

GENERAL ZOOLOGY

or

SYSTEMATIC NATURAL HISTORY

by

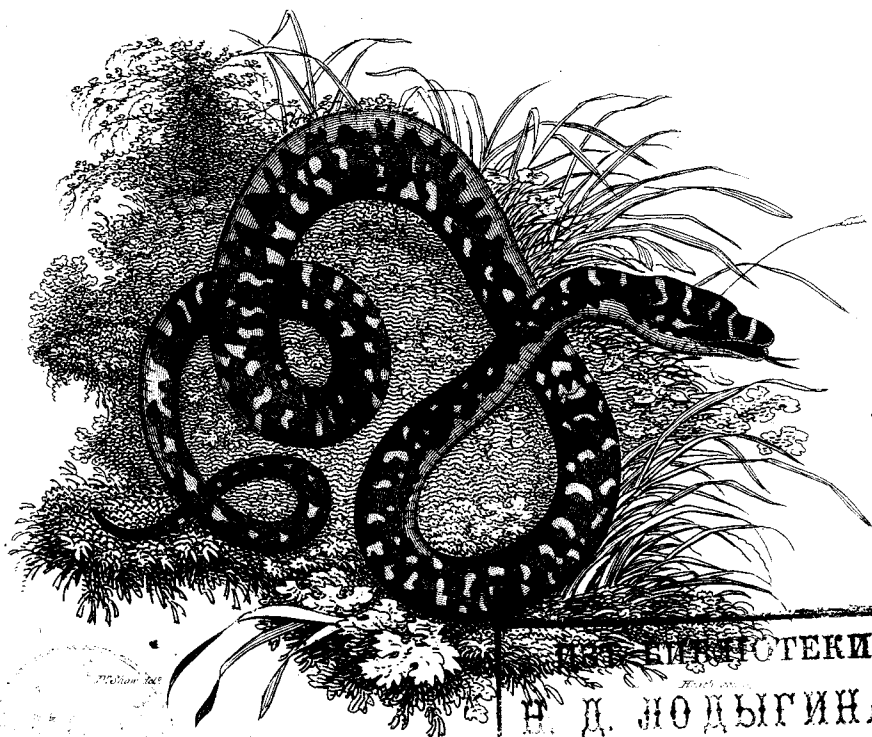
GEORGE SHAW, M.D.F.R.S.&c.

WITH PLATES

from the first Authorities and most select specimens

Engraved principally by

MR. HEATH.



VOL. III. Part II.

AMPHIBIA.

London Printed for G. Kearsley, Fleet Street.

1802.

GENERAL ZOOLOGY.

VOLUME III.—PART II.

AMPHIBIA.

LONDON.

PRINTED BY THOMAS DAVISON,
WHITE-FRIARS.

1802.

C O N T E N T S

OF

VOL. III.—PART II.

	Page		Page
ACROCHORDUS GENUS		Boa, crotaline . . .	352
573		— fasciated . . .	353
— Javan 573		— viperine . . .	355
— doubtful 575		— lineated . . .	356
— fasciated 576		— Horatta . . .	359
		— Siamese . . .	360
ANGUIS GENUS . 578		— hog-nosed . . .	361
		— palpebral . . .	362
AMPHISBÆNA GENUS 591		— annulated . . .	363
— white 591			
— fuliginous 593		CROTALUS GENUS . 317	
BOA GENUS . . 337		COLUBER GENUS . 364	
— Constrictor . . 337			
— ringed . . . 344		CÆCILIA GENUS . 595	
— water . . . 345		— eel-shaped . . 595	
— brown . . . 345		— white-sided . . 596	
— canine . . . 346		— slender . . . 597	
— royal . . . 347			
— embroidered . . 348		HYDRUS GENUS . 555	
— garden . . . 350		— colubrine . . 556	
— rat . . . 351		— Caspian . . 557	

Hydrus, great . . .	558	Snake, broad-checked . . .	428
— slender . . .	560	— fierce . . .	429
— blueish . . .	561	— short-headed . . .	430
— short . . .	562	— silver-eyed . . .	431
— fasciated . . .	563	— coralline . . .	432
— spiral . . .	564	— Canada . . .	433
— black-backed . . .	566	— superb . . .	433
— dark-blue . . .	567	— aulic . . .	434
— cinereous . . .	567	— Boiquatrara . . .	435
— fishing . . .	568	— Malpalon . . .	436
— marsh . . .	570	— striated . . .	436
LANGAYA GENUS . . .	571	— Serenus . . .	437
Rattle-Snake, banded . . .	317	— ocellated . . .	438
— striped . . .	333	— Argus . . .	439
— wood . . .	335	— Chiametla . . .	440
— miliary . . .	336	— Java . . .	441
SIREN GENUS . . .	601	— Daboya . . .	442
Snake, horn-nose . . .	397	— Brasilian . . .	443
— crotaline . . .	400	— triangular-headed . . .	444
— Clotho . . .	401	— Panther . . .	445
— Lachesis . . .	402	— Leopard . . .	445
— Atropos . . .	404	— spotted . . .	446
— Alecto . . .	405	— ringed . . .	446
— Tisiphone . . .	406	— French . . .	449
— Megæra . . .	407	— dun . . .	450
— Spectacle . . .	409	— Æsculâpian . . .	452
— Russelian . . .	418	— mourning . . .	453
— grass-green . . .	420	— large-scaled . . .	456
— severe . . .	421	— carinated . . .	457
— bull-headed . . .	422	— Molurus . . .	458
— crimson-sided . . .	423	— copper-bellied . . .	458
— hæmachate . . .	425	— cupreous . . .	459
— water-viper . . .	425	— Surinam . . .	460
— white . . .	427	— corn . . .	460
— milk-white . . .	427	— textile . . .	462
		— wampum . . .	463
		— black . . .	464

CONTENTS.

v

Snake, viper-headed . . .	465	Snake, white-skinned . . .	497
—— plicatile . . .	466	—— brown . . .	498
—— chain . . .	467	—— grey . . .	499
—— broad-nosed . . .	468	—— Cape . . .	499
—— fulvous . . .	469	—— angular . . .	500
—— short-tailed . . .	470	—— cærulean . . .	501
—— blue-green . . .	471	—— livid . . .	502
—— Lutrix . . .	472	—— red-bead . . .	502
—— graphic . . .	474	—— doubtful . . .	503
—— Cenchoa . . .	475	—— agile . . .	503
—— coachwhip . . .	476	—— flat-nosed . . .	504
—— clouded . . .	476	—— Padera . . .	505
—— ornamented . . .	477	—— Australasian . . .	505
—— Pintado . . .	478	—— cyanean . . .	506
—— miliary . . .	479	—— Sibon . . .	507
—— pearly . . .	480	—— dingy . . .	508
—— marbled . . .	480	—— Tyrian . . .	509
—— Ammobates . . .	481	—— Peliā . . .	509
—— crossed . . .	482	—— egg . . .	509
—— Peruvian . . .	483	—— swift . . .	510
—— Linnæan . . .	486	—— Hickanella . . .	511
—— glossy . . .	487	—— boaform . . .	511
—— Hygeian . . .	487	—— mucous . . .	513
—— Domicella . . .	488	—— cærulescent . . .	514
—— chequered . . .	489	—— smooth . . .	515
—— black-headed . . .	490	—— catenated . . .	516
—— annulated . . .	490	—— cinereous . . .	517
—— Dipsas . . .	491	—— Hippocrepis . . .	518
—— necklace . . .	492	—— scutated . . .	518
—— ring-banded . . .	492	—— Minervā's . . .	519
—— Cobella . . .	493	—— Caspian . . .	520
—— rough . . .	494	—— domestic . . .	520
—— Algerine . . .	495	—— half-spotted . . .	521
—— Hannasch . . .	495	—— Caracara . . .	522
—— red-throated . . .	495	—— quill . . .	523
—— Sipedon . . .	496	—— Schockar . . .	524
—— spotted-sided . . .	497	—— Beatan . . .	524

Snake, Hoellick . . .	525	Snake, Aurora . . .	544
—— Jara . . .	525	—— Iberacoa . . .	544
—— Arnee . . .	526	—— pale . . .	545
—— sagittated . . .	526	—— long-snouted . . .	546
—— streaked . . .	527	—— nasutus . . .	548
—— fasciated . . .	528	—— purpurascens . . .	549
—— biped . . .	528	—— iridescent . . .	550
—— lineated . . .	529	—— summer . . .	551
—— Dart . . .	530	—— filiform . . .	551
—— Sibilant . . .	530	—— black-tailed . . .	552
—— Situla . . .	532	—— collared . . .	553
—— Saurite . . .	532		
—— vittated . . .	533	Viper, common . . .	365
—— black-backed . . .	534	—— black . . .	375
—— Sirtal . . .	535	—— American black . . .	377
—— elegant . . .	536	—— Ammodytes . . .	379
—— tæniated . . .	537	—— Charasian . . .	379
—— bilineated . . .	538	—— Redi's . . .	380
—— bugle . . .	539	—— Asp . . .	381
—— trifasciated . . .	542	—— Swedish . . .	382
—— stolated . . .	542	—— Greek . . .	384
—— trilineated . . .	543	—— Scythian . . .	385
—— Bochr . . .	543	—— Cerastes . . .	385

ERRATA.—VOL. III. PART II.

P. 449, l. 1. for *punctato* read *punctatis*.P. 482, l. 1. for *dorsal* read *dorsali*.

Directions for placing the Plates in vol. III. part II.

The Vignette represents a species of Australasian Snake not yet fully described: it has the habit of a Boa, is covered with very small scales, and varied with irregular yellow spots on a blackish ground: length about 14 inches. See *White's Voyage*, p. 259. pl. 46.

Plate 87	to face page 314	Plate 114	to face page 454
88	_____ 317	115	_____ 455
89	_____ 333	116	_____ 458
90	_____ 334	117	_____ 458
91	_____ 335	118	_____ 460
92	_____ 339	119	_____ 461
93	_____ 340	120	_____ 463
94	_____ 344	121	_____ 465
95	_____ 346	122	_____ 483
96	_____ 347	123	_____ 556
97	_____ 348	124	_____ 558
98	_____ 350	125	_____ 564
99	_____ 353	126	_____ 566
100	_____ 355	127	_____ 571
101	_____ 365	128	_____ 573
102	_____ 377	129	_____ 575
103	_____ 385	130	_____ 576
104	_____ 397	131	_____ 582
105	_____ 402	132	_____ 583
106	_____ 403	133	_____ 588
107	_____ 409	134	_____ 591
108	_____ 418	135	_____ 593
109	_____ 422	136	_____ 595
110	_____ 423	137	_____ 596
111	_____ 425	138	_____ 601
112	_____ 452	139	_____ 608
113	_____ 453	140	_____ 612

A M P H I B I A.

ORDER

S E R P E N T E S.



THESE animals are sufficiently distinguished from the preceding tribes of Amphibia by their total want of feet, moving by the assistance of their scales, and their general powers of contortion.

The distinction of species in this numerous tribe is often peculiarly difficult. Linnæus persuaded himself that an infallible criterion might be found in the number of scaly plates on the abdomen and beneath the tail; and, accordingly, attempted in the *Systema Naturæ* to discriminate the species by this mark alone: experience, however, has sufficiently shown that, though often highly useful in the investigation of these animals, it is yet by much too uncertain and variable to be permitted to stand as an established specific test; and it is to be lamented that Linnæus should have so little availed himself of other more ob-

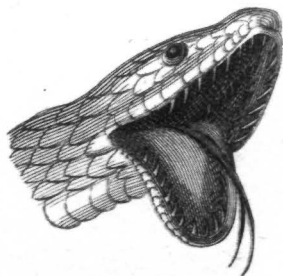
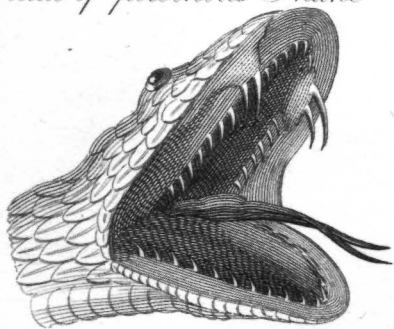
vious characters. The colour is indeed often variable, but the pattern, or general distribution of markings in each species, appears to be more constant: the relative size of the head, the length of the body and tail, the size, smoothness, or roughness of the scales, as well as their shape in different parts of the animal, often afford pretty certain specific marks.

The distinction of Serpents into poisonous and innoxious can only be known by an accurate examination of their teeth; the fangs or poisoning teeth being always of a tubular structure, and calculated for the conveyance or injection of the poisonous fluid from a peculiar reservoir communicating with the fang on each side of the head: the fangs are always situated in the anterior and exterior part of the upper jaw, and are generally, but not always, of much larger size than the other teeth; they are also frequently accompanied by some smaller or subsidiary fangs, apparently destined to supply the principal ones when lost either by age or accident. The fangs are situated in a peculiar bone, so articulated with the rest of the jaw as to elevate or depress them at the pleasure of the animal: in a quiescent state they are recumbent, with their points directed inwards or backwards; but when the animal is inclined to use them as weapons of offence, their position is altered by the peculiar mechanism of the above-mentioned bone in which they are rooted, and they become almost perpendicular.

Head of poisonous Snake

of innoxious D.

87



Tail of Coluber



Carinated Scale



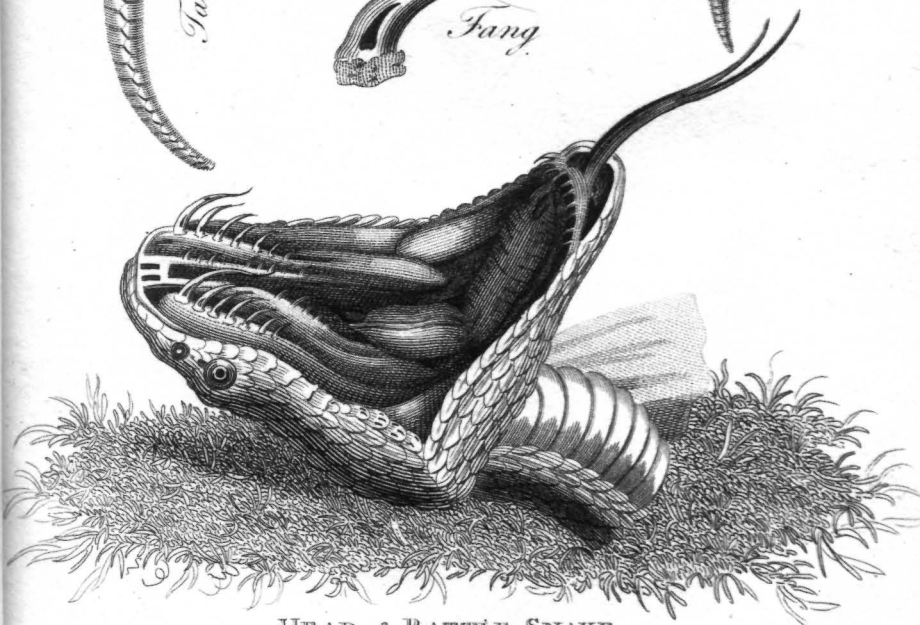
Plain Scale



Tail of Boa



Fang



HEAD of RATTLE-SNAKE.

A general rule for the determination of the existence or non-existence of these organs in any species of Serpent is proposed in a paper relative to the Amphibia by Dr. Gray, and published in the Philosophical Transactions for the year 1788. The fangs, according to Dr. Gray, may be distinguished with great ease, and, as he believes also, with great certainty, by the following simple method. When it is discovered that there is something like teeth in the anterior and exterior part of the upper jaw, which situation he considers as the only one in which venomous fangs are ever found, let a pin or other hard body be drawn from that part of the jaw to the angle of the mouth; (which operation may, for greater certainty, be tried on each side). If no more teeth be felt in that line, it may, he thinks, be fairly concluded that those first discovered are fangs, and that the serpent is consequently venomous: if, on the contrary, the teeth first discovered be observed not to stand alone, but to be only a part of a complete row, it may as certainly be concluded that the serpent is not venomous. This rule, however, like most others, may have its exceptions, and perhaps the most legitimate test of real fangs in a serpent is their tubular structure, which may always be easily detected by the assistance of a proper magnifier. It is to be observed, that all serpents, whether poisonous or not, have besides the teeth (whether fangs or simple teeth), in the sides of the upper jaw, two additional or interior rows, which are generally much smaller than the rest,

and frequently scarce visible: the general rule, therefore, is, that all venomous serpents have only two rows of true or proper teeth in the upper jaw, and that all others have four.

A head entirely covered with small scales is in some degree a character, but by no means a universal one, of poisonous serpents; as are also carinated scales on the head and body, or such as are furnished with a prominent middle line.

All Serpents are in the habit of casting their skin at certain periods; in temperate regions annually; in the warmer perhaps more frequently. The serpents of the temperate and cold climates also conceal themselves, during the winter, in cavities beneath the surface of the ground, or in any other convenient places of retirement, and pass the winter in a state more or less approaching, in the different species, to complete torpidity. It may be added, that some serpents are viviparous, as, the Rattle-Snake, the Viper, and many others of the poisonous kind, while the Common Snake, and probably the major part of the innoxious serpents, are oviparous, depositing their eggs in a kind of string or chain in any warm and close situation, where they are afterwards hatched.

The broad undivided laminæ or scaly plates on the bellies of Serpents are termed *scuta*, and the smaller or divided plates beneath the tail are called *squamæ subcaudales*, or subcaudal scales, and from these different kinds of laminæ the Linnæan genera of Serpents are chiefly instituted.

BANDED RATTLE SNAKE.



CROTALUS. RATTLE-SNAKE.

Generic Character.

<i>Scuta abdominalia.</i>	<i>Scuta on the abdomen.</i>
<i>Scuta Squamæque subcaudales.</i>	<i>Scuta and Squamæ beneath the tail.</i>
<i>Crepitaculum terminale caudæ.</i>	<i>Rattle terminating the tail.</i>

BANDED RATTLE-SNAKE.

Crotalus Horridus. C. fusco-flavescens, fasciis transversis nigricantibus.

Yellowish-brown Rattle-Snake, with blackish transverse bands.

Crotalus horridus. Lin. Syst. Nat. p. 372.

Vipera caudisona Americana. Catesb. Car. 2. t. 41.

Abdominal scuta 167, subcaudal 23.

THE genus *Crotalus*, or Rattle-Snake, affords the most signal examples of the powerfully destructive poison with which some of the serpent tribe are furnished; instances having frequently occurred in which the bite of these snakes has proved fatal to mankind in the space even of a very few minutes.

Till the discovery of the Western Hemisphere the knowledge of these serpents was concealed from the rest of the world, and philosophers then first beheld with amazement a reptile of the most

fatal nature, furnished, as if by a peculiar institution of Providence, with an instrument capable, in general, of warning mankind of their danger in too near an approach.

The different species of Rattle-Snakes seem to have been generally confounded with each other ; and even Catesby, who travelled in those parts of North America where it is found, seems to have been unacquainted with one of the most remarkable species, and to have particularly described the Banded Rattle-Snake only, which he has also figured with sufficient clearness to prevent its being confounded with any other kind, though not with that minute attention to all the particulars which the more improved state of Natural History at present demands.

This species is found, in general, from three to four or five feet in length, and is of a yellowish brown colour, marked throughout its whole length with several transverse and somewhat irregular fasciæ of deep brown, and from the head to some distance down the neck run two or three longitudinal stripes of the same colour ; the head is large, flat, and covered with small scales ; the rest of the upper parts with moderately large oval ones, all strongly carinated or furnished with a prominent line down the middle : the under parts are of a dingy yellowish brown colour, marked here and there with numerous dusky variegations and freckles : at the extremity of the tail is situated the rattle, consisting of several hard, dry, horny processes, the peculiar structure of which will be