Rec. zool. Surv. India, 72 : 107-124, 1977

NOTES ON THE REPTILIA COLLECTION FROM THE GREAT NICOBAR ISLAND DURING THE GREAT NICOBAR EXPEDITION IN 1966

By

S. BISWAS AND D. P. SANYAL

Zoological Survey of India, Calcutta

(With 3 Text-figures)

INTRODUCTION

The Reptile collection studied in this paper was collected from the Great Nicobar Island by a party from Zoological Survey of India, one of the constituent units of the Great Nicobar Expedition, 1966 and five snakes and lizards collection from Mr. Humayun Abdulali, an eminent Naturalist of Bombay Natural History Society who also participated in the Expedition.

The Great Nicobar Island is situated between 6° 45′ N and 7° 36′ N latitude and 93° 37′ E and 93° 36′ E and it is the furthest or southernmost of the Andaman and Nicobar group of islands. It is by far the largest of the eleven islands of the Nicobar group, having an area of nearly 865 sq. km. out of a total area of 1651 Sq. km. for all the islands. This island is about 55 km. long between Murry Point in the north and Pygmalion Point in the south and about 30 km. wide on the north but narrows down to only about 3 km. at the southern tip which is 144 km distant from the island of Sumatra in Indonesia. This island is very. rugged consisting of numerous ridges many of which appear to radiate from a knot in the north-eastern part culminating in a peak, the Mt. Thuillier (700 m). It contains the only large perennial rivers with sweet waters and evergreen lush vegetation on both the banks which provides an ideal habitat for the reptiles.

For the convenience of faunistic survey, the island was surveyed in six parts *viz.* Campbell Bay, Bananga, Galathea Bay, Megapod Island, Casuarina Bay and Kundul Island areas and we have reptile collection from Campbell, Galathea and Casuarina areas.

Practically nothing about the reptile fauna of this island is known. The reason may be due to lack of facilities available to the earlier workers for surveying the island. But on the other hand reptiles of Andaman and

islands of Nicobars (Nancawry and Camorta) are better known as these could be surveyed making Port Blair, the administrative headquarter as a centre. So we find work of eminent herpetologists like Blyth (1846), Stoliczka (1873), Annandale (1905) and Smith (1941) on the reptile fauna of Andaman and some islands of Nicobar group excepting Great Nicobar Island.

The reptile fauna of the island will be found equally rich and varied if it is compared with (Tables. 1 & 2) Andaman or other Nicobar Islands. While narrating his experiences on Nicobar Islands Sewell (1923) commented "... but this is almost compensated for by the superabundance of reptiles. Though the actual numbers of species may be small in comparison with the continental fauna the primaeval forest is everywhere swarming with small lizards, most of them belong to the genus *Calotes*". Sewell's opinion about the abundance of reptile fauna in Nicobar Islands is also applicable in case of Great Nicobar due to the presence of nineteen species numbering five snakes, eleven lizards and three chelonians in the present collection. The number of species collected are quite large for a small party in a short period.

All the species that are enlisted in this paper are new record from the Great Nicobar. Some of the lizards *Calotes cristatellus*, *Dasia olivacea*, *Varanus salvator* and *Dibamus novae-guineae* and among snakes *Python reticulatus* and *Ahaetulla humayuni* recorded from this island also occur in other Nicobar islands and *Calotes danieli* appears to be indigenous. It seems *Crocodilus porosus* occur in the creeks of this island. One lower jaw of this species was collected during the survey.

The following are the abbreviations used in this paper : Ex : example, Exs : examples, Stn : Stations, Loc : Locality, Sl. No. : serial number, Coll. No. : collection number, Reg. No. : register number, B. N. H. S. : Bombay natural History Society.

ACKNOWLEDGEMENT

The authors are thankful to the Director Zoological Survey of India for his kind permission to work out the collection and to Mr. Humayun Abdulali for allowing us to examine his collection.

SYSTEMATIC ACCOUNT

Order TESTUDINES

Family CHELONIIDAE

1. Eretmochelys imbricata (Linn.)

1766. *Testudo imbricata* Linn., *Syst. Nat.* ed. 12 : 350.

Material.—1 ex. (Head only), Campbell bay, Stn. 1, 2. III. 1966.

Remarks.—This species was recorded earlier by Blyth (1846) from Nicobar Coast.

2. **Chelonia mydas** (Linn.)

1758. *Testudo mydas* Linn., *Syst. Nat.* ed. 10 : 197.

Material.—1 ex., Galathea bay area, Sl. No. 713, 22. III. 1966.

Remarks.—Commonly known as Green Turtle. Its distribution is tropical and subtropical seas. Smith (1931) found it common in the vicinity of the Andaman Islands. The present record extends its distribution further south near the coast of Great Nicobar.

Family EMYDIDAE

3. **Cuora amboinensis** (Daudin)

1802. *Testudo amboinensis* Daudin, *Hist. Nat. Rept.* II : 309

Material.—1 ex., Alexandra river, Sl. No. 18, 13. IV. 1966.

Remarks.—One young specimen was collected from the bank of the river.

White band bordering the top of head is interrupted in two or three places and 2nd and 3rd bands meeting behind the jaw separates again. Plastral spots are not confluent. Every marginal plate has black spot below. Plastral bridge is black. Margin of the shell is narrowly bordered white.

Distribution.—In the collection of Zoological Survey of India there are records of occurrence of this species from Burma, Malaysia, Assam and Great Nicobar, (Reg. No. 14719, collector *C. G. Rogers*).

Range.—It occurs in both the sub region, Indochinese (Tenasserim, Thailand, Cambodia, Indochina) and Malaysia (Malay Peninsula and Archipelago, Philippine).

Suborder SAURIA

Family GEKKONIDAE

4. **Cnemaspis kandiana** (Kelaart)

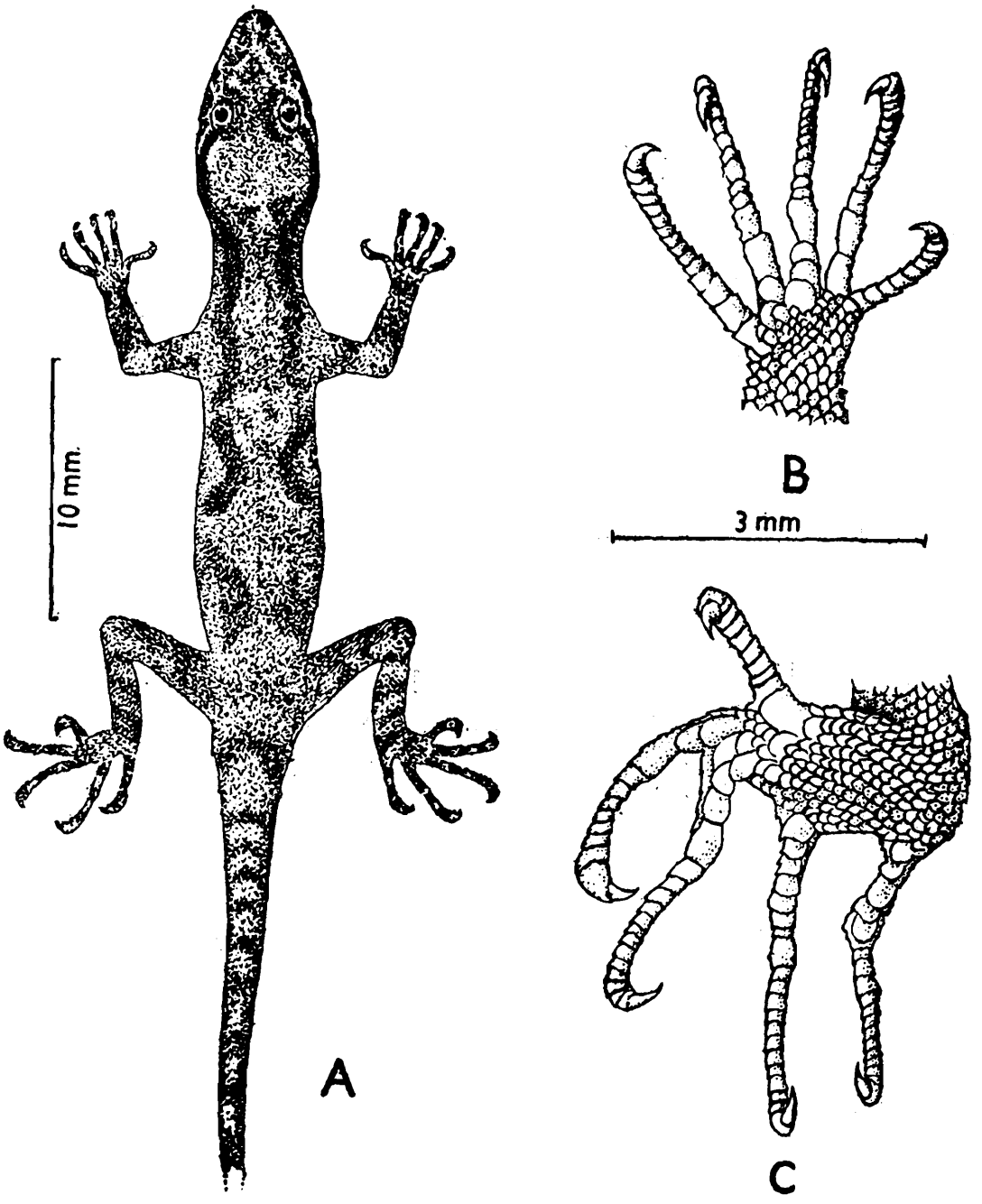
(Text fig. 1, A-C)

1852. *Gymnodactylus kandiana* Kelaart, *Prod. Fauna Zeyl.* : 186.

Material.—1 ex., Campbell bay, Stn. 1, 10. III. 1966.

Remarks.—One female specimen was collected from a tree. The general body colour is brown with 4 or 5 dark W-shaped markings on the body.

Measurement & Count.—8 upper and as many lower labials; length: Snout to vent—21 mm., tail broken.



Text-Fig. 1.— *Cnemaspis kandiana* (Kelaart). A. Dorsal view. B. under surface of hand. C. under surface of leg.

Distribution.—Regarding the distribution of this species Smith (1935) suggested that it might have been introduced in Andaman Is. and the Malay Archipelago by man's agency which is most unlikely in the present case because Great Nicobar was till now almost unconnected with civilised world.

Its range of distribution is Sri Lanka, South India as far north as lat. 12°, Andaman Islands and the Malay Archipelago.

5. **Hemiphyllodactylus typus typus** Bleeker

1860. *Hemiphyllodactylus typus* Bleeker, *Nat. Tijdschr. Ned.* Ind. **20** : 327.

Material.—1 ex., Campbell bay, Stn. No. 1, Coll. No. 2, 28, II. 1966.

Remarks.—One female specimen was collected from the camparea at night.

In the present specimen the postmentals are distinguishable being larger than the other scales. These are placed lining the infralabials. Colouration is almost the same as described in the literature excepting dorsally at the base of the tail there is a blcak spot posteriorly white instead of a large white spot edged with black.

Measuerment Count.—10 upper and lower labials each, 4th toe with 4 lamellae. Length—snout to vent 35 mm. and tail 33 mm.

Distribution and Range.—Sri Lanka, S. Burma, S. E. Thailand, Singapore, East Indian Archipelago and islands of Oceania.

6. **Platyurus platyurus** (Schneider)

1792. *Stellio platyurus* Schneider, *Amphib. Physiol.* II : 30.

Material.—1 ex., Campbell Bay area, Stn. 1, 1. V. 1966.

Remarks.—One male specimen from the mouth of a tree snake *Dendrelaphis humayuni* Tiwari & Biswas, while it was devouring it.

The cutaneous fold is prominent only in the front and hind portion of the leg. The body colour is more or less uniformly grayish brown.

Measurement & count.—Upper labials 9, lower 8 and 9; lamellae under 1st toe 9 and 4th toes 10 & 11; femoral pores continuous, 17 on each side.

Distribution.—This is an example of a sepcies belonging to the Indochinese subregion extending to the Malayan subregion.

Range.—Sri Lanka, N. India upto Nepal in the West, Indo-china, Hongkong, Formosa and the E. Indian Archipelago.

7. **Gekko gecko** (Linnaeus)

1900. *Lacerta gecko* Lunaeus, *Syst. Nat.* ed. 10, p. 205.

Material.—2 exs.; Campbell Bay, Great Nicobar; Coll. No. B. N. H. S. Reg. Nos. 947 and 948, Date of Coll. ? Collector, H. Abdulali.

Remarks.—Two specimens, one with tail and another without tail were received from B. N. H. S. for examination and these have been

referred to the present species. The occurrence of this species in Great Nicobar further proves the wide distribution of it in the Indochinese Subregion.

Measurement and count.—Length from snout to vent 123 mm., Tail 110 mm., 124 mm. tail missing.

Range.—North-eastern India (Bihar, Bengal, Tripura, Andaman island): Indochina, Southern China, Malay Penninsula, Burma and East Indian Archipelago.

Family AGAMIDAE

8. **Calotes cristatellus** (Kuhl)

1820. *Agama cristatella* Kuhl, *Beitr. Zool. Vergl. Anat.* 1, : 108.

Material.—1 ex., Campbell Bay, Stn. 1, Coll. No. 413, 14. III. 1966; 1 ex., Campbell Bay, Stn. 5, Coll. No. 355, 11. III. 1966; 1 ex., NW of Campbell Bay, Stn. 1, 5. III. 1966.

Remarks.—Two adults and one young specimens are in the collection. These specimens were collected from trees. The body colouration of larger specimen is mainly green with bluish tinge and scattered yellow spots are on the posterior part of the body and on the anterior part of the tail. Another specimen is bluish with chocolate colour on the head and patches on the body. The young specimen is grayish or blackish with white specks on the hind part of the dorsum which continue as bands on the tail.

Measurement & Count.—Specimen coll. No. 413—length: from snout to vent 75 mm., tail 225 mm.; scales round the body 63. Specimen coll. no. 355.— length: snout to vent 80 mm., tail 257 mm.; scales round the body 58. Young specimen—scales round the body, 63. length: body and tail 37 mm. and 107 mm. respectively.

Distribution.—This is an example of Malayan species extending its range in the Indo-Chinese Subregion. There is a record of this species from Nicobar Island (Steindachner, 1867).

Range.—Tenasserim; S. W. and Peninsular Siam; the Nicobar Is.; Malay Peninsula and the East Indian Archipelago except New Guinea.

9. **Calotes danieli** Tiwari & Biswas

1973. *Calotes danieli* Tiwari and Biswas, *J. zool. Soc. India*, Calcutta, **25** (1 & 2): pp. 57--63.

Material.—1 ex., Holotype Reg. No. 22455, Campbell Bay, Stn. 1, 2. III. 1966.

Remarks.—This species belongs to the *Calotes cristatellus* (Kuhl) group of species having long head, slender limbs, long tail and sides

of the body scales being pointed backward and downwards but differs from them in the length of the hind limbs, in the proportions of the fingers to toes and in colouration.

A species of slender and strongly compressed body, ventral scales more than 5 times larger than dorsal and strongly keeled, 71 scales round middle of body; nueal crest composed of 12 compressed and erect scales, dorsal crest prominent reaches beyond base of tail. Limbs long and slender. In preserved specimen hind portion of body reddish chocolate and front portion including head blackish chocolate; a black patch surrounding eye and tympanum and one vertical white patch between eye and tympanum, another white spot behind eye.

Measurement and Count.—(in mm.) Head length 25, head breadth 12, diameter of orbit 6, orbit to end of snout 9, diameter of tympanum 3, length of hind limb 71, length of body (snout to vent) 79, tail 271, snout to axilla 34, axilla to groin 43, scale count in the middle of the body not 48 as mentioned in the type description but the count is 71.

Family SCINCIDAE

10. **Mabuya multifasciata multifasciata** (Kuhl)

1820. *Scincus multifasciata* Kuhl, *Beitr. Zool. Vergl. Anat.* 126.

Material.—1 ex., Nepa Point, Stn. 8, Coll. No. 582, 24. III. 1966; 1 ex., Casuarina Bay, Stn. 10, Coll. No. 833, 3. IV. 1966; 1 ex., on the way to Pulokunyi Vill., 18. IV. 1966; 2 exs., 5 km. E. of Casuraina Bay, Stn. 1, Sl. No. 239, 6. III. 1966; 1 ex., 5 km. E of Campbell Bay, Stn. 1, Sl. No. 239, 6. III. 1966; 1 ex., Mangrove area Creek, Stn. 4, Coll. No. 332, 10. III. 1966.

Remarks.—7 specimens in total were collected from this island. These are one of the common lizard of this place. Most of the specimens are uniformly coloured brown above and whitish below excepting in the larger specimens where a faint lateral line is visible.

In larger specimens carina on the scale are very strong. Usually scales round the body of specimens from the mainland are between 30 to 34 but it is 30 to 37 in the present collection and the count of the lamellae of the 4th toe is 19 to 20 instead of 17 to 23.

Measurement and Count.—Scales round the body 30 to 37, number of keels on the scales—3 to 5, number of lamellae under the 1st toe 8 to 9 and under 4th toe 19 to 20, length—snout to vent 85 to 130 mm. and tail 105 to 210 mm.

Distribution.—This is an example of Indo-Chinese species extending its distribution in the Malaysia subregion.

Range.—N. W. Assam, Yunnan, Indo-China, Malay Peninsula, E. Indies, New Guinea and Nicobar island.

11. **Dasia olivacea** Gray

1838. *Dasia olivacea* Gray, *Ann. Mag. nat. Hist.* III : 331.

Material.—1 ex., Casuarina Bay, Stn. 10, 12.IV.1966.

Remarks.—Only one specimen was collected from the ground near the camp area. The specimen corrosponds to the colour description of young as given in the literature.

Measurement and Count.—Scales round the body 30, number of keels on the scale 3, upper labials 7, lower labials 6, lamellae under 4th toe 17, Length—Snout to vent 40 mm., tail 45 mm.

Distribution Range.—Tenasserim, Southern Thailand and Indo-china, Malay Peninsula, Indoneisa; the Andamans and Nicobar Islands.

12. **Lygosoma quadrivittatum** Peters

1867. *Lygosoma quadrivittatum* Peters, *Mon. Berl. Ac.* : 19.

Material.—1 ex., Campbell Bay, 10.III. 1966.

Remarks.—One young specimen is in the collection which was collected from the ground. The specimen agrees mostly with description of the species excepting some of the characters mentioned below.

17 lamellae under the 4th toe instead of 15 or 16, plam and sole with black tubercles, preanals large with irregular carinae on them, posterior abdominal scale also carry some kind of carinae, a part of the covering scale of the tympanum transparent, lateral band starts from the nostril instead of from the eye, scales round the body 23.

Some of the differences mentioned above are prominent enough to suggest it to be a new species but these characters should be verified from some more specimens.

Distribution—Range: Borneo, Philippines, Calebes, Malay Peninsula and Sumatra (Bukit Besar, Patani States).

Family DIBAMIDAE

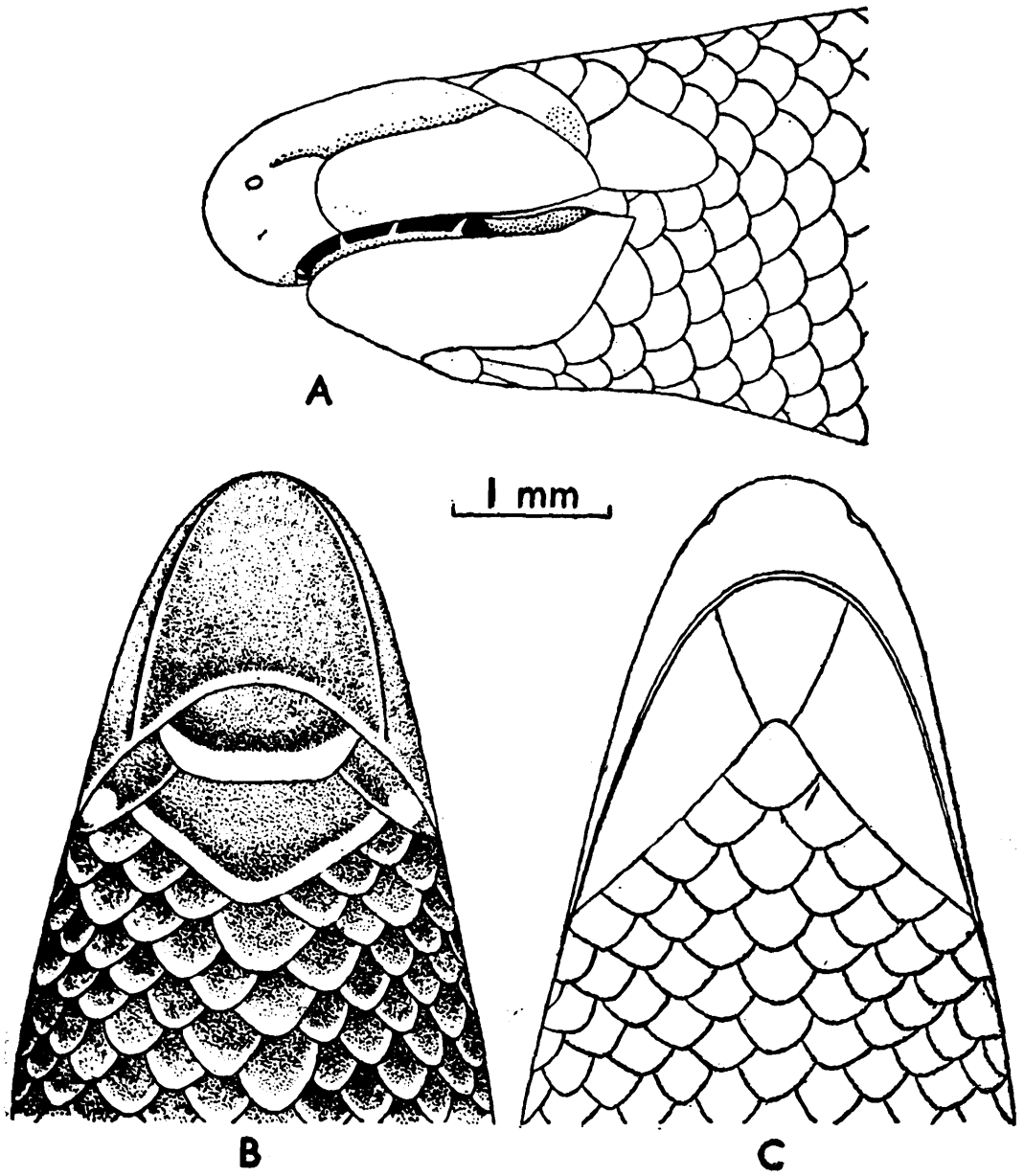
13. **Dibamus novae-guineae** Dum. & Bibr.

(Text-figs. 2 and 3)

1839. *Dibamus novae-guineae* Dum. and Bibr., *Erp. Gen.* **5** : 834.
1867. *Rhinophidion nicobaricum* Steindachner, *Reise Novara, Rept.* : **53.**

Materials.—1 ex., Campbell Bay area, Stn. 1. Coll. No. 124, 3. III. 1966; 1 ex., N. W. of Campbell Bay, Stn. 1, 5.IV. 1966; 1 ex., Casuarina Bay, Stn. 10, Coll. No. 912, 5. IV. 1966.

Remarks.—The material consists of specimens, one male and two females which superficially appears like Typhlops. These burrowing blind lizards were collected from the ground under the debris of the jungle.



Text-Fig. 2.— *Dibamus novae-guineae* Dum & Bibr. A. Lateral view of head region. B. Dorsal view of same. C. ventral view of same.

Body smooth, slender, wormlike, and equal in diameter throughout; colour in spirit uniform brown or chocolate; scale smooth, equal in size, magnified scales and head shields bordered white, 25 round the body; ventrals 206 to 220; subcaudals 35 to 38.

Measurements (in mm.) and scale count:

	♂	♀	♀
Snout to vent	97	113	112
Vent to tip of tail	10	12	12
Breadth of head (from junction of jaw)	2'6	2'3	2'9

Breadth of the body	3'5	3'3	3'0
Number of the ventrals	206	220	217
Number of subcaudals	36	38	35
Scales round the body	25	25	25

Distribution.—Range: Nicobars, New Guinea and Patani, Malay Peninsula.

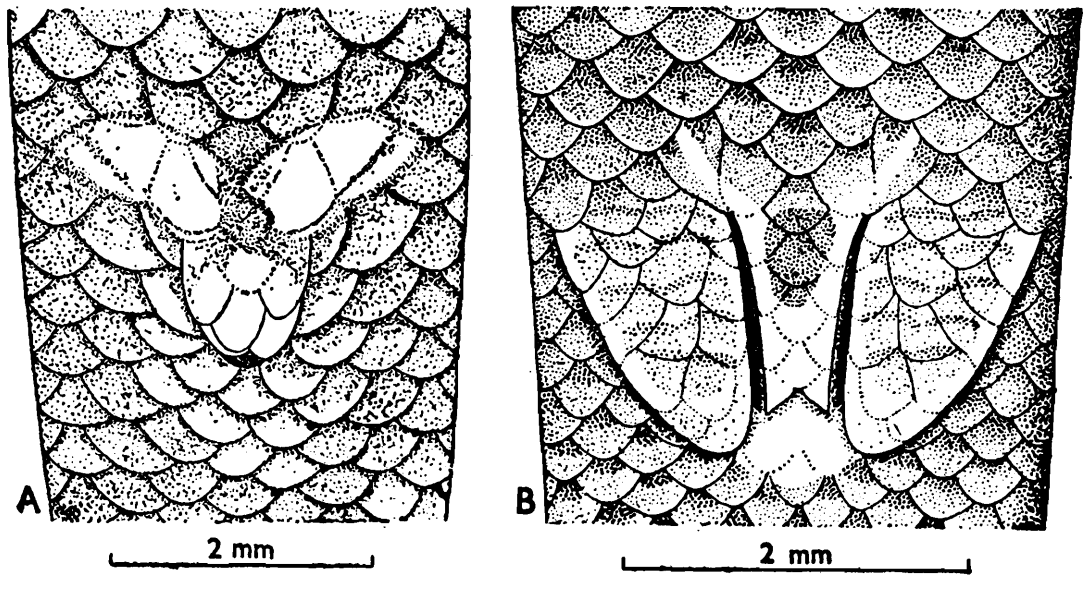
Faimly VARANIDAE

14. **Varanus salvator** (Laurenti)

1768. *Stellio salvator* Laurenti, *Syn. Rept.* (based on Seba's Illustr. II, pl. 88, fig. 2).

Materials.—1 ex., entrance of Galathea river, 10 kms up the river, Stn. 8, Sl. No. 709, 27. III. 1966; 1 ex., Stn. 8., Coll. No. 538, 24. III. 1966.

Remarks.—One specimen from the river bank at the entrance of Galathea river and another juvenile specimen by opening a fully developed egg collected from the Megapod mound are in the collection. The body colour of the adult specimen is blackish above with scattered small yellow spots and concentration of smaller spots in group of 4 to 6 arranged in seven transverse series. Ventral surface of the body is yellow. Though black lines come between two rows of ventral scales from the sides of the belly, it is not v-shaped. The body of the juvenile specimen is grayish with some white spots on the head and on the dorsal side of the body and these are 6 to 7 rings of white spots; the central ones are larger and laterals are gradually smaller. There are alternating white and gray bars on the tail. The gray bars are more than twice the white.



Text-Fig. 3.— *Dibamus novae-guineae* Dum & Bibr. A. Anal region of female B. Anal region of male.

Deraniyagala (1944) described 4 subspecies within this species relying on the colour variations. The pattern of the two specimens described above comes near either *Varanus salvator philippinensis* or *v. s. andamanensis* in the absence of ocelli. The colour variation within this species may be due to long isolation.

Measurement and Count.—Length of the adult specimen—snout to vent 360 mm., tail, 600 mm.; length of the juvenile specimen snout to vent 85 mm., tail 120 mm.

Distribution.—This species is mainly distributed in the Indochinese sub regions though it is also available in N. Australia, E. Indian Archipelago and Sri Lanka.

Suborder *SERPENTES*

Family BOIDAE

15. **Python reticulatus** (Schneider)

1801. *Boa reticulata* Schneider, *Hist. Amph.* II : 264.

Material.—1 ex., 15 km. S. E. of Campbell Bay towards Galathea Bay, Stn. 2, Sl. No. 287, 8. III. 1966.

Remarks.—The specimen was collected from the ground in the jungle. The black line in middle of head starts from middle of the temporal region instead of from the end of the snout in the orther Malayan specimens. Two zigzag black lines start from behind temporal region and continue dorsolaterally, these unite dorsally in the front part of the body to form rhombus but remain free in the hinder part of the body and again join dorsally in the posterior region of the tail.

Variation in the dorsal and ventral scale count and colour pattern of the specimen from the description of the species points out the necessity of investigating further on some more specimens collected from this island.

Measurement and Count.—Upper labials 12/13, anterior 4 deeply pitted, one side 6th and another side 7th touching eye; lower labials 20, 2 anterior and 6 posterior pitted; preoculars 2, postoculars 3; dorsal scale in 66 rows, ventral 290; tail ends bluntly indicating it was mutilated.

Distribution.—Present record of the species fill up a gap in the range—Indo--China as far north as Tong-King, Burma and Siam as far north as lat. 18°, Malay Peninsula and Archipelago and the Nicobar Islands.

Family COLUBRIDAE

Subfamily *COLUBRINAE*

16. **Dendrelaphis humayuni** Tiwari & Biswas

1973. *Dendrelaphis humayuni, J. zool. Soc. India,* Calcutta **25** (1 & 2) : 57–63.

Material.—Holotype: 1 ex., Campbell Bay, Great Nicobar Island, 1. V 1966; Paratypes: 1 ex., Galathea Bay area, 28.III. 1966; 1 ex., Campbell Bay area, 1. V 1966; 2 exs., Great Nicobar, B. N. H. S. Reg. No. 2339 & 2340, Humayun Abdulali.

Remarks.—There are three specimens in this collection. One was collected from a tree and the other two from the ground below trees. Colouration of the Holotype and one Paratype specimen is similar but it is different in the Paratype no. 22388. In the former the body colour is uniformly deep bluish or blackish and the ventral part is white with bluish tinge and in the latter specimen and 5 other Paratype specimens collected from other Nicobar Islands it is bronze with alternately arranged yelloish white short bars on the anterolateral part of the body. The apparent colour variation is due to the temporal stripe being scarcely distinguishable from the general body colouration in the above mentoned Holotype and Paratype specimens.

Over and above these three specimens from the Great Nicobar island there are 5 more specimens from the Nicobar islands in the Z.S.I. collection by the earlier collectors (Reg. No. 13516-17, W. Theohald; 7711 & 8886, F.A. de Roepstaff and 17568, F. Wall) which were identified by Wall (1921) as *Dendrelaphis cyanochloris* (Wall). These five specimens have been also placed under the present species. The measurement, scale count etc. of these specimens have been mentioned in detail in the literature cited above. Colour scheme of these specimens agrees with that of Paratype No. 22388. Therefore the difference of colour pattern found in case of the Holotype and other Paratype may be due to the preservative used in case of these two specimens.

In the ventral count (171 & 177) and the head shield characters the two snakes received from the Bombay Natural History Society come near this species and so have been placed under the present species but unfortunately end portions of the tails of these two specimens are missing. The colour pattern conforms to the Holotype where body colour is deep bluish. In one specimen breaking up of parital stripe into spots at the side of body is faintly visible.

The genus name *Ahae tulla* link has been replaced by *Dendrelaphis* Boulenger in view of the opinion No. 524, Opin. int. Comm. zool. Nom. **19**(12): 277-276, 1958.

Distribution.—The range of distribution of this species is now Nicobar group of islands and Great Nicobar. Two specimens from Sumatra (Bangnar) and Benang Star in Palani placed by Smith (1930) in *D. formosa* (Boie) and later transferred by him (1943) to *D. cyanocholoris* (Wall) may perhaps have also to be included in this species. Two speci-

mens in the British Museum from Penag and Malaceca are to be also included in this species.

17. **Dendrelaphis ahaetulla andamanensis** (Anderson)

1871. *Dendrophis picta* var *andamanensis* Anderson, *Proc. zool. Soc.*, London : 184.

Materials.—3 exs., Great Nicobar; B.N.H.S. Reg. Nos. S. 1009, 1010 and 1012, Coll. Humayun Abdulali.

Remarks.—Three snakes out of the collection received from the Bombay Natural History Society have been assigned to the present subspecies due to the colour pattern which is markedly different from that of the typical subspecies. In other characters these specimens agree well with the characters of the species.

The sub-species *andamanensis* differs markedly from *Dendrelaphis ahaetulla striata* (Cohn) which occurs in Sumatra and Nias in having more ventrals and the colour pattern though it appears to some extent from the sides like dark oblique bars from the back, but all the dorsals and the outer margins of the ventrals are heavily edged with black.

Often the mainland species *D. tristis* (Daudin) may likely be confused with *D. ahaetulla*, and its subspecies due to their similarity in the scale count, head shield character, and apparent colour approximation but the *tristis* group of species are separated from the *ahaetulla* group by its shorter posterior maxillary teeth than the other.

Measurement and Count.—

Reg. No.	1010	1009	1012
Ventrals	188	191	186
Subcaudals	133	122	112
Up. labials/touching eye	9/5th & 6th	9/5th & 6th	9/5th & 6th
Length: Snout to Vent in mm.	695	740	795
Length: Tail in mm.	327	345	350

Distribution.—This sub-species was so far known from Andamans only but the present record extends its distribution further south in the Great Nicobar Island.

18. **Boiga dendrophilus** (Boie)

1827. *Dipsas dendrophilus* Boie, *Isis* : 549.

Material.— 1 ex., Campbell Bay area, Stn. 5; Coll. No. 354; 11. III. 1966; 1 ex., Campbell Bay, near the camp, Stn. 1, Coll. No. 1260, 25. IV. 1966; 1 ex., Campbell Bay area, stn. 1, Coll. No. 1., 28.ii.1966.

Remarks.—Three specimens have been collected from the ground at night. The usual yellow cross bars present on the body of specimens from the mainland are wanting in these specimens. The normal colour of the species is black with white or yellow cross bars but in the present specimens the body is more or less uniformly brown with scattered patches of black marks on the tail. The body scales are edged blackish.

Measurement and Count.—Temporal 2+2, upper labials 8, lower labials 11, ventrals 232 and 235, Subcaudal 104 and 106, snout to vent 1175 and 855 mm. and tail 330 and 240 mm.

Distribution.—Thailand, Malay Peninsula and Archipelago.

19. **Natrix trianguligera** (Boie)

1827. *Tropidonotus trianguligerus* Bois, *Isis* : 535.

Material.—1 ex., near Galathea river, Stn. 8, Coll. No. 537, 23. III. 1966.

Remarks.—The place of collection is the jungle near the river. The body is uniformly coloured dark or blackish excepting upper and lower labials which are yellowish with black edges. Ventral side of the specimen is yellowish white and the edges of the ventrals are powdered gray. Excepting the lower labial colouration, the typical colour pattern of the body is absent in this specimen. The reason of this variation may be due to gradual disappearance of colour pattern with the age. The vantral scale count of the specimen agrees with the range (134 to 150) mentioned by Boulenger (1912) but not of Smith's (1943), (134 to 145).

Measurment and Count.—One preocular, 3 postocular, ventrals 149, subcaudals 90; snout to vent 690 mm. and tail 303 mm.

Distribution.—Southern Burma upto Mergui, Malay Peninsula and Archipelago.

Notes on Zoogeogrphy.

Afters tudying the distribution of reptiles in the southern part of the Indo-Malayan subregion it can be presumed that *Hemidactylus frenatus* Schlegel and *Gehyra mutilata* (Weigmann) may also occur in this island as they also occur in the East Indian Archipelago but in case of *Mabuya rugifera* (Stoliczka) the chance is more because its distribution is not only Malaysia but also in other Nicobar islands. In the same way we can expect some species of poisonous snakes in this island but total absence of Elapidae and Viperidae particularly *Trimeresurus* in the present collection is much interesting when on the one hand six species of *Trimeresurus* occur in Malaysia and four species in the Nicobar islands.

Smith's (1931) opinion "The Andaman contain an impoverished Burmese fauna; that of the Nicobar Island approximate to the Sumatran

type" will be further proved if we study the list of reptile species so far recorded in Andaman and Nicobar islands, (for snake Smith, 1943 and for lizard Table No. 1) and compare with the present record from the Great Nicobar Island (Table No. 2). The reptile fauna of the island clearly shows the affinity with the Malayan fauna as it is in case of Sumatra and that of Andaman with the Burmese which belongs to the Indochinese Subregion. Gradual mixing of Malaysian influence took place in the other Nicobar island through the Great Nicobar. The Andaman and Nicobar Islands are projection above sea level of long and narrow submarine ranges continuous with Arakan Yomas in the north and island festoon of the south-west Sumatra. In the geologically past this part was connected with the mainland by land but due to the land movement submergence of all exept the highest peaks took place and the continent of Asia was separated from the East Indian Archipelago. Therefore in the present collection in some examples of species some variations of characters and colouration noticed might have been produced by long isolation.

TABLE 1. List of Lizards species from Andaman and Nicobar Islands.

No.	Species	Andaman Is.	Nicobar Is.	Indigenous	Distribution outside Andaman Nicobar Is.
1.	*Gymnodactylus rubidus* (Blyth)	+	—	Yes	—
2.	*Cnemaspis kandiana* (Kelaart)	+	+	No	Sri Lanka, S. India, W. Sumatra
3.	*Gekko gecko* (Linnaeus)	+	—	No	Indochina, extending to Malaysia
4.	*Gekko smithi* Gray	+	—	No	Malaysia
5.	*Lepidodactylus lugubris* (Dum. & Bibr.)	+(?)	+(?)	No	Sri Lanka, S.W. Pacific Island, rarer in Malaysia
6.	*Ptychozoon kuhli* Stejneger	—	+	No	Malaysia
7.	*Phelsuma andamanense* Blyth	+	+	Yes	—
8.	*Goniocephalus subcristatus* (Blyth)	+	+	Yes	—
9.	*Calotes versicolor* (Daudin)	+	—	No	Indochina, Sri Lanka, Afganistan, part of Malaysia
10.	*C. calotes* (Linnaeus)	—	+	No	Sri Lanka, S. India
11.	*C. mystaceus* (Dum. & Bibr.)	+	+	No	Indochina

12. *C. Jubatus* (Dum. & Bibr.)	—	+	No	Java
13. *C. Cristatellus* (Kuhl)	—	+	No	Malaysia, extending Indochina
14. *C. andamanensis* Boulenger	+	—	Yes	—
15. *Mabuya andamanensis* Smith	+	+	Yes	—
16. *M. Tytleri* (Theobald)	+	—	Yes	—
17. *M. rugifera* (Stoliezka)	—	+	No	Malaysia
18. *M. multifasciata multifasciata* (Kuhl)	—	+	No	Indochina, Malaysia
19. *Lygosoma maculatum* (Blyth)	+	+	No	Indochina
20. *Leiolopisma macrotympanum* (Stoliczka)	+	—	Yes	—
21. *Riopa bowringi* (Günther)	+	—	No	Indochina
22. *Dibamus novae-guineae* Dum. & Bibr.	—	+	No	Malaysia, New Guinea
23. *Varanus salvator* (Laurenti)	+	+	No	Indochina, Sri Lanka, India, E.Ind. Archi., N. Australia·

TABLE 2. List of species recorded from the Great Nicobar and their distribution.

No.	Species	Andaman Is.	Nicobar Is.	Sumatra and Adj. Is.	Indegenous	Distribution outside Andaman and Nicobar and G. Nicobar
	Order-Testudines Suborder-Thecophora Family-Cheloniidae					
1.	*Eretmocleys imbricata* (Linn.)					Marine
2.	*Chelonia mydas* (Linn.) Fam. Emydidae					Marine
3.	*Cuora amboinensis* (Daudin) Sub-order—Sauria Fam.-Gekkonidae	—	—	+	No	Indochina and Malaysia
4.	*Cnemaspis kandiana* (Kelaart)	+	—	+	No	Sri Lanka, S. Ind., W. Sumatra
5.	*Hemiphyllodactylus typus typus* Bleeker	—	—	+	No	Sri Lanka, S. Burma, Malaysia

6. ***Platyurus platyurus*** (Schneider)	—	—	+	No	N. India, Indochina, E. Ind., Archi.
7. ***Gekko gecko*** (Linnaeus)	+	+	No	No	Widely in Indo-Chinese sub-region.
Fam.-Agamidae					
8. ***Calotes cristatellus*** (Kuhl)	—	+	+	No	Malaysia, extending in Indo-China
9. ***Calotes danieli*** Tiwari & Biswas	—	—	—	Yes	
Fam.-Scincidae					
10. ***Mabuya multifasciata multifasciata*** (Kuhl)	—	+	+	No	Indo-china, extending into Malaysia
11. ***Dasia olivacea*** Gray	+	+	+	No	Malaysia, extending into Indo-china
12. ***Lygosoma quardrivittatum*** Peters			+		
Fam.—Varanidae					
13 ***Dibamus novae-guineae*** Dum & Bibr.	—	+	+	No	Malaysia, New-Ginea.
14. ***Varanus salvator*** (Laurenti)	+	+	+	No	Ceylon, India, Indo-China, & E. Ind., Archi., N. Australia.
Fam.—Dibamidae					
Sub-order-Serpentes					
Fam. -Boidae					
15. ***Python reticulatus*** (Schneider)	—	+	+	No	Malaysia, extending to Indo-China.
16. ***Ahaetulla andamanensis*** (Anderson)	+	+	—	Yes	
Fam.—Colubridae					
17. ***Dendrelaphis humayuni*** Tiwari & Biswas	—	+	+	No	Probably Malaysia
18. ***Boiga dendrophilus*** (Boie)	—	—	+	No	Malaysia
19. ***Natrix trianguligera*** (Boie)	—	—	+	No	Malaysia, extending into Indo-china.

REFERENCES

ANNANDALE, N. 1905. Addition of the collection of oriental snakes in the Indian Museum. II. Specimens from Andamans and Nicobars. *J. Asiat. Soc. Bengal*, Calcutta, (N.S.), **1**: 173-176.

BLYTH, E. 1846. Notes on the fauna of Nicobar Islands. —*Reptilia. J. Asiat. Soc. Bengal*, Calcutta, **4**: 376-377.

BOULENGER, G. A. 1912. A vertebrate fauna of the Malay Peninsula. Reptilia & Batrachia. London. 294 PP., figs., Pls., Map.

CANTOR, TH. 1847. Catalogue of Reptiles inhabiting the Malay Peninsula and Islands. *J. Asiat. Soc. Bengal*, Calcutta, **16**(2): 607-656, 897-952 and 1026-78.

DERANIYAGALA, P. E. E. 1944. Four new races of *Varanus salvator*. *Spolia zylen.*, **24** (1): 59-62.

KARUNAKARAN, C. 1967. Exhibition on the Great Nicobar Island. Guide compiled by the Geological Survey of India: 1-14.

SMITH, M.A. 1930. The Reptilia and Amphibia of the Malay Peninsula. *Bull. Raffles Mus.* Singapore. No. 3, v+139 PP.

SMITH, M. A. 1931. *Fauna of British India.* Reptilia & Amphibia, Vol. **1** Loricata, Testudines. London. xxviii + 185 PP., figs., Pls., Map.

SMITH, M. A. 1935. *Fauna of British India* Reptilia & Amphibia, Vol. **2.** Sauria. London xiii+440 PP. figs., Pls., Map.

SMITH, M. A. 1941. The herpetology of the Andaman and Nicobar Islands. *Proc. Linn. Soc. .Lond* Part **2**: 150-8, Maps.

SMITH, M. A. 1943. *Fauna of British India.* Reptilia & Amphibia, Vol. **3.** Serpentes. London. xii+583 PP. figs. Pls. Map.

STEINDACHNER, F. 1867. Novora. Expedition. Zool. Bd. I. Reptien : 1-98.

STOLICZKA, F. 1873. Notes on some Andamanese and Nicobarese Reptilia with the description of three new species. *J. Asiat. Soc. Bengal,* Calcutta, **42** (2) : 162-169.

SEWELL, R. B. S. 1923. A survey season in the Nicobar Islands on the R. I. M. S. "Investigator", October, 1921 to March 1922. *J. Bombay nat. Hist. Soc.*, Bombay, **28**(4): 970-989.

WALL, F. 1921. Remarks on the Indian species of *Dendrophis. Rec. Indian Mus.*, Delhi, **22**: 151.