

## RECORDS OF THE REPTILES OF GOA

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(with 1 Text-figure and 1 plate)

### INTRODUCTION

#### (a) *General*

The present report is based on material collected from 40 localities in Goa by the Zoological Survey of India during 1966-1969 (Text-fig. 1).

The material consist of 413 specimens, comprising 46 species (5 turtles, 269 lizards and 139 snakes) belonging to 32 genera and 13 families. Two species (lizards) are new to Science and thirtyseven species (11 lizards and 26 snakes are recorded for the first time from this region. The 2, 130.4 sq. km. area of Goa roughly lies between 14°54'-15°48' N and 73°41'-74°21' E and the general topography represents uneven land, high coastal mountains which form a continuous southern chain of western-ghats.

The main rivers of the area are Tiracol, Chapora, Mandvi, Zuari and Sal. Most of the parts of Goa are covered with forests, which are quite thick at Molem, Valpoi and Canacona. The climate is hot and humid, the mean annual temperature varies between 24.5°C (April) and 27.5°C (October). The average annual rainfall remains between 375-415 cms.

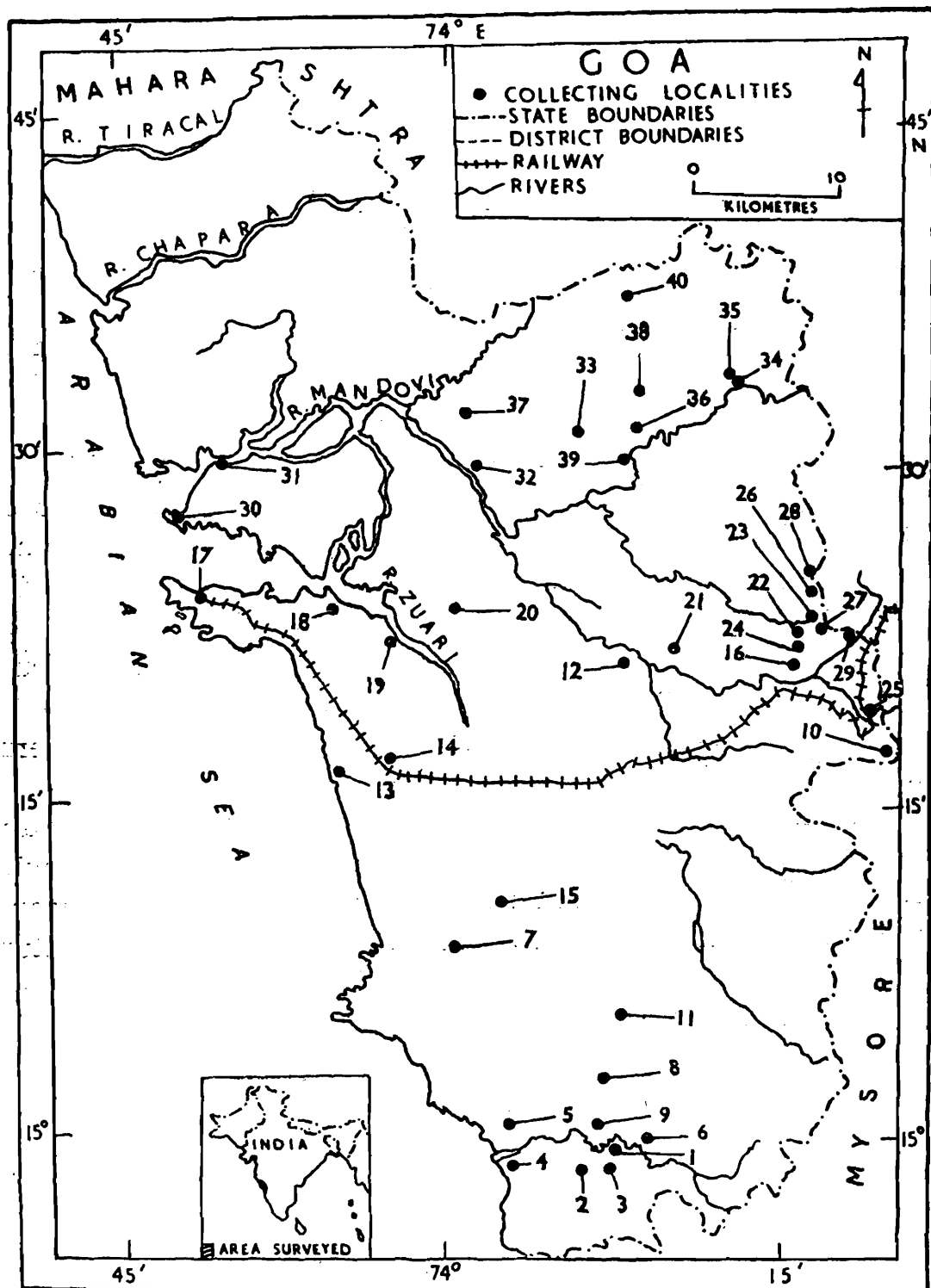
#### (b) *Abbreviations used*

*Alt.*, altitude above mean sea-level; *coll.*, collected by, collection; *Ex.*, *Exs.*, example(s); *Z.S.I.*, Zoological Survey of India, Calcutta.

#### (c) *Acknowledgements*

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Text-fig. 1.—Map of Goa showing 40 localities of collection of reptiles.

## SYSTEMATIC ACCOUNT

(a) *General*,

The following is the brief systematic account of the reptiles collected from Goa. For each species, details of material collected, some important measurements and geographical distribution are given. Under measurements, the 'Standard length' means the length from snout to vent and 'tail length' indicates the length from vent to tip of tail; in both cases while taking measurements the freshly killed specimen was kept flat and the straight line measurements (not along curvatures) was noted. Where necessary, taxonomic and ecological notes are given under each species.

(b) *Account of species*

## Order I. TESTUDINES

## Family 1. EMYDIDAE

1. ***Geoemyda trijuga*** (Schweigger)

## The Terrapin

*Material*.—4 exs., R. C. Sharma Coll., Goa : Nagae River, 21.ix.1969; Dhawan village, 22.ix.1969; Chaudi village, 24.ix.1969.

*Measurements*.—Length of shell 58-210 mm., length of plastron 53-205 mm., Depth of body 23-96 mm.

*Distribution*.—Goa : As above.

## Family 2. TRIONYCHIDAE

2. ***Lissemys punctata granosa*** (Schoepff)

## Abhua

*Material*.—1 ex. (juvenile), R. C. Sharma Coll., Goa : Canacona-Ponda road, 10.x.1969.

*Measurements*.—Length of shell (dorsal disc) 76 mm., length of plastron 75 mm., depth 34 mm.

*Distribution*.—Goa : As above (first record from Goa).

## Order II. SQUAMATA

## Suborder (i) SAURIA

## Family 1. GEKKONIDAE

3. ***Gymnodactylus albofasciatus*** Boulenger

*Material*.—1 ex., R. C. Sharma coll., Goa : Molem, 9.ix.1969.

*Measurements.*—Standard length 63 mm., tail length 57 mm.

*Distribution.*—Goa : As above (first record from Goa).

*Remarks.*—This lizard was beautifully coloured with black and deep yellow cross-bars in life. It was hiding beneath a black stone in dense forest. When caught it made a loud crocking sound, made an desperate attempt to escape and bite.

#### 4. *Cnemaspis goensis* n. sp.

(Plate IIA)

*Material.*—6 exs., R. C. Sharma coll., Goa : (i) 1 ex., ♀, ca. 23 km. from Canacona (on Canacona-Ponda Road), 3.x.1969. (ii) 5 exs., 4 ♂, 1 ♀, ca. 3 km. S. of Forest Rest House, Canacona (Poinguinim), 7.x.1969.

*Description.*—Colour : Dorsum brown, with W-shaped dark brown marks on the back (2 on neck, 6 on the space between the forelimbs and hindlimbs); tail with light and dark, narrow annuli above; head, limbs and flanks veriegated with lighter and darker markings, ventral side of head and throat densely spotted with black colour; degits with conspicuous dark bars; few dark lines emerging from eyes and extending on the cheeks, whitish below, speckled with black.

Snout obtuse, much longer than the distance between the eye and the ear openings; seven upper and six or seven lower labials; mental large, broader than the rostral, sub-triangular, truncate posteriorly; three pairs of postmentals, the first pair separated from one another by a median scale. Head covered above with small, granular keeled scales, intermixed with a few larger rounded tubercles, flanks with much separated spine shaped tubercles. Ventral scales imbricate, smooth, few on sides, under the neck feebly keeled, those on belly smooth. Digits elongate, the plates beneath the basal phalanges well developed, 2 to 5 in number; the hind limb reaches to the axilla. Tail cylindrical, covered above with small keeled scales and a series of six large pointed white tubercles; below with large, imbricate, feebly keeled scales, the median series of scales being bigger than others. Males with 2 or 3 pre-anal and, on each side, 2 to 4 femoral pores.

*Measurements.*—(Holotype) Total length (Snout to tip of tail) 71 mm., standard length (snout to vent) 30 mm., tail length 41 mm., inter-orbital length 4 mm. and girth of body 13 mm.

*Type-specimens* : *Holotype*; 1 ex., male, Z.S.I. Reg. No. 22110, ca. 3 km. S. of Forest Rest House, Canacona (Poinguinim), Goa. *Paratypes*; 4 exs., (3 males and 1 female) from the same lot as holotype, Z.S.I. Reg. Nos. 22213 to 22216 (Reg. No. 22216 a female example).

*Type locality and distribution*. *Type locality* : INDIA : Goa : ca. 3 kms. S. of Forest Rest House, Canacona (Poinguinim), *Distribution* : Vicinity of Canacona, Goa.

*Comparison*.—*Cnemaspis goensis* n.sp. closely resembles *Cnemaspis mysoriensis* (Jerdon) and *Cnemaspis kandiana* (Kelaart), but is separable from those two species in scalation, preanal pores, snout length, snout-vent length, tail length and coloration.

## 5. *Hemidactylus brooki* Gray

The House lizard

*Material*.—63 exs., V C. Agrawal and R. C. Sharma coll., Goa : Margaon (Paddy field), 18.xii.1968; Valpoi, 9.i.1969, 16, 22.ix.1969; Molem, 8-11.ix.1969; Nayavada village (near Molem). 12.ix.1969; Durgini Hill (near Sukhtala village), 13.ix.1969; Asavana village, 18.ix.1969; Nanus village, 19.ix.1969; Kandal rubber plantation, 20.ix.1969; Dhavan village, 21.ix.1969; Chaudi village, 24.ix.1969; Panjim, 26.ix.1969; Ponda, 28.ix.1969; Canacona, 7-9.x.1969.

*Measurements*.—Standard length 29-60 mm., tail length 31-72 mm.

*Distribution*.—Goa : As above (first record from Goa).

*Remarks*.—In Goa this lizard generally prefers to live under the stones or beneath the dry bark of the wooden logs, in or around human habitations. The specimens were also collected from the rocky areas in dense forests, away from human dwellings.

The specimens from Nayavada village, Goa also vary as follows : Upper labials 12 or 11 (*vs.* 8-10); post-mentals 3 pairs (*vs.* 2 pairs); 6 or 7 femoral pores on each side (*vs.* 7-12(16) preanofemoral pores on each side).

## 6. *Hemidactylus prashadi* Smith

*Material*.—7 exs., V C. Agrawal and R. C. Sharma coll., Goa : Canacona, 29.xii.1968; Nayavada village, 12.ix.1969;

Kandal rubber plantation, 20.ix.1969; Rubber plantation, Canacona, 10.x.1969.

*Measurements.*—Standard length 51-95 mm., tail length 71-123 mm.

*Distribution.*—Goa : As above (first record from Goa).

*Remarks.*—The specimens from Goa, were collected from old deserted buildings. At Nayavada village (near Molem, Goa) it was observed that the crevices in the walls used as abodes by these lizards were also shared by the snakes *Lycodon aulicus* and *Trimeresurus gramineus*.

### 7 *Hemidactylus frenatus* Schlegel

*Material.*—6 exs. V C. Agrawal and R. C. Sharma coll., Goa : Canacona, 26.xii.1968; Valpoi, 1.i.1969; Dhavan village, 26.ix.1969.

*Measurements.*—Standard length 40-56 mm., tail length 39-56 mm.

*Distribution.*—Goa : As above (first record from Goa).

*Remarks.*—The specimens from Goa were collected from tree trunks and from deserted houses.

#### Family 2. AGAMIDAE

### 8. *Draco dussumieri* Dumeril & Bibron

Flying lizard or Flying dragon, In Goa  
(Kokani language) "Seddha"

*Material.*—6 exs., R. C. Sharma coll., Goa : Nayavada village (near Molem), 12.ix.1969; Ponda, 1.x.1969.

*Measurements.*—Standard length 74-93 mm., tail length 112-127 mm.

*Distribution.*—Goa : As above.

*Remarks.*—All the specimens were collected from the trunk of teak trees. Colour of the specimens dark gray with bluish tinge above and a series of longitudinally oval or rhomboidal dark spots with orange margins on the back. The upper surface of the wing membrane black, with subcircular, oval or irregular deep orange spots; upper surface of tail having alternate bands of light gray and black. Upper surface of head and limbs with black spots. Dirty gray below, with a series of black marginal spots (confined only to the outer half of the ventral surface).

Throat bluish with black spots. Gular appendage yellow with an orange tinge. Gular appendage of males much longer than the head.

### 9. *Calotes versicolor* (Daudin)

The Blood Sucker

*Material*.—86 exs., K. S. Pradhan, V C. Agrawal & R. C. Sharma coll., Goa : Fatorpa, 11.ix.1966; Near Dudhsagar water falls, 19.ix.1966; Cortalim, 15.xi.1967; Cabo-da-Rama (up hill on way to Cabo-da-Rama Fort), 17.xi.1967; Margaon, 16, 18.xii.1968; Molem, 31.xii.1968 and 6-11.ix.1969; Nayavada village, 12.ix.1969; Durgini Hills (Sukhtala village), 13.ix.1969; Valpoi, 15, 17, 22.ix.1969; Asavana village, 18.ix.1969; Kandal rubber plantation, 20.ix.1969; Dhavan village, 21.ix.1969; Chaudi village, 24.ix.1969; Panaji, 26-27.ix.1969; Ponda, 1.x.1969; Rubber plantation, Canacona, 4-5.x.1969.

*Measurements*.—Standard length 26-117 mm., tail length 49-294 mm.

*Distribution*.—Goa : As above.

*Remarks*.—The specimens from Goa vary from other Indian examples in having 35-52 scales round the middle of body (*vs.* recorded by Smith, 1935 as, Ceylon and S. India, 35-45; North India, 42-52; Pakistan, 36-43; Afganistan, 42-48; Himalaya, 42-48; Indo-China, 40-52; Hainan and S. China 40-52).

### 10. *Calotes rouxi* Dumeril & Bibron

*Material*.—21 exs., R. C. Sharma coll., Goa : Molem, 7, 9 & 10.ix.1969; Near Valus River, Valpoi, 17.ix.1969; Dhavan village, 21.ix.1969; Valpoi, 22.ix.1969; Ponda, 10.x.1969; ca. 23 kms. Canacona Ponda Road, 3.x.1969; Rubber plantation, Canacona, 5.x.1969; Canacona, 9.x.1969.

*Measurements*.—Standard length 29-71 mm., tail length 49-161 mm.

*Distribution*.—Goa : As above (first record from Goa).

*Remarks*.—Collected from bushes.

Family 3. SCINCIDAE

### 11. *Mabuya macularia* (Blyth)

*Material*.—1 ex., R. C. Sharma coll., Goa : Ponda, 28.ix.1969.

*Measurements.*—Standard length 52 mm., tail length 43 mm. (broken).

*Distribution.*—Goa : As above (first record from Goa).

## 12. *Mabuya allapallensis* Schmidt

1926. *Mabuya allapallensis* Schmidt, *Pub. Field Mus. nat. Hist. (Zool.)*, Chicago, **12**, 170. 1 ex. (juvenile ♀). *Type locality*: INDIA: Allapalli Forest near Chanda Maharashtra.

*Material.*—21 exs., V C. Agrawal & R. C. Sharma coll., Goa : Canacona, 23.xii.1968; Molem, 7, 8 & 10.ix.1969; Asavana village (Near Valpoi), 18.ix.1969; Kandal rubber plantation, 20.ix.1969; Valpoi, 22.ix.1969; Ponda, 28.ix.1969; Canacona, 9.x.1969.

Smith (1935) synonymised this with *Mabuya macularia* (Blyth 1853), and regarded the united frontoparietals of *M. allapallensis* as an abnormality.

An examination of this considerable material from Goa has shown that *Mabuya allapallensis* is distinct. At Ponda, the two species were found to live side by side.

*Brief Diagnosis.*—This species resembles *Mabuya macularia* (Blyth) but is separable as follows (i) Prefrontal scales clearly separated (*vs.* narrowly separated). (ii) A pair of nuchals always present (*vs.* present or absent). (iii) Fronto-parietals united to form a single large shield (*vs.* not united). (iv) Temporal scales smooth (*vs.* strongly keeled). (v) Scales round middle of body 26-30 (*vs.* 28-34).

*Measurements.*—Standard length 24-50 mm., tail length 33-64 mm., interorbital length 3.5-6 mm., girth at the middle of body 16-34 mm.

*Distribution.*—Goa : As above (first record from Goa).

## 13. *Mabuya carinata* (Schneider)

Brahmini lizard

*Material.*—44 exs., V C. Agrawal & R. C. Sharma coll., Goa : Margaon, 17.xii.1968; Molem, 6:i.1969; Molem, 10-11.ix.1969; Nayavada village, 12.ix.1969; Valpoi, 16 & 22.ix.1968; near Valus River, Valpoi, 17.ix.1969; Asavana village (near Valpoi), 18.ix.1969; Nanus village (near Valpoi), 19.ix.1969; Kandal rubber plantation, 20.ix.1969; Dhavan village, 21.ix.1969; Panaji, 26-27.ix.1969; Ponda, 28.ix.1969; Rubber plantation, Canacona, 4,9.x.1969.



*Measurements.*—Standard length 30-160 mm., tail length 51-176 mm.

*Distribution.*—Goa : As above; Mormugoa and Nova Goa.

*Remarks.*—The specimen from Goa represent the biggest size recorded so far from India. One specimen from Valpoi, Goa varies in having two pairs of nuchals.

#### 14. *Riopa punctata* (Gmelin)

*Material.*—1 ex., R. C. Sharma coll., Goa : ca. 23 kms. from Canacona (on Canacona-Ponda road), 3.x.1969.

*Measurements.*—Standard length 52 mm., tail length 48 mm.

*Distribution.*—Goa : As above (first record from Goa).

#### 15. *Riopa guentheri* (Peters)

*Material.*—1 ex., R. C. Sharma coll., Canacona, 7.x.1969.

*Measurements.*—Standard length 89 mm., tail length 72 mm.

*Distribution.*—Goa : As above (first record from the area).

#### 16. *Riopa goensis* n. sp.

(Plate IIB)

*Material.*—1 ex. ♀, R. C. Sharma coll., Goa : Molem, 9.ix.1969.

*Description.*—Dorsum dark-brown to blackish; a black dorso-lateral streak beginning from Canthus rostralis and reaching almost to the end of tail; lower surface light bronze; back and sides densely spotted with brown.

Head very small, snout obtuse, distance between the end of snout and the forelimb contained less than two times in the distance between the axilla and groin; lower eyelids scaly, with a large semitransparent scale in the centre, supranasals entire, in contact with one another behind the rostral; frontal larger than the fronto-parietals and interparietals together; a pair of nuchals; an enlarged temporal scale borders the outer margin of the parietal; ear opening, with two minute lobules anteriorly; 7 supralabials, the 5th below the eye, longer than the adjacent labials; body covered with smooth subequal scales, 30 round the middle of body; 64 scales down the middle of back; marginal preanals moderately enlarged. Digits long, fourth toe longer than the third; 13 lamellae under fourth toe. Tail thick at the base, smaller than the head and body.

*Measurements.*—Standard length 53 mm., tail length 49 mm., interorbital length 5 mm., maximum girth of body 20 mm.

*Type specimen.*—*Holotype*: 1 ex., ♀, Z.S.I. Reg. No. 22032, Goa: ca. 5 km. N.E. of Forest Rest House, Molem.

*Type-locality.*—INDIA: Goa: ca. 5 km. N.E. of Forest Rest House, Molem.

*Distribution.*—Known only from type-locality.

*Comparison.*—*Riopa goaensis* n. sp. closely resembles *Riopa albopunctata* Gray, 1846, but is separable as follows: (i) The distance between the end of snout and the fore limb contained less than two times in the distance between the axilla and groin (*vs.* this distance contained 2 to  $2\frac{1}{3}$  times). (ii) Frontal much longer than the frontoparietals and interparietal together (*vs.* as long as or a little longer than the frontoparietals and interparietal together) (iii) 5th supralabial longest (twice longer than the adjacent labials) (*vs.* scarcely longer than the other labials). (iv) 30 rows of scales round the middle of body (*vs.* 26 to 28 scales round the middle of body). (v) Tail shorter than body (*vs.* longer).

#### Family 4. LACERTIDAE

### 17 *Ophisops beddomei* (Jerdon)

*Material.*—1 ex., R. C. Sharma coll., Goa: Molem, 11.ix.1969.

*Measurements.*—Standard length 29 mm., tail length 35 mm.

*Distribution.*—Goa: As above (first record from Goa).

*Remarks.*—The lizard collected from a grassy patch on a plateau at an altitude of 550 metres.

#### Family 5. VARANIDAE

### 18. *Varanus bengalensis* (Daudin)

Monitor lizard, Go-Samp or Pata-Go in Hindi

*Material.*—3 exs., R. C. Sharma coll., Goa: Dhavan village, 23.ix.1969; Valpoi, 23.ix.1969; Rubber plantation, Canacona, 10.x.1969.

*Measurements.*—Standard length 148-232 mm., tail length 237-465 mm.

*Distribution.*—Goa: As above.

*Remarks.*—The flesh of this lizard is considered as delicacy and consumed by many back-ward tribes in Goa.

Suborder (ii) *SERPENTES*

Family 6. TYPHLOPIDAE

19. **Typhlops braminus** (Daudin)

The common Blind Snake

*Material.*—5 exs., R. C. Sharma coll., Goa : Valpoi, 16.ix.1969; near Valus River, 17.ix.1969; Canacona, 9.x.1969.

*Measurements.*—Standard length 73-132 mm., tail length 2-3.5 mm.

*Distribution.*—Goa : As above (first record from the Goa).

*Remarks.*—One specimen from Canacona, varies from the other Indian specimens by having 361 transverse rows of scales (*vs* 290-320 rows).

20. **Typhlops acutus** (Dumeril & Bibron)

Beaked blind Snake

*Material.*—1 ex., R. C. Sharma coll., Goa : Ponda, 10.x.1969.

*Measurements.*—Standard length 399 mm., tail length 4.5 mm.

*Distribution.*—Goa : As above (first record from Goa).

Family 7. BOIDAE

21. **Python molurus** (Linnaeus)

Indian Python

*Material.*—3 exs., R. C. Sharma coll., Goa : Ponda, 10.x.1969; Rubber plantation Canacona, 10.x.1969.

*Measurements.*—Standard length 1572-2890 mm., tail length 230-347 mm.

*Distribution.*—Goa : As above (first record from Goa).

22. **Eryx conicus** (Schneider)

The Russell Sand Boa

*Material.*—1 ex., R. C. Sharma coll., Goa : Panaji, 26.ix.1969.

*Measurements.*—Standard length 282 mm., tail length 24.5 mm.

*Distribution.*—Goa : As above (first record from Goa).

Family 8. COLUBRIDAE

23. **Acrochordus granulatus** (Schneider)

Indian Wart Snake

*Material.*—1 ex., R. C. Sharma coll., Goa : Panaji sea beach, 27.ix.1969.

*Measurements.*—Standard length 641 mm., tail length 66 mm.

*Distribution.*—Goa : As above and Vasco Bay.

24. **Elaphe helena** (Daudin)

The Trinket Snake

*Material.*—1 ex., R. C. Sharma coll., Goa : Valpoi, 22.ix.1969.

*Measurements.*—Standard length 827 mm., tail length 181 mm.

*Distribution.*—Goa : As above (first record from the Goa).

25. **Ptyas mucosus** (Linnaeus)

Dhaman, Indian rat Snake

*Material.*—5 exs., R. C. Sharma coll., Goa : Rubber plantation, Canacona, 4, 5, 8, 9 & 10.x.1969.

*Measurements.*—Standard length 1118-1473 mm., tail length 463-583 mm.

*Distribution.*—Goa : As above (first record from Goa).

26. **Oligodon taeniolatus** (Jerdon)

*Material.*—3 exs., R. C. Sharma coll., Goa : Ponda, 30.ix.1969; Rubber plantation, Canacona, 4 & 10.x.1969.

*Measurements.*—Standard length 144-309 mm., tail length 32-39 mm.

*Distribution.*—Goa : As above (first record from Goa).

27 **Oligodon arnensis** (Shaw)

*Material.*—1 ex., R. C. Sharma coll., Goa : Ponda, 30.ix.1969,

*Measurements*.—Standard length 436 mm., tail length 92 mm.

*Distribution*.—Goa : As above and Mormugoa.

### 28. *Ahaetulla ahaetulla* (Linnaeus)

Painted Bronze Back

*Material*.—3 exs., R. C. Sharma coll., Goa : Molem, 13.ix.1969; Canacona, 7, 8.x.1969.

*Measurements*.—Standard length 280-772 mm., tail length 112-355 mm.

*Distribution*.—Goa : As above (first record from Goa).

*Remarks*.—One specimen varies from the other Indian examples by having 10 supralabials (*vs.* 8 or 9). Another one varies in possessing 17:15:11 rows of scales (*vs.* 15:15:11 rows).

### 29. *Ahaetulla grandoculis* (Boulenger)

*Material*.—2 exs., R. C. Sharma coll., Goa : Valpoi, 22.ix.1969; Canacona, 9.x.1969.

*Measurements*.—Standard length 245-546 mm., tail length 106-222 mm.

*Distribution*.—Goa : As above (first record from Goa).

*Remarks*.—This species is mainly restricted to the Western Ghats. The Goa material possesses the characters as follows : 9 supralabials ; temporals 2 + 2 ; scales in 15:15:11 rows ; ventrals 176 and 181 ; subcaudals 117 and 120 ; anals 2.

### 30. *Chrysopelea ornata* (Shaw)

Golden Tree Snake

*Material*.—2 exs., R. C. Sharma coll., Goa : Valpoi, 16.ix.1969; Canacona, 7.x.1969.

*Measurements*.—Standard length 551-826 mm., tail length 266-314 mm.

*Distribution*.—Goa : As above (first record from Goa).

### 31. *Lycodon aulicus* (Linnaeus)

Common Wolf Snake

*Material*.—5 exs., V. C. Agrawal & R. C. Sharma coll., Goa : Valpoi, 15.i. & 19.ix.1969; Molem, 7.ix.1969; Nayavada village, 12.ix.1969.

*Measurements.*—Standard length 290-434 mm., tail length 60-89 mm.

*Distribution.*—Goa : As above (first record from Goa).

### 32. *Natrix piscator* (Schneider)

The Checkered Keelback

*Material.*—10 exs., R. C. Sharma coll., Goa : Molem, 11.ix.1969; Durgini Hill, 13.ix.1969; Vascodegama, 25.ix.1969; Margaon, 27.ix.1969; Rubber plantation, Canacona, 4, 6, 8 and 9.x.1969.

*Measurements.*—Standard length 250-768 mm., tail length 98-272 mm.

*Distribution.*—Goa : As above (first record from Goa).

*Remarks.*—One specimen from Dhavan village differs from other Indian examples by having 10 supralabials (*vs.* 9).

### 33. *Natrix stolata* (Linnaeus)

Striped Keel back

*Material.*—3 exs., R. C. Sharma coll., Goa : Molem, 11.ix.1969; Canacona, 8 & 9.x.1969.

*Measurements.*—Standard length 250-356 mm., tail length 98-131 mm.

*Distribution.*—Goa : As above (first record from Goa).

### 34. *Natrix beddomei* (Günther)

Beddom's Keel back

*Material.*—1 ex., R. C. Sharma coll., Goa : Canacona, 9.x.1969

*Measurements.*—Standard length 236 mm., tail length 95 mm.

*Distribution.*—Goa : As above (first record from Goa).

### 35. *Macropisthodon plumbicolor* (Cantor)

Green Keel back

*Material.*—3 exs., R. C. Sharma coll., Goa : Dhavan village, 21.ix.1969.

*Measurements.*—Standard length 114-428 mm., tail length 21-78 mm.

*Distribution.*—Goa : As above (first record from the area)

**36. *Bolga trigonata* (Schneider)**

Indian Gamma

*Material.*—4 exs., *R. C. Sharma* coll., Goa : Dhavan village, 22.ix.1969; Ponda, 28.ix.1969; Canacona, 9.x.1969; Rubber plantation, Canacona, 10.x.1969.

*Measurements.*—Standard length 349-462 mm., tail length 66-122 mm.

*Distribution.*—Goa : As above (first record from Goa).

**37 *Dryophis nasutus* (Lacépède)**

Common Green Whip Snake

*Material.*—11 exs., *R. C. Sharma* coll., Goa : Nayavada village, 12.ix.1969; Durgini Hill, 13.ix.1969; Kandal rubber plantation, 20.ix.1969; Ponda, 28.ix.1969 and 1.x.1969; Rubber plantation, Canacona, 5.x.1969; Canacona, 9.x.1969.

*Measurements.*—Standard length 517-707 mm., tail length 322-418 mm.

*Distribution.*—Goa : As above (first record from Goa).

**38. *Dryophis pulverulentus* Dumeril & Bibron**

Brown Whip Snake

*Material.*—3 exs., *R. C. Sharma* coll., Goa : Dhavan village, 22.ix.1969; Rubber plantation, Canacona, 10.x.1969.

*Measurements.*—Standard length 452-763 mm., tail length 267-523 mm.

*Distribution.*—Goa : As above (first record from Goa).

Family 9. ELAPIDAE

**39. *Bungarus caeruleus* (Schneider)**

Common Indian Krait

*Material.*—2 exs., *R. C. Sharma* coll., Goa : Ponda, 29.ix.1969; Rubber plantation, Canacona, 10.x.1969.

*Measurements.*—Standard length 548-570 mm., tail length 76-93 mm.

*Distribution.*—Goa : As above (first record from Goa).

40. *Naja naja* (Linnaeus)

Indian Cobra

*Material*.—3 exs., R. C. Sharma coll., Goa : Durgini Hill, 13.ix.1969; Racaim village ca. 30 km. W. of Ponda, 25.ix.1969; Canacona, 6.x.1969.

*Measurements*.—Standard length 379-1011 mm., tail length 67-229 mm.

*Distribution*.—Goa : As above (first record from Goa).

## Family 10. HYDROPHIIDAE

41. *Enhydrina schistosa* (Daudin)

*Material*.—1 ex., R. C. Sharma coll., Goa : Panaji sea beach, 27.ix.1969.

*Measurements*.—Standard length 484 mm., tail length 69 mm.

*Distribution*.—Goa : As above (first record from Goa).

42. *Hydrophis caeruleus* (Shaw)

*Material*.—12 exs., R. C. Sharma coll., Goa : Panaji sea beach, 26 & 27.ix.1969.

*Measurements*.—Standard length 310-682 mm., tail length 33-70 mm.

*Distribution*.—Goa : As above (first record from Goa).

43. *Lepemis curtus* (Shaw)

*Material*.—5 exs., V. C. Agrawal & R. C. Sharma coll., Goa : Colva beach (Margaon), 15.xii.1969; Canacona sea beach, 10.x.1969.

*Measurements*.—Standard length 522-706 mm., tail length 69-80 mm.

*Distribution*.—Goa : As above (first record from Goa).

## Family 11. VIPERIDAE

44. *Vipera russelli* (Shaw)

Russell's Viper

*Material*.—1 ex., R. C. Sharma coll., Goa : Ponda, 10.x.1969.



*Measurements.*—Standard length 706 mm., tail length 128 mm.

*Distribution.*—Goa: As above (first record from Goa).

*Remarks.*—This species being recorded for the first time from Assam (Golpara), Mysore (Bangalore) and Uttar Pradesh (Nishangarh). The species was stated to be absent from these localities by Smith (1935).

#### 45. *Echis carinatus* (Schneider)

Saw-scaled Viper or Phoorsa

*Material.*—40 exs., V. C. Agrawal & R. C. Sharma coll., Goa : Near Arvalim water falls (near Valpoi), 12.i.1969; Nayavada village, 12.ix.1969; Near Valus River (Valpoi), 17.ix.1969; Asavana village (Valpoi), 18.ix.1969; Dhavan village, 22.ix.1969; Ponda, 29.ix.1969 and 1.x.1969; Canacona, 7-9.x.1969; Rubber plantation Canacona, 10.x.1969.

*Measurements.*—Standard length 152-324 mm., tail length 12-32 mm.

*Distribution.*—Goa: As above (first record from Goa).

#### 46. *Trimeresurus gramineus* (Shaw)

Bamboo pit Viper

*Material.*—1 ex., R. C. Sharma coll., Goa : Nayavada village, (near Molem), 12.ix.1969.

*Measurements.*—Standard length 496 mm., tail length 99 mm.

*Distribution.*—Goa: As above (first record from Goa).

### SUMMARY

1. This is the first comprehensive account of the reptile fauna of Goa, and is based on the considerable collections made by field parties of the Zoological Survey of India during the years 1966-1969.

2. A total of 46 species belonging to 33 genera of 13 families are recorded here. Two species of the Order Testudines, and 44 of the order Squamata, thus 16 of Suborder Sauria (5 Gekkonidae, 3 Agamidae, 6 Scincidae, 1 Lacertidae, 1 Varanidae) and 28 of Suborder Serpentes (2 Typhlopidae, 2 Boidae, 16 Colubridae, 2 Elapidae, 3 Hydrophiidae, 3 Viperidae).

3. Two species of lizards, namely, *Cnemaspis goaensis* and *Riopa goaensis* are described as new to the science.

4. Validity of *Mabuya allapallensis* Schmidt, 1926 has been established. It is shown that *Mabuya macularia* (Blyth) and *Mabuya allapallensis* Schmidt are not conspecific.

5. The following species are recorded for the first time from Goa.

Order TESTUDINES : *Lissemys punctata granosa* (Schoepff).

Order SQUAMATA

Suborder Sauria : *Gymnodactylus albofasciatus* Boulenger, *Hemidactylus brooki* Gray, *Hemidactylus prashadi* Smith, *Hemidactylus frenatus* Schlegel, *Calotes versicolor* (Daudin) *Calotes rouxi* Dumeril & Bibron, *Mabuya macularia* (Blyth), *Mabuya allapallensis* Schmidt, *Riopa punctata* (Gmelin), *Riopa guentheri* (Peters), *Ophisops beddomei* (Jerdon).

Suborder Serpentes : *Typhlops braminus* (Daudin), *Typhlops acutus* (Dumeril & Bibron), *Python molurus* (Linnaeus), *Eryx conicus* (Schneider), *Elaphe helena* (Daudin), *Ptyas mucosus* (Linnaeus), *Oligodon taeniolatus* (Jerdon), *Ahaetulla ahaetulla* (Linnaeus), *Ahaetulla grandoculis* (Boulenger), *Chrysopelia ornata* (Shaw), *Lycodon aulicus* (Linnaeus), *Natrix piscator* (Schneider), *Natrix stolata* (Linnaeus), *Natrix beddomei* (Günther), *Macropisthodon plumbicolor* (Cantor), *Boiga trigonata* (Schneider), *Dryophis nasutus* (Lacépède), *Dryophis pulverulentus* Dumeril & Bibron, *Bungarus caeruleus* (Schneider), *Naja naja* (Linnaeus), *Enhydrina schistosa* (Daudin), *Hydrophis caerulescens* (Shaw), *Lepemis curtus* (Shaw), *Vipera russelli* (Shaw), *Echis carinatus* (Schneider) and *Trimeresurus gramineus* (Shaw).

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