macrotis*, TEMMINCK, Mon. de Mamm., II, 1841, p. 218 (Padang, Sumatra).
Vesperugo imbricatus, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 108; TROUES-
 SART, Cat. Mamm., I, 1897, p. 112; WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV,
 1905, p. 289.
Pipistrellus imbricatus, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 825; ?DE JONG,
 Natuurk. Tijdschr. Ned. Ind., XCVIII, 1938, p. 22.
Pipistrellus curtatus, MILLER, Proc. Biol. Soc. Wash., XXIV, 1911, p. 25.
Vespertilio imbricatus, VAN BALEN, De Dierenw. v. Insul., I, 1914, p. 132.
Pipistrellus macrotis, THOMAS, Ann. Mag. Nat. Hist., 8-IV, 1915, p. 229.

14. *Kerivoula hardwickii engana* MILLER.

- Kerivoula engana*, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 825 (Pulo Dua, Eng-
 gano).

15. *Emballonura ?peninsularis* MILLER.

- Emballonura peninsularis*, MILLER, Proc. Acad. Nat. Sci. Philad., 1898, p. 323. (Trong,
 Lower Siam).
Emballonura semicauda(ta), THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 109;
 Ann. Mus. Civ. Genova, XXXIV, 1895, p. 665; TROUESSART, Cat. Mamm., I, 1897,
 p. 136; WILLINK, Natuurk. Tijdschr. Ned. Ind., LXV, 1905, p. 284; ?MILLER,
 Proc. U.S. Nat. Mus., XXX, 1906, p. 825.

16. *Rattus (mulleri) enganus* (MILLER).

- Mus enganus*, MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 84 (Enggano).

17. *Paradoxurus hermaphroditus enganus* LYON.

- Paradoxurus hermaphroditus enganus*, LYON, Proc. U.S. Nat. Mus., LII, 1916, p. 442.
 (Enggano).
Paradoxurus fasciatus, OUDEMANS, Tijdschr. Kon. Ned. Aardr. Gen., 2, VI, 1889, p. 160.
Paradoxurus hermaphroditus, THOMAS, Ann. Mus. Civ. Genova, XXXIV, 1894, p. 105;
 TROUESSART, Cat. Mamm., I, 1897, p. 329; WILLINK, Natuurk. Tijdschr. Ned. Ind.,
 LXV, 1905, p. 213; MILLER, Proc. U. S. Nat. Mus., XXX, 1906, p. 820; DE
 JONG, Natuurk. Tijdschr. Ned. Ind., XCVIII, 1938, p. 35.
Paradoxurus hermaphroditus parvus, POCKOCK, Proc. Zool. Soc., 1934, p. 647.

It is difficult to say whether the forms looked upon in this list as monotypic species, really, as such, are endemic to the island, or at some time will have to be inserted into some polytypic species (vide HUXLEY, *Bijdr. tot de Dierk.*, afl. 27, 1938, p. 515). Personally I was not able to find out any close relationship for them.

Not listed are squirrels, VON ROSENBERG's report (*Tijdschr. Ind. Taal-, Land- & Volkenk.*, III, 1855, p. 373) being doubtless incorrect. WALLAND's report of „boschkatten" (wild cats) (*T.I.T.L.V.*, XIV, 1864, p. 106) is also quite unproved and rather certainly incorrect.

The following Engganese names are given by HELFRICH (*Tijdschr. Kon. Ned. Aardr. Gen.*, 2, V, 1888, p. 277): Ek o j o k² for Wild Pigs, K a d e b o e k² for Bats, H o a n i e k² for *Pteropus*, E h o e w a for Rats, N a f i e² for *Paradoxurus*.
