

Fauna of Arunachal Pradesh

(Part-1)



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REPTILIA

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INTRODUCTION

Reptilian fauna of Arunachal Pradesh remained more or less unknown until the publication of the zoological results of the Abor Expedition in 1911-1912 by Dr. N. Annandale and Fauna Namdapha : Arunachal Pradesh by D.P. Sanyal & N.C. Gayen (1986) and Ghosh (1987), Mathew (1983) and Smith's works on the reptilia fauna of India, (1931, 1935, 1943). So the present paper will be the first detailed account on reptilian fauna and constitute new locality records from the state. The present paper is based upon the recent comprehensive reptilian collections made from Arunachal Pradesh by the authors along with other group of experts during 1987-1989 field surveys comprising Tirap, Lohit, Upper and Lower Subansiri, Dibang valley, East and West Kameng, East and West Siang and Changlang districts of Arunachal Pradesh, together with earlier collections made by Zoological Survey of India, survey parties including the Namdapha Biosphere Reserve collections during 1981 to 1987. Abor expedition collection made during 1911-1912, Swiss Entomological expeditions in 1961, Subansiri Expedition in 1974-75, Daphabum Expeditions in 1969-70. Tawang district not included in this paper due to non availability of specimen. In some cases measurement could not be given due to damaged condition of the specimens.

It comprises 78 species, 46 genera under 12 families. The classification followed is after Malcom Smith. Colouration of specimens described is of specimens preserved in formalin and stored in alcohol.

All the species in this paper have been dealt with their latest scientific names, references, keys,

material examined together with figures of interesting species. It also included map depicting state of Arunachal Pradesh, collection centres, border lines and rivers.

This paper have been submitted in the year 1994, Synonymies and records have been reduced to avoid over repetition but included the original and most recent references up to 1994. The authors are not responsible for the changes in nomenclature, records etc. after 1994.

MATERIAL AND METHOD

Reptiles are either aquatic, terrestrial or arboreal. Aquatic form has been collected with the help of water net, cast net and fishing hook. Both terrestrial and arboreal forms have been collected by hand or long forceps. The reptiles reported in this paper have been collected by parties of Zoological Survey of India from different ecological niches of Arunachal Pradesh. In the field, notes have been taken regarding the habits and habitats of reptiles. For collection, aquatic vegetations, bushes, scrub, jungles, heap of rotten leaves or straw burrows, dark corners of village huts, undersurface of barks of trees, soil under stones etc. are explored. Nocturnal fauna has been explored with the help of lamps. The collected material is first chloroformed and then put into 5% formalin solution for at least 24 hours for fixation. Before putting in the formalin, an incision on the abdomen for the bigger specimens and injection of 10% formalin solution inside abdomen for smaller specimen are given for the fixation of viscera. The fixed material along with labels containing the data of locality, altitude, habitat, date of collection and name of collector, are packed properly and kept in the laboratory.

SYSTEMATIC LIST

- Class REPTILIA
Order (I) TESTUDINES
Suborder (i) CRYPTODIRA
Family 1. BATAGURIDAE
1. *Pyxidea mouhotii* (Gray)
 2. *Melanochelys tricarinata* (Blyth)
 3. *Kachuga tecta* (Gray)
 4. *Kachuga sylhetensis* (Jerdon)
- Order (II) SQAMATA
Suborder (ii) SAURIA
Family 2. GEKKONIDAE
5. *Cyrtodactylus khasiensis* (Jerdon)
 6. *Hemidactylus brookii* (Gray)
 7. *Hemidactylus frenatus* (Schlegel)
 8. *Cosymbotus platyurus* (Schlegel)
- Family 3. AGAMIDAE
9. *Draco maculatus* (Blyth)
 10. *Ptyctolaemus gularis* Peters
 11. *Myctopholis austeniana* (Annandale)
 12. *Oriocalotes paulus* Smith
 13. *Japalura andersoniana* (Annandale)
 14. *Calotes versicolor* (Daudin)
 15. *Calotes jerdoni* Gunther
- Family 4. SCINCIDAE
16. *Mabuya macularia* (Blyth)
 17. *Sphenomorphus indicum* (Gray)
 18. *Sphenomorphus maculatum* (Blyth)
 19. *Sphenomorphus courcyanum* Annandale
 20. *Scincella sikkimensis* (Blyth)
- Family 5. LACERTIDAE
21. *Takydromus sexlineatus khasiensis* Boulenger
- Family 6. ANGUIDAE
22. *Ophisaurus gracilis* (Gray)
- Family 7. VARANIDAE
23. *Varanus bengalensis* (Daudin)
- Suborder (iii) SERPENTES
Family 8. TYPHLOPIDAE
24. *Ramphotyphlops braminus* (Daudin)
 25. *Typhlops jerdoni* Boulenger
 26. *Typhlops diardii* Schlegel
- Family 9. BOIDAE
27. *Python molurus bivittatus* Schlegel
- Family 10. COLUBRIDAE
28. *Pears monticola* (Cantor)
 29. *Elaphe radiata* (Schlegel)
 30. *Elaphe taeniura* (Cope)
 31. *Elaphe cantoris* (Boulenger)
 32. *Elaphe porphyracea* (Cantor)
 33. *Elaphe prasina* (Blyth)
 34. *Elaphe mandarina* (Cantor)
 35. *Ptyas mucosus* (Linnaeus)
 36. *Ptyas korros* (Schlegel)
 37. *Zoacys nigromarginatus* (Blyth)
 38. *Liopeltis frenatus* (Günther)
 39. *Liopeltis stoliczkae* (Sclater)
 40. *Oligodon albobinctus* (Cantor)
 41. *Oligodon melanozonotus* Wall
 42. *Oligodon cinereus* (Günther)
 43. *Oligodon erythracraxis* Wall
 44. *Dendrelaphis ahaetulla* (Linnaeus)
 45. *Dendrelaphis cyanochloris* (Wall)
 46. *Dendrelaphis gorei* (Wall)
 47. *Dendrelaphis tristic* (Daudin)
 48. *Ahaetulla prasina* (Reinwardt)
 49. *Chrysopelea ornata* (Shaw)
 50. *Ophites laoensis* (Günther)
 51. *Ophites jara* (Shaw)
 52. *Sibynophis collaris* (Gray)
 53. *Xenochrophis punctulata* (Günther)
 54. *Xenochrophis piscator* (Schneider)
 55. *Pseudoxenodon macrops* (Blyth)
 56. *Amphiesma stolata* (Linnaeus)
 57. *Amphiesma modesta* (Günther)
 58. *Amphiesma platyceps* (Blyth)
 59. *Trachischium monticola* (Cantor)
 60. *Trachischium tenuiceps* (Blyth)
 61. *Rhabdophis himalayanus* (Günther)
 62. *Rhabdops bicolor* (Blyth)
 63. *Blythia reticulata* (Blyth)

64. *Boiga ochracea* (Günther)
65. *Boiga gokool* (Gray)
66. *Boiga quincunciata* (Wall)
67. *Boiga multifasciata* (Blyth)
68. *Boiga cynodon* (Boie)
69. *Psammodynastes pulverulentus* (Boie)

Family 11. ELAPIDAE

70. *Bungarus fasciatus* (Schneider)
71. *Bungarus niger* Wall
72. *Calliophis maclellandi* (Reinhardt)
73. *Naja naja kaouthia* (Lesson)
74. *Ophiophagus hannah* (Cantor)

Family 12. VIPERRIDAE

75. *Trimeresurus mucrosquamatus* (Cantor)
76. *Trimeresurus monticola* (Günther)
77. *Trimeresurus garminaeus* (Shaw)
78. *Trimeresurus stejnegeri* Schmidt.

SYSTEMATIC ACCOUNT

- Class REPTILIA
Order (I) TESTUDINES
Suborder (i) CRYPTODIRA
Family 1. EMYDIDAE

Key to genera of family EMYDIDAE

1. Plastron united to carapace by ligamentous tissue *Pyxidea*
- Plastron united to carapace by suture. 2
2. Vertebral shields short sided anteriorly *Kachuga*
- Vertebral shields short sided posteriorly *Melanochelys*

Genus 1. *Pyxidea* Gray, 1864.1. *Pyxidea mouhotii* (Gray)
Keel Box Turtle

1862. *Cyclemys mouhoti* Gray, Ann. Mag. Nat. Hist. (3), 10 : 157.
1864. *Pyxidea mouhoti* Günther, Rept. Brit. Ind., : 16, Pl. 4.

Material examined : Changlang Dist. 1 ex., Deban, 27 km. from Miao, 27.iv.1981; Dr. S. Biswas.

Measurement : Carapace length & breadth 182 mm. & 178mm. Plastron length & Breadth 153 mm. & 87 mm.

Diagnostic character : The head is moderately small, snout shorter than the orbit and truncate, skin of the posterior part of head is divided into large shields. Plastron united to carapace by ligamentous tissue. Neurals hexagonal, limbs are with half webbed digits. Hind limbs club-shaped, its lower part and the sole of the foot with imbricate, pointed, horny shields.

Distribution : Arunachal Pradesh : as stated in the "material" Assam, Meghalaya.

Elsewhere : Myanmar (Burma), Thailand, Cambodia, Laos, Vietnam and Namfong in Hainan, China.

Remarks : The species is one of the several Malayan elements in the fauna of Indian subcontinent, its distribution including north-eastern India, southwards to south-east Asia.

Status : Indeterminate.

Genus 2. *Melanochelys* Gray, 18692. *Melanochelys tricarinata* (Blyth)
Tricarinate Hill Turtle

1856. *Geoemyda tricarinata* Blyth, Jour. Asiat. Soc. Bengal, 24 : 714.

1879. *Chaihassia tricarinata* Anderson, Zool. Res. II: Yunnan, : P. 718.

Material examined : East Siang Dist. : 1 ex., Dafla Hills; coll. Godwin Austin, (A. C. E.). (A.C.E.) = Abor country Expedition (1911-12).

Diagnostic character : The head moderately small, snout shorter than the orbit, truncate, upper jaw feebly notched at the middle, carapace elongated, tricarinate, shell arched with steep sides; carapace wheels low, Vertebral shields short sided posteriorly. Limbs with long claws, fingers half webbed; toes with rudimentary webs only. Tail short.

Distribution : Arunachal Pradesh : as stated in the "material"; Bihar, Uttar Pradesh, West Bengal.

Remarks : It inhabits the hilly terrestrial areas. It is mainly herbivorous.

Status : Indeterminate, probably vulnerable.

Genus 3. *Kachuga* Gray, 1989.

Key to species of genus *Kachuga*

1. Second Vertebral shield longer than third *tecta*
- Second Vertebral shields shorter than third ..
..... *sylhetensis*

3. *Kachuga tecta* (Gray)

Indian Roofed Turtle

1830. *Emys tectum* Gray, *Illus. Ind. Mus.* Pt. 2.

1890. *Kachuga tectum* Boulenger, *Fauna. Brit. Ind.*, : 43.

Material examined : East Siang Dist. 1 ex., Dehong, coll. S. W. Kemp, (A. C. E.).

Diagnostic character : The head moderately small, pointed, shorter than the orbit. Carapace elevated, oval with a distinct vertebral spiked keel, especially on vertebral shield longer than third; plastron truncated anteriorly, notched posteriorly. Limbs with fully and broadly webbed digits and have transversely enlarged scales.

Distribution : Arunachal Pradesh : as stated in the "material"; Assam, Meghalaya, Bihar, Uttar Pradesh, West Bengal, Punjab, Rajasthan, Jammu, Madhya Pradesh, Gujarat.

Remarks : The species is completely aquatic and inhabits freshwater bodies with plenty of aquatic vegetation.

Status : It has become extremely vulnerable and its population has been reduced due to over exploitation for food.

4. *Kachuga sylhetensis* (Jerdon)

Assam Roofed Turtle

1870. *Pangshura sylhetensis* Jerdon, *Proc. Asiat. Soc. Bengal.*, : 69.

1889. *Kachuga sylhetensis* Boulenger, *Cat. Chel. Brit. Mus.*, 57. and *Fauna Brit. Ind.*, 1890. : 42.

Material examined : East Kameng Dist. 1 ex., Namuri, ca 50 km. NW of Seijusa; 11.x.1987; coll. D. P. Sanyal.

Mesurements : Length 65 mm., Breadth -58 mm. Height 48 mm. Plastron Length 55 mm., Breadth 42.

Diagnostic character : The head moderately small; snout pointed, shorter than the orbit and projecting much beyond the lower jaw. Carapace strikingly elevated, oval and markedly serrated posteriorly; vertebral 1 as wide as long or wider than long, vertebral 3 and 4 longer than wide, the plastron consists of paired gular, humeral, oxillary, pectoral, abdominal, inguinal, femoral and anal shields. Limbs with fully and broadly webbed digits and with transversely enlarged scales.

Distribution : Arunachal Pradesh : as stated in the "material"; Its distribution is restricted to the evergreen forest tracts northeast of the Indian subcontinent and records exist both north and south of the Brahmaputra river.

Remarks : The species is fully aquatic and inhabits stagnant and slow running waters in the hilly terrain with plenty of vegetation. It is mainly herbivorous.

Status : Insufficiently known.

Order (II) SQUAMATA

Suborder (ii) SAURIA

Key to families of sub order SAURIA

1. Tongue slender, forked VARANIDAE
- Tongue neither slender nor forked 2
2. Top of head with symmetrical shields 3
- Top of head without symmetrical shields 4
3. Body covered with osteodermal plates; femoral pores absent SCINCIDAE
- Body covered with osteodermal plates; femoral pores present LACERTIDAE
4. Eyes with movable eyelids; digits free 5

- Eyes without movable eyelids; digits clawed GEKKONIDAE
- 5. Tongue broad and short AGAMIDAE
- Tongue not broad and short ANGUIDAE

Family 2. GEKKONIDAE

Key to genera of family GEKKONIDAE

- 1. Digits strongly dilated *Cosymbotus*
- Digits not dilated *Cyrtodactylus*
- Inner digit well developed, with free terminal phalange *Hemidactylus*

Genus 4. *Cyrtodactylus* Gray, 1827

5. *Cyrtodactylus khasiensis* (Jerdon) Khasi Hill Rock Gecko

1870. *Pentactylus khasiensis* Jerdon, *Proc. Asiat. Soc. Beng.*, : 75.
1871. *Gymnodactylus khasiensis* Anderson, *Proc. Zool. Soc.*, : 162.

Material examined : East Kammeng Dist. 1 ex., Seppa, 26.xi.1990. coll. S. Sur. East Siang Dist. 2 ex., Upper Rotung and 2 ex., Kobo; coll. S. W. Kemp & 32nd Sikh pioneer, (A. C. E.). 1 ex., Batiab Kunda, 6.iii.1961, coll. Dr. K. C. Jayramkrishna. Changlang Dist. 5 ex., Hornbill, ca 30 km. NE of Miao, 13.iv.1981 and 13.xii.1983 to 16.xii.1983, coll. Dr. S. Biswas.

Measurements : Snout to vent 45-62 mm., tail 52-64 mm.

Diagnostic character : Head moderate 10 to 12 upper and lower labials. Body and limbs above with small granular scales, intermixed with much larger rounded keeled tubercles. Tail covered with small flat scales. Grey-brown above with dark spots more or less regularly arranged. Tail with brown bands; belly whitish.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Assam; Darjeeling district (West Bengal).

Elsewhere : Upper Myanmar (Burma).

Remarks : Usually dwell among rocks and on the forest floor. It feeds largely on insects.

Status : Indeterminate.

Genus 5. *Hemidactylus* Oken, 1817

Key to species of genus *Hemidactylus*

- Tubercles very large, crowded, separated from one another by spaces about equal to the diameters of the tubercles; numerous small tubercles present on head *brookii*
- Tubercles smaller, not crowded, sometimes sparse, nearly always separated by spaces equal to several diameters of a tubercles, head devoid of tubercles *frenatus*

6. *Hemidactylus brookii* Gray Brook's Gecko

1845. *Hemidactylus brooki* Gray, *Cat. Liz. Brit. Mus.* : 153.
1965. *Hemidactylus brooki* Smith, *Fauna Brit. Ind.* 2 : 89-91.

Material examined : West Siang. Dist. 2 ex., Bomte village 12.ii.1988; coll. D. P. Sanyal. East Siang Dist. 1 ex., Belong, 22 km. NW of Pegu, 27.xi.1988, coll. D. P. Sanyal. Lohit Dist. 1 ex., Jasu, 19.i.1970, coll. J. M. Julka. Changlang Dist. 2 ex., Miao, 9.xi.1982, coll. Dr. S. Biswas.

Measurements : Snout to vent 30-33 mm., tail 21-35 mm.

Diagnostic character : Head distinct from neck, snout blunt, eye large; ear opening oval, about one-third of diameter of eye; body flattened dorsoventrally, no lateral fold. Body scales granular with rows trihedral large tubercles, separated from one another by spaces about equal to the diameters of the tubercles; numerous small tubercles present on the head. Light brown or grayish above, with dark brown spots, usually more or less regularly arranged; a dark streak along the side of the head; dirty whitish below.

Distribution : Arunachal Pradesh : as mentioned in the "material" The whole of India.

Elsewhere : Sri Lanka.

Remarks : Lives in a variety of habitats, on trees, rocks, under stones and on buildings.

Status : Common.

7. *Hemidactylus frenatus* Schlegel Southern House Gecko

1836. *Hemidactylus frenatus* Schlegel, *Erp. Gen.*, **3** : 366.

1935. *Hemidactylus frenatus* Smith, *Fauna Brit. Ind.*, **2** : 95-96.

Material examined : West Kameng Dist. : 4 ex., Jameri, 14.x.1987, coll. D. P. Sanyal. 1 ex. Likabali, 14.xii.1988, coll. D. P. Sanyal. East Kameng Dist. : 6 ex., Seijusa, 10.x.1987, coll. D. P. Sanyal, Lohit Dist. : 29 ex., from Namsai, Lathao and Kamglong, 18.ii.1987, coll. D. P. Sanyal. Tirap Dist. : 12 ex., Khunsa, 12.ii.1987; Deomali, 12.ii.1987; Bordumsa, 16.ii.1987, coll. D. P. Sanyal. Changlang Dist. : 4 ex., Namsang, 10.ii.1987, 3 ex., Miao, 5.v.1981 & 8.v.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 12-50 mm., tail 30-53.

Diagnostic character : Head large, snout obtusely pointed; 10-12 upper and 8-10 lower labials; mental large, subtriangular; back with smaller tubercles, not crowded, sometimes sparse, nearly always separated by spaces equal to several diameters of tubercles; head devoid of tubercles; 4-5 lamellae under 1st. toe, 9-10 under 4th.

Distribution : Arunachal Pradesh : as mentioned under "material"; Southern India, West Bengal.

Remarks : A common house gecko in South India. It breeds in warm climate.

Status : Common.

Genus 6. *Cosymbotus* Fitzinger, 1843

8. *Cosymbotus platyurus* (Schneider) Field House Gecko

1792. *Stellio platyurus* Schneider, *Amphib. physiol.*, **2** : 30.

1922. *Cosymbotus platyurus* Taylor, *Liz. Philipp. Is.*, : 59.

Material examined : East Siang Dist. : 1 ex., Rotung, coll. S. W. Kemp; 1 ex., Upper Rotung, coll. 32 Sikh pioneer; (A. C. E.). Changlang Dist. 1 ex, Miao, 4.iv.81, 2 ex., Deban, 27 km. E. of Miao, 27.iv.1981; coll. Dr. S. Biswas.

Measurements : Snout to vent 35-54 mm., tail 40-56 mm.

Diagnostic character : Snout obtusely pointed, distinctly longer than the distance between the eye and the ear-opening; 9-11 upper and 8 or 9 lower labials. Digits webbed, strongly dilated, with divided lamellae beneath. Dorsal scales small, granular, intermixed with larger tubercles. Greyish brown above and spotted with darker colour on the back and bands on the tail.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Sikkim, Darjeeling in India.

Elsewhere : Sri Lanka, Nepal, Indo-China, Hongkong, Formosa; The East Indian Archipelago.

Remarks : Distinguished from other house geckos by the fringe of skin along the sides of the body.

Family 3 AGAMIDAE

Key to genera of family AGAMIDAE

1. Body with a wing like lateral membrane *Draco*
- Wing like lateral membrane is absent 2
2. Three parallel longitudinal folds forming U-shaped marking present on throat *Ptyctolaemus*
- No such U-shaped fold on the throat 3
3. Dorsal scales equal *Calotes*
- Dorsal scales unequal 4
4. Tympanum exposed, gular sac present *Myctopholis*
- Tympanum concealed or partially naked, gular sac small or absent 5
5. A post orbital spine is present.... *Oriocalotes*

– Post orbital spine is absent *Japalura*

Genus 7. *Draco* Linnaeus, 1758

9. *Draco maculatus* (Gray)

Flying Lizard

1845. *Dracunculus maculatus* Gray Cat. Liz. Brit. Mus., : 262

1864. *Draco maculatus* Günther, Rept. Brit. Ind., : 125.

Material examined : East Siang Dist. 1 ex., Yabung, coll. S. W. Kemp, (A. C. E.).

Measurement : Snout to vent 57 mm., tail 90 mm.

Diagnostic character : Body with a large, lateral, winglike membrane, a gular appendage and a lateral flap on either side of the throat. Tail long. Colouration cryptic, resembling the bark of the tree on which the lizards live.

Distribution : Arunachal Pradesh : as mentioned in the "material"; The whole of the Indo-Chinese peninsula from Assam to Hainan.

Remarks : Inhabits primarily evergreen biotopes up to 1000 m.

Status : Commonest Flying Lizards of the Indo-Chinese Region.

Genus 8. *Ptyctolaemus* Boulenger, 1885

10. *Ptyctolaemus gularis* Peters

Blue Throated Lizard

1864. *Otocryptes gularis* Peters. Mon. Aked. Berlin., : 386.

1885. *Ptyctolaemus gularis* Boulenger, Cat. Liz. Brit. Mus., 1. : 273.

Material examined : East Siang Dist. 2 ex., Kobo, coll. S. W. Kemp & Capt. M. de-Courcey; 1 ex., Routang, coll. S. W. Kemp, (A. C. E.). Changlang Dist. 5 ex. Horn bill, 30 km. N. E. of Miao, 10-16.iv.81. 1 ex. Deban 27 km. E. of Miao, 27.iv.1981; coll. Dr. S. Biswas.

Measurements : Snout to vent 43-65 mm., tail 90-145 mm.

Diagnostic character : Body compressed; no dorsal crest, limbs moderate, fourth toe much longer than third. Male with a low nuchal fold.

Olive brown above; a dark stripe from below the eye to the angle of the mouth.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Assam, Meghalaya.

Remarks : A ground-lizard preferring the neighbourhood of shady forest.

Status : Common.

Genus 9. *Mictopholis* Boulenger, 1885

11. *Mictopholis austeniana* (Annandale)

1908. *Salea austeniana* Annandale, Rec. Ind. Mus., 2 : 97.

1935. *Mictopholis austeniana* Smith, Fauna Brit. Ind., 2 : 165.

Material examined : West Kameng Dist. 1 ex., Bomdila, 17.xi.1990, coll. S. Sur.

Diagnostic character : Body compressed, dorsal scales very unequal, irregularly shaped. A small gular fold. Third and fourth fingers equal, fourth toe distinctly longer than third.

Distribution : Arunachal Pradesh : as mentioned in the "material" Dafla Hills.

Status : Indeterminate.

Genus 10. *Oriocalotes* Gunther, 1864

12. *Oriocalotes paulus* Smith

1845. *Calotes minor* Gray, Cat. Liz. Brit. Mus., 244.

1935. *Oriocalotes paulus* Smith, Fauna Brit. Ind., 2 : 166

Material examined : East Siang Dist. 1 ex., Upper Rotung, coll. S. W. Kemp.

Measurements : Snout to vent 25 mm., tail 65 mm.

Diagnostic character : Dorsal crest present with mere denticulation. No gular sac. Tail rounded, Pale brownish-olive above, light brown below, the throat with dark transverse streaks.

Distribution : Arunachal Pradesh : as mentioned in the "material"; The Khasi Hills, Sikkim.

Status : Indeterminate.

Genus 11. *Japalura* Gray, 185313. *Japalura andersoniana* Annandale
(Japalura Lizard)

1905. *Japalura andersoniana* Annandale, *Jour. Asiat. Soc. Bengal.*, 1 : 85. pl. 2. fig. 4.

Material examined : East Siang Dist. 1 ex., Abore country, coll. George Dumber, (A. C. E.).

Measurements : Snout to vent 75 mm., tail 160 mm.

Diagnostic character : Body compressed; gular sac indicated by a fold. Limbs slender, fourth much longer than third. Tail compressed, covered with keeled scales. Dark brown above.

Distribution : Arunachal Pradesh : as stated in the "material" Dafla Hills.

Status : Indeterminate.

Genus 12. *Calotes* Refinesque, 1815.Key to species of genus *Calotes*

Two separated spines above the tympanum
..... *versicolor*

Two parallel rows of compressed scales above the tympanum *jerdoni*

14. *Calotes versicolor* (Daudin)
(Common Garden Lizard)

1802. *Agama versicolor* Daudin, *Hist. Nat. Rept.*, 3 : 361, pl. 42.

1853. *Calotes versicolor* Jerdon, *Asiat. Soc. Bengal.*, 22 : 470.

Material examined : Changlang dist. 1 ex. Miao, 5.xii.1982. coll. Dr. S. Biswas.

Measurement : Snout to vent 70 mm., tail 180 mm.

Diagnostic characters : The head is large and high and the snout is short and pointed. Two separated spines above the tympanum. The entire body and tail are covered with strongly keeled

scales. The dorso-nuchal crest is prominent. The tail is rounded and extremely long.

Distribution : Arunachal Pradesh : as mentioned in the "material" whole of India.

Elsewhere : Indo-Chinese subregions.

Remarks : It is found in the scrub jungle, open woods, hedges and city gardens. It is mainly an arboreal lizard occurring wherever trees and shrubs are found. During the breeding season the male assumes a brilliant crimson or scarlet colour which is the source of the misappropriate name "Blood Sucker" given to this harmless lizard.

Status : Common.

15. *Calotes jerdoni* Günther
Jerdon's Calotes
(Fig.- 1 & 2)

1845. *Calotes maria* Gray, *Cat. Liz. Brit. Mus.*, : 243.

1870. *Calotes jerdonii* Günther, *Proc. Zool. Soc. Nov.*, : 778.

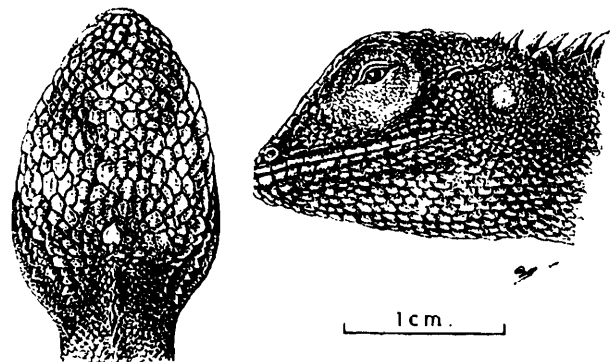


Fig. 1. Head (Dorsal view) of *Calotes jerdoni*

Fig. 2. Head (Lateral view) of *Calotes jerdoni*

Material examined : East Siang Dist. 1 ex., Komsang; 1 ex., Yabung, coll. S. W. Kemp, (A. C. E.) ; 2 ex., Pasighat, 19.xii.1988, coll. D. P. Sanyal.

Measurement : Snout to vent 60-85 mm., tail 205-295 mm.

Diagnostic character : Two parallel ridges above the tympanum not spinous, the lower one longer; starting from just behind the eye, separated

from the tympanum by two or three scales only. A bright green lizard with a pair of brown, black-edged, dorsal bands and a conspicuous fold ahead of the shoulder. Tail green at the base and posteriorly with bands.

Distribution : Arunachal Pradesh : as stated in the "material"

Elsewhere : Occurs in the hilly areas of NE India.

Remarks : Habits similar to those of other calotes lizards.

Family 4 SCINIDAE

Key to genera of family SCINIDAE

1. Pterygoid bones separated from one another, the palatal notch extending to the level of the centres of the eyes *Mabuya*
- Pterygoid bones usually in contact anteriorly, the palatal notch not reaching to the level of the centres of the eyes 2
- Limbs usually well developed, tympanum sunk, lower eyelid scaly *Sphenomorphus*
- Lower eyelid with a transparent disc *Scincella*

Genus 13. *Mabuya* Rafinesque, 1815

16. *Mabuya macularia* (Blyth) Bronze Grass Skink

1853. *Euprepes macularius* Blyth, *Jour. Asiat. Soc. Bengal.*, 22 : 652.

1887. *Mabuia macularia* Boulenger, *Cat. Liz. Brit. Mus.*, 3 : 182.

Material examined : East Siang Dist. 2 ex., Pasighat, coll. S. W. Kemp, (A. C. E.)

Diagnostic character : 28-30 rows of scales round the body; 7 keels on the dorsal scale and 12-13 lamellae under the fourth toe. The body colour is bronze with spots.

Distribution : Arunachal Pradesh : as mentioned in the "material" Throughout India.

Remarks : This skink is found in the grasslands and cultivated fields almost throughout India.

Status : Common.

Genus 14. *Sphenomorphus* Fitzinger, 1843

Key to species of genus *Sphenomorphus*

1. The adpressed limbs overlap 2
- The adpressed limbs do not overlap *courcyanum*
2. Rostral convex, 30-38 scales round the body *indicum*
3. Rostral flat or concave, 38-42 scales round the body *maculatum*

17. *Sphenomorphus indicum* (Gray)

Slender Skink

1853. *Hinulia indica* Gray, *Ann. Mag. Nat. Hist.*, (2) 12 : 388

1887. *Lygosoma indicum* Boulenger, *Cat. Liz. Brit. Mus.*, 3 : 241, pl. 16, fig. 1.

1928. *Sphenomorphus indicus* Schmidt., *Copeia.* : 80.

Material examined : East Siang Dist. : 3 ex., Rotung and Upper rotung, coll. S. W. Kemp, (A. C. E.)

Measurements : Snout to vent 52-80 mm., tail broken in all the specimens.

Diagnostic character : Rostral convex, 30-38 scales round the body. Brown above with small brown or black spots arranged in longitudinal lines and white below. There is a conspicuous black stripe.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas;

Elsewhere : S. E. Tibet, the whole of Indo-China, Hainan, S. China the Malayan Peninsula.

Status : A common species in mountainous districts of Eastern Himalayas.

18. *Sphenomorphus maculatum* (Blyth)

Slender Skink

1853. *Lissonota maculata* Blyth, *Jour. Asiat. Soc. Bengal.*, 22 : 653.

1887. *Lygosoma maculatum*. Boulenger. *Cat. Liz. Brit. Mus.*, 3 : 242.

1935. *Sphenomorphus maculatum* Pope. *Rept. China*. Newyork. : 483.

Material examined : Lower Subansiri Dist. 1 ex., near Tali, 30.1.1975; 1 ex., Ayumwing, Tali, 26.11.1975 and 2 ex., Pabin, 17.1.1975, coll. Dr. J. M. Julka. East Kameng Dist. 1 ex., palazl vill., Bana and 1 ex., Bana 21-22.x.1987. coll. D. P. Sanyal. Changlang Dist. 9 ex., Hornbill, 30 km. NE of Miao, 13-16.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 33-63 mm., tail 48-100 mm.

Diagnostic character : Rostral flat, 38-42 scales round the body. Bronzy or brown above with two vertebral series of small black spots and light indistinct series of golden-spots. A black lateral band extend from the head to base of the tail. The lower parts are whitish.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas, North Bengal, the Andaman and Nicobar Islands.

Status : Common.

19. *Sphenomorphus courcyanum* (Annandale) Slender Skink

1912. *Lygosoma courcyanum* Annandale, *Rec. Ind. Mus.* 8 : 43, pl. v. fig. 5.

1952. *Sphenomorphus courcyanus* Mittleman, *Smithsonian Misc. Coll.* Washington, 117 (17) : 23.

Material examined : East Siang Dist. 1 ex., Upper Rotung, coll. 32. Sikh pioneer; 1 ex., Rotung, coll. Capt. M-de.Courcey; (A. C. E.).

Measurements : Snout to vent 35 mm., tail 65 mm.

Diagnostic character : 26 scales round the body. A brown dorso-lateral band edged by a light one is always present.

Distribution : Arunachal Pradesh : as stated in the "material" Khasi Hills (Meghalaya).

Status : Rare.

Genus 15. *Scincella* Mittleman, 1950

20. *Scincella sikkimensis* (Blyth) Sikkim Ground Skink

1854. *Mococa sikkimense* Blyth. *Jour. Asiat. Soc. Bengal*, 22 : 652.

1935. *Leiolopisma sikkimense* Smith. *Fauna. Brit. Ind.*, 2 : 301.

1952. *Scincella sikkimense* Mittleman, *Smithsonian Misc. Coll.* Washington. 117 (17) : 30.

Material examined : Lower Subansiri Dist. 1 ex., Gelanio, 10.xii.1974. 2 ex. Galensiniak, 10.xii.1974, coll. Dr. J. M. Julka.

Diagnostic character : Bonze-brown above with small black spots or shorts stripes arranged longitudinally and light bluish below. There is a distinct dark brown dorso-lateral band.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas (Sikkim, Darjeeling);

Elsewhere : Nepal : Bangladesh; S. Tibet.

Status : Common.

Family 5 LACERTIDAE

Genus 16. *Tarkydromus* Doudin, 1802

21. *Tarkydromus sexlineatus khasiensis* (Boulenger)

Long-tailed Grass Lacerta (Fig. 3 & 4)

1890. *Tachydromus sexlineatus* Boulenger. *Fauna. Brit. Ind.*, 1 : 169.

1917. *Tachydromus khasiensis* Boulenger. *Mem. Asiat. Soc. Bengal.*, 5 : 221. pl. 47. fig. 1.

1935. *Tarkydromus sexlineatus khasiensis* Smith. *Fauna Brit. Ind.*, 2 : 369.

Material examined : East Siang Dist. 1 ex., Janakmukh, coll. S. Kemp (A. C. P.). Lohit Dist. 1 ex. Teju, 19.i.1970, coll. Dr. J. M. Julka. Tirap Dist. 1 ex. 27.i.1962, coll. C. B. Srivastava.

Changlang Dist. 3 ex. Hornbill, 30 km. NE. of Miao, 14-15.xii.1983, coll. Dr. S. Biswas.

Measurements : Snout to vent 35-46 mm., tail 150-160 mm.

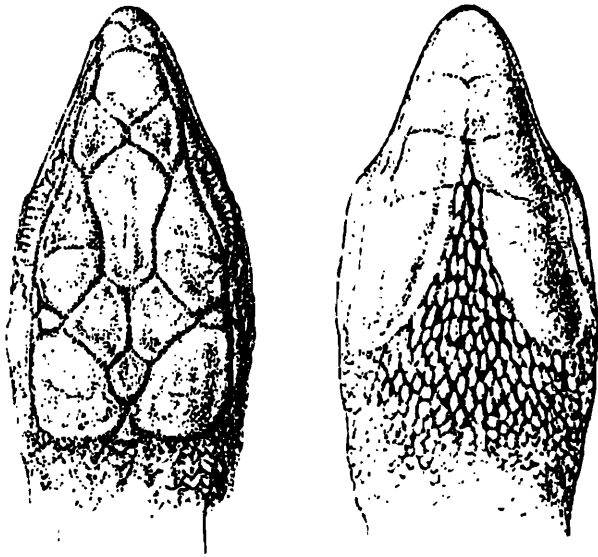


Fig. 3. Head (Dorsal view)

Fig. 4. Head (Ventral view) of *Takydromus sexlineatus* *Khasiensis*

Diagnostic character : Fronto-nasal often broader than long; scales on the flanks larger, pointed, keeled, bordered above and below by larger strongly keeled scales; 2 or 3 femoral pores on each side. Greenish brown above with a light dorso-lateral stripe dotted above and below with black and another black stripe along the side of the head and flanks. The belly is greenish-white.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Khasi Hills, (Meghalaya); Cachar (Assam);

Elsewhere : Myanmar.

Remarks : Insectivorous and diurnal in habits.

Status : Common.

Family 6 ANGUIDAE

Genus 17. *Ophisaurus* Daudin, 1803

22. *Ophisaurus gracilis* (Gray)

Indian Glass Snake

1845. *Pseudopus gracilis* Gray, *Cat. Liz. Brit. Mus.*, : 56.

1885. *Ophisaurus gracilis* Boulenger, *Cat. Liz. Brit. Mus.*, 2 : 283, pl. 15, fig. 1.

Material examined : East Siang Dist. 5 ex., Upper Rotung, coll. 32. Sikh Pioneer, (A. C. E.).

Measurements : Snout to vent 45-185 mm., tail 95-270 mm.

Diagnostic character : The body is elongated and snake like and lack of limbs, can be distinguished from the snakes by the presence of eyelids. Light brown or dark-brown above and pale brownish or yellowish on the lower surface. The dorsal pattern consists of a darker lateral band and scattered blue, black-edged spots.

Distribution : Arunachal Pradesh : as mentioned in the "material" Extreme northeastern India, adjacent territory of Myanmar (Burma) and is recently recorded from Simla (Himachal Pradesh).

Remarks : This species is the only representative of the family in India.

Status : Common at lower elevations in the hills of eastern India.

Family 7 VARANIDAE

Genus 18. *Varanus* Merrem, 1820

23. *Varanus bengalensis* (Daudin)

Common Indian Monitor

1758. *Lacerta monitor* Linnaeus, *Syst. Nat. Ed.*, 10 : 201.

1890. *Varanus bengalensis* Boulenger, *Fauna Brit. Ind.*, : 164.

Material examined : East Siang Dist. : 1 ex., Kobo, coll. D. C. of Macintyre, (A. C. E.); 2 ex. Pasighat, 19.xii.1988, coll. D. P. Sanyal.

Measurements : Snout to vent 160-190 mm., tail 225-265 mm.

Diagnostic character : Head long and narrow, snout pointed. It covered with small scales; body scales granular; limbs strong; neck long and mobile; tail laterally compressed. Young and adult differ in colouration. Young dark olive above with numerous light spots or ocelli alternating with dark bars and whitish on the undersides with narrow dark transverse bars sometimes broken up into spots. Adult brownish or olive above with blackish

dots on the back; lower parts yellowish, mottled with black.

Distribution : Arunachal Pradesh : as mentioned in the "material" Whole of India.

Elsewhere : Nepal; Myanmar (Burma).

Remarks : Diurnal in its habits and usually emerges from its hiding place two hours after sunrise and remains active till midday.

Status : Protected under Schedule I of India Wildlife Act, 1972.

Suborder : (iii) SERPENTES

Key to families of suborder SERPENTES

1. Eyes vestigial, body worm like, teeth only in upperjaw..... TYPHLOPIDAE
- Eyes not vestigial, teeth in both jaws..... 2
2. Vestiges of hind limbs present. BOIDAE
- Vestiges of hind limbs absent..... 3
3. Poison fangs present. 4
- Poison fangs absent..... COLUBRIDAE
4. Teeth present behind poison fangs, pupil round. ELAPIDAE
- Teeth absent behind poison fangs, pupil vertical. VIPERIDAE

Family 8 TYPHLOPIDAE

Key to genera of family TYPHLOPIDAE

1. Nasal suture terminating at the edge of preocular. *Ramphotyphlops*
- Nasal suture not terminating at the edge of preocular. *Typhlops*

Genus 19. *Ramphotyphlops* Fitzinger, 1843

24. *Ramphotyphlops braminus* (Daudin)

Common Blind Snake or Brahminy Blind Snake

1803. *Eryx braminus* Daudin, *Hist. Nat. Rept.*, 7 : 279.

1890. *Typhlops braminus* Boulenger, *Fauna Brit. India.*, : 236.

1980. *Ramphotyphlops braminus*, Nussabaum, *Herpetologica*, 36 : 215.

Material examined : East Kameng Dist. 5 exs., Bhairab-kunda, 4.iii.1961, coll. Dr. K. C. Jayram.

Measurements : Total length 95-160 mm.

Diagnostic character : Head bluntly rounded. Eyes indistinct, rostral large, snout rounded. Nasal suture terminating at the edge of preocular. Body uniformly cylindrical. Tail very short ending in a small sharp stiff point. Colour brown or blackish brown above, lighter below; snout, anal region and end of tail pale.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Throughout the Oriental region, Southern China including Hainam, Hong Kong and Taiwan. Introduced by human agency in several islands of the Pacific.

Remarks : Lives beneath the soil or stones or debris. They have also been found in flood plains forest under logs and stones. Often seen inside houses.

Status : The most wide spread species of the genus.

Genus 20. *Typhlops* Oppel, 1811

Key to species of genus *Typhlops*

1. Nasals completely divided, 22 scales round the body..... *jerdoni*
- Nasals incompletely divided, 24-26 scales round the body. *diardii*

25. *Typhlops jerdoni* Boulenger Jerdon's Warm Snake

1890. *Typhlops jerdoni* Boulenger, *Fauna Brit. India.*, : 238.

Material examined : East Siang dist. : 1 ex., Pasighat, coll. Capt. R. S. Kennedy, (A. C. E.).

Diagnostic character : Snout round, strongly projecting nostril lateral. Nasal completely divided, the lower cleft passing to the 2nd labial; ocular and preocular longer than the posterior nasal. 22 scales round the body. Dark brown or blackish

above, light brown below; snout and anal region whitish.

Distribution : Arunachal Pradesh : as stated in "materials". Eastern Himalayas; Assam; Meghalaya.

Elsewhere : Upper Myanmar.

Remarks : Lives beneath the soil or stones or debris. It is preyed on by other snakes.

Status : Common.

26. *Typhlops diardii* Schlegel Diard's Blind Snake

1839. *Typhlops diardii* Schlegel, *Abbild. Amphib.*, : 39.

Material examined : East Siang Dist. 3 ex., Kobo, coll. S. W. Kemp; 4 ex. Janakumukh, coll. 32, Sikh Pioneer, Capt. J. S. O'Neill and Capt. R. S. Kennedy; 1 ex., Balik, coll. Capt. Wilson; 1 ex., Pasighat, coll. R. S. Kenedy; (All are from A. C. E.). Lower Subansiri Dist. 1 ex., New Itanagar, 31.iii.1981, coll. Dr. S. Biswas.

Measurements : Total length 250-277 mm.

Diagnostic character : Snout rounded, strongly projecting; nostril lateral. Nasal incompletely divided, the lower eleft passing to the 2nd labial; ocular and preocular shorter than posterior basal. 24-26 scales round the body. Colour black or blackish above, paler below or a uniform pale gray.

Distribution : Arunachal Pradesh : as mentioned in the "materials". West Bengal, Assam.

Elsewhere : Nepal, Bangladesh and Myanmar to Indo-china, south through Malayan Peninsula, Indonesia (Sumatra, Borneo).

Remarks : In habits, it resembles the common Blind Snake.

Status : Common.

Family 9 BOIDAE

Genus 21. *Python* Daudin, 1803

27. *Python molurus bivittatus* Mertens Rock Python

1930. *Python molurus bivittatus* Mertene, *Abhandl.*

Senckenb. Naturforsch. Gesellsch Frankfurt am Main, 42 : 287.

Material examined : Changlang Dist : 1., 77th mile camp from Miao on M. V. Road, 13.i.1987, coll. Dr. S. Biswas.

Measurements : Snout to vent 2210 mm., tail 320 mm.

Diagnosis character : Labials separated from eye by suboculars; lance-shaped mark on the head distinct throughout.

Distribution : Arunachal Pradesh : as mentioned on the "material"

Elsewhere : Sourthern Yunnan east to Fujian including Hainan, Macao and Hong Kong. Eastern Sichuan, China. Myanmar eastward through Indo-china, Indonesia.

Remarks : Forest dweller occuring in dense as well as in open forest with rocky outcrops.

Status : Common.

Family 10 COLUBRIDAE

Key to genera of Family COLUBRIDAE

1. Mental groove present. 2
 - Mental groove absent. *Pareas*
2. All the maxillary teeth solid. 3
 - Last 2 or 3 maxillary teeth grooved. 17
3. Hydapophyses developed throughout the vertebral column. 4
 - Hydapophyses not developed on the posterior dorsal vertebrae. 11
4. Dentary bone freely movable on the articular; 30-50. Maxillary teeth present.
 - *Sibynophis*
 - Dentary bone not freely movable on the articular; usually less than 30 maxillary teeth. 5
5. Posterior maxillary teeth longest. 6
 - Posterior maxillary teeth equal. 9

6. Scales in 15-19 rows, not disposed obliquely. 7
 – Scales in 19 rows, disposed obliquely anteriorly. *Pseudoxenodon*
7. Hemipenis extending to the 7th caudal plate. *Rhabdophis*
 – Hemipenis extending beyond 7th caudal plate. 8
8. Inter nasal distinctly narrowed anteriorly. ... *Xenochrophis*
 – Inter nasal broadly truncate anteriorly. *Amphiesma*
9. Nostril directed forward. 10
 – Nostril not directed forward. *Rhabdops*
10. Maxillary teeth 20-22, those in the middle a little longer than the other. *Blythia*
 – Maxillary teeth 18-20, those in the middle not longer than the others. *Trachischium*
11. Some of the anterior maxillary teeth enlarged and fang-like; pupil vertically elliptic. *Ophites*
 – Anterior maxillary teeth not fang-like; pupil round. 12
12. Posterior maxillary teeth longest. 13
 – Posterior maxillary teeth not longest. 15
13. Longitudinal series of scales in odd numbers. 14
 – Longitudinal series of scales in even numbers. *Zaocys*
14. 20-28, teeth gradually enlarged and forming a continuous series. *Ptyas*
 – 6-16 teeth, the posterior strongly enlarged and compressed. *Oligodon*
15. Scales with apical pits. 16
 – Scales without apical pits. *Liopeltis*
16. Scales in 19-27 rows. *Elaphae*
 – Scales in 13-15 rows. *Dendrelaphis*
17. Pupil round. *Chrysopelia*
 – Pupil not round. 18
18. Pupil horizontal. *Ahaetulla*
 – Pupil vertical. 19
19. Maxillary teeth 10-14. *Boiga*
 – Maxillary teeth 18-20. *Psammodynastes*
- Genus 22. *Pareas* Wagler, 1830
28. *Pareas monticola* (Cantor)
Assam Snail Eater
1839. *Dipsas monticola* Cantor, *Proc. Zool. Soc.*, : 53.
1864. *Pareas monticola* Günther, *Rept. Brit. Ind.* : 327.
- Material examined** : East Sing Dist., 1 ex., Rotung and 12 ex., Upper Rotung, coll. 32, Sikh. Pioneer; 1 ex., Sirpo Valley, coll. Capt. J. B. Oneill; (A. C. E.).
- Measurements** : Snout to vent 150-425 mm. tail 45-130 mm.
- Diagnostic character** : Eye large, its diameter greater than its distance from the mouth; inter nasals about half as long as the prefrontals, the latter touching the eye. Loreal in broad contact with the eye. No preocular, 2 postoculars, the lower elongated and extending below the eye. Brown above with vertical blackish bars on the sides; a black line from above the eye to the nape and another from behind the eye to the angle of the mouth; top of head more or less thickly spotted with black.
- Distribution** : Arunachal Pradesh : as mentioned in the "material" Eastern Himalayas, Assam, Meghalaya.
- Remarks** : Subarboreal in their habit. In disposition these small snakes are quiet and inoffensive. They are nocturnal and appear to live chiefly on small molluscs.
- Status** : Common.
- Genus 23. *Elaphe* Fitzinger, 1833
- Key to species of genus *Elaphe***
1. Colour green. *prasina*

- Colour not green. 2
- 2. Loreal large. 3
- Loreal small. *mandarina*
- 3. Last labial touching the temporals ... *Radiata*
- Last labial not touching the temporals 4
- 4. Scales of the ischiadic region, strongly keeled.
..... *porphyracea*
- Scales of the ischiadic region feebly keeled.
..... 5
- 5. Scales in 21 rows. *cantoris*
- Scales in 23 rows. *taeniura*

29. *Elaphe radiata* (Schlegel) Copperhead Snake

1837. *Coluber radiatus* Schlegel, *Essai. Physion. Serp.*, 2 : 135.

1929. *Elaphe radiata*, Pope, *Bull. Amer. Mus. Nat. Hist.*, : 58 : 446.

Material examined : East Siang Dist. 1 ex., Pasighat, 18.xi.1988, coll. D. P. Sanyal. Lower Subansiri Dist. 5 ex. Itanagar, coll. S. Ghosh, on 15.v.1987, P. T. Bhutia on 20.vi.1988, 17.vi.1988, 14.viii.1990 and B. D. Tamang on 25.ix.1990.

Measurements : Snout to vent 1180-1400 mm., tail 295-335 mm.

Diagnostic character : Snout twice as long as the eye. Scales in 21 or 19 : 19 : 17 rows, more or less distinctly keeled. It has a copper coloured head. It gets the specific name, *radiata* from the three black streaks radiating from the eye. The back is greyish to yellowish brown with four black stripes on the forepart of the body.

Distribution : Arunachal Pradesh : as mentioned in the "material". Sikkim, Eastern Himalayas, Assam, Orissa, West Bengal, Extended to the Doon valley in the west subregion.

Remarks : This snake is usually found in the field and gardens in the vicinity of village.

Status : Common.

30. *Elaphe taeniura* Cope Striped Racer Snake

1861. *Elaphe taeniurus* Cope, *Proc. Acad. Nat. Sci. Philadelphia*, 12 : 565.

1935. *Elaphe taeniurus*, Pope, *Rept. China*, : 271.

Material examined : East Siang Dist. 2 ex., Upper Rotung, coll. 32 Sikh Pioneer and Capt. Mitchell, 2 (A. C. E.). Changlong Dist. 1 ex. near Burmanala, 67 km, from Miao, on the M. V. Road, 24.iv.81 and 1 ex., 42 km from Miao on the M. V. Road, 26.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 1295-1560 mm., tail 280-377 mm.

Diagnostic character : Snout 2.5 times as long as the eye. 7 to 9 supralabials, 2 or 3, sometimes only one touching the eye. Scales in 23 : 23 : 19 rows. Light greyish or brownish above, the head and neck uniform except for a black on each side of the head, broadest behind the eye, anterior part of the back with a vertebral series of large black butterfly-shaped spots.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Darjeeling (West Bengal), Assam; Myanmar (Burma) east through Indo-china to Vietnam, south to northern half of Malayan Peninsula.

Remarks : When excited, it will assume an attitude of defence.

Status : Indeterminate.

31. *Elaphe cantoris* (Boulenger) Darjeeling Trinket Snake

1894. *Coluber cantoris* Boulenger, *Cat. Sn. Brit. Mus.*, 2 : 35.

1939. *Elaphe cantoris*, Shaw and other, *Jour. Darjeeling. Nat. Hist. Soc.*, 14 : 74.

Material examined : West Kameng Dist., 1 ex., 55 km. from Rupa Kalak Tang, 9.xi.1970, coll. A. S. Rao, Lower Subansiri Dist. 1 ex., Doju Bung, 15.xii.1974, coll. J. M. Julka.

Diagnostic character : Snout 2 to 2.5 times as long as the eye; 8 supralabials, 4th & 5th or 3rd to 5th touching the eye. Anterior half of the body grey, the interstitial skin and margins of the scales white and with large squarish black spots, the vertebral series usually united to form broad transverse bars; posterior part of the body and tail olive brown to blackish, with irregular light cross-bars.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas, Assam, Meghalaya.

Remarks : Generally present in forests and foot-hills but are also found in the agricultural areas and fields.

Status : Common.

32. *Elaphe porphyracea* (Cantor) Black Striped Trinket Snake

1839. *Coluber porphyracea* Cantor, *Proc. Zool. Soc.*, 51.

1935. *Elaphe porphyracea* Pope, *Rept. China*, : 253.

Material examined : East Siang Dist. 1 ex., Kalek, Mihing, coll. S. W. Kemp, (A. C. E.). Lohit Dist. 1 ex., Tapghar, Teju, 5.xii.1986, coll. Dr. C. B. Srivastava.

Diagnostic character : Snout 2.5 times as long as the eye; 8 supralabials, 4th & 5th touching the eye. Pale to deep reddish brown above, with broad dark brown, black-edged cross bars which narrow on sides of the body. Lower parts uniform yellowish.

Distribution : Arunachal Pradesh : as mentioned in the "material" Sikkim, West Bengal (Darjeeling dist.), Assam, Meghalaya.

Elsewhere : Myanmar (Burma); Thailand; Laos; Northern Vietnam; Malayan Peninsula and Indonesia.

Remarks : According to Smith (1945) two

forms of this species are recognisable depending on the number of cross-bar on the body. This snake having 19 cross-bars on dorsal surface belongs to the form *Elaphe porphyracea porphyracea* in which the rings range from 14-20.

Status : Common.

33. *Elaphe prasina* (Blyth) Green Tree Racer

1854. *Coluber prasinus* Blyth, *Jour. Asiatic. Soc. Bengal*, 23 : 291.

1930. *Elaphe prasina* Smith, *Bull. Raffles. Mus. Singapore*, 3 : 48.

Material examined : Lower Subansiri Dist. 1 ex., Subansiri, 30.i.1975, coll. Dr. J. M. Julka.

Diagnostic character : Snout twice as long as the diameter of the eye. Preocular often touching the frontal. 9 supralabials, 4th to 6th touching the eye. Uniform green above in the adult, the interstitial skin with black and white reticulations, the scales sometimes edged with black in the young.

Distribution : Arunachal Pradesh : as mentioned in the "material" From Eastern Himalayas through Assam.

Elsewhere : Upper Myanmar (Burma) and Yunnan to Tong-king south to the Malayan Peninsula; northern Thailand, Laos and Vietnam.

Remarks : Arboreal in its habits.

Status : Indeterminate.

34. *Elaphe mandarina* (Cantor) Mandarin Snake (Fig. 5 & 6)

1842. *Coluber mandarinus* Cantor, *Ann. Mag. Nat. Hist.* (ser. 1), 9 : 483.

1925. *Elaphe mandarinus* : L. Sejneger, *Proc. U. S. Natl. Mus. Washington*, 66 : 84.

Material examined : East Siang Dist. 1 ex., Upper Rotung, 13.xii.1911, coll. 32, Sikh Pioneer (A. C. E.). Changlang Dist. 1 ex., Gandhigram,

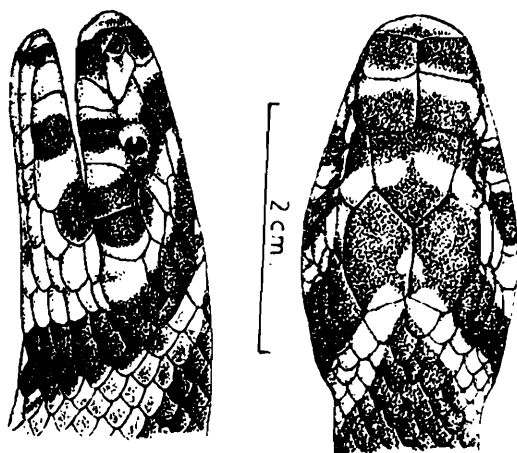


Fig. 5. Head (Lateral view)

Fig. 6. Head (Dorsal view) of *Elaphe mandarina*

ca 110 km. from Miao, on M. V. Road,
29.i.1987, coll. Dr. S. Biswas.

Measurements : Snout to vent 640 mm & 1075 mm., tail 108 mm and 200 mm.

Diagnostic character : Snout twice as long as the eye. 7 supralabials, 3rd and 4th touching the eye. Light brown or greyish above with a series of large, oval or rounded yellow spots, broadly edged with black. Yellowish below, with large black quadrangular spots which unite or alternate with one another; head above with black markings, a band across the snout, a crescentic mark on the top of the head passing through the eye where it divides into two and a V-shaped mark; its apex on the frontal shield and passing back on the side of the head behind the mouth to the throat.

Distribution : Arunachal Pradesh : as mentioned in the "material".

Elsewhere : Widely distributed over Southern China including Taiwan, Westward to south eastern Xizang (Tibet) and northward to Shanghai. Northern Myanmar, Laos and Vietnam.

Remarks : After a gap 75 years the species was recorded from Indian sub-continent.

Status : Rare.

Genus 24. *Ptyas* Fitzinger, 1843

Key to the species of genus *Ptyas*

1. Scales in 17 or 16 rows at mid-body; V. 190-213. *mucosus*

- Scales in 15 rows at mid-body; V. 160-187.
..... *korros*

35. *Ptyas mucosus* (Linnaneus)

Rat Snake, Dhaman

1758. *Coluber mucosus*. Linnæus. *Mus. Ad. Frid.*, 1 : 37.

1860. *Ptyas mucosus* Gunther. *Rept. Brit. India*, : 249.

Material examined : East Siang Dist. 1 ex., Janakmukh coll. 32 Sikh Pioneer, (A. C. E.).

Diagnostic character : Head long, distinctly wider than neck, snout bluntly pointed; rostral higher than wide, nostril between nasals and first upper labials; 3 loreals, 2 preocular, upper about four times size of lower, 2 postocular, 8 upper labials, 4th and 5th touching eye; 9 or 10 lower labials. Scales in 17 or 16 rows at mid-body. Eyes large and lustrous. Body robust, compressed, tapering towards both ends. Tail cylindrical about one-fourth of total length. Dorsally olivaceous brown, sometimes as dark as sepia or a light mustard yellow, lips and ventral scales margined with black. Belly greyish white.

Distribution : Arunachal Pradesh : as mentioned in the "material" Throughout the Indian sub-continent.

Elsewhere : Sri Lanka and Myanmar (Burma). In the west extends to Afghanistan and Turkestan. In the east to south China.

Remarks : Diurnal in its habit however not commonly seen during the day.

Status : A common snake in all parts of the country.

36. *Ptyas korros* (Schlegel)

Indo-Chinese Rat Snake

1837. *Coluber korros* Schlegel, *Physion. Serp.*, 2 : 139.

1860. *Ptyas korros* Cope, *Proc. Acad. Nat. Sci. Philadelphia*, 12 : 563.

Material examined : East Siang Dist. 1 ex., Jinning vill; Along 1.xi.1988, coll. D. P. Sanyal, Lower Subansiri Dist. 1 ex., Itanagar, 16.vi.1988, coll. T. Bhutia.

Measurements : Snout to vent 935-1030 mm., tail 490-585 mm.

Diagnostic character : Scales in 15 : 15 rarely 13 : 11 rows, smooth, olivaceous-green anteriorly, browner posteriorly, the scales on the posterior part of the body, edged or tipped with black. Yellowish-white below.

Distribution : Arunachal Pradesh : as mentioned in the "material".

Elsewhere : Southern China including Taiwan, Hong Kong and Hainan, Westward to Yunnan and Guzhou. Assam through Myanmar to Indonesia, south through Malayan Peninsula to Indonesia.

Remarks : It prefers to live away from habitations and has strong arboreal tendencies, seeming to prefer live in bushes or on low trees rather than on ground.

Status : Common.

Genus 25. *Zaocys* Cope, 1860

37. *Zaocys nigromarginatus* (Blyth) Green Rat Snake

1854. *Coluber nigromarginatus* Blyth, Jour. Asiatic. Soc. Bengal, 23 : 290.

1864. *Zaocys nigromarginatus* Günther, Rept. Brit. Ind., : 257.

Materials examined : Lower Subansiri Dist. 1 ex., Subansiri, 22.i.1975, coll. Dr. J. M. Julka.

Diagnostic character : Internasals nearly or quite as long as the prefrontals; loreal longer than high, 8 supralabials, 4th touching the eye. Dorsally it is greenish with four black stripes which extends to the whole length of body in the young and are confined to the posterior region in the adult.

Distribution : Arunachal Pradesh : as mentioned in the "material". India (Darjeeling, Sikkim, Assam).

Elsewhere : Nepal and northern Myanmar (Burma).

Remarks : It is found in the hills often at considerable altitude, upto 7,000 ft.

Status : Common.

Genus 26. *Liopelepis* Fitzinger, 1843

Key to species of genus *Liopelepis*

1. Snout projecting. *stoliczkae*
- Snout not projecting. *frenatus*

38. *Liopelepis frenatus* (Günther) Striped-neck Snake

1858. *Cyclophis frenatus* Günther, Catal. Colubr. Snakes. Coll. Brit. Mus. 120.

1923. *Liopelepis frenatus* Wall., Jour. Bombay Nat. Hist. Soc. 29 : 467.

Materials examined : East Siang Dist. 3 ex., Upper rotung, coll. 32 Sikh Pioneer, (A. C. E.).

Measurements : Snout to vent, 250-475 mm, tail 105-210 mm.

Diagnostic characters : Head not depressed, distinct from neck, snout not projecting. 7 supralabials, 3rd and 4th touching the eye. Scales in 15 : 15 : 15 rows. Olivaceous above, the scales edged with black, forming longitudinal lines on the anterior half of the body; broad black stripe from behind the eye; passing backwards and to the neck, and runs parallel on the opposite side.

Distribution : Arunachal Pradesh : as mentioned in the "material" Assam, Meghalaya.

Elsewhere : Myanmar (Burma); Laos and Vietnam.

Remarks : Generally found in hills at altitudes between 2,000 and 6,000 ft.

Status : Indeterminate.

39. *Liopelepis stoliczkae* (Sclater) Stoliczka's Striped-neck Snake

1891. *Ablabes stoliczkae* Sclater, Jour. Asiatic Soc. Bengal. 60 : 234, Pl. 6, fig. 1.

1924. *Liopelepis stoliczkae* Wall Jour. Bombay Nat. Hist. Soc., 29 : 863.

Material examined : Lower Subansiri Dist. 1 ex., Itanagar, 26.vi.1988, coll. P. T. Bhutia.

Measurements : Snout to vent. 270 mm, tail 170 mm.

Diagnostic character Head distinct from neck, much depressed, snout projecting, twice as long as the eye; nostril very small, in a long undivided nasal. 8 supralabials, 4th & 5th touching the eye. Greyish above, lighter below; broad black stripe on the side of the head, extending and gradually disappearing on the fore part of the body.

Distribution Arunachal Pradesh : as mentioned in the "material". Sikkim, West Bengal (Darjeeling district), Assam.

Remarks : It feeds on lizards and small birds.

Status, Rare.

Genus 27. *Oligodon* Boie, 1827

Key to species of genus *Oligodon*

1. Head shields complete, 2
Head shield incomplete, 3
2. Subcaudals 19-21. *albocinctus*
Subcaudals 15-17. *cinereus*
- 3 Subcaudals 15. *erythrorachis*
Subcaudals 17. *melazonotus*

40. *Oligodon albocinctus* (Cantor)

White-barred Kurki Snake

1839. *Coronella albocincta* Cantor, *Proc. Zool. Soc.*, : 50.

1923. *Oligodon albocinctus* Wall, *Rec. Ind. Mus.*, 25 : 326.

Materials examined : East Siang Dist. 1 ex., Sirpo Valley, coll. Capt. Wilson; 1 ex., Kobo, coll. Capt. M. de-Courcey; (A. C. E.). Lower Subansiri Dist. 1 ex., Banderdewa, 1977, coll. P. C. Roychowdhury.

Measurements : Snout to vent 515 mm, tail 170 mm,

Diagnostic characters : Ventral scales 177-208; subcaudals 40-69, 7 supralabials, 3rd and 4th touching the eye. Two distinct colour forms can be defined (Smith, 1943). Brown above with black

or dark brown black-edged crossbars; these may be simple bars or large rounded spots. The dark crossbars may disappear entirely with age, leaving the upper parts an almost uniform brown colouration.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas as far west as Sikkim. The whole of Assam east through Myanmar.

Remarks : Mainly diurnal and seen most often during the rainy season.

Status : A common snake in the Eastern Himalayas.

41. *Oligodon Melazonotus* Wall

Wall's Kurki Snake

1912. *Oligodon erythorhachis* Annandale, *Rec. Ind. Mus.*, 8 : 48.

1922. *Oligodon melazonotus* Wall, *Rec. Ind. Mus.*, 24 : 29.

Material examined : East Siang Dist. 2 ex., Upper Rotung, coll. 32 Sikh Pioneer, (A. C. E.).

Measurements : Snout to vent 460 mm., tail 90 mm.

Diagnostic character : No loreal, the frontal incontact with the 2nd labial; 6 upper labials, 3rd and 4th touching the eye. Ventral scales 171-173; caudals 42-45. Light brown above with a series of whitish black-edged crossbars. Whitish below with squarish black spots which occupy the whole of the ventral.

Distribution : Arunachal Pradesh : as mentioned in the "material" Eastern Himalayas.

Remarks : Only 2 specimens are known.

Status : Rare.

42. *Oligodon (Prox) cinereus* (Günther)

Black-barred Kurki Snake

1864. *Simotes cinereus* Günther, *Rept. Brit. India.* : 215.

1940. *Oligodon cinereus*, Smith, *Rec. Ind. Mus.*, 42 : 481.

Material examined : Changlang Dist. 1 ex., on the way, 57 km. from Miao, on M. V. Road. 23.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 177 mm., tail 33 mm.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : South China westward to Yunnan, including Hong Kong and Hainan. India (Assam) through Myanmar and Thailand to Laos, Cambodia and Vietnam, south to northern end of Malayan Peninsula.

Remarks : Though the specimens appears to agree with Indian material of *Oligodon cinereus* in many details, due to the difference in many major characters and colouration, we hesitate to regard it as that species fully. This snakes differ from *O. cinereus* as follows, scales round the middle of body in 15 rows (Vs. in 17 rows); subcaudal scales 49 (Vs. 29-42) and supralabials 7; 3rd, 4th and 5th touching the eye (Vs. 8; 4th and 5th touching the eye).

Status : Indeterminate.

43. *Oligodon erythrorhachis* Wall Red-striped Kurki Snake

1910. *Oligodon erythrorhachis* Wall, Jour. Bombay. nat. Hist. Soc., 19 : 923.

Material examined : Types deposited in British Museum, London. Description based on literature. Type locality Namsang.

Diagnostic character : No loreal, 7 upper labials, 3rd & 4th touching the eye; 1 anterior temporal. Scales in 15 rows. Ventrals 154, not angulate laterally; caudals 46. Brown above with a light vertebral striped and with 29 narrow, black, light edged crossbars on the body and 7 on the tail; yellowish below with squarish black spots at the outer margins of the ventrals and subcaudals.

Distribution : Arunachal Pradesh : as mentioned in the "material" Eastern Himalayas.

Remarks : Known only from the type-specimen. Locality Namsang, Assam. Now it is in Arunachal Pradesh.

Status : Rare.

Genus 28. *Dendrelaphis* Boulenger, 1890

Key to species of genus *Dendrelaphis*

1. Scales in 13 rows round the body. *gorei*
– Scales in 15 rows round the body. 2
2. Snout round. 3
– Snout not round. *cyanochloris*
3. Maxillary teeth 17-22. *tristis*
– Maxillary teeth 23-28. *ahaetulla*

44. *Dendrelaphis ahaetulla* (Linnaeus)

1758. *Coluber ahaetulla* Linnaeus, Syst. Nat. Ed., 10 : 225.

Material examined : Lower Subansiri Dist. 1 ex. Banderdewa 1977, coll. P. C. Roychowdhury; 1 ex., Itanagar, 11.vii.89, coll. P. T. Bhutia.

Measurements : Snout to vent 240-740 mm., tail 110-370 mm.

Diagnostic character : Maxillary teeth 23-28. Snout broadly rounded; eye as long as its distance from the nostril. Vertebral scales enlarged, variable in breadth, at mid-body broader than the outer row of scales, the posterior margin obtusely pointed or rounded or truncate. Bronze-brown above. Lower parts creamy white, a black stripe along the side of the head, strong on the temple and passing on to the neck, where it breaks up into oblique bars; upper lip and lower jaw yellow or white.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : The whole of Indo-Chinese region, from West Bengal and the Eastern Himalayas to southern China.

Remarks : Common in many places, both in the hills and in plains.

Status : Common.

45. *Dendrelaphis cyanochloris* (Wall)**Green Bronze-back Tree Snake**

1921. *Dendrophis pictus* Var. *cyanochloris* Wall. *Rec. Ind. Mus.*, 22 : 155.

Material examined : East Siang Dist. 1 ex., below Danida, coll. S. W. Kemp (A. C. E.). Changlang Dist. 1 ex., Hornbill, ca 30 km, N. E. of Miao, 11.xii.1993, coll. Dr. S. Biswas.

Measurements : Snout to vent 705 mm., tail 350 mm.

Diagnostic character : Snout squarish. Vertebrae enlarged at mid-body broader than the outer row of scales, the posterior margin truncate or concave. Bronzy olive above, the scales black-edged. Ventrals and outer scales-rows pale greenish or yellowish; a broad black temporal stripe, extending on to the neck and forebody, where it may be broken up into spots; lips and lower jaw yellowish.

Distribution : Arunachal Pradesh : as mentioned in the "material" Bengal (Darjeeling district); Andaman and Nicobar Islands. Assam north to the Thandaung Hills.

Elsewhere : Upper Myanmar; Tenasserim; Siam in the north-west.

Status : Indeterminate.

46. *Dendrelaphis gorei* (Wall)**HiMalayan Bronze-back Tree Snake**

1910. *Dendrophis gorei* Wall, *Jour. Bombay, Nat. Hist. Soc.*, 19 : 820.

1986. *Dendrelaphis gorei* W. S. Tian and Y. M. Jiang. *Identif. Man. Chin. Amphib. Rept.*, : 148.

Material examined : East Siang Dist. 1 ex., Kobo, coll. 32, Sikh Pioneer, (A. C. E.).

Diagnostic character : Scales in 13 rows round the body; snout broadly rounded; internasals shorter than the prefrontals. Bronzy brown above, greenish below; a more or less distinct yellowish stripe along scales rows 1 and 2; a black stripe along each side of the head, extending on to the neck where it breaks up into vertical bars.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas (Darjeeling), Assam.

Elsewhere : Myanmar (Burma), Tong-King.

Status : Indeterminate.

47. *Dendrelaphis tristis* (Daudin)**Common Indian Bronze-back**

1803. *Coluber tristis* Daudin *Hist. Nat. Rept.*, 6 : 430.

1894. *Dendrelaphis tristis* Boulenger, *Catal. Snakes Brit. Mus.*, 2 : 88.

Material examined : East Siang Dist. 1 ex., Janakmukh, coll. M. de-Courcey, (A. C. E.).

Diagnostic character : Maxillary teeth 17-22. Distinguished by the enlarged vertebrae and ridged ventrals. It is a slender and graceful snake with a flat head and large eye. The back is bronze-brown in colour which is marked with a distinctive dark stripe on the sides. The ventral surfaces are whitish or light green.

Distribution : Arunachal Pradesh : as mentioned in the "material" Peninsular India from Sind in north west and Darjeeling in the north-east.

Elsewhere : Sri Lanka.

Remarks : It lives almost entirely on trees and shrubs; rarely coming to the ground. It is active even during the hottest part of the day.

Status : Common in south India and along the Western Ghats. Uncommon north of the Tapti in the Gangetic plain. Common in the HiMalayan foot-hills.

Genus 29. *Ahaetulla* Link, 1807**48. *Ahaetulla prasina* Reinwardt****Short-nose Whipe Snake**

1827. *Dryophis prasinus*, Reinwardt in F. Boie. *Isis. van Ken. Jana*, 20 : 544.

1933. *Ahaetulla prasina* Stejneger, *Copeia*, : 203.

Material examined : Lower Subansiri Dist. 1 ex., Sang, Nov. 1966, coll. Dr. S. K. Tandon; 1 ex., Banderdewa, 1977, coll. P. C. Roychowdhuri; 1 ex.

Itanagar, 23.ix.1990, coll. S. Das. West Siang Dist. 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal. East Siang Dist. 1 ex., Janakmukh, coll. 32. Sikh Pioneer; 1 ex., Balack, coll. Capt. Wilson; (A. C. E.).

Measurements : Snout to vent 710-890 mm, tail 450-510 mm.

Diagnostic character : Snout acuminate, without dermal appendage, 2 to 2.5 times as long as the eye; nasal in contact with the labials. 9 supralabials, all entire, 4th, 5th and 6th touching the eye. Green above, the interstitial skin black and white, forming oblique lines. Paler below.

Distribution : Arunachal Pradesh : as mentioned in the "material" From Bengal (Jalpaiguri dist.) and the Eastern Himalayas (Assam) Sikkim.

Elsewhere : Through Myanmar to Indo-China, south through Malayan Peninsula to Indonesia and the Philippines.

Remarks : A very gentle snake, quite unafraid and easily handled.

Status : Common throughout the Indo-Chinese region, both in the hills at low altitudes and in the plains.

Genus. 30 *Chrysopelea* Boie, 1826

49. *Chrysopelea ornata* (Shaw)

Golden Tree Snake

1802. *Coluber ornatus* Shaw, *Gen. Zool.*, 3(2) : 477.

1827. *Chrysopelea ornata*, Boie, *Isis. von Oken, Jena*, 20 : coll. 546.

Material examined : East Kameng Dist. 1 ex., Dibru, 12.x.1987, coll. D. P. Sanyal.

Diagnostic character : The lateral, sharp and pronounced keeled condition of the ventrals in association with the unenlarged vertebral row of scales distinguish snake. It is black above with yellow or white cross bands and a series of redish or orange flower shaped spots on the back. The belly is greenish.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Western Ghats, Orissa, Bihar, West Bengal (Darjeeling district); Sri Lanka;

Myanmar and Indo-China, south through Malayan Peninsula to Indonesia; Philippines.

Remarks : This handsome snake is essentially arboreal but is also frequently seen in grass and on low bushes. Diurnal. It feeds largely on geckos and other lizards.

Status : A common snake in Indo-China and Sri Lanka. It is rarely seen in its Indian range.

Genus 31. *Ophites* Wagler, 1830

Key to species of genus Ophites

1. Anterior nasal larger than posterior. *jara*
- Anterior nasals smaller than posterior.
..... *laoensis*

50. *Ophites laeensis* Günther

Wolf Snake

1864. *Lycodon laeensis* Günther, *Rept. Brit. Ind.*, 317.

Material examined : Changlang Dist. 1 ex., Zero Camp, Miao, 22.xii.1983, coll. Dr. S. Biswas.

Measurements : Snout to vent 350 mm, tail 98 mm.

Diagnostic character : Anterior and posterior nasals subequal; loreal not or just touching the internasal, not touching the eye. Brownish or bluish-black above, with bright yellow cross bars which expand laterally; a yellow bar on the nape; upper lip and lower parts whitish.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Yunnan, China, Laos, Vietnam, Thailand and Malayan Peninsula.

Remarks : The species is recorded first time from Indian subcontinent.

Status : Indeterminate.

51. *Ophites jara* (Shaw)

Yellow-speckled Wolf Snake

1802. *Coluber jara* Shaw, *Genl. zool.*, 3 : 525.

1871. *Lycodon jara* Stoliczka, Jour. Asiatic. Soc. Bengal, 40 : 442.

1923. *Ophitis jara* Wall, Jour. Bombay, Nat. Hist. Soc., 612.

Material examined : East Kameng Dist. 1 ex., Sejusa, 10.x.1987, coll. D. P. Sanyal, Lower Subansiri Dist. 1 ex., Banderdewa, 1977, coll. P. C. Roy Chowdhury.

Measurements : Snout to vent 220-360 mm., tail 55-105 mm.

Diagnostic character : Anterior nasal usually larger than posterior; loreal in contact with the internasal, not touching the eye. Brownish or pulpy black above, stippled all over with white, the pattern being formed by small spots or short longitudinal lines, two on each side; upper lip and lower surface uniform white.

Distribution : Arunachal Pradesh : as mentioned in the "material" Bengal, Orissa, Assam. Recently it has been recorded from Kateranian Ghat (Bharaich dist. U. P.).

Status : Indeterminate.

Genus 32. *Sibynophis* Fitzinger, 1843

52. *Sibynophis collaris* (Gray)

Collared Black-headed Snake

1853. *Psamophis collaris* Gray, Ann. Mag. Nat. Hist., (2) 12 : 390.

1930. *Sibynophis collaris*, Smith, Bull. Raffles. Mus., 3 : 40.

Material examined : Kameng Div. 1 ex., 6 km. south of Batchling village, 14.x.1961, coll. S. Biswas. East Siang Dist. 2 ex., Upper Rotung, coll 32 Sikh Pioneer, (A. C. E.).

Measurements : Snout to vent 440 mm., tail broken.

Diagnostic character : Anterior temporal in contact with the 8th labial; 10 upper labials, 4th to 6th touching the eye. Brown above, usually with a vertebral series of small black spots; head with small black spots or vermiculations and two black transverse bars, one behind the eyes, the other across the occiput. Lower parts yellowish, each ventral shield with an outer black spot or streak.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Himalayas as far west as Simla. Assam, north to the Mishmi Hills.

Elsewhere : Western Yunnan; Laos; the whole of Myanmar and the hill country of Siam.

Remarks : Its chief food appears to be lizards, mainly skinks.

Status : Common in the Eastern Himalayas and Assam.

Genus 33. *Xenochrophis* Günther, 1864

Key to species of the genus *Xenochrophis*

1. Scales in 17 rows, smooth. *punctulata*
- Scales in 19 rows, keeled. *piscator*

53. *Xenochrophis punctulatu* (Günther)

Spotted Keel-back Water Snake

(Fig. 7 & 8)

1858. *Tropidonotus punctulatus* Günther, Catal. Snakes., Brit. Mus., : 247.

1965. *Xenochrophis punctulata* Malnatic and Minton, Proc. Acad. Nat. Sci. Philadelphia, 117 (2) : 19-43.

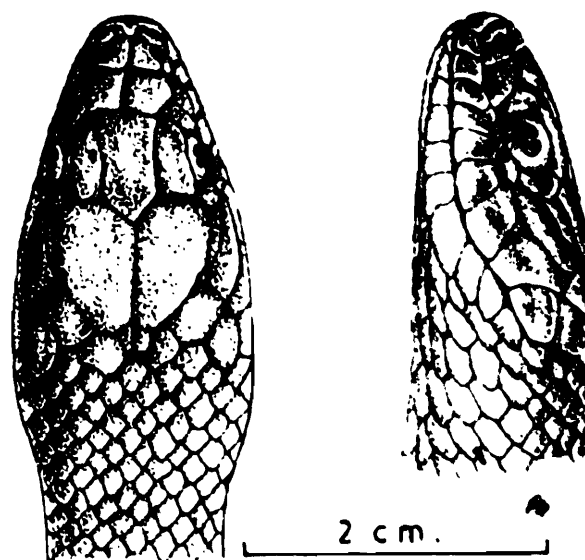


Fig. 7. Head (Dorsal view)

Fig. 8. Head (Lateral view) of *Xenochrophis punctulata*

Material examined : Lower Subansiri Dist. 1 ex., Itanagar, 14.iv.1990, coll. P. T. Bhutia.

Changlang Dist. 1 ex., Gandhigram, 26.i.1987, coll. Dr. S. Biswas.

Measurements : Snout to vent 580-850 mm., tail 195-270 mm.

Diagnostic character : Body moderately slender; scales in 17 rows, all smooth. Brown or black above, with small pale markings or dots; two outer rows of scales, ventrals and subcaudals yellowish, with dark margins; upper lip uniform yellowish; a light curved longitudinal streak on each side of the nape.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Tenasserim; Lower Myanmar.

Remarks : The species is recorded first time from Indian subcontinent.

Status : Indeterminate.

54. *Xenochrophis piscator* (Schneider)

Checkered Keelback

1799. *Hydrus piscator* Schneider, *Hist Amph.*, 1 : 247.

1965. *Xenochrophis piscator* Malnate and Minton, *Proc. Acad. Nat. Sci. Philadelphia*, : 117 : 19.

Material examined : West Kameng Dist : 1 ex., Dirang, 23.xi.1990. coll. S. Sur. East Kameng Dist. 1 ex., Seppa, 17.x.1987, coll. D. P. Sanyal; 1 ex., Sejusa, 9.xi.1990, coll. S. Sur. Lower Subansiri Dist. 1 ex., Siang, November 1966, coll. S. K. Tandon & G. S. Arora. West Siang Dist. 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal. East Siang Dist. 1 ex., Mathuri village, 16.ii.1973, coll. Dr. R. S. Pillai; 2 ex., Pasighat, 19.xi.1988, coll. D. P. Sanyal. Changlang Dist. 7 ex., Gibbon's land, Miao, 18.xii.1982, 2 ex., Miao, 1.xii.1982 & 5.xii.1982, all are collected by Dr. S. Biswas.

Measurements : Snout to vent 270-665 mm., tail 100-225 mm.

Diagnostic character : Scales in 19 rows, keeled. A fairly robust snake with oval head having slit like nostrils and moderately large eyes both with a decidedly upward inclination. Five rows black spots or an yellowish or olivaceous background, spots varying in size sometimes occupying most of the back. Number of rows not

constant throughout the body. Head olive brown with two black streaks one below and one behind the eye. Belly-white or yellowish.

Distribution : Arunachal Pradesh : as mentioned in the "material".

Elsewhere : Found through the Indian subcontinent from Baluchistan to Assam; upper Myanmar. Also occurs in the Malayan region; south China and Taiwan.

Remarks : Frequents water and is very common in tanks, paddy fields, pools and rivers; may be seen away from water.

Status : One of the commonest of Indian snakes.

Genus 34. *Pseudoxenodon* Boulenger, 1890

55. *Pseudoxenodon macrops* Blyth Mock Cobra

1854. *Tropidonotus macrops* Blyth. *Jour. Asiatic. Soc. Bengal*, 23 : 296.

1890. *Pseudoxenodon macrops*, Boulenger, *Fauna. Brit. Ind.*, : 340.

Material examined : East Siang Dist. 1 ex., near Sidi stream, coll. 32, Sikh Pioneer. Lohit Dist. 1 ex., Khamlong nagar, 18.xii.1986, coll. Dr. C. B. Srivastava.

Measurements : Snout to vent 580 mm., tail 165 mm.

Diagnostic character : Nostril large, between two nasals, loreal large, a little longer than high. The colouration is pretty but is extremely variable. It is brownish above and yellowish below. The dorsal pattern consists of vertebral series of orange or yellowish spots or crossbars. There is also a lateral series of black spots. The nape sometimes bears a chevron shaped mark.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : The Eastern Himalayas as west as Nepal; Assam, Myanmar, Malayan Peninsula.

Remarks : It gets the common name from the habit of widening the neck to a marked degree when excited.

Status : Common.

Genus 35. *Amphiesma* Dumeril & Bibron, 1854

Key to species of genus *Amphiesma*

1. Internasals truncate anteriorly. *modesta*
– Internasals not truncate anteriorly. 2
2. Internasals narrowed anteriorly. *stolata*
– Internasals not narrowed anteriorly.
..... *platyceps*

56. *Amphiesma modesta* (Günther)

Günther's Keelback

1875. *Tropidonotus modestus* Günther, *Proc. Zool. Soc.*, : 232.

1960. *Amphiesma modesta* Malnate, *Proc. Acad. Nat. Hist. Philadelphia*, 112 : 50.

Material examined : Changlang Dist., 1 ex., near 31st mile post on M. V. Road, 24.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 320 mm., tail 120 mm.

Diagnostic character : Internasals as long as or nearly as long as the prefrontals, truncate anteriorly. Brown above with small black spots regularly arranged and a dorso-lateral series of small yellow spot which may be united to form an indistinct stripe; lower parts yellowish with black spots on the sides of the ventrals sometimes forming continuous lines. A yellow stripe on each side of the head starting from behind the eye and converging towards its yellow on the neck, labials edged with black; top of head with indistinct vermiculation.

Distribution : Arunachal Pradesh : as mentioned in the "material" Assam.

Elsewhere : Upper Myanmar; North Siam; Thailand to Cambodia

Remarks : Found in the hills at between 2,000 and 5,000 feet altitude.

Status : A widely distributed and very variable species.

57. *Amphiesma stolata* (Linnaeus)

Striped Keelback

1758. *Colubar stolatus* Linnaeus, *Syst. Nat. Ed. 10. 1* : 219.

1854. *Amphiesma stolatum* Dumerill & Bibron, *Erpetol. Gen.*, 7 (1) : 727.

Material examined : Lower Subansiri dist. 1 ex., Banderdewa, 1977, coll. P. C. Roychowdhury; 1 ex., Indira Park, Itanagar, 20.vii.1989, coll. K. Allia. West Siang Dist. 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal.

Measurements : Snout to vent 430-500 mm., tail 135-150 mm.

Diagnostic character : Internasals narrowed anteriorly; nostrils directed slightly upwards. A graceful little snake with a relatively short body and long tail. Neck fairly evident. Body tapers to vent. Eyes large, pupil round, flecked with gold. A pair of conspicuous buff stripes covering one whole or two half rows of scales from neck or forebody to tip of tail. Some black or blackish irregular crossbars on body. Head olivaceous brown. Belly white with some small scattered black spots.

Distribution : Arunachal Pradesh : as mentioned in the "material" Found throughout India both in the plains and hills.

Elsewhere : Also from Sind in the west to south China in the east; Indo-China.

Remarks : It inhabits banks of rivers etc. and marshy areas.

Status : Common.

58. *Amphiesma platyceps* (Blyth)

Mountain Keelback

1854. *Tropidonotus platyceps* Blyth, *Jour. Asiatic Soc. Bengal*, 23 : 297.

1960. *Amphiesma platyceps*, Malnate, *Proc. Acad. Nat. Sci. Philadelphia*, 112 : 50.

Material examined : West Kameng Dist. 1 ex., Bomdila, 18.xi.1990, coll. S. Sur. East Siang

dist. 1 ex., Upper Rotung, coll. 32, Sikh Pioneer, (A. C. E.).

Measurements : Snout to vent 210 mm., tail 57 mm.

Diagnostic character : Nostrils lateral, internasals not narrowed anteriorly. Colouration very variable. Olive brown above, with small black spots. Lips white or yellow, belly yellowish with or without blackish dots.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Himalayas from Kashmir eastward to Assam.

Elsewhere : Nepal; China.

Status : A common snake.

Genus 36. *Trachischium* Günther, 1858

Key to species of genus *Trachischium*

1. Scales in 15 rows round the body.
..... *monticola*
- Scales in 13 rows round the body
..... *tenuiceps*

59. *Trachischium monticola* (Cantor)

Assam Oriental Worm Snake

1839. *Calamaria monticola* Cantor, *Proc. Zool. Soc.*, : 50.

1890. *Trachischium monticola* Boulenger, *Fauna Brit. Ind.*, : 286.

Material examined : East Siang Dist. 2 ex., Upper Rotung, coll. 32, Sikh Pioneer; 1 ex., Sipro Valley, coll. Capt. M. de-course; (A. C. E.). Lohit Dist. 1 ex., Gogdi Camp, 19.xi.1969, coll. Dr. J. M. Julka. Changlang Dist. 1 ex., Zero Camp, Miao, 24.xii.1983, coll. Dr. S. Biswas.

Measurements : Snout to vent 90 mm., tail 20 mm.

Diagnostic character : Scales in 15 rows round the body, those of the sacral region quite smooth. Dark brown above and yellowish below. The dorsal pattern consists of two vertebral blackish lines and two or more less prominent reddish or light lateral stripes.

Distribution : Arunachal Pradesh : as mentioned in the "material" West Bengal, Assam; Meghalaya.

Elsewhere : Bangladesh.

Status : Common.

60. *Trachischium tenuiceps* (Blyth)

Orange-bellied Oriental Worm Snake

1854. *Calamaria tenuiceps* Blyth, *Jour. Asiatic Soc. Bengal*, 23 : 288.

1890. *Trachischium tenuiceps* Boulenger, *Fauna Brit. Ind.*, : 286.

Material examined : East Kameng Dist. 1 ex., Seppa, 28.xi.1990. coll. S. Sur; 1 ex., Shergaon, 7.iii.1961, coll. Dr. K. C. Jayram,

Measurements : Snout to vent 103-235 mm., tail 21-50 mm.

Diagnostic characters : Scales in 13 rows round the body. Dark brown to blackish above, yellow below; tail mottled below with brown and with a brown mesial line.

Distribution : Arunachal Pradesh : as mentioned in the "material" Sikkim, West Bengal (Darjeeling).

Elsewhere : Nepal and Bangladesh.

Status : Indeterminate.

Genus 37. *Rhabdophis* Fitzinger, 1843

61. *Rhabdophis hiMalayanus* (Günther)

HiMalayan Keelback

1864. *Tropidonotus hiMalayanus* Günther, *Rept. Brit. Ind.*, : 265.

1923. *Rhabdophis hiMalayanus* Wall, *Jour. Bombay. Nat. Hist. Soc.*, 29 : 605.

Material examined : East Kameng Dist. 1 ex., Denzi village, 15.iii.1961; 1 ex., Bitselling, 16.v.1961, coll. Dr. K. C. Jayramkrishnan; 1 ex., Nargum village, 16.x.1961, coll. S. Biswas. Lower Subansiri Dist.; 1 ex., Indira Park, Itanagar, 20.vii.1989, coll. K. Allia. East Siang Dist. 1 ex., Abore hills, coll. George Dumber, (A. C. E.); 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal; 1 ex., Upper Rotung, coll. 32 Sikh Pioneer, (A. C. E.);

2 exi, Pasighat, 19.xi.1988, coll. D. P. Sanyal.

Measurements : Snout to vent 250-695 mm., tail 70-225 mm.

Diagnostic character : A nuchal groove, more or less distinct, the three median rows of scales of that region narrower than the others, the vertebral row sometimes hidden between the two adjacent rows. Olive above with small black spots. Lower parts yellowish, speckled with brown or black or nearly entirely greyish or blackish. Labials yellow with black sutures. Neck and forebody sometimes with a reticulation of black and yellow colours confined very largely to the interstitial skin.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas as far west Sikkim, Assam.

Elsewhere : Nepal; Bhutan; Bangladesh and Northern Myanmar.

Status : Common.

Genus 38. *Rhabdops* Boulenger, 1893

62. *Rhabdops bicolor* (Blyth)

Black & Yellow Forest Snake

1854. *Calamaria bicolor* Blyth, *Jour. Asiatic Soc. Bengal*, 23 : 289.

1893. *Rhabdops bicolor* Boulenger, *Catal. Snakes Brit. Mus.*, 1 : 301.

Material examined : Changlang dist. 1 ex., Namdapha Camp, 58 km. East of Miao, 23.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 360 mm., tail 95 mm.

Diagnostic character : Snout broadly rounded; nostrils directed slightly upwards; rostral large. Dark brown or blackish above, yellowish white below. Tail uniform below or spotted with black.

Distribution : Arunachal Pradesh : as mentioned in the "material" Assam, Meghalaya.

Elsewhere : Northern Myanmar; Western Yunnan.

Remarks : Found in the hills. It feeds on worms and slugs.

Status : Common.

Genus 39. *Blythia* Theobald, 1868

63. *Blythia reticulata* (Blyth)

Iridescent Hill Snake

1854. *Calamaria reticulata* Blyth, *Jour. Asiatic Soc. Bengal*, 23 : 287.

1868. *Blythia reticulata* Theobald, *Cat. Rept. Mus. Bengal*, 37 (extra no. 146) : 44.

Material examined : East Siang Dist. 2 ex., Upper Rotung; 1 ex., Janakmukh, 13.xii.1911, coll. 32, Sikh Pioneer; 1 ex., Sirpo Valley, coll. Capt. M. de-Coursey (A.C.E.).

Measurements : Snout to vent 162-355 mm., tail 12-30 mm.

Diagnostic character : Rostral as high as broad, visible from above. Olive to blackish above, highly iridescent, the scales sometimes with light specks or borders.

Distribution : Arunachal Pradesh : as mentioned in the "material" Assam.

Elsewhere : Myanmar.

Status : Indeterminate.

Genus. 40 *Bolga* Fitzinger, 1826

Key to species of genus *Bolga*

1. Scales in 19-21 rows. 2
- Scales in 23-29 rows. *cynodon*
2. Preocular reaching the upper surface of the head. 3
- Preocular not reaching the upper surface of the head. 4
3. Scales in 19 rows. *quincunciata*
- Scales in 21 rows. *multifasciata*

4. Hemipenis extending to the 10th-12th caudal plate, the cups feebly scalloped.*ochracea*
- Hemipenis extending to the 10th caudal plate, the cups finely scalloped.*gokool*

64. *Bioga ochracea* (Günther)
Tawny Cat Snake

1868. *Dipsas ochracea* Günther, *Ann. Mag. Nat. Hist.* (4) 1 : 425.

Material examined : West Kameng Dist. 1 ex., 23.xi.1990, coll. S. Sur.

Measurements : Snout to vent 425 mm., tail 110 mm.

Diagnostic character : Anterior genials about as long as the posterior, latter in contact with one another or separated by small scales, vertebrals strongly enlarged. Greyish, reddish or yellowish brown above, some of the scales finely edged with black and forming more or less distinct transverse lines or bars, best marked in the young; the vertebral series of scales sometimes lighter than the others; paler below; lips and chin whitish.

Distribution : Arunachal Pradesh : as mentioned in the "material" Eastern Himalayas, Assam.

Remarks : In disposition it is fierce and bites readily when handled.

Status : A common snake.

65. *Boiga gokool* (Grey)
Eastern Gamma

1834. *Dipsas gokool* Grey, *Ill. Ind. Zool.*, 2 : Pl. 83, fig. 1.

Material examined : Changlang dist. 1 ex., Gibbon's land, Miao, 22.xii.1982, coll. Dr. S. Biswas.

Measurements : Snout to vent 360 mm., tail 85 mm.

Diagnostic character : Posterior genials in contact with one another. Scales in 21 : 21 : 17 rows, vertebrals strongly enlarged. Yellowish brown above, with a series of vertical Y-shaped

or T-shaped markings on each side of the back, separated from one another by a light vertebral line. A black stripe from the eye to the angle of the mouth.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Eastern Himalayas as far as West Bengal (Darjeeling), Assam.

Elsewhere : Bangladesh (Chittagong).

Remarks : It feeds mainly on lizards but will also devour small birds and mammals killing them by constriction.

Status : Common.

66. *Boiga quincunciata* (Wall)
Assam Cat Snake

1908. *Dipsadomorphus quincunciatus* Wall, *Jour. Bombay. Nat. Hist. Soc.*, 18 : 272.

1940. *Boiga quincunciata* Smith, *Rec. Ind. Mus.*, 42 : 484.

Material examined : East Kameng Dist. 1 ex., Pashighat, 19.xi.1988. coll. D. P. Sanyal. Lower Subansiri Dist. 1 ex., Banderdewa, 1977, coll. P. C. Roychowdhuri.

Measurements : Snout to vent 620 mm and 850 mm tail 265 & 270 mm.

Diagnostic characters : 1 Preocular, reaching the upper surface of the head. Scales in 19 : 19 : 15 or 13 rows, vertebrals strongly enlarged. Yellowish or greyish brown above, finely speckled with dark brown and with a vertebral series of dark brown or black spots or blotches; each spot covers from 5 to 8 scales and each scale edged with white; between the spots are more or less distinct whitish areas; sides of the body speckled or spotted with brown; nape with three longitudinal stripes; top of head brown, the frontal and parietals black edged with white.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Assam.

Elsewhere : Upper Burma.

Remarks : Known from four specimens and the type.

Status : Rare.

67. *Boiga multifasciata* (Blyth)**HiMalayan Cat Snake**

1861. *Dipsas multifasciata* Blyth, *Jour. Asiatic Soc. Bengal*.
29 : 114.

Material examined : East Kameng Dist. 1 ex., Ankaling village, 14.x.1961, coll. S. Biswas.

Measurements : Snout to vent 630 mm., tail 190 mm.

Diagnostic character : 1 sometimes 2 preoculars, reaching the upper surface of the head. Scales in 21 : 21 : 15 rows, vertebrals not strongly enlarged. Greyish brown above, finely speckled with black and with narrow black, transverse or oblique bars. A black longitudinal stripe on the nape and two more on the top of the head; another from the eye to the angle of the mouth; lower parts whitish, thickly spotted and speckled with black.

Distribution : Arunachal Pradesh : as mentioned in the "material" The Himalayas (Western and Eastern Himalayas).

Remarks : Found generally above, 4500 ft., altitude.

Status : Indeterminate.

68. *Boiga cynodon* (Boie)**Bengal Cat Snake**

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

1924. *Boiga cynodon* Wall, *Jour. Bombay, Nat. Hist. Soc.*,
29 : 874.

Material examined : Lower Subansiri Dist. 1 ex., Bandardewa, 1977, coll. P. C. Roychowdhury; 1 ex., Nampeng, 16.vi.1972., coll. J. Jesep.

Measurements : Snout to vent 815 mm., tail 280 mm.

Diagnostic character : Scales in 23 rarely 25 rows strongly enlarged. Brownish, greyish or pinkish above with dark brown or black, chevron-shaped spots, very distinct anteriorly but which

may become indistinct or disappear entirely, posteriorly. Nape with two longitudinal, parallel, black stripes another from the eye to the angle of the mouth. Yellowish or greyish below more or less thickly powdered with brown black.

Distribution : Arunachal Pradesh : as mentioned in the "material"; West Bengal, Assam.

Elsewhere : Myanmar; Siam; Cambodia; Malayan Peninsula.

Remarks : It is found in plains and hills at low altitudes.

Status : Common.

Genus 41. *Psammodynastes* Günther, 1858

69. *Psammodynastes pulverulentus* (Boie)**Mock viper**

1827. *Psammophis pulverulenta* Boie, *Isis.* : 547.

1890. *Psammodynastes pulverulentus*, Boulenger, *Fauna. Brit. Ind.*, : 363.

Material examined : Lower Subansiri Dist., 1 ex., Subansiri, 25.xi.1974, coll. Dr. J. M. Julka. West Siang Dist., 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal. East Siang Dist., 3 ex., Upper rotung, 1 ex., Kobo, coll. 32, Sikh Pioneer; 1 ex., Renging, coll. S. W. Kemp; 2 ex., Sipro valley, 1 ex., Balek, coll. M-de-courcey (A. C. E.).

Measurements : Snout to vent 170-435 mm., tail 38-90 mm.

Diagnostic character : The body is short and stoky with a moderate tail. The large eye with vertical pupils. The colouration is variable. It is usually dark brown, blackish or reddish above and the lower surface are mottled with brown or grey or sometimes with dark spots or longitudinal lines.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Eastern Himalayas and Khasi hills, Sikkim, Meghalaya.

Elsewhere : Nepal; Myanmar to Laos and Vietnam; south through Malayan Peninsula to Indonesia.

Remarks : It feeds largely on frogs and lizards.

Status : Common.

Family 11 ELAPIDAE

Key to genus of family ELAPIDAE

1. Maxillary bone extending forward beyond the palatine. 2
- Maxillary bone not extending forward beyond the palatine *Bungarus*
2. Vertebral series of scales enlarged.
..... *Ophiophagus*
- Vertebral series of scales not enlarged. 3
3. Scales oblique. *Naja*
- Scales not oblique. *Calliophis*

Genus 42. *Bungarus* Daudin, 1803Key to species of genus *Bungarus*

1. Tail ending in a point, dorsal vertebrae not forming a ridge on the back. *niger*
- Tail not ending in a point, dorsal vertebrae forming a ridge on the back. *fasciatus*

70. *Bungarus fasciatus* (Schneider)

Banded Krait

1801. *Pseudoboa fasciata* Schneider, *Hist. Amph.*, 2 : 283.

1858. *Bungarus fasciatus*, Gunther, *Catal. Colubr. Snakes Coll. Brit. Mus.*, : 220.

Material examined : East Kameng Dist., 1 ex., Sejusa; 10.xi.1990, coll. S. Sur.

Measurements : Snout to vent 1230 mm., tail 130 mm.

Diagnostic character : Head broad and depressed; snout short, eye black, pupil very faintly outlined in yellow. Neck distinct. Body smooth and glossy with a conspicuous ridge down the spine and tail short and ending in a finger-like tip. Alternately banded with broad canary-yellow and black bands, completely encircling the body. Nape has a large, elongate, black patch, rounded behind. Lips lone, chin and throat yellow.

Distribution : Arunachal Pradesh : as mentioned in the "material"; North-east peninsular India, the southern most record being Hyderabad.

Elsewhere : Indo-china; south through Malayan Peninsula to Indonesia.

Remarks : Largely nocturnal. Extremely sluggish and remains lethargic even under provocation.

Status : Fairly common throughout the Indo-chinese sub region.

71. *Bungarus niger* Wall

Black Krait

(Fig. 9 & 10)

1908. *Bungarus niger* Wall, *Jour. Bombay. Nat. Hist. Soc.*, 18 : 715.

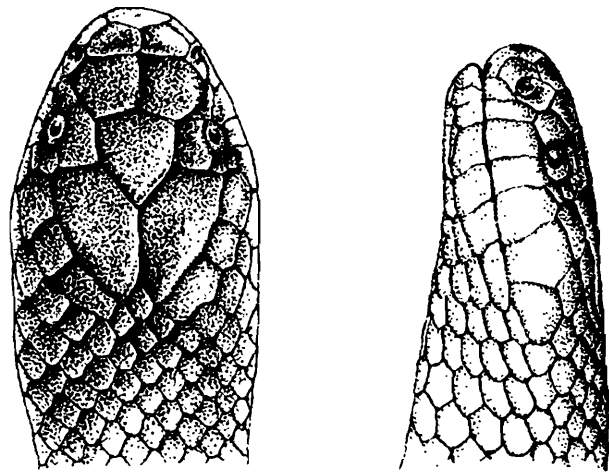


Fig. 9. Head (Dorsal view)

Fig. 10. Head (Lateral view) of *Bungarus niger*

Material examined : West Siang Dist. 1 ex., Along, 1.xii.1988, coll. D. P. Sanyal.

Measurements : Snout to vent 750 mm., tail 130 mm.

Diagnostic character : Scales in 15 rows throughout. Dorsal vertebrae not forming a ridge on the back. Tail ending in a point. Uniform black or bluish-black above, white below, with a more or less distinct dark mottling at the bases of the ventral and subcaudal shields.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Eastern Himalayas, Assam.

Elsewhere : China.

Remarks : In disposition it is quiet and inoffensive.

Status : Indeterminate.

Genus 43. *Calliophis* Gray, 1835

72. *Calliophis maclellandi* (Reinhardt)

Maclelland's Coral Snake

1844. *Elaps maclellandii* Reinhardt, *Calcutta, Jour. Nat. Hist.*, 4 : 532.

1907. *Calliophis maclellandii* Stejneger, *Bull. U. S. Natl. Mus.*, 58 : 391.

Material examined : Lower Subansiri Dist. 1 ex., Siang, November 1966, coll. S. K. Tandon & G. S. Arora. East Siang dist. 2 ex., Upper Rotung, coll. 32 Sikh Pioneer; 1 ex., Abore hills, coll. Sri George Dumber; (A. C. E.).

Measurements : Snout to vent 25-570 mm., tail 18-65 mm.

Diagnostic characters : The broad enamel-white band across head distinctive. It is a boldly marked species which is red or brownish above, with narrow black transverse bars on the body. The belly is yellowish with black cross-bars or spots.

Distribution : Arunachal Pradesh : as mentioned in the "material".

Elsewhere : From the Western Himalayas to southern China and Taiwan.

Remarks : Prefers thick forests between 1200-1800 mt., but may occur at lower elevation.

Status : Common.

Genus 44. *Naja* Laurenti, 1768

73. *Naja naja kaouthia*, Lesson

Bengal Cobra

1831. *Naja kaouthia* Lesson, *Bull. Universal. Sci. Indust. Ferussac* (Sect. 2., *Bull. Sci. Nat. Goel*) Paris, 25 : 122.

1940. *Naja naja kaouthia* Smith, *Rec. Indian Mus.*, 42 : 485.

Material examined : Lower Subansiri dist. 1 ex., Bandaidewa, 1977, coll. P. C. Roychowdhury; 1 ex., New Itanagar, 27.ix.1988, coll. T. B. Rai.

Measurements : Snout to vent 675 mm., tail 125 mm.

Diagnostic character : This Cobra has a rather rounded and smaller head. The overall colouration varies from yellow to green. The distinguishing characteristic is the presence of a yellow or orange coloured, O-shaped (Monocellate) mark on the hood in place 'spectacle'. There is a black spot on either side of the lower surface of the hood and one or two black cross-bars on the belly slightly below the underside of the hood. The rest of the belly is of the same colour as the back but lighter.

Distribution : Arunachal Pradesh : as mentioned in the "material". Commonly found in Uttar Pradesh, Bihar, Orissa, West Bengal, Assam and the Andamans.

Status : Common.

Genus 45. *Ophiophagus* Günther, 1864

74. *Ophiophagus hannah* (Cantor)

King Cobra or Hamadryad

1836. *Hamadryas hannah* Cantor, *Asiatic Rex.*, 19 (1) : 87.

1945. *Ophiophagus hannah* Bogert, *Copeia, Ann. Arbor.* : 47.

Material examined : Changlang Dist. 1 ex., near Burma, Nala, 67 km. from Miao on M. V. Road, 24.iv.1981, coll. Dr. S. Biswas.

Measurements : Snout to vent 2210 mm., tail 475 mm.

Diagnostic character : The head is moderate in size and markedly depressed. The nostril is fairly large. The eye is moderately large with round pupil. The body is fairly robust. Colour blackish-brown above and dirty white below.

Distribution : Arunachal Pradesh : as mentioned in the "material". It is found in the dense forests of HiMalayan foot hills, West Bengal, Bihar, Assam, Orissa, Western Ghats and in the mangrove swamps of Sunderbans (West Bengal & Orissa) and the Andamans.

Remarks : It is diurnal snake feeds entirely on snakes.

Status : It is common nowhere and is partial to a jungle environment although it is sometimes met with in the plains and mangrove swamps.

Family 12. VIPERIDAE

Genus 46. *Trimeresurus* Lacepede, 1804

Key to species of genus *Trimeresurus*

1. 19-21, scales round the body. 2
- 23-27 scales round the body. 3
2. Dorsal scale keeled. *stejnegeri*
- Dorsal scale not keeled. *gramineus*
3. Ventrals 127-176. *monticola*
- Ventrals 200-218. *mucrosquamatus*

75. *Trimeresurus mucrosquamatus* (Cantor)

Brown Spotted Pit Viper

Fig. 11 & 12

1839. *Trigonocephalus mucrosquamatus* Cantor, *Proc. Zool. Soc. London*, : 32.

1864. *Trimeresurus mucrosquamatus* Günther, *Rept. Brit. India*, London, : 390.

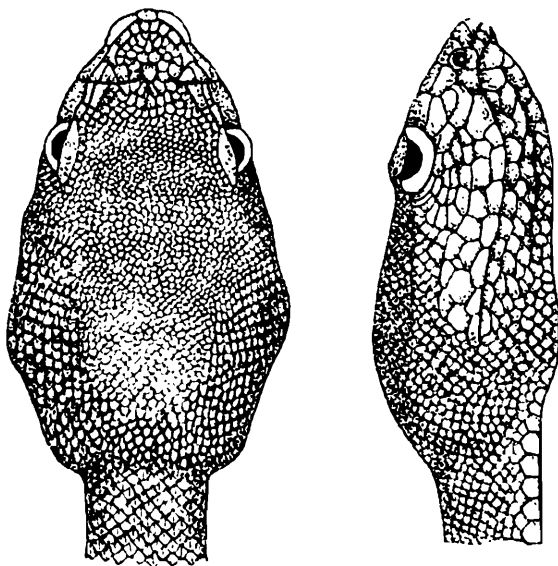


Fig. 11. Head (Dorsal view)

Fig. 12. Head (Lateral view) of *Trimeresurus mucrosquamatus* (Cantor)

Material examined : West Siang Dist. 1 ex.,

Along, 1.xii.1988, coll. D. P. Sanyal. Changlang Dist. 1 ex., Hornbill, Miao, 13.xii.1983, Dr. S. Biswas.

Measurements : Snout to vent 435-532 mm., tail 105-120 mm.

Diagnostic character : Head rather elongate; snout 2-3 times as long as the diameter of the eye. Upper head scales very small, unequal, obtusely keeled on the posterior part. Ventrals 200-218. Greyish or olive brown above, with a dorsal series of large brown, dark-edged, irregularly shaped spots and a lateral series of smaller ones; whitish below, heavily powdered with light brown. Head brown above, paler below. Tail light brown, with dorsal series of conspicuous black spots.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Assam.

Elsewhere : Bangladesh; Myanmar. Widely distributed over southern China including Hainan and Taiwan.

Remarks : Oviparous.

Status : Common.

76. *Trimeresurus monticola* Günther

Blotched Pit Viper

1864. *Trimeresurus monticola* Günther, *Rept. Brit. Ind. London*, : 388.

Material examined : E. Kameng Dist. 2 ex., Mursing, 17.ix.1961; 1 ex., Domkho village, 23.ix.1961, coll. S. Biswas; 1 ex., 10 km. from Kalaktong to Rupa, 20.xi.1970, coll. A. S. Rao. East Siang Dist. 1 ex., Rotung; 1 ex., Upper Rotung, coll. 32 Sikh Pioneer (A. C. E.). Tirap Dist. 1 ex., 1990, Dr. Panigrahi. Changlang Dist. 1 ex., Deban, Miao, 8.xii.1982, coll. S. Biswas.

Measurements : Snout to vent 190-750 mm., tail 32-105 mm.

Diagnostic character : Eye small; snout more than twice as long as the diameter of the eye. Upper head scales unequal, smooth, feebly imbricate. Ventrals 127-176. Light or dark brown above, with large, squarish, irregularly placed dark brown spots or markings upon the back and smaller ones upon the sides. head dark brown above; usually a light streak from the eye to the

angle of the jaw; lips pale yellowish or spotted with brown or entirely brown; lower parts whitish, spotted or powdered with brown.

Distribution : Arunachal Pradesh : as mentioned in the "material"; Eastern Himalayas, West Bengal (Darjeeling), Sikkim, the whole of Assam.

Elsewhere : Myanmar to Thailand and Vietnam, South through Malayan Peninsula to Indonesia (Sumatra).

Remarks : Oviparous. The eggs are guarded by the parent until the young emerge.

Status : Common.

77. *Trieresurus gramineus* (Shaw)

Bamboo Pit Viper

1802. *Coluber gramineus* Shaw, *Gen. Zool.*, 3 : 420.

1937. *Trimeresurus gramineus*, Smith, *Jour. Bombay. Nat. Hist. Soc.*, 39 : 730.

Material examined : East Siang Dist. 1 ex., Kobo, coll. 32 Sikh Pioneer (A. C. E.).

Diagnostic character : Snout twice as long as the diameter of the eye. Upper head-scales small, subequal, subimbricate, smooth. Dorsal scale not keeled. The head is flattened and appears unduly broad owing to the constricted neck. Body stout. Tail short and tapering, prehensile. Glass green above, glossy white, yellow or greenish below and on upper lip, chin and throat. Tail yellowish or reddish mottled dark golden.

Distribution : Arunachal Pradesh : as mentioned in the "material" It is found in most of the Peninsular India, West Bengal and Gujarat but is rare in Western Ghats, South of Goa.

Remarks : Its slow-moving habits and the habit of lying motionless in the foliage of trees and shrubs pose danger to the lives of people plucking tea, cutting bamboo or clearing undergrowth who are most often bitten.

Status : Not uncommon.

78. *Trimeresurus stejnegeri* Schmidt

Stejneger's Pit Viper

1925. *Trimeresurus stejnegeri* Schmidt, *Amer. Mus. Novit.*, Newyork, 157 : 4.

Material examined : Lower Subansiri Dist., 1 ex., Banderdewa, 1977. Coll. P. C. Roychowdhury, 1 ex., 70 km. from Zeropoint to Sebla, 20.i.1970. coll. A. S. Rao.

Measurement : Snout to vent 425 mm., tail 85 mm.

Diagnostic character : Snout twice as long as the diameter of the eye. Upper head-scales small, unequal, subimbricate, smooth. A single series of scales between the labials and the elongate subocular; temporal scales small, smooth. Dorsal scales keeled. Green above, pale green or whitish below. A light stripe, bordered below with orange or chocolate along the flank and base of the tail. Upper lip pale green; end of the tail usually pinkish.

Distribution : Arunachal Pradesh : as mentioned in the "material"

Elsewhere : Darjeeling to Vietnam. Southern China including Taiwan and Hainan.

Remarks : Found in hills.

Status : Common.

SUMMARY

The paper deals with the reptilian fauna of Arunachal Pradesh based on the collections made by the authors along with other experts during 1987-89, field surveys comprising Tirap, Lohit. Upper and Lower Subansiri, Dibang valley, East and West Kameng, East and West Siang and Changlang districts of Arunachal Pradesh, together with earlier collection made by Zoological Survey of India, Survey parties including the Namdapha Biosphere Reserve collections made during 1981 to 1987, Abor Expedition collection made during 1911-12. Swiss Entomological Expedition in 1961, Subansiri Expedition in 1974-75 and Daphabum Expedition in 1969-70. It comprises 78 species, 46 genera and 12 families. *Ophites laoensis* and *Zenochrophis punctulata*

recorded for the first time from India. The reptilian fauna represent one genus of Emydid freshwater tortoises *Pyxidea* a genus which is known to radiate southwards and southeast of main Indo-Chinese centre of differentiation. In the rest of the reptilian fauna, some genera like *Hemidactylus* and *Calotes* are known from both palaearctic and Oriental region; however most of the reptilian fauna are of Indo-Chinese origin and even the two newly recorded species of *Ophites* and *Xenochrophis* from India only help to extend the distribution range from Thailand, Malaysiansia, China and Myanmar (Burma) to India. Some species show remarkably restricted distribution viz. *Boiga gokool* which is confined to eastern Himalayas whereas others like *Trimeresurus monticola* extends from Yunnan to southeast Tibet through

Assam-Myanmar (Burma) mountains southwards to Malayasia.

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CHART SHOWING THE DISTRICTWISE DISTRIBUTION OF SPECIES

Found +
Not found -

Name of species	Name of Districts										
	Tawang Dt.	West Kameng Dt.	East Kameng Dt.	Lower Subansiri Dt.	Upper Subansiri Dt.	West Siang Dt.	East Siang Dt.	Debang Valley Dt.	Lohit	Tirap	Changlang Dt.
	1	2	3	4	5	6	7	8	9	10	11
1. <i>Pyxidea mouhoti</i>		-	-	-	-	-	-	-	-	-	+
2. <i>Melanochelys tricarinata</i>		-		-	-	-	+	-	-		-
3. <i>Kachuga tecta</i>		-	-	-	-	-	+	-	-		-
4. <i>Kachuga sylhetensis</i>	-	-	+					-	-	-	
5. <i>Cytrodactylus khasiensis</i>		-	+	-		-	+	-	-	-	+
6. <i>Hemidactylus brookii</i>	-		-		-	+	+		+		+
7. <i>H. frenatus</i>		+	+	-				-	+	+	+
8. <i>Cosymbotas platyrus</i>		-					+		-		+
9. <i>Draco maculatus</i>	-	-	-	-			+		-		
10. <i>Ptyctolaemus gularis</i>				-			+			-	+
11. <i>Myctopholis austiana</i>		+							-	-	
12. <i>Oriocalotes pavlvs</i>							+	-			
13. <i>Japalura andersoniana</i>							+				
14. <i>Calotes versicolor</i>											+
15. <i>C. jerdoni</i>							+				
16. <i>Mabuya macularia</i>						-	+				
17. <i>Sphenomorphus indicum</i>							+				

Name of species	T 1	EK 2	EK 3	LS 4	US 5	WS 6	ES 7	D 8	E 9	T 10	C 11
18. <i>S. maculatum</i>			+	+		-					+
19. <i>S. courcyanum</i>			-	-	-		+			-	
20. <i>Scincella sikimensis</i>			-	+	-					-	
21. <i>Takydromus sexilineatus khasiensis</i>		-			-		+		+	+	
22. <i>Ophisaurus gracilis</i>		-	-	-	-		+				-
23. <i>Varanus bengalensis</i>			-	-		-	+			-	
24. <i>Rhamphotyphlops braminus</i>	-	-	+			-					
25. <i>Typhlops jerdoni</i>	-				-		+				
26. <i>T. diardii</i>				+		-	+		-		
27. <i>Python molurus bivittatus</i>	-					-				-	+
28. <i>Pareas monticola</i>							+	-	-	-	-
29. <i>Elaphe radiata</i>	-	-	-	+			+	-	-		-
30. <i>E. taeniura</i>	-	-					+	-	-	-	+
31. <i>E. cantoris</i>		+		+							
32. <i>E. prophyracea</i>	-			-			+		+	-	-
33. <i>E. prasina</i>	-	-	-	+	-	-		-	-	-	-
34. <i>E. mandarina</i>	-	-	-		-		+	-	-	-	+
35. <i>Ptyas mucosus</i>	-	-	-		-	-	+		-	-	-
36. <i>P. korros</i>		-		+	-	-	+		-	-	-
37. <i>Zoacys nigromarginatus</i>		-	-	+					-	-	-
38. <i>Liopeltis frenatus</i>		-				-	+		-	-	-
39. <i>L. stoliczkae</i>	-	-	-	+	-		-	-	-	-	-

Name of species	T 1	EK 2	EK 3	LS 4	US 5	WS 6	ES 7	D 8	E 9	T 10	C 11
40. <i>Oligodon albocinctus</i>		-	-	+	-	-	+	-	-	-	-
41. <i>O. melazonotus</i>	-	-	-	-	-	-	+	-	-	-	-
42. <i>O. cinereus</i>	-	-	-	-	-	-	-	-	-	-	+
43. <i>O. erythrorachis</i>	-	-	-	-	-	-	-	-	-	-	+
44. <i>Dendrelaphis ahaetulla</i>		-	-	+	-	-	-	-	-	-	-
45. <i>D. cyanochloris</i>	-	-	-	-	-	-	+	-	-	-	+
46. <i>D. gorei</i>		-	-		-	-	+	-	-	-	-
47. <i>D. tristis</i>	-	-	-		-	-	+	-	-	-	-
48. <i>Ahaetulla prasinus</i>	-	-	-	+	-	+	+	-	-	-	-
49. <i>Crysopelea ornata</i>		-	+	-	-	-	-	-	-	-	-
50. <i>Ophites laeensis</i>		-	-	-	-	-	-	-	-	-	+
51. <i>O. jara</i>		-	+	+	-		-	-	-	-	-
52. <i>Sibynophis collaris</i>	-	-	+	-		-	+	-		-	-
53. <i>Xenochrophis punctulata</i>		-	-	+	-	-	-	-		-	+
54. <i>X. piscator</i>	-	+	+	+		+	+	-	-		+
55. <i>Pseudoxenodon macrops</i>	-		-	-	-	-	+	-	+	-	
56. <i>Amphiesma stolata</i>			-	+		+	-	-	-	-	-
57. <i>A. modesta</i>			-				-	-	-		+
58. <i>A. platyceps</i>		+					+	-			
59. <i>Trachischium monticola</i>				-			+		+		+
60. <i>T. tenuiceps</i>			+								
61. <i>Rhabdophis hiMalayanus</i>			+	+			+				
62. <i>Rhabdops bicolor</i>			-	-							+

Name of species	T 1	EK 2	EK 3	LS 4	US 5	WS 6	ES 7	D 8	E 9	T 10	C 11
63. <i>Blythia reticulata</i>							+				
64. <i>Boiga ochracea</i>		+									
65. <i>B. gokool</i>											+
66. <i>B. quincunciata</i>			+	+							
67. <i>B. multifasciata</i>			+								
68. <i>B. cynodon</i>				+							
69. <i>Psammodynastes pulverulentus</i>				+		+	+				
70. <i>Bungarus fasciatus</i>			+								
71. <i>Bungarus niger</i>						+					
72. <i>Calliophis macclellandi</i>			-	+			+				
73. <i>Naja naja kaouthia</i>				+							
74. <i>Ophiophagus hannah</i>			-		-						+
75. <i>Trimeresurus mucrosquamatus</i>						+				-	+
76. <i>T. monticola</i>		-	+				+			+	+
77. <i>T. gramineus</i>							+		-	-	-
78. <i>T. stejnegeri</i>				+	-	-		-	-	-	-