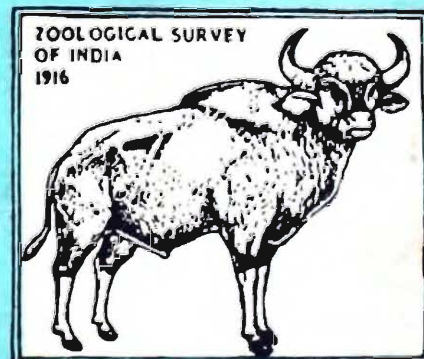


STATE FAUNA SERIES 5

Fauna OF Andhra Pradesh

PART-1

**ZOOLOGICAL SURVEY OF INDIA
1993**



STATE FAUNA SERIES : 5

FAUNA OF ANDHRA PRADESH

PART I (Reptilia, Amphibia, Fishes)

Edited by

The Director, Zoological Survey of India, Calcutta



ZOOLOGICAL SURVEY OF INDIA
1993

© Copyright, 1993, Government of India

Published : August, 1993

Project Co-ordinator : Dr. A. K. Ghosh
Director, Zoological Survey of India

Price

Inland : Rs. 350·00

Foreign : £ 15·00 \$ 24·00

Published by
The Director, Zoological Survey of India, Calcutta

Printed by
A. K. Chatterjee at JNANODAYA PRESS
55B, Kabi Sukanta Sarani, Calcutta-700 085.

FOREWORD

Zoological Survey of India, a premier national institution entrusted with survey, collections, identification and publication of inventories of faunal resources has taken up a systematic survey of States of the Republic of India since 1987-88. Under this programme the present volume designated as Part I of Fauna of Andhra Pradesh, brings out for the first time a total account of reptilia, amphibia and fishes so far recorded from the State. The varied ecological conditions of the State and its significant biogeographical location offer a rich faunal resources. The present work indicates a part of the same and it is strongly believed that it will stimulate further exploration of the resources of the States in the eastern India. Fauna of Andhra Pradesh will be published in a series in coming years under the State Fauna Series No. 5 and when completed, the total profile of faunal biodiversity is expected to emerge. I would like to put on record my deep sense of appreciation to my colleagues, who have contributed the papers for the present volume and to Mr. G. Sivagurunathan, Publication Production Officer of ZSI and his associates for bringing out the volume in the desired manner. I hope that the volume will be of use for the policy planners of the biodiversity and for researchers and students engaged in the studies relevant to such areas.

Calcutta, 2nd August, 1993

DR. A. K. GHOSH
Director
Zoological Survey of India

FAUNA OF ANDHRA PRADESH

PART I

CONTENTS

REPTILIA

**D. P. Sanyal, B. Datta Gupta
& N. C. Gayen**

... 1

AMPHIBIA

**A. K. Sarkar, P. K. Chandra
& S. Ray**

... 65

PISCES : FRESHWATER FISHES

R. P. Barman

... 89

REPTILIA

D. P. SANYAL, B. DATTAGUPTA AND N. C. GAYEN

Zoological Survey of India, Calcutta

1. INTRODUCTION

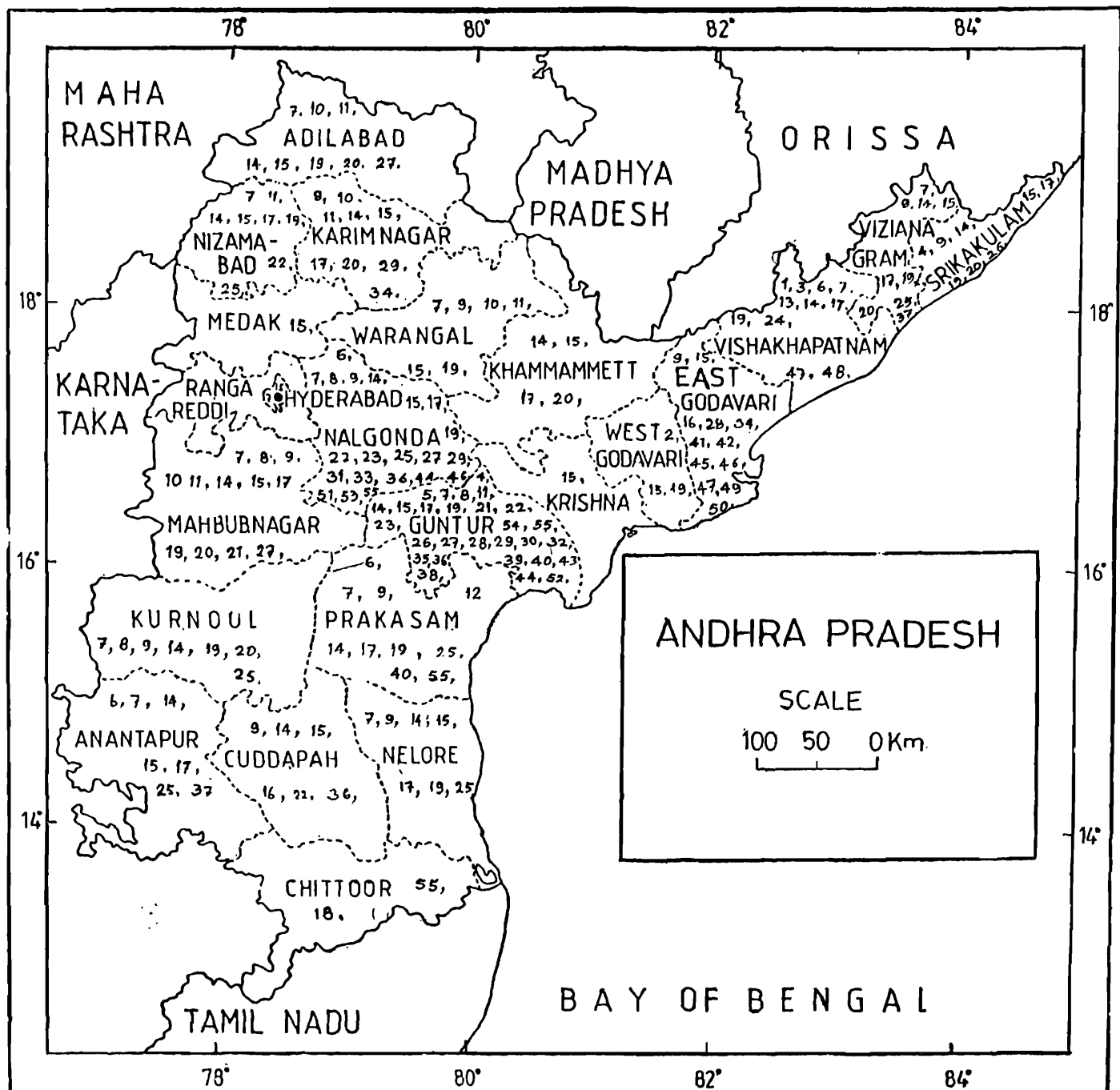
There is very little information about reptilian fauna of Andhra Pradesh. Sharma (1971) recorded 34 species of reptiles from Nagarjunasagar of Andhra Pradesh and besides some scattered records by Annandale (1906, 1912, 1915), Beddome (1870), Bhaskar (1982), Biswas (1984), Boulenger (1890), Constable (1949), Daniel et. al. (1983, 1985, 1986), Das (1991), Dutt (1979), Ganapati et. al. (1952), McCann (1945), Moll et. al. (1986), Murthy (1980, 1986), Sharma (1969, 1976), Rao (1991) and Smith's works on the reptile fauna of India (1931, 1935, 1943), no other consolidated faunal account on the reptiles from the state as a whole is available. So, this will be first detailed account on the reptilian fauna from the state as a whole is available. The present work on Andhra Pradesh reptiles is based largely on the extensive collections in the Zoological Survey of India made during faunistic surveys between the years 1962 to 1988. A few examples collected prior to that and available with the named collections of Reptilia Section have also been utilized. It comprises 837 examples belonging to 78 species, 56 genera and 18 families. Out of which 55 species have actually been collected from the above region by the various survey parties of the Zoological Survey of India, and the rest 23 species are known otherwise from adjacent region and are likely to occur in the state have also been included in this paper.

Physiogeographically, Andhra Pradesh is situated between latitude $12^{\circ} 14'$ and $19^{\circ} 54'$ N and longitudes $76^{\circ} 50'$ and $86^{\circ} 50'$ E. It lies on the Eastern sea board of the peninsula and south-eastern part of Indian subcontinent. The total land area of the state is 2,76,814 square kilometers bounded on the north by Madhya Pradesh and Orissa, on the west by Maharashtra and Karnataka, on the south by Tamil Nadu, on the east by the bay of Bengal. It has a coastline of 1000 kilometers. The lakes and tanks cover an area of 8,00,000 hectares, and the river system of the state is more than 1,500 kilometers. Two major river systems namely Godavari and Krishna along-with their several tributaries drains the state.

There are three main mountain chains in the state.

1. Eastern Ghats fringing the east coast line, with at some places a very narrow coastal plain. 2. The Deccan plateau with Sahyadri range of Adilabad district at the north border of the state. 3. The Horseley and the other hills of the Chittor, Anantapur districts at the south border. The Eastern Ghats and their southern continuation taken by the Nallamalais run through the entire state.

Evergreen, semi-evergreen and moist deciduous forests are found in the state and occupy about 23.8% of the states total area. The state is divided into 23 districts with Hyderabad as its state capital. There is a large natural swampy area (c. 250



Map showing locality-wise distribution of the species.

NAME OF SPECIES: 1. *Lepidochelys olivacea* (Eschscholtz) 2. *Kachuga tentoria tentoria* (Gray) 3. *Geochelone eligans* (Schoepff) 4. *Lissemys punctata punctata* (Lecepede) 5. *Aspideretes leithi* Gray 6. *Hemidactylus triedrus* (Daudin) 7. *Hemidactylus brooki* Gray 8. *Hemidactylus reticulatus* Beddome 9. *Hemidactylus leschenaulti* Dum. & Bib. 10. *Hemidactylus frenatus* Schlegel 11. *Hemidactylus giganteus* (Stoliczka) 12. *Hemidactylus bowringi* (Gray) 13. *Hemiphyrodactylus typus aurantiacus* (Beddome) 14. *Sitana ponticeriana* Cuvier 15. *Calotes versicolor* (Daudin) 16. *Psammophilus dorsalis* (Gray) 17. *Psammophilus blanfordianus* (Stoliczka) 18. *Chamaeleo zeylanicus* Laurenti 19. *Mabuya carinata* (Schneider) 20. *Mabuya macularia* (Blyth) 21. *Mabuya nagarjuni* Sharma 22. *Lygosoma punctata* (Gmelin) 23. *Riopa ashwamedhi* Sharma 24. *Barkuda insularis* Annandale 25. *Cabrita jerdoni* Beddome 26. *Cabrita leschenaulti* Milne-Edwards 27. *Ophisops jerdoni* Blyth 28. *Varanus bengalensis* (Daudin) 29. *Ramphotyphlops braminus* (Daudin) 30. *Typhlops acutus* Dum. & Bib. 31. *Eryx conicus* (Schneider) 32. *Eryx johni johni* (Russell) 33. *Ahaetulla nasutus* (Lacepede) 34. *Amphiesma stolata* (Linn.) 35. *Xenochrophis piscator* (Schneider) 36. *Ptyas mucosus* (Linn.) 37. *Lycodon aulicus aulicus* Smith 38. *Elaphe helana* (Daudin) 39. *Oligodon travancoricus* Beddome 40. *Oligodon taeniolatus* (Jerdon) 41. *Macropisthodon plumbicolor* (Cantor) 42. *Sibynophis sagittarius* (Cantor) 43. *Argyrogena bholanathi* (Sharma) 44. *Boiga trigonata* (Schneider) 45. *Gerardia prevostiana* (Eydxou and Gervias) 46. *Cerberus rhynchops* (Schneider) 47. *Hydrophis spiralis* (Shaw) 48. *Lapemis curtus* (Shaw) 49. *Enhydrina schistosa* (Daudin) 50. *Microcephalophis gracilis* (Shaw) 51. *Bungarus caeruleus* (Schneider) 52. *Naja naja* (Linn.) 53. *Calliophis melanurus* (Shaw) 54. *Vipera russelli* (Shaw) 55. *Echis carinatus* (Schneider).

Sq. km.) known as Kolleru Lake which is regarded as one of the largest wetland in India is situated partially in the coastal districts namely Krishna and West Godavari.

Colouration of specimens described is of specimens preserved in formalin and stored in alcohol.

II. MATERIAL AND METHOD

Reptiles are either aquatic, terrestrial or arboreal. Aquatic form has been collected by the help of water net, cast net and fishing hook. Both terrestrial and arboreal forms have been collected by hand or long survey forceps. The reptiles reported in this paper have been collected by parties of Zoological Survey of India from different ecological niches of Andhra Pradesh. In the field, notes have been taken regarding the habits and habitats of reptiles. For collection, aquatic vegetations, bushes, scraby 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 by the help of lamps. The collected material are first chloroformed and then put into 5% formalin solution at least for 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 alongwith labels containing the data of locality, altitude, habitat, date of collection and name of collector, are packed properly and kept in 5% formalin solution again. The material collected in the field are brought to laboratory. After unpacking the material, they are washed thoroughly in water and placed them in 95% rectified spirit. The materials are studied and identified with the help of literature in the laboratory.

III. ABBREVIATIONS USED

Collector (Coll.), Example (Ex.), Kilometre (Km.), Milimetre (mm.), Station (Stn.), A. K. Mondal (AKM), A. K. Sarkar (AKS), B. Dattagupta (BDG), B. Nath (BN), D. P. Sanyal (DPS), H. S. pruthi (HSP), I. N. Maligi (INM), K. Reddia (KR), N. Majumder (NM), N. V. Suba Rao (NVSR), P. N. Ganapati (PNG), R. C. Sharma (RCS), R. Hodgard (RH), R. Role (RR), R. V. Sherard (RVS), S. S. Saha (SSS), T. S. N. Murthy (TSNM), Dr. Goffney (G), G. Rama Krishna (GRK), Dr. A. Danial (AD) W.T. Blanford (WTB).

IV. SYSTEMATIC LIST

(*Species likely to occur ; not yet recorded)

Class : REPTILIA

Order I. : CROCODYLIA

Family I. : CROCODYLIDAE

*1. *Crocodylus palustris* Lesson*2. *Crocodylus porosus* Schneider

Order II. : TESTUDINES

Suborder (i) : CRYPTODIRA

Family 2. : CHELONIIDAE

3. *Lepidochelys olivacea* (Eschscholtz)

Family 3. : EMYDIDAE

*4. *Melanochelys trijuga trijuga* (Schweigger)5. *Kachuga tentoria tentoria* (Gray)

Family 4. : TESTUDINIDAE

6. *Geochelone elegans* (Schoepff)

Family 5. : TRIONYCHIDAE

7. *Lissemys punctata punctata* (Lacepede)*8. *Chitra indica* (Gray)9. *Aspideretes leithi* Gray

Order III. : SQUAMATA

Suborder (ii) : SAURIA

Family 6. : GEKKONIDAE

*10. *Cyrtodactylus nebulosus* (Beddome)*11. *Calodactylodes aureus* (Beddome)12. *Hemidactylus triedrus* (Daudin)*13. *H. subtriedrus* Jerdon14. *H. brooki* Gray15. *H. reticulatus* Beddome16. *H. leschenaulti* Dumeril & Bibron17. *H. frenatus* Schlegel18. *H. giganteus* Stoliczka19. *H. bowringi* (Gray)

- *20. *H. gracilis* Blanford
- 21. *Hemiphyllodactylus typus aurantiacus* (Beddome)

Family 7. : AGAMIDAE

- 22. *Sitana ponticeriana* Cuvier
- 23. *Calotes versicolor* (Daudin)
- 24. *Psammophilus dorsalis* (Gray)
- 25. *P. blanfordanus* (Stoliczka)

Family 8. : CHAMAELEONIDAE

- 26. *Chamaeleo zeylanicus* Laurenti

Family 9. : SCINCIDAE

- 27. *Mabuya carinata* (Schneider)
- 28. *M. macularia* (Blyth)
- 29. *M. nagarjuni* Sharma
- 30. *Lygosoma punctata* (Gmelin)
- *31. *Rlopa albopunctata* Gray
- 32. *R. ashwamedhi* Sharma
- *33. *Sepsophis punctatus* Beddome
- 34. *Barkudia insularis* Annandale

Family 10. : LACERTIDAE

- 35. *Cabrita jerdoni* Beddome
- 36. *C. leschenaulti* Milne-Edwards
- 37. *Ophisops jerdoni* Blyth.

Family 11. : VARANIDAE

- 38. *Varanus bengalensis* (Daudin)

sudorder (iii) : SERPENTES

Family 12. : TYPHLOPIDAE

- 39. *Ramphotyphlops braminus* (Daudin)
- 40. *Typhlops acutus* Dumeril and Bibron
- *41. *Typhlops beddomei* (Boulenger)

Family 13. : UROPELTIDAE

- *42. *Uropeltis elioti* (Gray)

Family 14. : BOIDAE

- *43. *Python molurus* (Linnaeus)
- 44. *Eryx conicus* (Schneider)

45. *Eryx johni johni* (Russell)

Family 15. : COLUBRIDAE

Subfamily (i) : COLUBRINAE

- 46. *Ahaetulla nasutus* (Lacepede)
- 47. *Amphiesma stolata* (Linnaeus)
- 48. *Xenochrophis piscator* (Schneider)
- 49. *Ptyas mucosus* (Linnaeus)
- 50. *Lycodon aulicus aulicus* Smith
- *51. *Lycodon striatus* (Shaw)
- *52. *Lycodon travancoricus* Beddome
- 53. *Elaphe helena* (Daudin)
- 54. *Oligodon travancoricus* Beddome
- 55. *Oligodon taeniolatus* (Jerdon)
- *56. *Oligodon arnensis* (Shaw)
- 57. *Macropisthodon plumbicoler* (Cantor)
- 58. *Sibynophis sagittarius* (Cantor)
- *59. *Dryocalamus gracilis* (Gunther)
- *60. *Psammophis condanarus* (Merrem)
- 61. *Argyrogena bholanathi* (Sharma)
- 62. *Boiga trigonata* (Schneider)

Subfamily (ii) : HOMALOPSINAE

- 63. *Gerardia prevostiana* (Eydoux and Gervais)
- *64. *Enhydris enhydris* (Schneider)
- 65. *Cerberus rhynchops* (Schneider)

Family 16. : HYDROPHIIDAE

- 66. *Hydrophis spiralis* (Shaw)
- *67. *Hydrophis mamillaris* (Daudin)
- 68. *Lapemis curtus* (Shaw)
- 69. *Enhydrina schistosa* (Daudin)
- 70. *Microcephalophis gracilis* (Shaw)

Family 17. : ELAPIDAE

- 71. *Bungarus caeruleus* (Schneider)
- *72. *Bungarus fasciatus* (Schneider)
- 73. *Naja naja* (Linnaeus)
- *74. *Ophiophagus hannah* (Cantor)
- 75. *Calliophis melanurus* (Shaw)

Family 18. : VIPERIDAE

76. *Vipera russelli* (Shaw)
 77. *Echis carinatus* (Schneider)
 *78. *Trimeresurus gramineus* (Shaw)

V. SYSTEMATIC ACCOUNT

Class : REPTILIA

Order : CROCODYLIA

Family : CROCODYLIDAE

Genus : 1. *Crocodylus* Gronovius, 1763

Key to the species of the genus CROCODYLUS

A strong ridge in front of the eye snout $1\frac{2}{3}$ to $2\frac{1}{6}$ time as long as broad at the base	...	...	...	...	...	...	<i>Porosus</i>
No ridge in front of eye snout $1\frac{1}{8}$ to $1\frac{1}{2}$ times as long as broad at the base	...	...	...	...	...	...	<i>Palustris</i>

* 1. *Crocodylus palustris* Lesson
 (Mugger or Marsh crocodile)

1834. *Crocodylus palustris* Lesson, in *Belang. Voy. Ind. or., Zool.* : 305.1890. *Crocodylus palustris* Boulenger, *Fauna Brit. Ind.* : 5.**Material examined :** Material not available. Description based on the literature.

Description : Snout broad, and without distinct ridges in front of the eyes. Snout $1\frac{1}{8}$ to $1\frac{1}{2}$ times as long as broad of the base. A row of 4 distinct, sharply raised, scales just behind the head called post occipitals, dorsal scutes in 16 or 17 transverse and 4, sometimes 6, longitudinal series of bony plates embedded in the skin. Ventrally the skin lacks armour. Fingers webbed at the base.

Distribution : Inhabits rivers, lakes and other large bodies of water throughout the Indian subcontinent, from Baluchistan in the west to Assam in the east, and from Nepal in the north to Tamil Nadu in the south. Also Srilanka and Iran.

Remarks : Formerly this species was available abundantly in most states of the

Status : Placed under schedule I of Indian Wildlife Protection Act, 1972.

(Estuarine or salt water crocodile)

- Material examined:** Material not available. Description based on the literature.

Distribution : Inhabits tidal estuaries of the larger continental rivers, marine swamps and coastal brackish water lakes from the Cochin area of Kerala on the west coast, south ward around the tip of the Peninsula, and north ward along the east coast to the Sunderbans in West Bengal. Also present in Andaman and Nicobar Islands.

Status : Placed under Schedule I of Indian Wildlife Protection Act, 1972.

Suborder (i) : CRYPTODIRA

Family 2. : CHELONIIDAE

1.	Digits elongated	...	...	...	...	...	CHELONIIDAE
	Digits not elongated	...	...	...	...	...	2
2.	Forelimbs semi-paddle shaped with 3 claws ; carapace covered with smooth skin ; edge of carapace flexible	...	...	...	...	...	TRIONYCHIDAE
	Forelimbs paddle-shaped with more than 3 claws ; Carapace covered with horny shields	...	...	...	...	...	3.
3.	Limbs paddle shaped but more or less flattened ; digit webbed ; top of head covered with smooth skin or with the posterior part of it divided into shields ; claws 4-5 ; carapace covered with horny shields	...	...	...	...	...	EMYDIADAE
	Limbs more or less cylindrical, the hind limbs clubshaped or elephantine, digits not webbed ; upper portion of the head shielded ; plastron with 12 shields,	...	...	...	...	...	TESTUDINIDAE

Genus 2. *Lepidochelys* Fitzinger, 1843.3. *Lepidochelys olivacea* (Eschscholtz)
(Olive Ridley Turtle) Telugunama, Samudram tabelu1829. *Chelonia olivacea* Eschscholtz, *Zool. Atlas* : 2, Pl. 3.1843. *Lepidochelys Olivacea* Fitzinger, *Syst. Rept.* : 30.

Material examined : Visakhapatnam Dist. : 1 ex., Visakhapatnam sea shore, 4. xi. 1980 (coll. SB).

Measurements : Carapace length 200 mm.

Diagnostic character : Carapace broad, almost heart-shaped, fairly raised but with a flat top; posterior marginals serrated; 5-9 pairs of pleurals and 12-14 pairs of marginals; a broad cervical, touching the first pleural; five or more costal shields on carapace. Marginal shields on carapace 27, rarely 25. Carapace of the young with three distinct keels. Distinct pores present on the inframarginal region. Head small, triangular; four prefrontal scales on forehead; upper jaw hooked but without a ridge. Adult olive brown above, yellowish below.

Distribution : Andhra Pradesh as mentioned in the material. The olive ridley is widely distributed in the tropics and subtropics, especially along shallow coastal waters with muddy bottom, high in detritus and low in salinity.

Remarks : It is the commonest turtle along the Indian coasts.

Status : Protected under schedule I of Indian Wild Life Protection Act, 1972.

Family 3. EMYDIDAE

Key to the genera of the family EMYDIDAE

Vertebral shields short sided anteriorly	...	...	...	...	<i>Kachuga</i>
Vertebral shields short sided posteriorly	...	...	...	...	<i>Melanochelys</i>

Genus 3. *Melanochelys* Gray, 1869.*4. *Melanochelys trijuga trijuga* (Schweigger)
(Peninsular black turtle) Telugu name : Nuiye tabelu1814. *Emys trijuga* Schweigger, *Prodr. Monog. Chel.* : 41.1869. *Melanochelys trijuga* Gray. *Proc. Zool. Soc. London*, : 187.

Material examined : Material not available. Description based on the literature.

Description : Four well defined and perfectly established subspecies of *Melanochelys trijuga* are found in India. These races are mainly recognised on the basis of head

and shell colouration. The head is moderately small, snout shorter than the orbit, slightly projecting beyond the lower jaw ; Upper jaw notched at the middle. Vertebral shields short sided posteriorly. Carapace elongated, fairly elevated in adults, depressed in the young, tricarinate ; posterior marginals feebly serrated ; cervical small, triangular in shape. Head is greyish or olivaceous with yellow or pink reticulations which are more prominent on the sides.

Distribution : The subspecies is available in Andhra Pradesh, Maharashtra, Tamil Nadu, Karnataka and Gujarat.

Remarks : It is mainly aquatic and completely vegetarian in habits.

Status : Indeterminate, possibly vulnerable. The main threat is due to large scale exploitation of eggs and adults for food.

Genus 4. *Kachuga* Gray, 1869.

5. *Kachuga tentoria tentoria* (Gray) (Indian tent turtle)

1834. *Emys tentoria* Gray, *Proc. Zool. Soc.*, 54.

Material examined : 1 ex., Godavari river (Coll. WTB)

Diagnostic character : Carapace elevated, oval with distinct vertebral keel that is spiked, especially on vertebral 3 ; vertebrals 3 and 4 longer than wide, vertebrals 5 wider than long, vertebrals 1 and 2 longer than wide or wider than long ; plastron truncated anteriorly, notched posteriorly ; snout pointed, the skin at the back of forehead with irregular scales ; upper jaw unnotched, vertebral shields short sided anteriorly. Limbs are with fully and broadly webbed digits and have transversely enlarged scales.

Distribution : *Andhra Pradesh* as stated in the *material*. Elsewhere : Orissa, Madhya Pradesh, Maharashtra.

Remarks : The species is absolutely aquatic and inhabits the slow running water near the banks and still water pools on the river side. It is an active swimmer and is mainly herbivorous.

Status : Species become vulnerable on account of large scale river pollution and habit destruction.

Family 4. TESTUDINIDAE

Genus 5. *Geochelone* Fitzinger, 1835

6. Geochelone elegans (Schoepff)
(Indian Star Tortoise) Telegu name : Meta tabelu

1792. *Testudo elegans* Schoepff, *Hist. Test.* 1 : 111.

1835. *Geochelone elegans* Fitzinger, *Ann. Wien Mus.* 1 : 111.

Material examined : Visakhapatnam Dist : 3 ex., Visakhapatnam (Coll. RR); 1 ex. (Juv) Visakhapatnam (Coll. WT).

Diagnostic character : Carapace viewed from above oblong in adult to almost round in young. Cervical absent; all vertebrals, except the first, which is as long as broad, are broader than long; 12th marginals united; bridge with a single axillary and inguinal scute on each side. The head is of moderate size, its anterior portion is bulged and somewhat convex. The upper jaw is slightly tricuspid. The skin at top of head is divided into small irregular shields. Tail is moderately long and terminating into a spur-like scute. Shell is black above, each vertebral and costal shield is with a yellow areols from which radiate as many as eight streaks, ultimately producing a starred pattern which is continuous over the marginals to plastron. Head and limbs are yellow, more or less spotted with dark brown or black.

Distribution : Andhra Pradesh as stated in the *material*. Elsewhere : Peninsular India and offshore islands like Karadura and Rameswaram. Also Sri Lanka, extending upto Sind.

Remarks : The species inhabits rocky, grassy arid areas with plenty of other vegetation. Its feeds on grass, flowers, vegetables, fruits and all other available vegetable material.

Status : Indeterminate, suspected to be threatened by habitat loss.

Family 5. TRIONYCHIDAE

Key to the genera of the family TRIONYCHIDAE

- | | | | | | |
|--|-----|-----|-----|-----|---------------------|
| 1. Marginal bones are present. Snout short | ... | ... | ... | ... | <i>Lissemys</i> |
| Marginal bones are not present. Snout long | ... | ... | ... | ... | 2. |
| 2. Orbit nearer the temporal than the nasal fossa ; postorbital arch narrower than the diameter of the orbit | ... | ... | ... | ... | <i>Aspidereters</i> |
| Orbit nearer the nasal than the temporals fossa ; Postorbital arch twice as broad as the diameter of the orbit | ... | ... | ... | ... | <i>Chitra</i> |

Genus 6. *Lissemys* Smith, 1931.

7. *Lissemys punctata punctata* (Lace'pe'de)
(Indian Flap-shell Turtle) Telegu name : Neeti tabelu

1788. *Testudo Punctata* Lace'pe'de, *Hist, Quad. Ovip.* 2 : 446.

1931. *Lissemys punctata punctata* Smith, *Funa Brit. Ind.* 1 : 157.

Material examined : Guntur Dist : 1 ex., (juv) Pullareddygudem vill., 2. ix. 1962, (Coll. BN & IMN) Srikakulam Dist. I ex., Stn. 6 Samarilli, ca 20 km. north of Palkonda, 19. ix. 1986 (Coll. DPS).

Description : Carapace viewed from above broadly oval in adult to circular in young. Head is moderately large, the snout is short, its length is less than the length of the eye opening. The carapace and plastron covered by a continuous sheet of soft skin and their callosities are finely granulated. The lateral and the hinder portions of the carapace are most flexible. Plastron is with soft, semicircular flaps, which accommodate the retracted hind feet to be totally concealed. Plastron is with seven callosities in the adult. Limbs are fully webbed, with only three claws on each foot. Tail is very short. Olive brown above. Carapace is grey-green, with numerous blackbordered yellow spots, irregularly arranged and with a light yellow marginal rim.

Distribution : *Andhra Pradesh* as stated in the *material*. Elsewhere : Tamil Nadu, Orissa, Goa, Bihar, Gujrat, West Bengal, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Andamans. Also Sri Lanka, Bangladesh, Myanmar (Burma), Nepal, Pakistan,

Remarks : Three subspecies of *Lissemys* are recognised : *Punctata* (Lacepede), *andersoni* Webb and *scutata* (Peters), the first two occuring in the Indian subcontinent, the third restricted in Myanmar (Burma). The subspecies prefers to live in shallow, muddy ditches, lakes and marshes. It is a carnivorous turtle and feeds mainly on frogs, fishes, shrimps and snails.

Status : The species is protected under schedule I of the Indian Wild life (Protection) Act, 1972.

Genus 7. *Chitra* Gray 1844.

* 8. *Chitra indica* (Gray) (Narrow-headed Softshell Turtle)

1831. *Trionyx indicus* Gray, *Syn. Rept.* : 47,

1844. *Chitra indica* Gray, *Cat. Tort. etc., Brit. Mus.* : 49.

Material examined : Material not available. Description based on the literature.

Description : Shell oval and depressed ; shell bones prominently pitted ; orbit nearer the nasal than the temporal fossa ; postorbital arch twice as broad as the diameter of the orbit. The head is quite small in comparison to the body, somewhat elongated ; snout is rounded. The alveolar surfaces of jaws are slightly expanded, and the edges of the jaws are extremely sharp. The eyes are situated close to the nostrils. Carapace

is remarkably pitted and vermiculated. The basic colour is dull olive or bluish-grey dorsally, with a pattern of wavy reticulations, carapace pattern continuing up to the neck and the outer surface of the forelimbs; a 'V'-shaped mark commencing from the nape and extending to the carapace; juveniles sometimes with 4 eye-like markings on the carapace or with numerous black elongated spots; plastron cream or pale pink.

Distribution : The turtle is widespread in the oriental region, from the Indian subcontinent, eastwards to Thailand, in the rivers Indus, Ganga, Godavari, Padma, Mahanadi, Coleroon and Ratburi, of Pakistan, Nepal, Bangladesh and Thailand.

Remarks : This species is most agile and prefers to live in shallow rivers with sandy bottoms and banks. Its food mainly fish, gastropod molluscs and other small animals.

Status : Indeterminate, suspected to be threatened on account of excessive killing of adults and over exploitation of eggs for foods.

Genus 8. *Aspideretes* Gray, 1872.

9. *Aspideretes leithii* (Gray) (Leith's softshell Turtle)

1872. *Trionyx Leithii* Gray, *Ann. Mag. Nat. Hist.* (4) 10 : 334.

Material examined : Gunter Dist. ex., Pedaavagu river, near Rayaram vill, Nagarjuna, Sagar, 20. x. 1963. (Coll. BN).

Diagnostic character : Carapace low and oval; a preneural with one or two neurals separating the first pair of costals; eight pair of costals meet at carapace midline eight neurals; plastral callosities large, five in number. Orbit nearer the temporal than the nasal fossa; postorbital arch narrower than diameter of the orbit. Alveolar surface of upper jaw is flat and with a fairly well defined median maxillary groove between them. Dorsal colouration is olivegreen with lighter vermiculations. Ventrums are whitish. Head is greenish with black longitudinal lines from between the eyes and two oblique black streaks emerge on either side and one streak starts behind the eye.

Distribution : Andhra Pradesh as stated in the material. Elsewhere, Ganga river system and all the rivers of Peninsular India as far south as Madras.

Remarks : The species is perfectly aquatic and is frequently seen basking on sandy banks or resting in shallow water with its head sticking out of water. It is completely omnivorous and is also a scavenger.

Status : This species endangered on account of excessive killing of the adults for flesh, and over exploitation of eggs for food.

Order III : SQUAMATA

Suborders (II) : SAURIA

Key to the families

- | | | | | | | |
|---|-----|-----|-----|-----|-----|-----------------------|
| 1. Tongue slender, forked | ... | ... | ... | ... | ... | <i>Varanidae</i> |
| 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 | ... | ... | ... | ... | ... | <i>Scincidae</i> |
| Body covered with osteodermal plates, femoral pores present | ... | ... | ... | ... | ... | <i>Lacertidae</i> |
| 4. Eyes with movable eyelids ; digits free | ... | ... | ... | ... | ... | 5. |
| Eyes without movable eyelids ; digits clawed | ... | ... | ... | ... | ... | <i>Gekkonidae</i> |
| 5. Tongue club-shaped | ... | ... | ... | ... | ... | <i>Chamaeleonidae</i> |
| Tongue not club-shaped | ... | ... | ... | ... | ... | <i>Agamidae</i> |

Key to the genera of the family GEKKONIDAE

- | | | | | | | |
|--|-----|-----|-----|-----|-----|---------------------------|
| 1. Digits strongly dilated | ... | ... | ... | ... | ... | 2. |
| Digits not dilated | ... | ... | ... | ... | ... | <i>Cyrtodactylus</i> |
| 2. Digits dilated as the apex only | ... | ... | ... | ... | ... | <i>Calodactylodes</i> |
| Digits dilated at the base only | ... | ... | ... | ... | ... | 3. |
| 3. Inner digit well developed, with free terminal phalange | ... | ... | ... | ... | ... | <i>Hemidactylus</i> |
| Inner digit vestigial, without free terminal phalange | ... | ... | ... | ... | ... | <i>Hemiphyllodactylus</i> |

Family 6. GEKKONIDAE

Genus 9. *Cyrtodactylus* Gray, 1827.*10. *Cyrtodactylus nebulosus* (Beddome)
(Rock Gecko)

1870. *Gymnodactylus nebulosus* Beddome, *Madras Month. J. Med. Sc.* 2 : 174.

Material examined : Material not available. Description based on the literature.

Description : Head moderate ; snout longer than the distance between the eye and the ear opening ; 10-12 upper and the same number of lower labials. Back with small granular scales, intermixed with numerous larger, rounded, keeled tubercles. The toes are short, the tail is shorter than the head and body, and is more or less swollen in the basal part. A conspicuously and handsomely coloured gecko.

Distribution : Golconda Hills, Godavery valley (Andhra Pradesh) ; Hills of Southern India.

Remarks : Mainly a forest species where it is found under stones or bark of trees,

Status : Indeterminate.

Genus 10. *Calodactylodes* Strand, 1926.

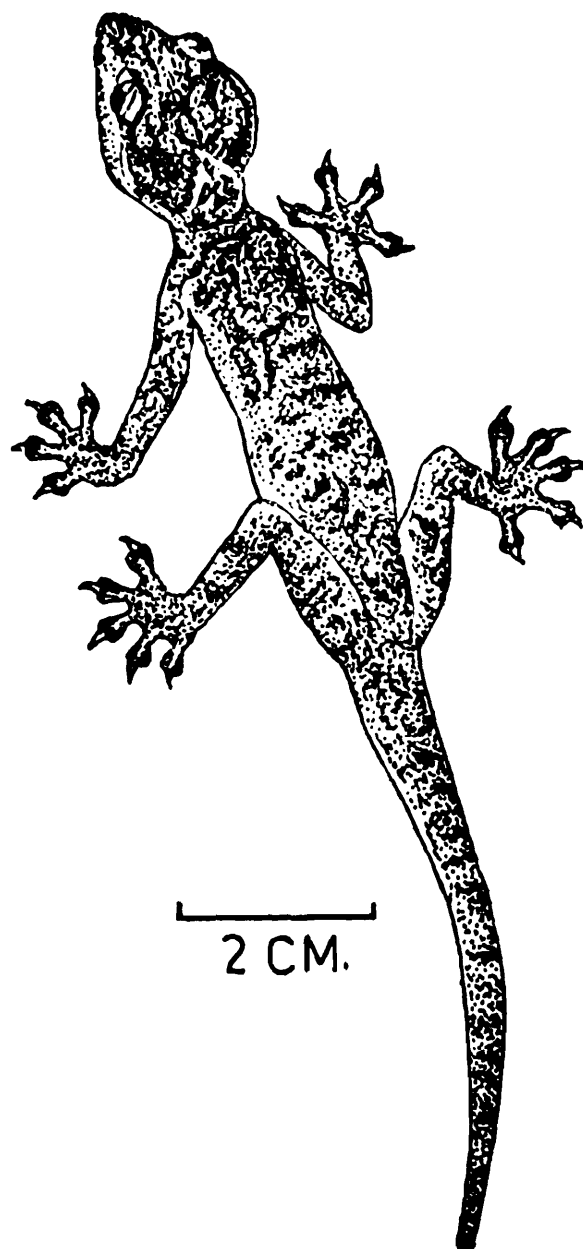
*11. *Calodactylodes aureus* (Beddome)
(Golden gecko) Text figure with plate

1870. *Calodactylus aureus* Beddome, *Madras Month. J. Med. Sci.* 1 : 31.

1926. *Calodactylodes aureus* Strand, *Arch. Nat. Berlin*, 92 A : 54.

Material examined : Material not available. Description based on the literature.

Description : Head moderate ; snout broad and rounded, distinctly longer than



Calodactylodes aureus
(Golden Gecko)

the distance between the eye and the ear opening, which is an oblique slit, its length about half of that the eye. 12 or 13 upper and as many as lower labials, Head

covered above with small granular scales. Back with small granular scales intermixed with numerous larger rounded tubercles. The terminal phalange of the slender digits with two plate-like expansions. Pupil vertical. The colour in life is said to be a brilliant golden yellow.

Distribution : Reported from rocky ravines in the Eastern Ghats.

Remarks : Beddome (1870) described as a new genus and species. The Gecko was apparently forgotten thereafter Daniel and Bhushan (1985) collected the species from Venkateswara Wildlife Sanctuary in Tirumalai Hills after a gap of 115 years.

Status : Rare.

Key to the species of genus HEMIDACTYLUS

- | | | | | | |
|--|-----|-----|-----|-----|---------------------|
| 1. Enlarged dorsal tubercles numerous, strongly keeled, arranged in regular longitudinal series | ... | ... | ... | ... | 2. |
| Enlarged dorsal tubercles not numerous, feebly keeled, not regular. by arranged | ... | ... | ... | ... | 6. |
| 2. Free distal phalanx of inner digit half as long as the dilated portion | ... | ... | ... | ... | 3. |
| Free distal phalanx of inner digit not half as long as the dilated portion | ... | ... | ... | ... | 5. |
| 3. Dorsal tubercles very large, back with dark cross bars | ... | ... | ... | ... | 4. |
| Dorsal tubercles large, back with dark spots | ... | ... | ... | ... | <i>Brooki</i> |
| 4, 7 to 10 lamellae under fourth toe | ... | ... | ... | ... | <i>Triedrus</i> |
| 12 lamellae under fourth toe | ... | ... | ... | ... | <i>Subtiedrus</i> |
| 5. Dorsal granules mixed with oval tubercles ; back with rectangular spots | ... | ... | ... | ... | <i>Gracilis</i> |
| Dorsal granules mixed with erect conical tubercles ; back with reticulated spots | ... | ... | ... | ... | <i>Reticulatus</i> |
| 6. Free distal phalanx of inner digit half as long as the dilated portion ; males with femoral pores only | ... | ... | ... | ... | 7. |
| Free distal phalanx of inner digit not half as long as the dilated portion ; male with continuous series of preano-femoral pores | ... | ... | ... | ... | <i>Frenatus</i> |
| 7. Tail swollen of the bases ; femoral pores separated by 6 scales | ... | ... | ... | ... | 8. |
| Tail not swollen at the base ; femoral pores separated by 2 to 4 scales | ... | ... | ... | ... | <i>Bowringii</i> |
| Tail with enlarged tubercles above ; 9 to 11 lamellae under the fourth toe | ... | ... | ... | ... | <i>Leschenaulti</i> |
| Tail without tubercles above ; 13 to 15 lamellae under the fourth toe | ... | ... | ... | ... | <i>Giganteus</i> |

Genus 11. *Hemidactylus* Oken, 1817.

12. *Hemidactylus triedrus* (Daudin) (Termite Hill Gecko)

1802. *Gecko triedrus* Daudin, Nat. Repr. 4 : 155.

1832. *Hemidactylus triedrus*, Lesson, in Belang., Voy. Ind. Or. : 311.

1906. *Hemidactylus triedrus*, Annandale, Mem. Asiat. Soc. Beng. (n. s.) 1 : 186

Material examined : 12 ex., collected from different districts as follows :

Annatapur Dist : 4 ex., Bukapatnum, Kalasamudram. **Nalgonda Dist.** 1 ex., Vijaypuri, Nagarjunkonda. **Prakasam Dist :** 5 ex., Erryandaputen, Shrisailam. **Visakhapatnam**

Dist : 2 ex., In and around Visakhapatnam all collected during the period 31. vii. 1962 to 5. xi. 1986. Collected by BN and INM ; AKS ; DPS and BDG.

Measurements : Snout to vent 45-70 mm, Tail 35-70 mm.

Diagnostic character : Head rather large, snout obtusely pointed. 8 to 10 upper and 7 or 8 lower labials, nostril between the rostral and several small scales. 7 to 10 lamellae under the fourth toe. Back of head with minute granules intermixed with larger keeled tubercles. Back with three white edged olive green crossbars ; greenish above eye. Belly white to pale flesh colour.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The range extends from Sri Lanka through much of Peninsular India to West Pakistan.

Remarks : A nocturnal form and emerges from crevices, termite hills and rodent burrows. It takes crickets, grasshoppers, spiders.

Status : *Common*.

*13. *Hemidactylus subtriedrus jerdon*

1853. *Hemidactylus subtriedrus* Jerdon, *J. Asiat. Soc. Beng.* 12 : 467.

Material examined : Material not available. Description based on the literature.

Description : 10 to 12 upper and 10 lower labials. 8 lamellae under the first toe, 12 under the fourth. Back of head with minute granules intermixed with larger keeled tubercles.

Distribution : The type of the species was collected from Nellore district. (Smith, 1935).

Remarks : It is chiefly found among rocks.

Status : *Indeterminate*.

14. *Hemidactylus brooki* Gray (Brook's Gecko)

1845. *Hemidactylus brooki* Gray, *Cat. Liz. Brit. Mus.* : 153.

1906. *Hemidactylus brooki* Annandale, *Mem. Asiat. Soc. Beng.* 1 : 183.

Material examined : 45 ex. ; collected from different districts as follows. : *Adilabad Dist.* : 4 ex. Birsai pet. *Anantpur Dist.* : 8 ex. collected from Dharmavaram and Kalasumurdam. *Guntur Dist.* : 3 ex. collected from Nagarjuna hill and puttegudem and Ashwamedh site *Hyderabad Dist.* : 1 ex. Mohemnedabad. *Kurnool Dist.* 3 ex. west of Mahanadi. *Mahbubnagar Dist.* : 5 ex. Mannanur Vill. *Nalgonda Dist.* : 8 ex. collected from Tiger hill ; Nandikonda valley ; Deverkonda valley ; Madhavram Vill. and Nidigul. *Nellore Dist.* : 5 ex. collected from Bata ; Kashmir Vill ; and Satrapaly Vill. *Nizamabad Dist.* : 1 ex., Armur. *Prakasam Dist.* : 2 ex. collected from Kanigiri

town and Podile. *Srikakulam Dist.* : 1 ex., Srikakulam. *Visakhapatnam Dist.* : 1 ex. Annantagiri. *Vizianagram Dist.* : 1 ex. Chipurapalli. *Warangal Dist.* : 2 ex. collected from mulug and Edungram. All collected during the period from 1962 to 1986. Collected by AKM ; KR ; BN and INM ; DPS ; SSS ; AKS.

Measurement : Snout to Vent 18-48 mm ; Tail 20-65 mm.

Diagnostic character : Head moderate large, snout obtusely pointed. 8 to 10 upper and 7 to 9 lower labials. Back with conical tubercles arranged in regular rows colour brown or varying shades of grey with brown spots, whitish below. Femoral and preanal pores vary from 15 to 27.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere occurring throughout the Indian subregion. It also occurs from Borneo and South China through much of tropical Asia and the northern half of Africa.

Remarks : Although it is characteristically a domestic gecko over much of its range, this house lizard is often found quite away from human buildings. It lives in a variety of habitats, on trees, rocks, under stones and on buildings. Its loud chuck chuck chuck call is often heard after dusk.

Status : *Common*.

15. *Hemidactylus reticulatus* Beddome (Reticulate Gecko)

1870. *Hemidactylus reticulatus* Beddome, *Madras Month. J. Med. Sci.* 1. : 33.

1890. *Hemidactylus reticulatus* Boulenger, *Fauna Brit. Ind.* 84.

Material examined : 71 ex., collected from different districts as follows ; *Guntur Dist.* : 34 ex., collected from Ashwamedh site ; Eddenmotu and Fringimotu hills ; Macherla town ; Nandikonda valley ; Nagarjunkonda valley ; Pullaredygudem. *Mahbubnagar Dist.* : 7 ex., collected from Mahbubnagar town ; Lengal ; Marik. *Nalgonda Dist.* : 18 ex. collected from Choutuppal ; Madhavram ; Tellesawarm ; Vijaypuri ; Suryaropet ; Nidigul Vill ; Yelleshwarm. All collected during the 1962-88. Collected by KR ; BN and INM ; DPS. Murthy (1986) collected 12 ex. from *Kurnool Dist.* during 1982-83.

Measurements : Snout to vent 25-30 mm. Tail 24-26 mm.

Diagnostic character : Head rather short and high, snout broadly rounded. 9 to 10 upper and 7 or 8 lower labials. Back with erect keeled granules and enlarged, pointed and keeled tubercles ; lamellae on the fourth toe 10. Male with 11 preanal pores. The colour is brown above with a characteristic pattern of darker lines arranged in a network on the back. The belly is whitish and the throat is speckled with brown. Most of the dorsal tubercles are whitish.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Madura and Shevaroy, Tamil Nadu ; Palnis, Western Ghats ; Karnataka.

Remarks : They are found under loose, small stones in the open hill country.

Status : Indeterminate.

16. *Hemidactylus leschenaulti* Dumeril and Bibron (Bark Gecko)

1836. *Hemidactylus leschenaulti* Dum & Bibr. *Erp. Gen.* 3 : 364.

Material examined : 32 ex., collected from different districts as follows : *Adilabad Dist.* : 3 ex., Kotapally, *Cuddapah Dist.* : 1 ex., Razampeta, *East Godavari Dist.* : 2 ex., Rajmundri, *Karimnagar Dist.* : 4 ex., Dharmapally. *Mahbubnagar Dist.* : 3 ex., collected from Mannanur and Kornangal. *Nalgonda Dist.* : 1 ex., Devakonda fort. *Nellore Dist.* : 4 ex., Sitarampurams. *Prakasam Dist.* : 10 ex., collected from Podili ; Erragandaperta ; Kanigiri ; Pameru and Shrisailam ; *Srikakulam Dist.* : 2 ex., collected from Antikonda and Telneelapuram. *Vizianagram Dist.* : 1 ex., Babbili. *Warangal Dist.* : 1 ex., Mulug. All collected during the year 1960-1988. Collected by AKM ; NM ; HSP ; DPS. Murthy (1986) collected 1 ex. from *Kurnool Dist.* during 1982-83.

Measurements : Snout to vent 33-80 mm. Tail 30-90 mm.

Diagnostic character : Body stout with a lateral fold ; upper labials 10 to 12 and 8 to 10 lower labials. Dorsally head and body covered with fine granules intermixed with small tubercles irregularly scattered ; scales on the underside small and imbricate. Digits rather long ; 9 to 11 lamellae under fourth toe. Tail strongly depressed with enlarged tubercles above. Males with 10 to 17 femoral pores on each side. Grey above and silvery white below. Back with conspicuous wavy cross bars. A dark line from the eye to ear on each side of the head.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The range is from Sri Lanka and Peninsular India north and west to Rajasthan and eastern Las Bela.

Remarks : This is a sylvatic and arborreal gecko found on large trees such as mango and banyan trees and it lies concealed under bark of these trees situated several feet above the ground.

Status : Common.

17. *Hemidactylus frenatus* Schlegel (South Asian waif Gecko)

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

Material examined : 6 ex. collected from different district as follows : *Adilabad Dist.* :
F 3

1 ex., Kotapally. *Karimnagar Dist.* : 1 ex. Mahadevpur. *Mahbubnagar Dist.* : 3 ex., collected from kothakolag ; kowakarat and Mannanur. *Warangal Dist.* : 1 ex. Mulug. All collected during the year 1978 to 1988. Collected by NM ; DPS ; AKM.

Measurements : Snout to vent 26-45 mm. Tail 25-47 mm.

Diagnostic character : Habitus and scalation similar to those of *H. leschenaulti*. It is a smaller lizard and differs in the following particulars : first toe less than half of length of second ; male with a continuous series of 23 or more preano-femoral pores ; dorsal tubercles scattered or partly in linear arrangement or absent. Dark brownish dorsally and dirty whitish below. A dark stripe through the eye to the sides and groin. Flanks with dark spots.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : widely distributed in South India, Sri Lanka, Southern Indo-China.

Remarks : Although it is a common house-gecko in south India, this species is found quiet often in the bark of coconut trees, beneath debris in outdoor locations. The species is recorded for the first time from Andhra Pradesh.

Status : Common.

18. *Hemidactylus giganteus* Stoliczka (Giant Tree Gecko)

1871. *Hemidactylus giganteus* Stoliczka, *P. Asiat. Soc, Beng.* : 193.

Material examined : 15 ex. collected from different districts as follows : *Adilabad Dist.* : 3 ex. collected from Ilkial and Kotapally. *Guntur Dist.* : 2 ex. collected from Nagarjuna hill and Siddler hill. *Karimnagar Dist.* : 2 ex. Manthani *Mahbubnagar Dist.* : 3 ex., Armur. *Warangal Dist.* : 4 ex. Mulug. All collected during the year 1963-1988. Collected by NM ; BN ; DPS ; AKM.

Measurements : Snout to vent 65-125 mm. Tail 55-125 mm.

Diagnostic character : Size large 12 to 15 upper labials and 10 to 12 lower labials. Mental large subtriangular. Back with more or less uniform small granules ; no enlarged tubercles ; belly with smooth, rounded, imbricate scales ; 13 to 15 lamellae under the fourth toe. Male with 40 preano-femoral pores. Greyish dorsally and whitish on the undersides. Back with prominent large W-shaped cross-bars.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Malabar, Palkonda Hills.

Remarks : Found on trees, crevices.

Status : Indeterminate

19. Hemidactylus bowringi (Gray)

1845. *Doryura bowringii* Gray, *Cat. Liz. Brit. Mus.* 156.

1890. *Hemidactylus bowringii* Boulenger, *Fauna Brit. Ind.* : 93.

Material examined : Prakasam Dist. : 1 ex., Dorsi, ca. 26 Km. N. of Poddile. 2. ix. 1986 (Coll. DPS).

Measurements : Snout to vent 38 mm. Tail 23 mm.

Diagnostic character : 9 to 11 upper and 7 to 9 lower labials ; mentals large, subtriangular, rostral broader than high. Back with small more or less uniform granules, no enlarged tubercles. Belly with smooth, rounded, imbricate scales. 10 lamellae under the fourth toe. Male with 15 femoral pores on each side separated by 4 scales mesially. Light brown above with darker spots arranged to form four longitudinal streaks down the back. A dark streak along the side of the head.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Darjeeling (W. Bengal), Sikkim. Also found in Chittagong (Bangladesh) ; Myanmar (Burma) ; Hongkong ; S. China.

Remarks : Smith (loc. cit.) gives the range of this gecko as Godavari valley. The specimens under study are, therefore, the specific records for the first time from Andhra Pradesh.

Status : Indeterminate.

***20. Hemidactylus gracilis Blanford**

1870. *Hemidactylus gracilis* Blanford, *J. Asiat. Soc. Beng.* 39 : 362.

Material examined : Material not available. Description based on the literature.

Description : Body slender ; back with small scales series of oval, keeled tubercles ; upper labials 9, lower labials 7 ; lamellae on the fourth toe. Male with 6 preanal pores. The dorsum is grey with rectangular spots arranged in two longitudinal rows which are separated by a thin streak. The underside is whitish.

Distribution : Murthy (1986) collected 14 ex. from *Kurnool dist.* during the year 1982-83. Smith (1935) gives the range of this species as "S. E. Berar and Raipur, Central Provinces ; Bombay Presidency". Its record from Andhra Pradesh extend the distribution of this species to South India.

Status : Indeterminate.

Genus 12. *Hemiphyllodactylus* Blecker, 1860.21. *Hemiphyllodactylus typus aurantiacus* (Beddome)1870. *Hemidactylus aurantiacus* Beddome, *Madras Month. J. Med. Sci.* 1. : 33.1860. *Hemiphyllodactylus typus* Blecker, *Nat. Tijdschr. Ned. Ind.* 20 : 327.1935. *Hemiphyllodactylus typus aurantiacus* Smith. *Fauna. Brit. Ind.* 2 : 108.

Material examined : Visakhapatnam Dist. : 6 ex. Madhugulu, ca. 40 km. S. of Pederu, 14. x. 1984 ; 1 ex. Araku valley (Alt. 975mt.), 1. x. 1985 (Coll. DPS).

Measurements : Snout to vent 15-35 mm. Tail 18-38 mm.

Diagnostic character : Head shorter and less depressed. Body covered above with numerous, minute granular scales and belly with rows of small, rounded scales ; tail without spines, upper labials 10 to 12, lower labials 9 to 11. Inner digit vestigial. Toes are dilated having ventral lamellae. Chin devoid of shields. Pupil elliptic, erect. 5-7 femoral and 7-9 preanal pores. Brown above with black streaks on the neck and anterior region of the body are flecked with black on the middle of the back and posteriorly ; whitish beneath. Tail orange in colour with black blotches.

Distribution : Andhra Pradesh : (First record) as mentioned the *material*. Elsewhere : Shevaroy, Tamil Nadu ; Anaimalais & Nilgiris, Western Ghats.

Remarks : The species is recorded for the first time from Andhra Pradesh.

Status : A widely distributed SE. Asian species occurs as a ground gecko in the hill forest of South India.

Family 7. : AGAMIDAE

Key to the genera of the family AGAMIDAE

1. Body depressed	...	...	...	...	<i>Psammophilus</i>
Body not depressed	...	...	...	...	2.
2. Dorsal crest present, five toes only	...	...	...	...	<i>Calotes</i>
Dorsal crest absent, four toes only	...	...	...	...	<i>Sitana</i>

Genus 13. *Sitana* Cuvier, 1829.22. *Sitana Ponticeriana* Cuvier
(Fan-Throated lizard)1829. *Sitana ponticeriana* Cuvier, *Regne Anim* 2nd ed. 2 : 43

Material examined : 165 ex. collected from different districts as follows : Adilabad Dist. : 3 ex. Idkal ; Birsai pet. Anantapur Dist. : 2 ex., In and around Anantapur. Cuddapah Dist. : 2 ex., Rajampeta. Guntur Dist. : 29 ex., collected from Pullareddygudam ;

Eddenmotu hills, and Fringimotu, Macherla ; *Khammam Dist.* : 1 ex., in and around Khammam, *Karimnagar Dist.* : 12 ex., collected from Cincela ; Manthani ; Mahadevpur ; Malapalli. *Kurnool Dist.* : 2 ex., Mahani, *Mahbubnagar Dist.* : 13 ex., collected from Macharam ; Mannanur ; Kowakart ; Kargi ; Korangal ; Manik. *Nalgonda Dist.* : 53 ex., collected from Deverkonda ; Nandi Konda Valley ; Vijaypuri South ; Madhavram Vill ; Nagarjuna Sagar ; in and around Nalgonda town. *Nellore Dist.* : 15 ex. collected from Bata and in and around Nellore town. *Nizamabad Dist.* : 5 ex., Melapalli ; in and around Nizamabad town. *Prakasam Dist.* : 18 ex., collected from Darsi ; in and around Poddile. *Srikakulam Dist.* : 4 ex., collected from Razam ; Donubai ; in and around Srikakulam town. *Visakhapatnam Dist.* : 1 ex., in and around Visakhapatnam town. *Vizianagram Dist.* : 5 ex. collected from Parbatipuram ; Bhadrakiri ; in and around Vizianagram town. All collected during the year 1962 to 1988 collected by BN and INM ; AKM ; HSP ; RH ; RR.

Measurements : Snout to vent 15-43 mm. Tail 30-100 mm.

Diagnostic character : A small lizard, easily distinguished by the presence of only four as against five toes in all other agamids. No dorsal crest. Tail very long. Male with a gular pouch. Dark brown dorsally with a vertical series of dark brown, black edged, rhomboidal spots on the back. Majority of the specimens under study have a distinct vertebral line which divides the spots on the back. The ventral side is whitish.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The whole of India and Sri Lanka.

Remarks : It inhabits all biotopes except the heavy rainfall forests and deserts. The preferred habitat is rocky terrain, scrubby jungles and sandy country.

Status : Common.

Genus 14. *Calotes* Rafinesque, 1815.

23. *Calotes versicolor* (Daudin)

(Common Garden Lizard or Blood Sucker) Telegu name : Thota balli

1802. *Agama versicolor* Daudin, *Hist. Nat. Rept.* 3 : 395.

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

Material examined : 154 ex., collected from different districts as follows : *Adilabad Dist.* : 13 ex., collected from Birsepet ; Mamid ; Kotapally ; Kaddam. *Anantapur Dist.* : 2 ex., collected from Goly ; in and around Anantapur town. *Cuddapah Dist.* : 31 ex., collected from Razempeta ; Kangumadugh ; Bolapalli. *East Godavari Dist.* : 2 ex., in and around East Godavari town. *West Godavari Dist.* : 4 ex., collected from Elura ; Koyyalagudem. *Guntur Dist.* : 10 ex., collected from Pullareddygudem ; Macherla town, *Hyderabad Dist.* : 1 ex., Ibrahimpalam. *Karimnagar*

Dist. : 2 ex., collected from Sircella ; Metapally. *Khammam Dist.* : 6 ex., collected from Kottagudem ; in and around Khammam town. *Krishna Dist.* : 2 ex., collected from Mylararam ; Machilipatnam. *Mahbubnagar Dist.* : 9 ex., collected from Macharm ; Mannanur. *Medak Dist.* : 2 ex., Pocharam Wild Life Sanctuary. *Nalgonda Dist.* : 48 ex., collected from Tiger valley ; Deverkonda town ; Vijaypuri South ; Azampur vill. ; Rayaram vill. ; Suryaraopet vill. ; Madhavram vill. ; Nidigul vill. ; Yelleshwaram vill. ; Nandikonda valley and Choutuppal. *Nellore Dist.* : 4 ex., collected from Bata and in and around Atmakur town. *Nizamabad Dist.* : 1 ex., Komarredi ; *Prakasam Dist.* : 4 ex., in and around Podili town. *Srikakulam Dist.* : 3 ex., collected from Dunubali ; Rezam. *Vizianagram Dist.* : 8 ex., collected from Bhadrageiri ; Sehanipalla ; Babbuli. *Warangal Dist.* : 6 ex., collected from Mulug ; Pallimppalli ; Rangaradpalli. All collected during the year 1929 and 1962-88. Collected by AKS ; DPS ; AKM ; BN ; INM ; NM ; HSP.

Measurements : Snout to vent 25-110 mm. Tail 45-250mm.

Diagnostic character : Head is oval and body is laterally compressed. Dorsal scales strongly keeled and more or less larger than ventrals. Two distinct spines on each side of head behind tympanum. Dorsonuchal crest well developed extending from nape to above vent in the male. Tail long and rounded. Juveniles with light dorsolateral stripes which enclose transverse black spots. Adult greyish brown above with dark transverse bars, Belly whitish, with dark streaks. Tail with dark brown cross bars. Head and shoulders of males turn orange or scarlet red. It exhibits considerable colour variation.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : widely distributed throughout the Indian subcontinent and most of SE Asia.

Remarks : An arboreal, diurnal lizard of gardens, hedges, scrubland and forest.

Status : The commonest lizard of India.

Genus 15. *Psammophilus* Fitzinger, 1843.

Key to the species of genus PSAMMOPHILUS

115 to 150 scales round the middle of the body	...	...	...	<i>Dorsalis</i>
80 to 100 scales round the middle of the body	...	...	...	<i>Blanfordianus</i>

24. *Psammophilus dorsalis* (Gray) (Peninsular Rock Agama)

1831. *Agama dorsalis* Gray, in Griffith's *Anim. King.* 9 : 56.

1935. *Psammophilus dorsalis* Smith, *Fauna Brit. Ind.* 2 : 210.

Material Examined : 7 ex., collected from different districts as follows : *Anantapur Dist.* : 1 ex., Kolasamurdamkadri. *East Godavari Dist.* : 3 ex., Muredemully. *Cuddapah Dist.* ;

2 ex., Kutteryela-giri. Nalgonda Dist. : 1 ex. Vijaypuri South. All collected during the year 1929, 1962 and 1986. Collected by AKS ; HSP ; BN ; INM.

Measurements : Snout to vent 65-85 mm. Tail 125-146 mm.

Diagnostic Character : Body depressed and covered, with small, feebly keeled scales ranging in count from 115 to 150. Head rather large, elongate and depressed. A deep fold on either side of the neck which unite across the throat. Tail long and slender. Young and females are olive brown above with a distinct series of white elongated spots on the back. Adult male brownish retaining only the traces of whitish spots. The underside is yellowish.

Distribution : Andhra Pradesh : as mentioned in the material, Elsewhere : Hills of Southern India.

Remarks : It is an agile and wary diurnal lizard, darting into rock crevices of the least sign of danger. It lives upon insects.

Status : Common.

25. *Psammophilus blanfordanus* (Stoliczka)

1871. *Chersasia blanfordana* Stoliczka, *P. Asiat. Soc. Beng.* : 194.

1935. *Psammophilus blanfordanus* Smith, *Fauna Brit. Ind.* 2 : 210.

Material examined : 66 ex., collected from districts as follows : Anantapur Dist. : 2 ex., collected from Kolasomudram ; Kodri. Guntur Dist. : 2 ex., Nagarjuna hill. Karimnagar Dist. : 4 ex., collected from Manthani. Khammam Dist. : 1 ex., in and around Khammam town. Mahbubnagar Dist. : 23 ex., collected from Kargi ; Korangal ; Mannanur ; Marik, in and around Mahbubnagar town. Nalgonda Dist. : 11 ex., collected from Deverkonda. ; Mirialuguda. Nellore Dist. : 5 ex., collected from Kashmur ; Sarbapally ; in and around Atmakur town. Nizamabad Dist. : 2 ex., Armur. Prakasam Dist. : 1 ex., Doranala. Srikakulam Dist. : 7 ex., collected from Antigonda ; Dhonubai ; in and around Srikakulam town. Visakhapatnam Dist. : 5 ex., collected from Anantagiri ; Mudhugulu ; in and around Visakhapatnam town. Vizianagram Dist. : 1 ex., Bhadravari. All collected during the year 1962-88. Collected by AKS ; BN ; DPS ; SSS.

Measurements : Snout to vent 22-85 mm. Tail 55-160 mm.

Diagnostic character : Size small. Dorsal scales slightly larger, keeled and imbricate, arranged in 80 to 100 rows round the midbody ; flank with a few scattered and a little larger series of scales. Young and females olive-brown marbled or with flecks of brown ; a series of large, lozenge-shaped dark brown spots on the back and tail which fade out with age. Adult coloured like *dorsalis*.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Bihar, Orissa, Madhya Pradesh, Eastern Ghats and Kerala.

Status : Common.

Family 8. CHAMAELEONIDAE

Genus 16. *Chamaeleo* Laurenti, 1768.

26. *Chamaeleo zeylanicus* Laurenti (Indian Chameleon)

1768. *Chamaeleo zeylanicus* Laurenti, *Syn. Rept.* : 46.

Material examined : *Chittor Dist.* : 2 ex., collected from Panapakkam and Palamanthur, 15, 30.viii. 1964 (Coll. KR).

Measurements : Stout to vent 160 mm. Tail 200 mm.

Diagnostic character : Body laterally compressed. A conical casque on top of the head. Body covered with granular scales. A prominent canthal and supraorbital crest, the latter continued backwards as a ridge of enlarged tubercles along the side of the head and then curved upwards to meet the parietal crest ; no rostral appendages. Eyes large and except for a small aperture for the pupil, covered by the granular, scaled, lid. Tympanum absent. Tongue very extensile and club-shaped at the tip. The digits of the hand in two opposed sets, two directed away from and three towards the body. The number is reversed in the arrangement in the foot. Tail prehensile. The colour in life is green, varying in shade from very pale green to almost black. Tail often banded.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Distributed throughout the Indian Peninsula south and west of the Ganges. The western distribution extends upto to Peshawar in Pakistan. Also Sri Lanka.

Remarks : It is arboreal and prefers wooded areas and is uncommon in very heavy rainfall regions. The species is recorded for the First time from Andhra Pradesh.

Status : Uncommon.

Family 9, SCINCIDAE

Key to the genera of the family SCINCIDAE

- | | | | | |
|--|-----|-----|-----|---------------|
| 1. Palatine bones meeting on the mid-line of the palate | ... | ... | ... | 2. |
| Palatine bones not meeting on the mid-line of the palate | ... | ... | ... | 4. |
| 2. Pterygoid bones separated from one another, the palatal notch reaching forwards to the level of the centres of the eyes | ... | ... | ... | ... |
| Pterygoid bones not separated from one another, the palatal notch reaching forwards to the | ... | ... | ... | <i>Mabuya</i> |

	level of the centres of the eye	...	...	...	...	...	3,
3.	Supranasals present	...	...	...	...	...	<i>Rtopa</i>
	Supranasals absent	...	...	...	...	...	<i>Lygosoma</i>
4.	Limbs vestigial ; top of head with 4 azygous shields	...	...	...	...	...	<i>Sepsophis</i>
	Limbs absent ; top of head with a large azygous shields	...	...	...	...	...	<i>Barkudia</i>

Genus 17. *Mabuya* Rafinesque, 1815

Key to the species of genus MABUYA

1.	Fronto-nasal broader than long	...	...	...	...	...	2.
	Fronto-nasal not broader than long	...	...	...	...	...	<i>Macularia</i>
2.	One pair of nuchals	...	...	...	...	...	<i>Carinata</i>
	Three pair of nuchals	...	...	...	...	...	<i>Nagarjuni</i>

27. *Mabuya carinata* (Schneider) (Common or Brahminy Skink)

1801. *Scincus carinatus* Schneider, *Hist. Amph.* 2 : 182.

1935. *Mabuya carinata* Smith, *Fauna Brit. Ind.* 2 : 266-268.

Material examined : 27 ex. collected from different districts as follows : *Adilabad Dist.* : 5 ex., collected from Birsapet ; Itkal ; in and around Adilabad town. *Guntur Dist.* : 3 ex., collected from Pollareddygudem ; Eddenmotu hills. *Kurnool Dist.* : 1 ex., Mahanadi temple. *Mehbubnagar Dist.* : 1 ex., Mannanur. *Nalgonda Dist.* : 4 ex., collected from Vijaypuri South ; Pindlipakula vill., *Nellore Dist.* : 1 ex., In and around Atmakur town. *Nizamabad Dist.* : 1 ex., in and around Nizamabad town. *Prakasam Dist.* : 5 ex., collected from Darsi ; Srisailam ; in and around Podile town. *Srikakulam Dist.* : 2 ex., in and around Srikakulam. *Visakhapatnam Dist.* : 1 ex., in and around Visakhapatnam town. *Vizianagram Dist.* ; 1 ex., in and around Vizianagram town. *West Godavari Dist.* : Machilipatnam. *Warangal Dist.* : 1 ex., Mulug. All collected during the year 1962-88. Collected by AKS ; AKM ; BN & INM ; DPS & BDG.

Measurements : Snout to vent 23-100 mm ; Tail 33-135 mm.

Diagnostic character : Head with enlarged scales arranged symmetrically one pair of nuchals. Dorsal and lateral scales subequal, with 3 or 5 distinct keels, the three median keels are strongly marked. 30-34 scales round the middle of the body. Digits moderately long, with smooth or obtusely keeled lamellae, from 14-18 under the fourth toe. Young dark bronze above with a yellow lateral band from snout to base of tail. Adults light bronze above with four to six rows of black dots on the back. Flanks darker. A light band from behind the eye to the base of the tail. Upper lip white. Lower parts white or yellow.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Widely distributed in the Indian Peninsula but rare or absent in NW. India.

Remarks ; A diurnal lizard and almost a commensal of man.

Status : This is the commonest and best known of Indian skinks.

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

1853. *Euprepes macularius* Blyth, J, *Asiat. Soc. Beng.* 22 : 652.

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

1935. *Mabuya macularia* Smith, *Fauna Brit. Ind.* 2 : 264-266.

Material examined : 26 ex. collected from different districts as follows : *Adilabad Dist.* : 5 ex., collected from Itkal. *Karimnagar Dist.* : 1 ex., collected from Manthani. *Khammam Dist.* : 5 ex., collected from Tellandu ; in and around Kuttagudem town. *Kurnool Dist.* : 1 ex., 2 Km west of Mahanadi. *Mahbubnagar Dist.* : 1 ex., Mannur. *Srikakulam Dist.* : 5 ex., collected from Rajam ; Donubai. *Vizianagram Dist.* : 8 ex., collected from Bhadravari ; Bobbili. All collected during the year 1979 to 1987. Collected by AKM ; DPS.

Diagnostic character : Head small snout short, not depressed ; eye small. Fronto-nasal not broader than long ; ear opening oval, slightly smaller than eye. 6 or 7 upper and 7 lower labials. 28 to 30 rows of scales round the body. Dorsal scales with 5 to 7 low keels ; lateral scales smooth, 12 to 17 lamellae under the fourth toe. Tail round. The colour pattern of this species varies. The general body-colour is brown with or without spots.

Mesurements : Snout to vent 22-58 mm, Tail 35-88 mm.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Its range of distribution from Laos and Cambodia to northern Malaya and west through most of Myanmar (Burma), India and Sri Lanka to southern Baluchistan.

Remarks : It is a shy and sinuous lizard and inhabits grassland and edges of cultivated fields. The species is recorded for the first time from Andhra Pradesh.

Status : It is common in the forested areas of the Peninsula.

29. *Mabuya nagarjuni* Sharma (The Nagarjuni lizard)

1969. *Mabuya nagarjuni* Sharma, *Bull. Syst. Zool.*, Calcutta, 1 (2) : 71-75.

Material examined : *Guntur Dist.* : 4 ex., Vijayapuri South, 23-28. vii. 1962 (Coll. BN & INM). *Mahbubnagar Dist.* : 2 ex., Kowakurt ca. 40 km East of Mahbubnagar, 23.1.1988 (Coll. DPS).

Measurements : Total length 120-172 mm. Standard length 21-73 mm.

Diagnostic character : Supranasals not in contact with one another, being separated by fronto nasal ; frontonasal square in shape ; Prefrontal not in contact with one another ; three pairs of nuchals : postnasal present ; Dorsal scales with 5 to 7 keels ; 16-22 lamellae beneath fourth toe.

Distribution : *Andhra Pradesh* : as mentioned in the *material*.

Remarks : Sharma (1969) described it as a new species from the material collected in the years 1962-63 from Nagarjunasagar project area. Some material was collected from Mahbubnagar dist. So, the present range of its distribution extends further south of its known range.

Status : Indeterminate

Genus 18. *Lygosoma* Hardwicke & Gray, 1827

30. *Lygosoma punctata* (Gmelin) (Dotted Garden Skin)

1799. *Scincus punctatus* Gmelin, *Hist. Amph.* : 197.

1835. *Riopa punctata* Smith, *Fauna Brit. Ind.* 2 : 318-319.

1977. *Lygosoma punctata* Green, *J. Nat. Hist.* 11 : 515.

Material examined : 8 ex. collected from different districts as follows : *Guntur Dist.*, : 3 ex., Eidenmotu Hill ; Macherla town. *Nalgonda Dist.* : 2 ex., Nandikonda valley. *Nizamabad Dist.* : 1 ex., Stn. 3 in and around Nizamabad town. *Cuddapah Dist.* : 2 ex., Razampeta. All collected during the year 1929 ; and 1962-1983. Collected by BN & INM ; KR ; DPS ; HSP.

Diagnostic character : A small and slender skink. Snout obtuse ; supranasals entire, in contact with one another behind the rostral : frontal longer than the fronto-parietals and interparietal together ; a pair of nuchals, rarely absent. legs vestigial. Lower eyelid with a transparent disc. Young with two prominent yellowish dorso-lateral streaks. The dark basal spots on the back are united with each other and from 6 longitudinal lines down the back. The pattern, however, breaks up with age. Tail scarlet red in young which also fades with age.

Measurements : Total length, 47-92 mm. Standard length 25-28mm.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Widely distributed in India ; found usually in hilly country at low altitude.

Remarks : It spends most of its life underground. Its habits are little known,

Status : Common.

Genus. 19. *Riopa* Gray, 1839.Key to the species of genus *RIOPA*

Ear opening with 1 or 2 minute lobules on anterior margin	...	...	<i>Albopunctata</i>
Ear opening with 3 or 4 minute lobules on anterior margin	...	...	<i>Ashwamedhi</i>

***31. *Riopa albopunctata* Gray**

1846. *Riopa albopunctata* Gray, *Ann. Mag. Nat. Hist.* 18 : 430.

1935. *Riopa albopunctata* Smith, *Fauna Brit. Ind.* 2 : 316.

Material examined : Material not available. Description based on the literature.

Description : An elongated, snake-like slender skink with feeble five-toed limbs. Lower eyelid scaly, two or three central scales often much larger than the others; nuchals indistinct. Ear opening with 1 or 2 minute lobules on anterior margin. Bodyscales subequal or the dorsals a little larger than the laterals. 12 to 15 lamellae under the fourth toe. Tail thicker at the base. Brown or reddish-brown above, each scale with a distinct dark spot, forming longitudinal series. Yellowish white below.

Distribution : *Andhra Pradesh* : Godavari district. Elsewhere : Bihar, Madhya Pradesh ; Orissa ; Uttar Pradesh, West Bengal ; Assam. Also Nepal.

Status : Indeterminate.

**32. *Riopa ashwamedhi* Sharma
(Ashwamedhi Lizard)**

1969. *Riopa ashwamedhi* Sharma, *Bull. Syst. Zool.* Calcutta, 1 (2) : 71-75.

Material examined : 7 ex., as follows ; *Guntur Dist.* : Pullareddygudem, 30. vii. 1962 ; Eddenmotu and Fringimotu Hills, 1. ix. 1962 ; Macherla town, 15. ix. 1962 (Coll. BN & INM) *Nalgonda Dist.* : Vijaypuri North 8. vii. 1962, Vijayapuri South, 22 and 23. vii. 1962. (Coll. BN & INM).

Diagnostic character : Distance between axilla and groin $1\frac{1}{2}$ times the distance between tip of snout and fore-limb. Lower eyelids scaly, central scales of the lid much enlarged and thin. Frontal scale shorter than fronto-parietals and interparietal together. Scales bordering outer margins of parietals equal. Ear opening with 3 or 4 minute lobules on anterior margin. 28 to 32 scales round the body. 13 to 15 lamellae under fourth toe.

Measurements : Total length, 52-91 mm. ; Standard length, 20-32 mm.

Distribution : *Andhra Pradesh* : as mentioned in the material.

Remarks : Sharma (1969) described as new species from the material collected in the years 1962-63 from Nagarjunasagar Project area.

Status : Indeterminate.

Genus 20. *Sepsophis* Beddome, 1870.

*33. *Sepsophis punctatus* Beddome

1870. *Sepsophis punctatus* Beddome, *Madras Month. J. Med. Sci.* : 172.

1835. *Sepsophis punctatus* Smith, *Fauna Brit. Ind.* 2 : 353-354.

Material examined : No material was available. Description based on the literature.

Description : Snout bluntly pointed, rostral large ; laterally in contact with nostril ; supranasals large, in contact with one another and with the first and second labials ; fronto-nasal broader than long. Limbs vestigial ; top of head with 4 azygous shields. Lower eyelid composed of 3 or 4 opaque scales. 6 upper labials, the 4th below the eye. smooth scales round the middle of the body. Light brown above, with two series of black spots which about the middle of the body are continued as lines ; on the tail there are four lines. Sides of head and body black, whitish below, more or less thickly spotted with dark brown.

Distribution : *Andhra Pradesh* : Godavari valley.

Status : Rare.

Genus 21. *Barkudia* Annandale, 1917.

34. *Barkudia insularis* Annandale

1917. *Barkudia insularis* Annandale, *Rec. Ind. Mus.*, 13 : 20.

Material examined : *Visakhapatnam Dist.* : 1 ex., Waltair, 17. viii, 1954. (Coll. PNG).

Diagnostic character : Body much elongate, snout depressed, obtusely pointed. 21 smooth scales round the middle body, limbs absent ; top of head with 3 large azygous shields. 3 supraoculars, nasal shield comparatively large. 1 large loreal. Lower eyelid having 2 or 3 opaque scales. Upper lid vestigial. 4 upper labials, the 3rd below the eye. Colour light brown above with a central dot on each dorsal scale. Lower parts whitish. Top of head coloured with brown.

Distribution : *Andhra Pradesh* : as mentioned in the material.

Remarks : It lives buried in the sub-soil.

Status : Rare.

Family 10. LACERTIDAE

Key to the genera of the family LACERTIDAE

Lower eyelid distinct from the upper	...	...	...	...	<i>Cabrita</i>
Lower eyelid fused with the upper	...	...	...	...	<i>Ophisops</i>

Genus 22. *Cabrita* Gray, 1838.

Key to the species of genus CABRITA

Anterior labials ridged ; occipital scale present ; 42-50 scales round the middle of body	...	...	...	...	<i>Leschenaulti</i>
Anterior labials not ridged ; occipital scale absent ; 26-30 scales round the middle of body	...	...	...	...	<i>Jerdoni</i>

35. *Cabrita jerdoni* Beddome

(Beddome's cabrita lizard)

1870. *Cabrita jerdoni* Beddome, *Madras Month. J. Med. Sci.* : 34,

Material examined : 29 ex., collected from different districts as follows : *Anantapur Dist.* : 1 ex., Stn. 10. Gooty. *Kurnool Dist.* : 1 ex., Stn. 13. Forest ca. 3 km. W. of Mahanadi temple. *Nalgonda Dist.* : 10 ex., collected from Vijaypuri South. *Nellore Dist.* : 1 ex., in and around Atmakur town. *Nizamabad Dist.* : 1 ex., Stn. 4. Kamarpally 40 km. E. of Armur. *Prakasam Dist.* : 6 ex., collected from Darsi, in and around Podili town. *Vizianagram Dist.* : 9 ex., collected from Tummalabirilu ; Bobbile ; in and around Vizianagram town. All collected during the year 1929 and 1962 to 1986. Collected by AKS ; DPS ; BN & INM ; HSP.

Measurements : Snout to vent 16-40 mm. Tail 25-70 mm.

Diagnostic character : Upper head-shields coarsely striated. Nostril between a large anterior and two small posterior nasals. Anterior labials not ridged ; occipital scale absent ; 26-30 scales round the middle of body. 11-15 femoral pores. Colour brownish or golden above with two lateral stripes, the upper much more conspicuous than the lower and is bordered with a longitudinal series of black spots, lips and throat speckled with black.

Distribution : *Andhra Pradesh* : as mentioned in the material. Elsewhere : Northern and Central India.

Status : Common.

36. *Cabrita leschenaulti* Milne-Edwards
(Leschenaulti's cabitra)

1829. *Cabrita leschenaultii* Milne-Edwards, *Ann. Sci. Nat. Paris*, 16 : 80 & 86.

1935. *Cabrita leschenaulti* Smith, *Fauna Brit. Ind.* 2 : 374-375.

Material examined : Guntur Dist. : 4 ex. Pullareddyguddem village, 28. vii. 1962. (Coll. BN & INM). Nagarjuna Hill, 2. x. 1963. (Coll. BN). Srikakulam Dist. : 2 ex., Tummalabailu, Palkonda Hill. Collected in the year 1933. (Coll. HSP).

Measurements : Total length, 129-150 mm ; Standard length, 41-45 mm.

Diagnostic character : Head covered with symmetrical shields ; dorsal scales keeled and imbricate while the ventrals are smooth and imbricate. Anterior labials ridged ; occipital scale present ; 42-50 scales round the middle of body. Lower eyelid large and distinct from the upper eyelid. Tail cylindrical. 12 to 16 femoral pores on each side. Dorsally colour is brownish yellow and whitish ventrally. The dorsum is having two white lateral bands, the interval between the two bands being black or green.

Distribution : Andhra Pradesh : as mentioned in the material. Elsewhere : The Peninsula of India and Sri Lanka.

Remarks : Murthy (1986) recorded 7 examples first time from Kurnool district.

Status : Common in the open dry jungles of the Peninsula.

Genus 23. *Ophisops* Menetries, 1832

37. *Ophisops jerdoni* Blyth
(Snake-Eyed Lacerta)

1853. *Ophisops jerdoni* Blyth, *J. Asiat. Soc. Beng.* 22 : 653.

1935. *Ophisops jerdoni* Smith, *Fauna Brit. Ind.* 2 : 377-378.

Material examined : 52 ex., collected from different districts as follows : Adilabad Dist. : 1 ex., Mamid. Guntur Dist. : 30 ex., collected from Pullareddygudem village ; Edlenmotu Hill ; Nagarjuna Hill ; Macherla town. Mahbubnagar Dist. : 5 ex., collected from Mannanur ; Marik. Nalgonda Dist. : 16 ex., collected from Tiger valley ; Nandikonda valley ; Deverkonda town ; Vijaypuri South. All collected during the year 1962-1988. Collected by BN & INM ; DPS.

Measurements : Snout to vent 18-28 mm. Tail 25-48 mm.

Diagnostic character : Ear opening oval, a little smaller than eye ; gular fold weakly developed, bordered by scales of irregular size ; scales of crown rugose : occipital well developed, in contact with interparietal ; dorsal scales keeled, imbricate 28 to 35 scales round the middle of the body. Preanal plate is large. 7 to 12 femoral pores on each

side. Colour dark olive above and whitish below. Two lemon coloured stripes on the flanks which enclose dark transverse bars in the middle zone of the back.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The range extends from the Northwest Frontier Provinces in Pakistan and through most of Northern and Central India to Southern India.

Remarks : It is secretive and diurnal in habits. It is an extremely agile creature and very difficult to catch one.

Status : A widely distributed species.

Family 11. VARANIDAE

Genus 24. *Varanus* Merrem, 1820.

38. *Varanus bengalensis* (Daudin)

(Common Indian Monitor) Telegu name : Ooder.

1802. *Tupinambis bengalensis* Daudin, *Hist. Nat. Rept.* 3. : 67,

1835. *Varanus bengalensis* Boulenger, *Cat. Liz. Brit. Mus.* 2 : 310.

Material examined : 4 ex., collected from different districts as follows : *Godavari Dist.* : 1 ex., Godavari, 10. xi. 1971. (Coll. WTB). *Guntur Dist.* 1 ex., Nagarjuna Hill, 2. ix. 1962 (Coll. BN). 2ex., Pullareddygudem village. 7. ix. 1963. (Coll. BN & INM).

Measurements : Total length, 76-135 mm ; Standard length 33-40 mm.

Diagnostic character : Head long and narrow ; snout pointed. Head covered with small scales ; body scales granular ; limbs strong ; neck long and mobile ; tail laterally compressed ; midbody scale rows 132-176 ; no femoral pores. Young and adult differ in colouration. Young dark olive above with numerous light spot 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 molted with black.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Throughout India, Myanmar (Burma), Nepal, Pakistan, Iran and Southern Uzbekistan.

Remarks : A diurnal lizard and more active in the mornings and evenings. Found both in the remote forests as well as on the outskirts of the villages.

Status : Protected under Schedule I of Indian Wild life Act, 1972.

Suborder (iii) SERPENTES

Family 12. TYPHLOPIDAE

Key to the genera of Family TYPHLOPIDAE

Nasal suture terminating at the edge of preocular	...	...	...	<i>Ramphotyphlops</i>
Nasal suture not terminating at the edge of preocular	...	...	...	<i>Typhlops</i>

Genus 25. *Ramphotyphlops* Fitzinger, 1943.39. *Ramphotyphlops braminus* (Daudin)
(Common Blind Snake)1803. *Eryx braminus* Daudin, *Hist. Nat. Rept.* 7 : 279.1890. *Typhlops braminus* Boulenger, *Fauna Brit. India.* : 236,1943. *Ramphotyphlops braminus* Fitzinger, *Bull. Zool. Nomencl.* (3/4) : 204-207.

Material examined : 41 ex., collected from different districts as follows : *Guntur Dist.* : 20 ex., collected from Nagarjuna Hill, 5 and 28. vii. 1962. (Coll. BN). Pullareddygudem village, 27. viii-14. xi. 1963 ; Eddenmotu and Fringimotu Hills, 2-8. ix. 1962 ; Macherla town, 12. ix. 1962, (Coll. BN & INM). *Karimnagar Dist.* : 1 ex., Manthani, 7. ix. 1984. (Coll. DPS & BDG) *Nalgonda Dist.* 20 ex., collected from Nandikond valley, 7-11. viii. 1962, (Coll. BN & INM). Madhavram village, 10. x. 1963 ; Yelleswharam village, 2. xi. 1963. (Coll. BN).

Measurements : Total length, 128-133 mm ; Standard length 125-130 mm.

Diagnostic character : Head bluntly rounded. Eyes indistinct. Rostral large, snout rounded ; 4 upper labials, last two in contact with ocular. Nasal suture terminating at the edge of preocular. Body uniformly cylindrical. Tail very short ending in a small sharp stiff point. Scales lightly polished. 20 scales round the body. Colour brown or blackish brown above lighter below ; snout, anal region and end of tail pale.

Distribution : *Andhra Pradesh* : as mentioned in the material. Elsewhere : Throughout the Oriental region, Africa, Mexico, and New Guinea. Introduced by human agency in several island of the Pacific.

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

Status : The most widespread species of the genus.

Genus 26. *Typhlops* Dumeril and Bibron, 1844.

Key to the species of the genus TYPHLOPS

Snout rounded, nostril lateral, 18 scales round the body	...	...	...	<i>Beddmei</i>
Snout pointed, nostril not lateral, 28-34 scales round the body	...	...	...	<i>Acutus</i>

40. *Typhlops acutus* Dumeril and Bibron.
(Beaked worm or Blind snake)

1844. *Onychocephalus acutus* Dum. & Bibr. *Erp. Gen.* 6 : 333.

1890. *Typhlops auctus* Boulenger, *Fauna Brit. Ind.* : 241.

Material examined : Guntur Dist. : 1 ex., Nagarjuna Hill, 9. ix. 1962. (Coll. BN)

Measurements : Total length 345 mm ; Standard length 342 mm.

Diagnostic character : Snout pointed and hooked, projecting with sharp horizontal edge ; nostril inferior. Rostral very large, covering most of the head above. 23-34 scales round the body. colour brownish above, paler below, each scale with a paler centre.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Peninsular India, south of the Gangetic plain and south of Rajasthan, west to Gujarat and east to Calcutta (West Bengal), but rarer south of latitude 16° N.

Remarks : The largest of all the Oriental species of *Typhlops*.

Status : Indeterminate.

*41. *Typhlops beddomei* Boulenger

1890. *Typhlops beddomei* Boulenger, *Fauna Brit. Ind.* 237,

1943. *Typhlops beddomei* Smith, *Fauna Brit. Ind.* 3 : 54-55,

Material examined : Material not available. Description based on the literature.

Description : Snout rounded, strongly projecting ; nostril lateral. Nasal divided ; posterior nasal very large ; supraocular twice as broad as long. Eye distinct ; tail ending in a point. 18 scales round the body ; 190-200 transverse rows of scales. Colour brown above, pale below ; snout and anal region whitish.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : Hills of Southern India.

Remarks : Smith (1943) mentioned that 4 specimens collected by Col. Beddome from the Kimeddy Hills, Visakhapatnam district.

Status : Indeterminate.

Family 13. UROPELTIDAE

Genus 27. *Uropeltis* Cuvier, 1829.

*52. *Uropeltis ellioti* (Gray)
(Elliot's shield tail)

1858. *Siluboura ellioti* Gray, *Proc. Zool. Soc. Lond.*, 262.

1890. *Siluboura ellioti* Boulenger, *Fauna Brit. Ind.* : 265.

1943. *Uropeltis ellioti* Smith *Fauna Brit. Ind.* 3 : 75-76.

Material examined : Material not available. Description based on the literature.

Description : Snout acutely pointed ; rostral separating the nasals for most of their length. 17 scales round the body. Ventrals 144-176, subcaudals 5-11. Tail obliquely truncate, not perfectly flat. Terminal scute large and depressed, with small tubercles above. Colour dark brown with or without small yellow spots above and larger ones below ; a yellow line on each side of the neck ; tail with a yellow stripe on each side united together with a cross bar in the anal region.

Distribution : *Andhra Pradesh* : (likely to occur). Elsewhere : Hills of Peninsular India. Western Ghats south of the Goa Gap to Tinnevely. Eastern Ghats.

Remarks : Inhabits the moist soft soils of dense forests.

Status : Indeterminate.

Family 14. BOIDAE

Key to the genera of Family BOIDAE

A supraorbital bone ; teeth on the premaxilla ; head covered with large shields ; labials pitted...	<i>Python</i>
No supraorbital bone ; No teeth on the premaxilla ; head covered with small shields ; labials not pitted	 <i>Eryx</i>

Genus 28. *Python*, Daudin, 1803.

*43. *Python molurus molurus* (Linnaeus)

(Indian Python ; Rock Python) Telegu name Pedda poda.

1758. *Coluber molurus* Linnaeus, *Syst. Nat.* 10th ed., : 225,

1890. *Python molurus* Boulenger, *Fauna Brit. Ind.* : 246.

1943. *Python molurus molurus* Smith, *Fauna Brit. Ind.*, 3 : 106-109.

Material examined : Material not available. Description based on literature.

Description : Head flattened with a long snout ; neck distinct. Head covered with large shields ; labials pitted. Nostrils large, directed upwards and situated high on the snout. Rostral and first two labials with sensory pits. Eyes small, pupil vertical, iris flecked with gold. Chin with mental groove. Tail short and prehensile tapering abruptly. Colour greyish, whitish or yellowish in adults and in the young often a very pretty shade of pink. A dark streak from eye to nostril in young may or may not be present in adult. A conspicuous dark, oblique band, from eye to nape. On the back of head and the nape is a large lance shaped mark with a pale centre often fading

anteriorly in adult. The body with a series of large, roughly quadrate patches from neck to tail dorsally.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : The range of the nominate subspecies is confined to Peninsular India to the extreme limit of Sind and the Punjab in the north-west and to Bengal in the north-east. Also Sri Lanka.

Remarks : These big snakes inhabit in dense as well as in open forests with rocky outcrops near to marshes or streams.

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

Genus 29. *Eryx*, Daudin, 1803.

Key to the species of the genus ERYX

Mental groove present ; tail blunt	...	...	...	...	<i>Johni Johni</i>
Mental groove absent ; tail pointed	...	...	...	...	<i>Conicus</i>

44. *Eryx conicus* (Schneider)

(Russell's Sand Boa) Telegu name : Mondhi Ponda.

1801. *Boa conica* Schneider, *Hist. Amphib.* 2 : 268.

1893. *Eryx conicus* Boulenger, *Cat. Sn. Brit. Mus.* 1 : 124.

Material examined : *Nalgonda Dist.* 1 ex., Tiger valley ca. 4 km. SE of project house, Nagarjuna Sagar 5. vii. 1963. (Coll. BN).

Measurements : Total length 380 mm. Standard length 345 mm.

Diagnostic Character : Head slightly distinct from neck. Rostral about twice as broad as high, visible from above, without angular horizontal edge. Mental groove absent. Nostril slit like, between the two nasals and the internasals ; only these scales enlarged, the rest of the head covered with small, obtusely keeled scales, 8 to 10 scales across the forehead between the eyes ; 10 to 15 scales round the eye. Upper labials 11-13 ; lower labials 14-17 ; Body robust, cylindrical tapering abruptly just anterior to vent ; tail very short and bluntly pointed ; dorsal scales keeled. Colour yellowish, brownish or greyish above, with a dorsal series of large, dark brown, black edged spots, usually confluent with one another to form a zigzag stripe ; lower parts yellowish or whitish, the outer scale-rows parts with small brown spots.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Occurs from the base of the Himalayas to the extreme south of India and from Sind and Baluchistan in the west to Bihar and Bengal in the east ; North of Sri Lanka.

Remarks : It is a dull, phlegmatic creature, but of uncertain temper.

Status : Common

45. *Eryx johni johni* (Russell)
(John's Sand Boa)

1801. *Boa johni* Russell, *Ind. Serp.* 2 : 18 & 20. Pls. 16 & 17.

1890. *Eryx Jonni* Boulenger, *Fauna Brit. Ind.* : 248.

1943. *Eryx Johani Johani* Smith, *Fauna Brit. Ind.* 3 : 113-114.

Material examined : *Guntur Dist.* : 1 ex., Eddenmotu Hill, 3. ix. 1962. (Coll. BN & INM). 1 ex., Nagarjuna Hill, 27. viii. 1962. (Coll. BN).

Measurements : Total length 325 mm 770 mm. Standard length 270 mm.

Diagnostic character : Head not distinct from neck ; snout broad, edge-shaped, rostral shield wide and heavy ; nostril slit like between enlarged nasals ; upper labials 9 to 12 ; lower labials 13-18 ; mental groove present ; no chin shields ; eye completely surrounded by 9 to 12 small scales ; body robust, cylindrical, with very little taper ; tail completely blunt. Body scale small, smooth. Head scales a little larger than back scales. Eye small ; pupil vertically elliptical ; iris spotted with ruddy gold. Tail short, stumpy, rounded at its end and in general form very similar to the head. Colour sandy grey or yellowish above, the scales edged with dark brown, or entirely brown above ; uniform or with more or less distinct dark transverse bands ; these bands usually distinct on the tail ; lower parts whitish, spotted with dark brown, or almost entirely brown.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Widely distributed in the plains of the Indian subcontinent. In hills upto about 600 m elevation.

Remarks : That the snake has two heads is belief held all over the country due to its stumpy rounded short tail and in general form very similar to the head.

Status : Recorded as common in some areas.

Family 15. 'COLUBRIDAE

Sub-family (i) COLUBRINAE

Key to the genera of sub-family COLUBRINAE

- | | | | | | |
|---|-----|-----|-----|-----|-----------------------|
| 1. All the teeth solid | ... | ... | ... | ... | 2. |
| All the teeth not solid, last 2 or 3 maxillary teeth grooved | ... | ... | ... | ... | 11. |
| 2. Hypapophyses present throughout the vertebral column | ... | ... | ... | ... | 3. |
| Hypapophyses absent on the posterior dorsal vertebrae | ... | ... | ... | ... | 6. |
| 3. Dentary bone freely movable on the articular ; 30 to 50 maxillary teeth present | ... | ... | ... | ... | <i>Sibynophis</i> |
| Dentary bone not freely movable on the articular ; usually less than 30 maxillary teeth | ... | ... | ... | ... | 4. |
| 4. Scales in 15 to 19 rows | ... | ... | ... | ... | 5. |
| Scales in 25 to 27 rows | ... | ... | ... | ... | <i>Macropisthodon</i> |
| 5. Inter nasal distinctly narrowed anteriorly | ... | ... | ... | ... | <i>Xenochrophis</i> |
| Inter nasal broadly truncate anteriorly | ... | ... | ... | ... | <i>Amphiesma</i> |

6. Posterior maxillary teeth longest	...	...	...	7.
Posterior maxillary teeth not longest	...	...	...	10.
7. Pupil round	...	...	...	...
Pupil vertically elliptic	...	...	...	8.
8. Head elongate, distinct from neck	...	...	...	...
Head short, not distinct from neck	...	...	...	9.
9. Maxillary teeth 13-18	...	...	...	...
Maxillary teeth 20-28	...	...	...	...
10. All the maxillary teeth subequal	...	...	...	...
Some of the maxillary teeth elongated and fang-like	...	...	...	...
11. Pupil round	...	...	...	...
Pupil vertical	...	...	...	...
Pupil horizontal	...	...	...	...

Dryocalamus

Oligodon

Argyrogena

Ptyas

Elaphe

Lycodon

Psammophis

Boiga

Ahaetulla

Genus 30. *Ahaetulla* Link, 1807.46. *Ahaetulla nasutus* (Lacepede)

(Common Green Whip Snake). Telegu name : Pasarika pamboo.

1789. *Coluber nasutus* Lacepede, *Hist. Nat. Serp.* 1 : 100 and 2 : 227.1933. *Ahaetulla nasuta* Stejneger, *Copeia* : 203.

Material examined : Nalgonda Dist. : 1 ex., on way to Hyderabad 20. iii, 1962.
(Coll. BN).

Measurements : Total length 951 mm. Standard length 605 mm.

Diagnostic character : Snout acuminate, terminating in a pointed dermal appendage, variable in length, shorter than the eye ; it has a median groove above, and is formed usually entirely by the rostral. Eyes large, iris powdered with gold, pupil horizontal. No loreal, the internasals and prefrontals in contact with the labials ; 1 large preocular in contact with the frontal ; 2 postoculars. 8 supralabials, 3rd and 4th or one only divided to from 1 or 2 presuboculars, 5th touching the eye. Colour above verdant green. Belly of an equally intense but lighter shade of green, adorned on each side by a well-defined, narrow, white stripe situated on the ventral shields. Chin and throat white with light shy blue and yellow mottlings.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The whole of Peninsular India, Sri Lanka, Myanmar (Burma), Thailand and Cambodia.

Remarks : It is diurnal and usually reclines on the topmost boughs of bushes and escapes notice by its cryptic colouration.

Status : Common.

Genus 31. *Amphiesma* Dumeril & Bibron, 1854.47. *Amphiesma stolata* (Linnaeus)
(Striped keelback)1758. *Coluber stollatus* Linnaeus, *Syst. Nat.* 10th Ed. : 219 and 12th Ed. 1766 : 379.1854. *Amphiesma stolatum* Dumeril & Bibron, *Erp. Gen.* 7 : 724.

Material examined : *Godavari Dist.* : 1 ex., 10. xi. 1871. (Coll. WTB). *Karimnagar Dist.* : 1 ex., Kaliswher, 8. ix. 1984. (Coll. DPS).

Measurements : Snout to vent 130 mm. Tail 45 mm.

Diagnostic character : Internasal broadly truncate anteriorly ; nostrils slightly directed upwards. 8 upper labials, 3rd, 4th and 5th touching the eye. Nasals not touching the 2nd upper labials, rostral touching 6 shields, a single anterior temporal. Scales in 19 rows, strongly keeled, except the outer row, which is smooth. Colour olivaceous-brown. A pair of conspicuous buff stripes covering one whole or two half rows of scales front neck or forebody to tip of tail. Head olivaceous-brown, whitish, yellowish or orange on tips. Belly white with some small scattered black spots.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The whole of India.

Remarks : A remarkably inoffensive and gentle snake, common in fields, grassy and cultivated areas of open country during the rainy season.

Status : A common snake in the plains.

Genus 32. *Xenochrophis* Gunther 1864.48. *Xenochrophis piscator* (Schneider)
(Checkered keelback)1799. *Hydrus Piscator* Schneider, *Hist. Amph.* 1 : 247.1935. *Natrix piscator* Pope, *The reptiles of China. Natural History of Central Asia, Vol. 10* : 120.1935. *Xenochrophis piscator* Malnate, *Proc. Acad. Nat. Sci. Philadelphia*, 112 : 41-71.

Material examined : *Hyderabad Dist.* : 1 ex., Mohemmedabad, 1985 (Coll. AKS). *Guntur Dist.* : 2 ex., Pullareddygudem village, 13. xi. :1963. (Coll. BN & INM). *Nalgonda Dist.* : 3 ex., Madhavram village, 10. x. 1963. (Coll. BN).

Measurements : Total length 555-580 mm ; Standard length 450-470.

Diagnostic character : Head slightly flattened, distinct from neck ; snout bluntly pointed ; rostral wider than high. Internasal distinctly narrowed anteriorly ; nostril between nasals ; single large loreal ; eye moderate size, with round pupil, 9 supralabials, 4th and 5th touching the eye, the 6th excluded by the lowest postocular. Body stout :

scales in 19 rows, more or less distinctly keeled, except the outer one or two rows which are smooth. Colour yellowish or olivaceous above with black spots quincuncially arranged; belly uniform whitish or yellowish; head olive-brown above, with two oblique black streaks, one below, the other behind the eye. The dorsal spots are arranged in five series, namely, a vertebral, 2 dorso-lateral and 2 lateral. Together they form a chess-board pattern.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : It is found throughout the Indian subcontinent from Baluchistan to Assam into upper Myanmar (Burma).

Remarks : Frequent water and is very common in tanks, paddy fields, pools and rivers.

Status : The commonest freshwater snake.

Genus 33. *Ptyas* Fitzinger 1843.

49. *Ptyas mucosus* (Linnaeus)

(Dhaman ; Rat Snake) Telegu name : Jeri Potoo.

1758. *Coluber mucosus* Linnaeus, *Mus. Ad. Frid.* 1 : 37. and *Syst. Nat.* Ed. 10, 1758 : 226.

1864. *Ptyas mucosus* Gunther, *Rept. Brit. India* : 249.

1943. *Ptyas mucosus* Smith, *Fauna Brit. Ind.* 3 : 159-162.

Material examined : *Cuddapah Dist.* : 1 ex., Chitvit, 30. vii. 1929. (Coll. HSP). *Guntur Dist.* : 2 ex., Pullareddygudem village, 14. ix. 1963 and 9. xi. 1963. (Coll. BN & INM). *Nalgonda Dist.* : 1 ex., Tiger valley, 3. x. 1963. (Coll. BN & INM). 1 ex., Nidigul village, 23. x. 1963. Coll. BN.)

Measurements : Total length. 1845-1875 mm. Standard length 1290-1335 mm.

Diagnostic character : Maxillary teeth 20 to 28. Head long, distinctly wider than neck, snout bluntly pointed; rostral higher than wide; nostril between nasals and first upper labial; 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. Eyes large and lustrous. Scale rows at midbody 17 and 14 to 12 two head-lengths before vent. Body robust, compressed, tapering towards both ends. Tail cylindrical about one-fourth total length. Colour olivaceous brown or dull tan to dark olive brown. Scales on the posterior part irregularly margined with black forming a reticulate pattern to form crossbars. Lips and ventral scales margined with black. Belly greyish white.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Throughout the Indian subcontinent, Sri Lanka and Myanmar (Burma). In the west extends to Afghanistan and Turkestan. In the east to south China.

Remarks : Diurnal in habits but in populated areas may not be commonly seen out during the day.

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

Genus 34. *Lycodon* Boie, 1826.

Key to the species of genus LYCODON

1. Loreal extensively in contact with the internasal	...	...	...	2.
2. Ventrals angulate laterally ; 9 supralabials	...	...	...	<i>Aulicus</i>
Ventrals not angulate laterally ; 8 supralabials	...	...	...	<i>Striatus</i>

50. *Lycodon aulicus aulicus* (Linnaeus) (Common Wolf Snake)

1754. *Coluber aulicus* Linnaeus, *Adolph. Frider.* 1 : 29.

1864. *Lycodon aulicus* Gunther, *Report, Brit. Ind.* : 316.

1943. *Lycodon aulicus aulicus* Smith, *Fauna Brit. Ind.* 3 : 265

Material examined : *Anantapur Dist.* : 1 ex., Kalasamudram, 23. ix. 1986. (Coll. AKS). *Vizianagram Dist.* : 1 ex., 3 km. South of Vizianagram town, 27. ix. 1985. (Coll. DPS & BDG).

Measurements : Snout to vent 280-350 mm ; Tail length 45-125 mm.

Diagnostic character : Snout more or less spatulate and projecting beyond the lower jaw ; anterior and posterior nasals subequal ; loreal in contact with the internasal not touching the eye ; 1 preocular. 17 scales at midbody ; angulate laterally 9 supralabials. Head depressed and pear-shaped. Neck slightly constricted. Two races are recognised. In race *Lycodon aulicus aulicus* the colour is brown or greyish-brown above, with from 12-19 white cross-bars which expand laterally or bifurcate, enclosing triangular patches. A triangular whitish blotch on each side of the occiput. Upper lip white or spotted with brown. Specimens without any markings and uniform brown in colour occur.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The whole of Indian subcontinent, Sri Lanka, Maldives-Islands, Myanmar (Burma) to Indochina, South China, Malaya, Indonesia, Phillipines.

Remarks : The snake most often seen near and in human habitations.

Status : One of the commonest snakes of the Indian plains.

* 51. *Lycodon striatus* (Shaw) (Shaw's Wolf Snake)

1802. *Coluber Striatus* Shaw, *Gen. Zool.* 3 : 527.

1870. *Lycodon striatus* Stoliczka, *J. Asiat. Soc. Beng.* 29 : 200.

Material examined : Material not available. Description based on the literature.

Description : Snout projecting beyond the lower jaw ; anterior nasal usually larger than the posterior ; loreal in contact with the internasal, not touching the eye ; a preocular. 8 supralabials. 17 scales round mid-body not angulate laterally, colour dark brown or black above with 11 to 18 white or yellowish crossbars on body which divide on the sides to enclose triangular spots of the body colour, Belly and upper lip white.

Distribution : *Andhra Pradesh* : (Likely to occur) Elsewhere : Peninsular India, Westwards to Iran and to the east upto Chota Nagpur. Also Sri Lanka.

Remarks : A timid snake which hides its head beneath its coil if disturbed.

Status : Indeterminate.

***52. *Lycodon travancoricus* (Beddome)**
(Travancore Wolf Snake)

1870. *Coreaspis travancoricus* Beddome, *Madras Month. J. Med. Sci.* 2 : 169.

1890. *Lycodon travancoricus* Boulenger, *Fauna Brit. Ind.* 293.

1943. *Lycodon travancoricus* Smith, *Fauna. Brit. Ind.* 3 : 259.

Material examined : Material not available. Description based on the literature.

Description : Snout broad ; anterior and posterior nasals subequal : loreal not or but slightly in contact with the internasal ; a preocular ; 9 supralabials. Scales in 17 rows, smooth. The colour is purplish brown or blackish above with pale yellow crossbars.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere Western Ghats, South Arcot (Tamil Nadu), Visakhapatnam and Jubbalpore (Madhya Pradesh).

Status : Indeterminate.

Genus 35. *Elaphe* Fitzinger, 1833.

53. *Elaphe helena* (Daudin)
(Trinket Snake)

1803. *Coluber helena* Daudin *Hist. Nat. Rept.* 6 : 277.

1943. *Elaphe helena* Smith, *Fauna Brit. Ind.* 3 : 149-150

Material examined : *Guntur Dist.* : 1 ex., Eddenmotu Hill, 3. ix. 1962. (Coll. BN & INM).

Measurements : Total length, 835 mm ; Standard length 640 mm ;

Diagnostic character : Snout twice as long as the eye ; prefrontals twice as long as the internasals ; loreal little longer than high. 9 supralabials. Scales in 25 rows

at midbody, more or less distinctly keeled on the posterior part of the body and tail. Colour brown above of varying degrees of intensity. Yellowish or whitish on lips. An oblique streak from eye to lip. Forebody for a variable length beautifully ornamented with ocellated crossbars of a pattern peculiar to this snake. There are two black stripes on the nape and another black stripe on the hindpart of the body. The belly is white.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Peninsular India and from Sind in the west to Assam in the east Himalays, Sri Lanka.

Remarks : Usually found in or at the periphery of forests. Truculent when annoyed.

Status : Common between 500 m. and 2000 m. Rarer in the plains.

Genus 36. *Oligodon* Boie, 1827.

Key to the species of genus OLIGODON

1. 6-7 maxillary teeth present	...	...	...	...	2.
8-11 maxillary teeth present	...	...	...	...	<i>Arnensis</i>
2. Hemipenis 2/5 forked ; loreal present	...	...	...	...	<i>Taeniolatus</i>
Hemipenis not forked ; loreal absent	...	...	...	...	<i>Travancoricus</i>

54. *Oligodon travancoricus* Beddome (Kukri Snake)

1877. *Oligodon travancoricum* Beddome, *Proc. Zool. Soc. London* : 685.

1890. *Oligodon travancoricus* Boulenger, *Fauna Brit. Ind.* 318 and *Cat. Sn. Brit. Mus.* 1 : 236.

1943. *Oligodon travancoricus* Smith, *Fauna Brit. Ind.* 3 : 233.

Material examined : *Guntur Dist.* : 2 ex., Pullareddyguden village, 28. vii. 1962. (Coll. BN).

Diagnostic character : 7 supralabials, 3rd and 4th touching the eye : loreal absent ; posterior nasal elongate. Scales in 17 rows. Colour greyish-brown above with large irregular oval blackish spots edged with lighter are narrower and from more or less distinct transverse bars. Head with characteristic markings, the outlines of which are more or less crenate.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Western Ghats, South of the Palghat Gap.

Status : Indeterminate.

55. *Oligodon taeniolatus* (Jerdon)
(Variegated Kukri Snake)

1853. *Coronella taeniolata* Jerdon, *J. Asiat. Soc. Bengal.*, 22 : 528.
1921. *Oligodon taeniolatus* Wall, *Sn. Ceylon.* : 239.
1943. *Oligodon taeniolatus* Smith, *Fauna Brit. Ind.* 3 : 223-225.

Material examined : Guntur Dist. : 4 ex., Pullareddygudem village, 28. vii. 1962. and 6-11. xi. 1963. (Coll. BN & INM). Prakasam Dist. : 1 ex., Podile, 2. xi. 1986. (Coll. DPS).

Measurements : Total length 357-525 mm ; Standard length 300-450 mm.

Diagnostic character : Head barely distinct from neck ; snout blunt ; rostral large, higher than wide and extending posteriorly, almost separating internasals ; nostril between nasals ; loreal present, one preocular ; two occasionally three postoculars ; 7 upper labials, 3rd and 4th touching eye ; 7 or 8 lower labials. Body slender, or almost uniform diameter from neck to vent. 15 rows of dorsal scales at midbody. Coloration shows considerable differences in colour and markings. The back is buff or brown, with either large black spots or cross-bars. There are two black streaks on the nape. The lower surface is whitish, sometimes with lateral spots.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The range extends from Bihar to southern Baluchistan and south through Peninsular India to Sri Lanka.

Remarks : Largely diurnal and found of basking in the sun on rock or grass.

Status : A very common snake in the evergreen forest at higher elevations of the Western Ghats.

***56. *Oligodon arnensis* (Shaw)**
(Common Kukri Snake) Telegu name : Sanka.

1802. *Coluber arnensis* Shaw, *Gen. Zool.* 3 : 526.
1921. *Oligodon arnensis* Wall, *Sn. Ceylon.* : 231.
1943. *Oligodon arnensis* Smith, *Fauna Brit. Ind.* 3 : 225-227,

Material examined : Material not available. Description based on the literature.

Description : 8-11 maxillary teeth. 7 supralabials, 3rd and 4th touching eye ; loreal frequently united with the prefrontal ; scales in 17 rows. Body cylindrical, short, smooth and even sized. Head depressed, snout short and blunt. Tail short. Ground colour is reddish or greyish-brown with a series of black bands. The belly is plain white, sometimes with faint spots.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : It is found in Bangladesh

and Central Nepal west to the Indus valley and south through Peninsular India and Sri Lanka.

Remarks : An active little snake, mainly diurnal and seen most often during the rainy season.

Status : Not uncommon.

Genus 37. *Macropisthodon* Boulenger, 1893.

**57. *Macropisthodon plumbicolor* (Cantor)
(Green keelback)**

1839. *Tropidonotus plumbicolor* Cantor, *Proc. zool. Soc. London*, : 54.

1893. *Macropisthodon plumbicolor* Boulenger, *Cat, Sn. Brit. Mus.* 1 : 267.

Material examined : East Godavari Dist. : 1 ex., Upper Godavari, 1872. Coll. Dr. Goffeny.

Diagnostic character : Head rather broad and short ; nostril between two nasals ; internasal as long, or nearly as long as the prefrontals ; loreal united with the lower preocular, 2 pre and 3 or 4 postoculars. 7 upper labials, 3rd and 4th touching the eye. Scales round the body 25 and strongly keeled. Eyes moderately large, iris greenish gold. Tail short. The colour is bright green above and white below, with an indistinct pattern of cross-bars on the back. There is a V-shaped mark on the head. The ventral surface is greyish white.

Distribution : Andhra Pradesh : (First record) as mentioned in the *material*.
Elsewhere : Occurs throughout India except the Ganges valley and extreme north-west Sri Lanka.

Remarks : A hill species found altitudes between 600-1800 m.

Status : It is somewhat rare found only in the forests and hills.

Genus 38. *Sibynophis* Fitzinger, 1843.

**58. *Sibynophis sagittarius* (Cantor)
(Cantors black headed snake)**

1839. *Calamaria sagittaria* Cantor, *Proc. zool. Soc. London* : 49.

1943. *Sibynophis sagittarius* Smith, *Fauna Brit. Ind.* 3 : 280.

Material examined : East Godavari Dist. : 1 ex., Godavari, 1877. Coll. Goffeny.

Diagnostic character : Snout broad and more rounded, 7 supralabials. 3rd and 4th touching the eye ; parietal touches both postoculars. Colour light brown above, with a vertebral series of black dots ; greyish brown on the sides, the colour occupying four

scale rows, and bordered above with black ; head and nape dark brown or black, with a large elongate oval patch of yellow on each side at the back of the head. Lower parts yellow, with a black dot on the outer edge of each ventral scale.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. (First record) from Andhra Pradesh. Elsewhere : North-eastern India from the Central and Northern India to Bangladesh.

Status : Indeterminate.

Genus 39. *Dryocalamus*, Gunthor, 1858.

*59. *Dryocalamus gracilis* (Gunther) (Bridal Snake)

1864. *Odontomus gracilis* Gunther, *Rept. Brit. Ind.* : 234.

9893. *Dryocalamus graciis* Boulenger, *Cat. Sn. Brit. Mus.* 1 : 371.

1943. *Dryocalamus gracilis* Smith, *Fauna Brit. Ind.* 3 : 275.

Material examined : Material not available. Description based on the literature.

Description : Nasal shield more or less divided into an anterior and posterior part ; loreal in contact with the eye, with a small preocular above it, rarely absent ; 2 or 3 postoculars, 7 upper labials, 3rd and 4th touching the eye. Scales in 15 rows.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : Peninsular India (Anaimalais, Cuddapah Hills), Sri Lanka.

Status : A rare species.

Genus 40. *Psammophis* Fitzinger, 1826.

*60. *Psammophis condanarus* (Merrem) (Indian Sandsnake)

1920. *Coluber condanarus* Merrem, *Tent. Syst. Amph.* : 107.

1890. *Psammophis condanarus* Boulenger, *Fauna Brit. Ind.* : 365 and *Cat. Sn. Brit. Mus.* 3 : 165.

1943. *Psammophis condanarus* Smith, *Fauna Brit. Ind.* 3 : 364-365.

Material examined ; Material not available. Description based on the literature.

Description : Upper head shields not protuberant ; nasal incompletely divided a suture only from the nostril to the labial. Preocular not in contact with frontal, 2 postoculars ; one anterior and two or three posterior temporals, 8 or 9 upper labials, 4th & 5th touching eyes ; 11 lower labials. 17 rows of scales behind head, at midbody, and 13 rows ahead of the tail. Head is oval shaped pupil round. Tail long. Dorsum pale olive to

brassy streaked alternately with distinct nut brown and greenish olive or buff stripes. Belly sulphur or primrose yellow.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : Arid and semi arid country in Pakistan and Peninsular India upto Bengal in the east and Andhra Pradesh in the south. Also in light forested country in western Himalayas ; Myanmar (Burma).

Remarks : A diurnal snake of grassland and open jungle.

Status : Not uncommon in some parts of its total distribution.

Genus 41. *Argorogena* Werner, 1924.

61. *Argyrogena bholanathi* (Sharma)

1976. *Coluber bholanathi* Sharma, *Comp. Physiol. Eco.* 1 (3) : 105-107.

Material examined : *Guntur Dist.* : 3x, : Nagarjuna Hill, 27. vii. 1962 and 4 and 9. ix. 1962. (Coll. BN).

Measurements : Total length 992-1190 mm. ; Tail 168-307 mm. ;

Diagnostic character : Head moderately large and distinct from the neck. Body long, slender and smooth. Pupil large and round. Rostral shield two times wider than high, not separating the internasal which are slightly smaller than prefrontals. 9 supralabials, 5th & 6th touching the eye, 11 infralabials. Postoculars 2 or 3. 1 preocular. Dorsal scales smooth, 19 : 19 : 15 rows. Ventral scales 202-212, Prominently angulated, laterally subcaudal scales 109-121 divided. Anal 2. Anterior dorsal region bears an alternate arrangement of ash coloured oval spots (vertebral) and narrow white (black spotted) bands. Posteriorly the spots fade out and form a dark brown colouration. Snout dark brown, posterior head region spotted white and black, a black bar on the complete interorbital region, two stripes across the whole of both the parietals, an oblique black stripe from base of the orbit to mouth across sixth and seventh supralabials. All the labials, chin shields and laterals scale of the head bear black spots. The lower parts, yellowish-white ; outer margins of the ventral scales spotted with black.

Distribution : *Andhra Pradesh* : as mentioned in the *material*.

Remarks : Sharma (1976) described it as a new species.

Status : Indeterminate.

Genus 42. *Boiga* Fitzinger, 1826.

62. *Boiga trigonata* (Schneider) (Indian Gamma or Cat Snake)

1802. *Coluber trigonatus* Schneider, in *Bechst. transl. Lacep.* 4 : 256.

1916. *Boiga trigonatum* Nikolsky, *Fauna de la Russic* : 187.

1943. *Boiga trigonuta*, Smith. *Fauna Brit. Ind.* 3 : 349-350.

Material examined : *Guntur Dist.* : 1 ex., Pullareddygudem village, 13. xi. 1963. (Coll. BN & INM). *Nalgonda Dist.* : 1 ex., Madhavram village, 10. x. 1963. (Coll. BN).

Measurements : Total length 555-580 mm. Standard length 450-470 mm.

Diagnostic character : Head triangular, much wider than thin neck, rather flat ; rostral strongly concave below, slightly wider than high ; nostril large between nasals ; loreal present ; eye large, with vertically elliptical pupil ; 1 preocular and 2 postoculars ; 8 upper labials, 3rd, 4th and 5th touching eye. 10-11 lower labials. Scales in 21 : 21 : 15 rows. Ground colour yellowish brown, sandy or fawn, uniform or mottled with darker shades. Dorsally a series of dark Y-shaped mark which meet at the centre and resemble arrowheads. The markings fade before or at the vent. Belly white. Head with a pair of lung-shaded brown patches often bordered with black. A narrow dark streak from behind eye to gape.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : The whole of the Peninsular India to Baluchistan (Pakistan) in west to Assam in the east ; Sri Lanka.

Remarks : Essentially arboreal, frequenting bushes, scrub or trees, usually close to ground.

Status : A fairly common snake in India ascending upto about 1500 m.

Subfamily (ii) HOMALOPSINAE

Key to the genera of subfamily HOMALOPSINAE

1. Nasal in contact with one another	...	...	...	2.
Nasal seperated by the internasal	...	...	...	<i>Gerardia</i>
2. Scales smooth	...	...	...	<i>Enhydris</i>
Scales keeled	...	...	...	<i>Cerberus</i>

Genus 43. *Gerardia* Gray, 1849.

63. *Gerardia prevostiana* Eydoux & Gervais (Glossy marsh Snake)

1832-1837. *Coluber Homalopsis prevostianus* Eydoux & Gervais, in *Guer. Mag. Zool. Cl.* 3 : 5

1890. *Gerardia prevostiana* Boulenger, *Fauna Brit. Ind.* : 379.

1943. *Gerardia Prevostiana* Smilh, *Fauna Brit. Ind.*, 3 : 394-396.

Material examined : *East Godavari Dist.* : 1 ex., east of Eatimoga village, 20. ix. 1964. (Coll. NVSR).

Diagnostic character : Nasals separated by the internasal ; Frontal much broader than the supraocular ; 1 pre and 2 postoculars ; loreal not in contact with the internasal. 7 supralabials, 4th touching the eye. Dorsal scale subequal. Tail short. Colour dark grey above and whitish below.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. **Elsewhere :** Coasts and tidal rivers of India. Sri Lanka ; Myanmar (Burma) ; west coast of Malay peninsula.

Remarks : It is a sluggish creature on land and is not prone to bite easily.

Status : Indeterminate.

Genus 44. *Enhydris* Sonnini & Latreillie, 1802.

*64. *Enhydris enhydris* (Schneider) (Smooth water snake)

1799. *Hydrus enhydris* Schneider, *Hist. Amph.* 1 : 245.

1935. *Enhydris enhydris* Pope, *Rept. China.* : 314.

Material examined : Material not available. Description based on the literature.

Description : Snout broadly rounded : internasal single, twice as broad as long, in contact with the loreal ; frontal broader than the supraocular. 8 supralabials. 4th touching the eye. 21 or 23 scales at midbody. Scales smooth. Eyes small, placed high on the face. Pupil vertically elliptic. The body colour is dark-olive or olive-brown above and lemon yellow below. Ventrals demarcated laterally by a dark line. A continuous or interrupted dark line in the middle of the belly may be present or absent.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : North-east India, from the coastal Andhra Pradesh to east Uttar Pradesh, and eastwards to S. China, Indochina, Malaya.

Remarks : An aquatic species frequenting fresh and brackish water.

Status : An uncommon snake.

Genus 45. *Cerberus* Cuvier, 1829.

65. *Cerberus rhynchops* (Schneider) (Dog-Faced Water Snake)

1799. *Hydrus rhynchops* Schneider, *Hist. Amph.* 1 : 246.

1864. *Cerberus rhynchops* Gunther, *Rept. Brit. Ind.* 279.

1943. *Cerberus rhynchops* Smith, *Fauna Brit. Ind.* 3 : 279.

Material examined : *East Godavari Dist. :* 1 ex., Nizampatnam, 26. vii. 1963, (Coll. AD). *Nalgonda Dist. :* 1 ex., Madhavram, 11. x. 1963. (Coll. KR).

Diagnostic character : Snout broadly rounded; nostril connected by suture to the first labial; internasal divided by a longitudinal suture; frontal broken into small scales, the anterior half distinct; loreal large; 1 pre, 1 post and 2 suboculars. 9-10 supralabials, 5th and 6th below the eye, the 2 or 3 horizontally divided. Scales striated and strongly keeled, in 23-25 rows. Head pear-shaped. Eyes small, pupil vertical. Tail short rather compressed at base, rapidly tapering to a point. The back is grey with numerous black crossbars which are obscure in the forepart but prominent on the hinder side. The belly is pale yellowish with conspicuous black blotches or cross-bars.

Distribution : *Andhra Pradesh :* as mentioned in the *material*. Elsewhere : An estuarine species. Coasts of India and tidal rivers from Sind to Chittagong (Bangladesh) and eastwards.

Status : A fairly common inhabitant of brackish waters of tidal river, creeks and estuaries and also the sea littoral.

Family 16. HYDROPHIIDAE

Key to the genera of family HYDROPHIIDAE

- | | | | |
|---|-----|-----|-------------------------|
| 1. Ventrals distinct throughout and normally entire | ... | ... | 2. |
| Ventrals not distinct throughout, either divided by a median longitudinal fissure, or vestigial | ... | ... | 3. |
| 2. Mental shield normal; 1-18 maxillary teeth | ... | ... | <i>Hydrophis</i> |
| Mental shield elongate; 3-5 maxillary teeth | ... | ... | <i>Enhydrina</i> |
| 3. Body long and very slender anteriorly; ventrals divided by a longitudinal fissure | ... | ... | <i>Microcephalophis</i> |
| Body not long and slender anteriorly; ventrals if present entire | ... | ... | <i>Lapemis</i> |

Genus 46. *Hydrophis* Latreille, 1802.

Key to the species of genus HYDROPHIS

- | | | | | | | |
|--|-----|-----|-----|-----|-----|-------------------|
| Scales on the thickest part of the body with rounded or bluntly pointed tips; normally one anterior temporal | ... | ... | ... | ... | ... | <i>Spiralis</i> |
| Scales on the thickest part of the body subquadrangular or hexagonal in shape; two anterior temporals | ... | ... | ... | ... | ... | <i>Mamillaris</i> |

66. *Hydrophis spiralis* (Shaw)

(Yellow Sea Snake)

1802. *Hydrus spirallis* Shaw, *Gen. zool.* 3 : 564.

1926, *Hydrophis spiralis* Smith, *Monogr. Sea. Sn.* : 48.

Material examined : *East Godavari Dist.* : 1 ex., Kakinada, 17. vii. 1963. (Coll. Dr. AD). *Visakhapatnam Dist.* : 1 ex.. Bimalipatnam, 22. ii. 1947.

Diagnostic character : Head moderate, body elongate, cylindrical, compressed in the posterior three-fifths. Eye small ; frontal as long as its distance from the rostral or the end of the snout ; 1 pre and 1, rarely 2, postoculars. A single large anterior temporal 6-8 supralabials, the 2nd in contact with the prefrontal, the 3rd, 4th and 5th, or only two of them, touching the eye. Scales on the thickest part of the body with rounded or bluntly pointed tips, scales imbricate, smooth or weakly keeled posteriorly ; scale rows at midbody 35-39, decrease anteriorly of seven rows and posteriorly three or four. Head in young black with more or less distinct yellow horseshoe mark on the crown. The black colour fades with age and the head may become light olivaceous above, yellow ventrally with 34 to 70 variable shaped black bands or bars.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Persian Gulf to Malay Archipelago.

Remarks : A strong and active swimmer going for up tidal rivers.

Status : Uncommon on the west coast of the Indian Peninsula and common on the east coast.

***67. *Hydrophis mamillaris* (Daudin)
(Bombay Sea Snake)**

1803. *Anguis mamillaris* Daudin, *Hist. Nat. Rept.* 7 : 340.

1926. *Hydrophis mamillaris* Smith, *Monogr. Sea. Sn.* : 88.

Material examined : Material not available. Description based on the literature.

Description : Head small, not distinct from neck which is slender and much elongated in adult ; rostral wider than high. One preocular and one or two postoculars ; two anterior and three posterior temporals ; 7-8 upper labials, the 3rd and 4th or 4th and 5th touching the eye ; 9 or 10 lower labials. Body laterally compressed posteriorly ; Scales on the thickest part of the body subquadrangular or hexagonal in shape. Scale rows at midbody 39-41, decreasing anteriorly to 28 or 30 and posteriorly to 35-39 ; ventrals small. 4 to 6 preanals. Colour yellowish or greyish with from 44 to 55 broad black bands on the body. Head entirely black or with a yellow streak on the temporal region.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : From coastal Las Bela (Pakistan) around the coast of India to Visakhapatnam.

Status : Rare in east coast of India.

Genus 47 **Lapemis** Gray, 1835.68. **Lapemis curtus** (Shaw)
(Shaw's Sea Snake)1902. *Hydrus curtus* Shaw, *Gen. zool.* 3 : 562.1926. *Lapemis curtus* Smith, *Monogr. Sea. Sn.* : 112.*Material examined* : 1 ex., Visakhapatnam.

Diagnostic character : Head large, body short, the diameter of the neck is half or more than half of the greatest diameter of the body ; eye moderate ; frontal as long as or shorter than its distance from the rostral. 1 pre and 1-2 postoculars. 7 supralabials, the 2nd normally in contact with the prefrontal. Olive-green turning to pale yellow above, with ill-defined, dark greenish brown cross-bars 15 to 55 in number, the first one on the nape.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Persian Gulf to Malay Archipelago. Common along the Coromandal coasts.

Status : Common.

Genus 48. **Enhydrina** Gray, 1849.69. **Enhydrina schistosa** (Daudin)
(Beaked Sea Snake)1803. *Hydrophis schistosus* Daudin, *Hist. Nat. Rept.* 7 : 386.1926. *Enhydrina schistosus* Smith *Monogr. Sea. Sn.* 36.

Material examined : *East Godavari Dist.* : 2 ex., Kakinada bay. 15. vii. 1963. (Coll. AD).

Diagnostic character : Head moderate size and slightly distinct from neck ; rostral wider than high, with prominent, median downward prolongation giving beaklike profile ; mental shield elongate, 1 preocular and 1 or 2 postoculars. 4 well differentiated anterior upper labials, last two usually in contact with eye, followed by 3 to 5 small, wedge-shaped shields ; 9 lower labials. All head shields densely studded with fine tubercles. Body moderately stout, laterally compressed. Eye with dull green iris. Colouration variable. Young bluish or bluish grey with well marked black rings often broadened vertebally. With age bands disappear or may remain as bands dorsally.

Distribution : *Andhra Pradesh* : (First record) as mentioned in the *material*. Elsewhere : Coastal waters from Persian Gulf to New Guinea. Abundant on both coasts of Indian Peninsula,

Status : The commonest sea snakes very numerous all along the coast and ascending considerable distance on the tidal rivers.

Genus 49. *Microcephalophis* Lesson, 1834.

70. *Microcephalophis gracilis* (Shaw)
(Common small-headed sea snake)

1802. *Hydrus gracilis* Shaw, *Gen. zool.* 3 : 560.

1926. *Microcephalophis gracilis* Smith, *Monogr. Sea. Sn.* : 121.

Material examined : East Godavari Dist. : 1 ex., Kakinada, 27. ii. 1948. (Coll. GR).

Diagnostic character : Head very small, elongate, body long and very slender anteriorly, much compressed posteriorly. 1 preocular, 1 postocular and 1 temporal. 5 upper labials, 3rd and 4th in contact with eye, 2nd in contact with prefrontal ; 6 lower labials ; anterior and posterior chin shields short, subequal ; neck slender, cylindrical. Anterior part of body, including all of head, chin and throat, black to dark olive, with white or pale yellow spots on side of neck or with light cross bands ; posterior part pale yellow to greenish, white grey cross bands. With age the markings lose definition and the adult is usually greyish above, paler below ; with the bars or bands indistinctly marked, particularly on the thickest part of the body.

Distribution : Andhra Pradesh : (First record) as mentioned in the *material*. Elsewhere : From Persian Gulf around the coasts of India, north along the China coasts to Hongkong, and south to perhaps northern Australia.

Status : Indeterminate.

Family 17. ELAPIDAE

key to the genera of family ELAPIDAE

1. Maxillary bone extending forwards beyond the palatine	...	...	2.
Maxillary bone not extending forwards beyond the palatine	...	...	<i>Bungarus</i>
2. Vertebral series of scales enlarged	...	...	...
Vertebral series of scales not enlarged	...	...	...
3. Scales in 15-25 rows on the body ; scales oblique	...	...	...
Scales in 13-15 rows on the body ; scales not oblique	...	...	...
			<i>Naja</i>
			<i>Calliophis</i>

Genus 50. *Bungarus* Daudin, 1803.

Key to the species of genus BUNGARUS

Tail ending obtusely ; dorsal vertebrac forming a ridge down the back ; back marked with black and yellow annuli	...	...	...	...	<i>Fasciatus</i>
--	-----	-----	-----	-----	------------------

Tail ending in a point ; dorsal vertebrac not forming a ridge down the back ; back with narrow white cross-bars arranged more or less distinctly in pairs *Caeruleus*

71. *Bungarus caeruleus* (Schneider)
(Common Indian Krait)

1801. *Pseudoboa caerulea* Schneider, *Hist. Amph.* 2 : 284.

1890. *Bungarus caeruleus* Boulenger, *Fauna Brit. Ind.* : 388.

Material examined : Nalgonda Dist. : 2 ex., Nandikonda valley, 7. x. 1963 and 7. xi. 1963 (Coll. BN & INM).

Measurements : Total length 725-890 mm. Standard length 630-760 mm.

Diagnostic character : Head flat, distinct from neck ; snout blunt ; rostral slightly wider than high ; nostril between nasals ; eye small with round pupil, loreal, absent ; 1 preocular and 2 postoculars ; 1 anterior and 2 posterior temporals ; 7 upper labials, 3rd and 4th touching the eye ; 8 lower labials. Body cylindrical. Tail ending in a point. Scale rows on midbody 15. The vertebral scales are enlarged and hexagonal. Colour is lustrous black or bluish black above with paired narrow white crossbars arranged more or less distinctly in pairs.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : It occurs from western Bengal through Peninsular India and Sri Lanka.

Remarks : It inhabits fields, low scrub jungles and is common in the vicinity of human habitation. It is nocturnal in habits.

Status : Common.

***72. *Bungarus fasciatus* (Schneider)**
(Banded Krait) Telegu name : Bungarum pambah

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

1803. *Bungarus fasciatus* Daudin, *Hist. Nat. Rept.* 5 : 263.

Material examined : Material not available. Description based on the literature.

Description : Head broad and depressed ; snout short, eye black, pupil very faintly outlined in yellow. Neck distinct. Body smooth and glossy. A prominent ridge down the back and tail formed by the spinous processes of the vertebrac ; tail ending bluntly, usually more or less swollen at the tip. Alternately banded with black or purplish-black, and yellow or buff bands, completely encircling the body. Nape has a large, elongate, black patch, rounded behind. Top of the head with a yellow 'V' with its arms passing backwards over the temples to the throat.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : North-east Peninsular

India, the southern most record being Hyderabad. Also found in Assam and Bangladesh. Occurs throughout the Indochinese subregion.

Remarks : Largely nocturnal. Frequents moist places and the vicinity of water.

Status : Common in some parts of its distributional range.

Genus 51. *Naja* Laurenti, 1768.

73. *Naja naja* (Linnaeus)
(Indian Cobra)

1758. *Coluber naja* Linnaeus, *Syst. Nat.* 10th ed. : 221.

1924. *Naja naja* Prater, *J. Bombay nat. Hist. Soc.* 30 : 175,

Material examined : Guntur Dist. : 1 ex., Pullareddygudem village, 1. x. 1963, (Coll. BN & INM).

Measurements : Total length 1190 mm. Standard length 975 mm.

Diagnostic character : Head depressed with short, rounded snout. Nostrils large pupil round. Head shields glossy, body with a more or less distinct groove down the spine. 1 preoculars and 3 postoculars. 7 upper labials, 3rd largest, touching both nasal and eye. 8 lower labials ; small triangular shield (cuncate) between 4th and 5th lower labial at oral margin. Scale rows across widest part of hood usually 25 and 13-15 rows just anterior to vent. Extremely variable in colouration and markings. Three races are recognised on the basis of hood pattern. Indian cobras are generally buff, brown or black in colour. The dorsal pattern usually consists of light or dark bands, cross-bars, variegations or reticulations which disappear as age advances.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : Occurs from Transcaspia in the north, through Indian subcontinent to southern China in the east and to the Philippines in the South Andaman, Sri Lanka.

Remarks : They are found in all types of country : Plains, jungles, open fields and even in the regions heavily populated by man. Frequently found near or in water and is a strong swimmer.

Status : Common.

Genus 52. *Ophiophagus* Gunter, 1864.

*74. *Ophiophagus hannah* (Cantor)
(Hamadryad ; King cobra)

1836. *Hamadryas hannah* Cantor, *Asiat. Research*, 19 : 187.

1924. *Naja hannah* Wall, *J. Bombay nat. Hist. Soc.* 30 : 189.

1943. *Naja hannah* Smith, *Fauna Brit. Ind.* 3 : 436-439.

Material examined : Material not available. Description based on the literature.

Description : Head flat ; snout rounded and eyes moderately round with round pupil. Scales smooth, oblique, those of the vertebral series and the outer 2 rows larger than the others ; in 17 or 19 rows upon the neck, 15 at mid-body and in front of the vent. In the anterior part of the body only the vertebral row of scales is enlarged ; in the hinder part of the body the median three rows may be enlarged. The over all colouration is olive green or yellowish but the tail is almost entirely jet black. The young are black above with chevron-shaped transverse bands which disappear as age advances. The lower surfaces are whitish. Head olivaceous-brown.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : In the Peninsula it occurs in the dense forests of the Western Ghats and in the forests of the hills, plains, estuaries of Orissa, Bengal, Assam and Andamans.

Remarks : Largely diurnal in habits. Its staple diet is snakes. All species including other poisonous snakes being taken.

Status : Not a common snake in India.

Genus 53. *Calliophis* Gray, 1863.

75. *Calliophis melanurus* (Shaw) (Slender coral snake)

1802. *Coluber melanurus* Shaw, *Gen. Zool.* 3 : 552.

1943. *Calliophis melanurus* Smith, *Fauna Brit. Ind.* 3 : 420.

Material examined : *Nalgonda Dist.* : 1 ex., Nandikonda valley, 6. xi. 1963. (Coll. BN & INM).

Measurements : Total length 323 mm. Standard length 300 mm.

Diagnostic character : Eye small, its diameter equal to or less than its distance from the mouth ; 1 preocular in contact with the nasal, 2 postoculars ; 6 upper labials, 3rd and 4th touching the eye ; 5th and 6th in with the temporal ; 3 lower labials. Scales in 13 rows, not oblique. The head and neck are black above with yellowish spots. The tail is encircled by two black rings, one at the base and the other at the tip. Below red.

Distribution : *Andhra Pradesh* : as mentioned in the *material*. Elsewhere : It may be found both in the plains and hills at low altitudes in the States of Maharashtra, Madhya Pradesh, Tamil Nadu, Karnatak and Kerala.

Remarks : When annoyed, it will curl its tail over the back to show the beautiful red colour of the underside.

Status : A fairly wide spread but uncommon species in India.

Family 18. VIPERIDAE

Key to the genera of family VIPERIDAE

1. A deep pit between the nostril and the eye	...	...	...	<i>Trimeresurus</i>
No pit between the nostril and the eye	...	...	...	2.
2. Nostril in a large nasal shield ; scales in straight rows	...	...	...	<i>Vipera</i>
Nostril in a divided nasal shield ; lateral scales in oblique series	...	...	...	<i>Echis</i>

Genus 54. *Vipera* Laurenti, 1768.

76. *Vipera russelli* (Shaw)

(Russell's viper) Telegu name : Katuka rekula poda

1797. *Coluber russelli* Shaw, *Nat. Misc.* 8 : 291.

1890. *Vipera russelli* Boulenger, *Fauna Brit. Ind.* : 420.

1943. *Vipera russelli* Smith, *Fauna Brit. Ind.* 3 : 482-485.

Material examined : Guntur Dist. : 1 ex., (Damaged) Eddenmotu Hill, 4. ix. 1963. (Coll. BN & INM).

Measurements : Total length 1190 mm. Standard length 975 mm.

Diagnostic character : Head rather long, distinct wider than neck, snout bluntly pointed ; rostral about twice as high as wide, nostril large crescent shaped, a in large nasal shield ; supraocular entire ; 11 upper labials separated from eye by three rows of scales ; 14 lower labials. Head covered with small scales and without shields, 27 to 33 costals at midbody ; subcaudals divided. Body stout, flattened dorsoventrally tapering evenly posteriorly and anteriorly ; dorsal scales in straight rows and keeled except for lowest row. The colouration and marking of this viper are so distinctive that there is no mistaking it for any other snake if once seen. There are three longitudinal rows of reddish-brown or dark-brown rings with black or black and white edges which form a chain-like pattern on the back and the sides. Head with distinct dark patch behind. A dark streak, margined with white, pink or buff behind eye. A dark stripe from eye to lip.

Distribution : Andhra Pradesh : as mentioned in the material. Elsewhere : It occurs throughout India and has been met with in the plains and hills even at elevations upto 3,000 m. in the Himalayas.

Remarks : Normally sluggish and does not strike readily unless irritated when it bites with great malice.

Status : Common,

Genus 55. *Echis* Merrem, 1820.77. *Echis carinatus* (Schneider)
(Saw-scaled Viper)1801. *Pseudoboa carinata* Schneider, *Hist. Amph.* 2 : 285.1896. *Echis carinatus* Boulenger, *Cat. Sn. Brit.* 3 : 505.1943. *Echis carinatus* Smith, *Fauna Brit. Ind.* 3 : 487-490.

Material examined : Guntur Dist. : 1 ex., Nagarjunakonda, 7. xi. 1963. (Coll. Dr. KR). 2 ex., Eddenmotu Hill, 3. ix. 1963, 1 ex., Fringimotu Hills, 8. ix. 1963. (Coll. BN & INM). Nalgonda Dist. : 1 ex., Nandikonda valley 8. viii. 1962. (Coll. BN & INM). Chittore Dist. : 1 ex., Mamandam, 6. ix. 1964. (Coll. Dr. KR). Prakasam Dist. : 1 ex., Darsi, 2. xi. 1986 (Coll. DPS).

Measurements : Total length 122-352 mm, Standard length 118-312 mm.

Diagnostic character : Head short, distinctly wider than neck, snout blunt ; rostral about twice as wide as high ; nostril in divided nasal shield ; eye surrounded by 10-15 small scales exclusive of the supraocular ; 3.4 scales between nasal and the eye ; temporal scales small, keeled, except the lowermost row ; 10-12 upper labials, the 4th usually the largest ; 1-2 series of scales between them and the eye. Scales in 25 to 29 ; 27-37 : 21-27 rows, the outer most rows the largest, the oblique series in 4-5 rows, Colour and pattern varies considerably pale brown, buff or tawny with dark brown or even blackish markings in the form of dark edged spots in a vertebral series connected to a light coloured inverted U- or V-shaped flank mark enclosing a dark area connected to each other and forming a wavy flank line. Whitish below, uniform or spotted with brown.

Distribution : Andhra Pradesh : as mentioned in the *material*. Elsewhere : The whole of India south of the Gages, except Bengal.

Remarks : It is found in the desert and semi-arid tracts of India.

Status : Common.

Genus 56. *Trimeresurus* Lace'pede', 1804.*71. *Trimeresurus gramineus* (Shaw)
(Green Bamboo Pit Viper)1802. *Coluber gramineus* Shaw *Gen. Zool.* 3 : 420.1937. *Trimeresurus gramineus* Smith, *J. Bombay nat. Hist. Soc.* 39 : 730.

Material examined : Material not available. Description based on the literature.

Description : Snout twice as long as the diameter of the eye. Upper head scales small, subequal, subimbricate, smooth ; supraocular narrow, entire, 8-11 scales on a line between

them. The loreal pit between the nostril and the eye. 15-17 rows of costals two headlengths before vent. The head is flattened and appears unduly broad owing to the constricted neck 10-12 upper labials, first completely separated from the nasal, 3rd largest. Tail short and tapering. Prehensile green or yellowish-green above uniform or with occasional small dark brown spots produced by an extension of the colour of the interstitial skin on to the base of the scales. Whitish or greenish below.

Distribution : *Andhra Pradesh* : (Likely to occur). Elsewhere : Peninsular India south of lat. 22°

Remarks : A hill species not normally seen below 450 m. Frequents low vegetation showing a market preference for bamboo in localities where it occurs.

Status : Not uncommon.

VI. ACKNOWLEDGEMENT

Authors are highly indebted to Dr. A. K. Ghosh, Director, Zoological Survey of India, for providing us all sorts of facilities to carry out this work and critically going through the manuscripts, and Shri A. K. Sarkar, Scientist-'SD', for helping us to carry out these studies and to all collectors for collecting the materials and handing over the same to us for the study. Thanks are also due to the Deptt. of Forests, Govt of Andhra Pradesh for providing necessary help in various ways.

VII. SUMMARY

The paper deals with the reptilian fauna of Andhra Pradesh based on the collections made by the Surveys undertaken by the scientist of Zoological Survey of India during 1962-1988. A few examples collected prior to that and available with the named collections of Reptilia Section have also been utilized. This paper deals with 837 examples belonging to 78 species, 56 genera and 18 families. Out of which 55 species have actually been collected from the above region by the various survey parties of the Zoological Survey of India, and rest 23 species have been included in this paper are known otherwise from adjacent region and are likely to occur in Andhra Pradesh. 13 species namely *Hemidactylus frenatus*, *Hemidactylus bowringi*, *Hemiphyllodactylus typus aurantiacus*, *chamaeleo zeylanicus*, *Mabuya macularia*, *Oligodon travancoricus*,^a *Macropisthodon plumbicolor*, *Sibynophis sagitterius*, *Gerardia prevostiana*, *Hydrophis spiralis*, *Lapemis curtus*, *Enhydrina schistosa*, *Microcephalops gracilis* are recorded for the first time from Andhra Pradesh. Keys and short diagnostic characters of the

species have been given in the paper for determination of the species. A text figure and a map showing distribution of species have also been provided in the paper.

VIII. REFERENCES

- Annandale, N. 1906. Notes on the fauna of a Desert tract in Southern India Part 1. Batrachians and Reptiles. *Mem. Asiat. Soc. Bengal*, **1** : 183-202.
- Annandale, N. 1906. Notes on the Indian tortoises. *J. Asiat. Soc. Bengal*, **2** : 203-206.
- Annandale, N. 1912. The Indian mud-turtles (Trionychidae). *Rec. Zool. Surv. India*, **7** : 151-179.
- Annandale, N. 1915. Notes on some Indian Chelonia. *Rec. Indian. Mus.* **11** : 189-195.
- Beddome, R. H. (1870). Descriptions of new Reptiles from Madras Presidency. *Madras Month. J. Med. Sci.*, **9** : 169-176.
- Bhaskar, S. 1982. Sea turtle survey of northern Andhra Pradesh, India. Report to the WWF-1. 6 pg.
- Biswas, S. 1984. A preliminary survey of sea turtle of the Andhra coast. *Bull. Zool. Surv. India*, **6** (1-3) : 325-326.
- Boulenger, G. A. 1890. *The Fauna of British India including Ceylon and Burma. Reptilia Batrachia*. Taylor and Francis, London. xviii+541 pp.
- Constable, T. D. 1949. Reptiles from the Indian Peninsula in the Museum of comparative zoology. *Bull. Mus. Comp. Zool. Harv.*, **103** : 59-160.
- Daniel, J. C. 1983. *The book of Indian reptiles, Bombay Natural Hist. Soc.* x+141 pp., pls, photos.
- Daniel, J. C. and Bhusan, B. 1985. Golden Gecko of Tirumalai Hills. *Hornbill*, 1985 (3) : 17-19.
- Daniel, J. C., Bhushan, B. and Sekar, A. G., 1986. Rediscovery of the Golden Gecko *Calodactylodes anreus* (Beddome) in the Eastern Ghats of Andhra Pradesh. *J. Bombay nat. Hist. Soc.*, **83** (1) : 15-16.
- Das, I. 1985. *Indian turtles. A field guide*. World life Fund India (Eastern Region), Calcutta. 199, pp.
- Das, I. 1991. *Colour guide to the turtles and tortoises of the Indian subcontinent*. R. & A Publishing Limited, Portishead, Avon England. vi+133 pp, pls, Maps.
- Dutt, S. 1979. Sea turtle notes from Visakhapatnam. *Hamadryad* **4** (2) : 14-15.
- Ganapati, P. N. and Nayar, K. 1952. Occurrence of limbless lizard *Barkudia* Annandale at Waltair. *Curr. Sci.* **21** : 105-106.
- McCann, C. 1945. Reptiles and amphibians of Vizagapatnam and neighbouring Ghats. *J. Bombay nat. Hist. Soc.*, **45** (3) : 435-436.
- Moll, E. O. and Vijay, J. 1986. Distributional records for some Indian turtles. *J. Bombay nat. Hist. Soc.*, **83** (1) : 57-62.

- Murthy, T. S. N. 1986. Lizards of Kurnool district. *Bullet. Maryland Herpt. Soc.*, **22** (3) : 134-143.
- Murthy, T. S. N. and Venkateswarlu. 1980. Record of Rock-lizard, *Psammophilus blanfordianus* (Stolicezka) in Araku valley Eastern Ghats, Andhra, *J. Bombay nat. Hist. Soc.*, **76** (3) : 524.
- Rao, R. J. 1991. Salt water crocodile, *Crocodylus porosus* in Andhra Pradesh, *J. Bombay nat. Hist. Soc.*, **88** (1) : 116-117.
- Sharma, R. C. 1969. Two lizards of genera *Mabuya* Fitzinger and *Riopa* Gray (Scincidae) from India, *Bull. Syst. Zool.* Calcutta, **1** (2) : 71-75.
- Sharma, R. C. 1971 The reptile fauna of Nagarjuna sagar dam area (Andhra Pradesh, (India), *Rec. Zool. Surv. India*, **63** (1-4) : 77-93.
- Sharma, R. C. 1976. "Some observations on ecology and systematics of *Coluber bholanathi*. A new species of snake (Reptilia : Squamata : Colubridae) from India. *Camp. Physiol. Ecol.* **1** : (3) pp 105-107.
- Smith, M. A. 1926. *Monograph of the Sea-snakes (Hydrophiidae)* London, xvii + 130 pp, 2 pls. (reprinted, 1964).
- Smith, M. A. 1931. *The Fauna of British India, including Ceylon and Burma. Reptilia and Amphibia*. Vol. I. Loricata, Testudines. Taylor and Francis, London 185 pp.
- Smith, M. A. 1935. *The fauna of British India, including Ceylon and Burma, Reptilia and Amphibia* Vol. 2. Sauria. Taylor and Francis, London. xii + 440 pp, figs., Map.
- Smith, M. A. 1943. *The fauna of British India, including Ceylon and Burma, Reptilia and Amphibia* Vol. 3 Serpentes, Tailors and Francis, London xii + 583 pp, fig, maps.
- Underwood, G. 1954. On the classification and evolution of Geckos. *Proc. Zool. Soc., London*, **124**, pt. 3 : 469-492.