



## NOTES ON SOME MAMMALS RECENTLY COLLECTED FROM ANDAMAN AND NICOBAR ISLANDS

By

SUBHENDU SEKHAR SAHA

*Zoological Survey of India, Calcutta*

During March-April 1977, a team including the author, led by Dr. K. K. Tiwari, Joint Director, Zoological Survey of India, obtained 20 specimens of mammals belonging to eight species in the course of its faunistic survey in various islands of the Andaman and Nicobar groups. Most of the specimens were collected in the Great Nicobar Island, except a single bat in the Camorta Island and a rat in the South Andaman Island. The present collection adds additional material of such little-known species as *Taphozous saccolaimus crassus*, *Pipistrellus camortae*, *Rattus flebilis* and *Rattus pulliventer*. Besides, a Pipistrelle with anomalous characters which could not be placed under any recognised species.

All the measurements are in millimeters unless otherwise stated. Reference to colour names are after Ridgway (1886). The taxonomy and nomenclature followed here is largely based on Ellerman and Morrison-Scott (1966).

### Order INSECTIVORA

#### Family TUPAIIDAE

#### *Tupaia nicobarica* (Zelebor)

#### Nicobar Tree-Shrew

*Cladobates nicobaricus* Zelebor, 1869, Reise Novara, *Zool. Theil*, 1 : 17. Great Nicobar.

**Material.**—4 ♂, 2 ♀ : Campbell Bay, Magar Nullah and Shabnam Nagar, Great Nicobar ; 29-31 Mar and 2 Apr 1977. Dry and wet.

**Measurements.**—Head & body ♂ ♂ : 183.5, 184, 189.5 and 194 ; ♀ ♀ : 180 and 186.2. Tail ♂ ♂ ; 208, 210.5, 231 and 233.5 ; ♀ ♀ : 225 and 237.5. Hindfoot ♂ ♂ : 45 (2), 45.5 and 46.4 ; ♀ ♀ : 43.5 and 45.5. Ear ♂ ♂ : 17.5 (3) and 18 ; ♀ ♀ : 17.5 and 18. Weight ♂ ♂ : 175, 190 (2) and 195 g ; ♀ ♀ : 180 and 200 g. **Mammae** : one pair, abdominal.

**Remarks.**—Although the family Tupaiidae is considered to belong to

the order Primates by most of the recent authors since Simpson (1945), it has been kept here under the order Insectivora after Ellerman & Morrison-Scott (1966). Who in turn followed Simpson (1945).

Miller (1902) noticed the variation in the pelage colour of this species, which is also confirmed by the present series. In this series, a female from Shabnam Nagar is a dark specimen, the dark dorsal area is strongly pronounced forward along the sides of the shoulder to join the dark patch of the head, a feature, as stated by Miller (1902) was shown in Zelebor's plate of *Cladobates nicobaricus*. In other specimens, however, the dark patch of the forepart of the dorsum is not so pronounced, some of them agreeing very closely with Miller's description of *Tupaia nicobarica surda* from the Little Nicobar Island. It would, therefore, appear that Miller's *T. n. surda* is not tenable.

The following additional points in coloration have been noted : The tail is deep burnt umber with a pencil of drab wood brown underneath. The black of the back is also extended over the tail. In the females the black on the tail is arrested at a place some 4 to 5 cm from the root, but in the males it extends all over the tail, in some as a distinct pencil throughout to the tip and in others in broken patches over it.

The Nicobar Tree-Shrew was found to be very common in forests. It was mostly arboreal but was also found playing and running very fast on sand and very active particularly during the afternoons. Usually it moved in pairs or in small parties of three. A larger party of eight individuals was also once observed at dusk before they went to retire. The call of the Nicobar Tree-Shrew was a long nasal 'cheengayaa' lasting for about three seconds in each spell. It is much vocal in the mornings and afternoons. Occasional call at midday was, however, not uncommon, but the intensity and duration of such calls was decidedly lesser in extent. A slightly modified note 'cheenee' was also heard, repeated four or five times, apparently a call in distress. It occupied various niches from the coastal mangroves to the interior rain forest, from the forest floor to the top of the canopy and also in the forest clearings.

## Order CHIROPTERA

### Family PTEROPIDAE

#### *Pteropus melanotus* Blyth

#### Nicobar Flying Fox

*Pteropus melanotus* Blyth, 1863, *Cat. Mamm. Mus. Asiat. Soc. Beng.*, 20. Nicobar Island.

*Material*.—5 ♂♂, 2 ♀♀ : Campbell Bay, Shabnam Nagar, Great Nicobar ; 31 Mar. - 2 Apr. 1977. Dry and wet.

*Measurements and other characters.—*

| Age & Sex | Head & Body | Forearm | Ear  | Remarks   |
|-----------|-------------|---------|------|---|
| Subad ♀   | 219.5       | 148     | 24.5 | Cusps not worn, Pm <sup>1</sup> absent. Pelage with much blackish wash, mantle with much red.   |
| ad ♀      | 237         | 151.5   | 28.6 | Cusps worn, Pm <sup>1</sup> lost. Pelage as in subadult, but mantle much richer and darker coloured.  |
| subad ♂   | 221         | 149.5   | 29.8 | Cusps not worn, Pm <sup>1</sup> present. Pelage superficially as in female, mantle with red but not so extensive. Testes abdominal.                           |
| subad ♂   | 242         | 152     | 27.5 | Cusps slightly worn, Pm <sup>1</sup> on left maxilla only, right one lost. Pelage dark mantle reddish but paler than above. Testes descending to scrotal sac. |
| ad ♂      | 249.3       | 163.5   | 28.2 | Cusps worn, Pm <sup>1</sup> lost. Pelage dark, mantle paler than former. Testes entirely in scrotum.  |
| ad ♂      | 260.5       | 165     | 27   | Cusps worn, Pm <sup>1</sup> lost, sockets smooth.   |
| (?old)    | 271.8       | 167     | 27.8 | Pelage even paler than ad. male. Scrotum very large. Anogenital region denuded.   |

*Remarks.*—Dobson (1873) segregated the sexes on the basis of colouration. He stated that the females from the Andaman and Nicobar Islands were generally of an intensely black colour throughout with the exception of a few individuals, apparently very aged ones, in which the fur on the back of the head and neck had a slightly reddish tinge. The males, on the contrary, had the whole of the head, nape and neck to shoulder coloured bright orange or pale yellow remarkably contrasting with the somber hues of the females. Andersen (1912) contradicted Dobson's statement and said: 'So far as Nicobar individuals [of *P. melanotus*] are concerned, the alleged sexual difference in colour is imaginary. .... such variation in the bright tinge as does occur is individual, not sexual' Miller (1902) admitted: 'There is considerable individual variation in both colour and size, but taken as a whole the series from the two islands [*i.e.* Andaman and Nicobar] are not distinguishable from each other'

In the present series, the females and a subadult male (forearm 221) have somber hue (cinnamon rufous) on the mantle but powdered with much black, the tips of individual hairs being blackish. Generally, females have a wash of brown on the rump and interfemoral membrane. In addition, females differ from the males by having dark seal brown at the concealed basal part of hairs in the mantle while males have

them cream buff. In younger males a strong reddish tinge is suffused on the mantle, which is faded into much paler and uniform cream buff to light buff in old males.

From the present observations it may be summarized that : (1) mantle is decidedly darker and richer in colouration in females than in males ; (2) hairs in mantle are uniformly coloured in males but dark-based in females ; (3) the exposed parts, namely, mantle and midventral line along chest and abdomen, get paler with ageing ; (4) size of individuals may indicate age, adult female is a trifle smaller than adult male.

Thus, Dobson's (1873) view on sexual difference in colour is established. Miller (1902) and others, in fact, failed to detect the characteristic colour of the base of the hairs in the mantle of females. 'Dull brownish.....on the part of the mantle' as stated by him could not be found there. Again, the faded midventral part of the abdomen and chest was wrongly given by him as 'essentially the same as mantle'

Mason (1908) separated the Andaman population as *Pteropus tytleri*, and Andersen (1912) provided a description of the species. Ellerman & Morrison-Scott (1966) and Hill (1967) treated it as *Pteropus (?) melanotus tytleri* Mason. I, however, differ with them and agree with Miller (1902) that the bats from the two groups of islands, viz., Andaman and Nicobar, are not distinguishable from each other.

It has been noted in the field that the larger bats dominated the feeding grounds where bats in small parties were found feeding on some particular trees. Roosting has been reported in swamps as well as in rain forests on hill tops. The presence of healed up lacerated wounds on the tip of ears, particularly in older individuals, suggested fighting and biting among themselves. They were found to be much vocal too.

#### Family EMBALLONURIDAE

#### **Taphozous saccolaimus crassus** Blyth

#### Blyth's Pouch-bearing Bat

*Taphozous crassus* Blyth, 1844, *J. Asiat. Soc. Beng.*, 13: 491. Mirzapur, Uttar Pradesh.

*Material*.—1 ♀ : Campbell Bay, Great Nicobar. 27 Mar 1977. Dry.

*Measurements*.—Head and body 91.4. Tail 20.6. Forearm 70.8. Ear 17.6. Tibia 29. Weight 41 g.

*Remarks*.—Hill (1967) recorded this species for the first time in

the Andaman and Nicobar Islands on a female specimen collected at Campbell Bay, Great Nicobar, on 4 Mar 1967 by Shri Humayun Abdulali.

This specimen had a mature foetus (without hair) in the left uterus. Though very little is known about the biology of this species, according to Phillips (as stated by Brosset, 1962), the breeding season is presumed to be in the autumn in Sri Lanka. This bat was shot at dusk when it came out to feed on termites on wing, swarming of which was observed to be a regular feature in this island. The stomach of specimen was full of termites, even at that early hour of dusk (18.00 hrs).

Family RHINOLOPHIDAE

Subfamily HIPPOSIDERINAE

**Hipposideros bicolor nicobarulae** Miller

Miller's Nose-leaf Bat

*Hipposideros nicobarulae* Miller, 1902, *Proc. U. S. natn. Mus.*, 24 : 781. Little Nicobar Island.

*Material.*—1 ♂ : Kamorta Island (from an old gun box). 24 Mar. 1977. Wet,

*Measurements.*—Head & body 40.6. Tail 26.8. Forearm 39. Tibia 16.2. Weight 5 g.

*Remarks.*—Hill (1967) reported this species from many islands of the Nicobar group. One of his specimen collected by Shri H. Abdulali 11 years earlier, on 29 Mar. 1966, was from the same spot where the present specimen was taken from.

Very few (only 4 or 5) individuals were found roosting in an old Japanese gun box, the floor of which was submerged under knee-deep water.

Family VESPERTILIONIDAE

**Pipistrellus camortae** Miller

Camorta Pipistrelle Bat

*Pipistrellus camortae* Miller, 1902, *Proc. U. S. natn. Mus.*, 24 : 779. Camorta Island, Central Nicobar.

*Material.*—2 ♀ ♀ : Campbell Bay, Great Nicobar. 2 Apr. 1977. Wet.

*Measurements.*—Head & body 45.5, 46.5. Tail 32.5, 33.5. Forearm 31, 32. Ear 10, 10.5. Tibia 12.5, 13. Weight 4.5 g (2).

*Remarks.*—Tate (1942) placed it as a subspecies under *Pipistrellus abramus* group, and Hill (1967) placed it as a subspecies of *Pipistrellus javanicus*. But I prefer to follow Ellerman & Morrison-Scott (1966) in treating it as a separate species.

### **Pipistrellus sp.**

*Material.*—1 ♀ : Campbell Bay, Great Nicobar. 25 Mar. 1977, Wet (lower jaw missing).

*Measurements.*—Head & body 46. Tail 37.5. Forearm 35.5. Ear 12.5. Tibia 15.8. Weight 5.5 g.

*Remarks.*—For the anomalous characters of this moderate sized Pipistrelle which has a rather broad wing and well marked pads on feet and thumb base, and has a short, broad outline of the skull, rather low but broad muzzle and a strong zygoma, both  $i^1$  &  $i^2$  bicuspid and almost equal in basal area,  $i^2$  slightly anteriorly placed,  $p^3$  greatly reduced and accommodated inbetween  $c$  and  $p^2$  at the inner edge of the toothrow, canine strongly built with a distinct accessory cusp and is in close contact with  $p^2$ , I could not place it under any of the recognized species of Pipistrelle.

## **Order RODENTIA**

### **Family MURIDAE**

#### ***Rattus flebilis* (Miller)**

#### **Andaman "Subanus" Rat**

*Mus flebilis* Miller, 1902, *Proc. U. S. natn. Mus.*, 24: 762. Henry Lawrence Island, Andaman Island.

*Material.*—1 ♀ : Pahargaon, near Port Blair, South Andaman. 14 Apr. 1977. Wet.

*Measurements.*—Head & body 228. Tail 240. Ear 21. Hindfoot 39.7. Mammary 5 pairs. Cranial : Occipitonasal 49.5. Condylar-basal 47.6. Nasal 18.8. Palate 24. Palatal foramen 8.4. Tooth row (alveolar) 7.4. Tooth row (crown) 5.5. Zygomatic breadth 24.8. Diastema 14.4.

*Remarks.*—Ellerman & Morrison-Scott (1966) retained this species as *Rattus (?) rattus flebilis*. Many other authors also considered it as a subspecies of *Rattus rattus*. But in view of its sympatry with the other indigenous *Rattus rattus*, particularly *R. r. andamanensis* in South Andaman Island, it is treated here as a distinct species.

**Rattus pulliventer** (Miller)

## Nicobar Spine-backed Rat

*Mus pulliventer* Miller, 1902, *Proc. U. S. natn. Mus.*, 24 : 762. Great Nicobar Island.

*Material.*—1 ♂, Campbell Bay, Great Nicobar. 6 Apr 1977. Dry.

*Measurements.*—Head & body 195. Tail 165.5. Ear 20.5. Hind-foot 37.2. Weight 170 g. Cranial : Occipitonasal 44.4. Condyllo-basal 42.5. Nasal 16.5. Palate 21.9. Palatal foramen 7.5. Tooth row (alveolar) 7.4. Tooth row (crown) 6. Zygomatic breadth 21.5. Diastema 11.6. Bulla 7.2.

*Remarks.*—The characteristic flat dorsal profile of the cranium distinguishes this species from other rats of the Andaman and Nicobar Islands. In this specimen, however, the palatal foramina, supra orbital ridge and the angular process of the mandible have some resemblance with the illustration of *Mus flebilis* given by Miller (1902).

This rat was found to be very common in the forests. It is chiefly arboreal and nocturnal. At dusk it came down the trees and invaded the forest floor as well as the agricultural fields in the forest clearings.

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