CATALOGUE OF LINNEAN TYPE-SPECIMENS OF SNAKES

IN THE ROYAL MUSEUM IN STOCKHOLM.

 \mathbf{BY}

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• In the Royal Museum in Stockholm are preserved the most of the type-specimens of Linnæus's »Serpentes». Most of these came from Museum Adolphi Friderici regis and are described by Linnæus in the two parts of his work on this museum. The first part, which is much the larger of the two— the great volume, in folio, with excellent figures— was published in 1754: the second part, however, though finished that same year, was not published till ten years later, owing to the troubled times at court, when it appeared, together with the description of Museum Ludovicæ Ulricæ, like which it also is a Prodromus and without figures.

When Gustaf IV Adolf in 1801 divided the collections of his grandparents between the University of Upsala and the R. Academy of Science in Stockholm, the snakes came among other things to Stockholm. Besides these specimens from Mus. Ad. Frid., there are in the R. Museum a few other Linnean type-specimens of snakes. These came from the museum of the court Marshal, Carl de Geer, at Löfsta in Upland, and are characterized by Linnæus, but only in Systema Naturæ. After Carl de Geer's death in 1778 his widow presented the greater part of his collections to the R. Academy of Science.

At the request of the Director of the Vertebrate Department of the R. Mus., Professor F. A. Smitt, I have revised these Linnean type-specimens. The result of my work is given in this paper.

The Linnean specimens from Mus. Ad. Frid. are marked with small rectangular labels with printed Linnean names,

In a paper on the species of Echinoidea described by Linnaus in his work "Museum Ludovica Ulrica" in K. V. A. Handl., Bihanget, Band 13, Afd. IV, 1888, S. Lovén gives an interesting account of the origin of this museum, as also of that of Queen Lovisa Ulrika, and of Linnaus's work in both of these.

for which reason these specimens in general have been easily distinguished. According to S. Loven it was not Linnæus who labeled the objects in the museum in question, but O. Schwartz, Director of the museum of the R. Academy of science from 1806 to 1819, and already in 1789 commissioned to take charge of the collections in question. As Schwarz was a botanist and not a zoologist, it is possible that the mistakes in the thicketing which in some cases probably are made may date from his time.

The snakes from Mus. DE GEER are all in want of any significant label, but from the older collections there is in the R. Museum usually only one specimen of these types, which specimens always completely agree with Linnæus's diagnoses in Systema Naturæ. Therefore, it was easy to distinguish also these types.

Linnæus has described 71 species from Mus. Ad. Frid., 57 in his first part and 14 in his second, arranged under his well-known 6 genera, Coecilia (2 species), Amphisbæna (2 species), Anguis (3 species), Coluber (61 species), Boas (2 species), and Crotalus (1 species). In the 12:th edition of Systema Naturæ he gives 8 species (6 Coluber and 2 Boa) from Mus. DE GEER.

To judge from the manuscript catalogues of 1802 and 1808 of the collections of the R. Acad. of Sc., two of the types in the Mus. Ad. Frid. had been lost before its removal to the Academy, viz., Coluber Tyria, and Coluber libetinus, both obtained by Hasselqvist during his »Iter Palæstinum». But these catalogues do not seem to be very trustworthy. They differ considerably, especially in regard to the number of the specimens of each species, in which they both further differ from a catalogue, showing the actual state of the collection. At present are the specimens of a species often fewer than stated in these catalogues. If this only was the case, we might suppose that the missing ones had been lost, but frequently there are more specimens of a species than stated, and then we must presume that there are mistakes in the catalogues or else that other Linnean typespecimens have been found since the catalogues were drawn up.

From my revision it appears that of LINNEUS'S 71 types described in Mus. Ad. Frid. at present only 55 remain. The authenticity of two of these, Coluber cobella and Coluber cinereus, is, however, doubtful. Beside the two above-mentioned the following are now missing: Boa Hipnale, Coluber vittatus, C. natrix, C. agilis, C. buccatus, C. exoletus, C. scaber, C. coerulescens, C. hortulanus, C. viridissimus, Crotalus horridus, Anguis Meleagris, A. Jaculus, and A. laticaudatus. From the Museum de Geer all types remain.

In addition to the 55 Linnean types from Mus. Ad. Frid., mentioned above, two others Coluber Constrictor and Coluber Cerastes may be stated. The former is not mentioned in Mus. Ad. Frid., the latter is spoken of by LINNÆUS as a by art deformed specimen of another species.

It is possible that of the types mentioned as missing some may still exist in the R. Mus., though the characteristic labels are lost. This being the case, I dare not pronounce the specimens to be Linnean types, if LINNÆUS does not give in his descriptions anything characteristic of the specimens. In such cases, however, I have considered myself able to identify without any doubt the specimens as LINNÆUS'S, though the labels were missing.

As is to be expected from Linnæus's usually clear descriptions, which are also furnished with good figures, his types have in general been correctly identified by the herpetologists. Some specimens, however, have been wrongly judged, and there is a number of his types which the authors have not been able to identify at all.

Museum Regis Adolphi Friderici I. I.

Cœcilia tentaculata.

Described by LINNÆUS in Amoen. Acad. Tom. I, N:o XVI, p. 489, N:o 3. Mus. Ad. Frid. I, p. 19, tab. 5, fig. 2. Syst. Nat. Ed. X, p. 229; Ed. XII, p. 393.

Syn. in Boulenger's Catalogue of the Batrachia Gradientia p. 93, 1882, Coecilia tentaculata Linnæus.

(For other synonyms see Boul. loc. cit.)

One specimen from Museum Drottningholmense.1

Total length 320 mm. — 185 rugis.

Cœcilia glutinosa.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 19, tab. 4, fig. 1. Syst. Nat. Ed. X, p. 229; Ed. XII, p. 393.

Syn. in Boulenger's Cat. of the Batr. Grad. p. 89, 1882, Ichthyophis glutinosus Linnæus.

(For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh.

Total length 400 mm., 355 >rugis > (Linnæus states about 350).

Amphisbæna fuliginosa.

Described by Linnæus in Amoen. Acad. Tom. I, N:o XI, p. 295, N:o 22. Mus. Ad. Frid. I, p. 20. Syst. Nat. Ed. X, p. 229; Ed. XII, p. 392.

Syn. in Boul. Cat. of Lizards Vol. II, 1885, p. 437, Amphisbæna fuliginosa Linnæus.

(For other synonyms see Boulenger loc. cit.).

One specimen from Mus. Drottningh.

Total length 390 mm. Tail 50 mm. V.2 210. C.3 28.

Amphisbæna alba.

Described by Linnæus in Mus. Ad. Frid. I, p. 20, tab. 4, fig. 2. Syst. Nat. Ed. X, p. 229; Ed. XII, p. 393.

¹ The museums of Adolphi Friderici and Lovisæ Ulricæ are also called >Museum Drottningholmense> on the ground that the collections were preserved in the Royal palace of Drottningholm.

2 V. = ventral shields.

³ C. = subcaudal shields.

Syn. in Boulenger's Cat. Liz. Vol. II, 1885, p. 438, Amphisbæna alba Linnæus.

(For other synonyms see Boul. loc. cit.)

Two specimens from Mus. Drottningh.

Total length 690 mm. Tail 65 mm. V. 222. C. 16.

» 620 » » 60 » V. 223. C. 17.

Anguis Scytale.

Described by LINNÆUS in Amoen. Acad. Tom. I, N:o XI, p. 296, N:o 23 and N:o XVI, p. 492, N:o 6, Mus. Ad. Frid. I, p. 21, tab. 6, fig. 2. Syst. Nat. Ed. X, p. 228, Ed. XII, p. 391.

Syn. in Boulenger's catalogue of Snakes Vol. I, p. 133, 1893, Ilysia scytale (L.) Lichtenst.

(For other synonyms see Boul. loc. cit.)

Three specimens from Mus. Drottningh.

Total length 630 mm. Tail 30 mm. Sq. 1 21. V. 211. C. 11.

> 570 > 27 > Sq. 21. V. 216. C. 12.

> 560 > 25 > Sq. 21. V. 212. C. 12.

Anguis maculata.

Described by Linnæus in *Mus. Ad. Frid. I, p. 21, tab. 21, fig. 3*, Syst. Nat. Ed. X, p. 228, Ed. XII, p. 391.

Syn. in Boul. Cat. Sn. Vol. I, p. 136, Cylindrophis maculatus (L.) Gray.

(For other synonyms see Boul. loc. cit.)

Three specimens from Mus. Drottningh.

Total length 420 mm. Tail 10 mm. Sq. 21. V. 197. C. 6.

⇒ 325 → 8 → Sq. 21. V. 203. C. 6.

> 270 » > 8 > Sq. 21. V. 192. C. 5

LINNÆUS states the number of the subcaudals at 12, probably owing to a mistake: they are in this case as usual not more than six.

Anguis bipes.

Described by LINNÆUS in *Mus. Ad. Frid. I, p. 21, tab. 28, fig. 3*, Syst. Nat. Ed. X, p. 227, Ed. XII, p. 390.

Syn. i Boul. Cat. Liz. III, p. 414. Scelotes bipes (L.) Boul.

(For other synonyms see Boul. loc. cit.)

In the Royal Museum there is one specimen of this lizard, which is evidently the type of LINNÆUS'S Anguis bipes. —

 $^{^{1}\ \}mathrm{Sq.}=\mathrm{The}\ \mathrm{number}$ of the rows of scales on the thickest part of the body.

A fragment of a label from Mus. Drottn. is still preserved and the characteristics of the specimen agree completely with Linnæus's description and figure.

Total length 105 mm. Tail 29 mm. Hind limbs 5 mm.

Coluber atropos.

Described by Linnæus in *Mus. Ad. Frid. I, p. 22, tab. 13, fig. 1*, Syst. Nat. Ed. X, p. 216, Ed. XII, p. 375.

Syn. in Boul. Cat. Sn. III, p. 495, Bitis atropos (L.) Gunther. (For other synonyms see Boul. loc. cit.)

There are two specimens from Mus. Drottningh., labeled Coluber atropos. — The one of these, evidentely the type for Linnæus's description, is a true Bitis atropos, the other one is a Vipera lebetina (L.) Daud.

Bitis atropos: Total length 500 mm. Tail 50 mm. Sq. 29 (30). V. 132. C. 23. Vipera lebetina: >> 620 >> 80 >> Sq. 23 V. 155. C. 48.

Coluber Calamarius.

Described by LINNÆUS in *Mus. Ad. Frid. I, p. 23, tab. 6, fig. 3,* Syst. Nat. Ed. X, p. 216, Ed. XII, p. 375.

This Linnean type is regarded by the authors as synonymous with Calamaria Linnæi Boie. At a glance we, however, find that Linnæus's Coluber Calamarius and the authors' Calamaria Linnæi are different species. The head of the Linnean specimen is provided with all the usual shields while the genus Calamaria is in want of the loreal, the internasals, and the temporals. Linnæus's specimen is identical with Oligodon Templetonii GÜNTHER, from Ceylon, which species is first described at a later period. The specimen in question agrees completely with the description of this snake. The singular position of the sixth upper labial and the form and ranging of the other head-shields are exactly the same as in O. Templetonii, which appears from the descriptions and from the figure in GUNTHER'S »Reptiles of British India» Pl. 19, fig. c. The colour also seems to have been the same though the specimen is rather discoloured. The yellowish vertebral streak is distinct, especially on the tail. The dark cross bands are indistinct on the posterior part of the body, but they seem to be more than 18 in number. The ventral shields have alternating white and black square spots. The head is of a fairly uniform colour. The only character which differs from the descriptions is the number of the caudal shields. Boulenger mentions these shields as varying between 28 and 31, but as he only had three specimens at his disposal, these figures are of no great importance. On this specimen the caudal shields are only 22 in number, which, however, is a slight difference. The number of the ventrals agrees with those before found. -- Therefore I may pronounce Linnæus's Coluber Calamarius to be a synonym of GÜNTHER'S Oligodon Templetonii. Its true name would then be Oligodon calamarius (L.).

(For fuller description see Boul. Cat. Sn. II, p. 241.)

Total length 210 mm. Tail 25 mm. Sq. 15. V. 140. C. 22.

Coluber Plicatilis.

Described by Linnæus in Amoen. acad. Tom I, N:o XI, p. 301, N:o 26, Mus. Ad. Frid. I, p. 23, tab. 6, fig. 1, Syst. Nat. Ed. X, p. 217, Ed. XII, p. 376.

Syn. in Boul. Cat. Sn. II, p. 186, Dimades plicatilis (L.) Gray. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh.

Total length 770 mm. Tail 160 mm. Sq. 15. V. 131. C. 47.

Coluber angulatus.

Described by LINNÆUS in Amoen. acad. Tom I, N:o V, p. 119, N:o 7, Mus. Ad. Frid. I, p. 23, tab. 15, fig. 1, Syst. Nat. Ed. X, p. 217, Ed. XII, p. 377.

Syn. in Boul. Cat. Sn. I, p. 278, Helicops angulatus (L.) Dum. & Bibr. (For other synonyms see Boul. loc. cit.)

Total length 600 mm. Tail 160 mm. Sq. 19. V. 120. C. 61.

Coluber albus.

Described by Linnæus in Mus. Ad. Frid. I, p. 24, tab. 14, fig. 2, Syst. Nat. Ed. X, p. 218, Ed. XII, p. 378.

Syn. in Boul. Cat. Sn. I, p. 305, Brachyorrhus albus (L.) Boil. (For other synonyms see Boul. loc. cit.)

There is one specimen from Mus. Drottningh. It differs a little in the number of the caudal shields from what LIN-NEUS stated. They are 27, instead of 20 according to LINNEUS. In other respects this specimen agrees completely with LinNEUS'S description and figure. It differs from the description in BOULENGER'S catalogue in that the fifth upper labial on both sides is divided into two shields.

Total length 460 mm. Tail 45 mm. Sq. 19. V. 170. C. 27.

Coluber Reginæ.

Described by Linnæus in Mus. Ad. Frid. I, p. 24, tab. 13, fig. 3, Syst. Nat. Ed. X, p. 219, Ed. XII, p. 378.

Syn. in Bouleng. Cat. Sn. II, p. 137, **Liophis reginæ** (L.) Dum. & Bibb. (For other synonyms see Boul. loc. cit.)

From the Museum Drottningholmense there is a jar, labeled Coluber Reginæ. This contains two young specimens of Liophis reginæ (L.) Dum. & Bibr. and a young Aporophis lineatus (L.) Cope, which latter, probably by mistake, has been put among these young Liophis reginæ, to which, at a rapid glance, it seems rather similar. No doubt, however, exists that Linnæus by his description meant Liophis reginæ.

Liophis regine: Total length 250 mm. Tail 65 mm. Sq. 17. V. 137. C. 76.

3 3 210 3 55 3 Sq. 17. V. 141(?). C. 82.

Aporophis lineatus: 3 200 3 55 3 Sq. 19. V. 165. C. 91.

Coluber Melanocephalus.

Described by Linnæus in Mus. Ad. Frid. I, p. 24, tab. 15, fig. 2, Syst. Nat. Ed. X, p. 218, Ed. XII, p. 378.

Syn. in Boul. Cat. Sn. III, p. 215, Homalocranium melanocephalum (L.) Dum. & Bibr.

(For other synonyms see Boul. loc. cit.)

There are two snakes, labeled Coluber melanocephalus, from Museum Drottningholmense. Of these one is a Homalocranium melanocephalum (L.) Dum. & Bibr., the other is a Polyodonthophis subpunctatus (Dum. & Bibr.) Boul. It is evident from Linnæus's description of Coluber Melanocephalus that he meant the former snake; the number of the shields and the statement »vertex punctis duobus albidis» prove this. But as type for the figure he took the other specimen; wherefore the description and the figure represent quite different snakes.

From the description of Hom. melanocephalum in Bou-LENGER'S catalogue this specimen differs in that the symphysial is in contact with the anterior chin-shields, separating the first lower labials. Nearly the same is the case, according to Boulenger, with two of the specimens in the British Museum and Cope's Tantilla pallida, which Cope in Proc. Am. Phil. Soc. XXIV, 1887, p. 56 describes with the symphysial shield quite similarly situated as in this specimen, is also considered by Boulenger to be a Hom. melanocephalum.

I therefore believe that this difference does not prevent our identifying Linnæus's specimen with this snake, as it in other respects completely corresponds with the description.

Hom. melanocephalum: Total length 210 mm. Tail 55 mm. Sq. 15. V. 142. C. 62. Polyod. subpunctatus: > 360 > 85 > Sq. 17. V. 175. C. 56.

Coluber Cobella.

Described by Linnæus in Amoen. Acad. Tom I, N:o V, p. 117, N:o 4, N:o XI, p. 302, N:o 28, and N:o XVI, p. 496, N:o 14, Mus. Ad. Frid. I, p. 24, Syst. Nat. Ed. X, p. 218, Ed. XII, p. 378.

Syn. in Bour. Cat. Sn. II, p. 166, Rhadinæa cobella (L.) Bour.

There is at present no specimen of this snake in the Royal Museum marked with the Drottningh. label. According to QUENSEL there were, however, in 1802 three specimens from Mus. Drottningh., and it is not probable that all these have been lost.

On closer studying of Linnæus's description of Col. Cobella in Mus. Ad. Frid., we find that his type-specimen probably was not a Rhadinæa cobella (L.) Boul. On the ground of the number of the shields and the colour I think that he had as type a specimen of Liophis reginæ (L.) Dum. & Bibr. In the museum there are also two specimens of this snake from an earlier period, called Coluber cobella, which very much agree with the Linnean description of this later one. Therefore, it is possible that these specimens are the types of Linnæus's Col. Cobella in Mus. Ad. Frid. Lönnberg, however, has shown that Linnæus in Amoen. Acad. with Col. Cobella meant the snake which is now called Rhadinæa cobella and Linnæus's mistake in Mus. Ad. Frid. does not cause a change of the usual names.

^{1 &}gt;Linnean Type-Specimens of Birds, Reptiles, Batrachians, and Fishes in the Zoological Mus. of the R. University in Upsala revised by Dr. Einar Lönnberg in Bihang till K. Vet.-Akad. Handl. Band 22, Afd. IV, N:o 1. Stockh. 1896.

The lengths and the numbers of the shields in the two above mentioned specimens of Liophis reginæ are the following.

Total length 650 mm. Tail 180 mm. Sq. 17. V. 141. C. 72.

Coluber severus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 25, tab. 8, fig. 1,* Syst. Nat. Ed. X, p. 219, Ed. XII, p. 379.

Syn. in Boul. Cat. Sn. II, p. 149, **Xenodon severus** (L.) Schleg. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn., a true Xenodon severus. Total length 280 mm. Tail 40 mm. Sq. 21. V. 135. C. 41.

LINNÆUS'S statement, 170 ventral shields, must be a mistake. The specimen is from its damaged tail and from the presence of a frog in its stomach, so very characteristic that there can be no doubt that it is the Linnean type-specimen.

Coluber Aurora.

Described by Linnæus in *Mus. Ad. Frid. I, p. 25, tab. 19, fig. 1,* Syst. Nat. Ed. X, p. 219, Ed. XII, p. 379.

Syn. in Boul. Cat. Sn. I, p. 321, Lamprophis aurora (L.) Smith. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn. It is a true Lampr. aurora.

Total length 660 mm. Tail 85 mm. Sq. 23. V. 179. C. 36.

Coluber stolatus.

Described by Linnæus in Mus. Ad. Frid. I, p. 26, tab. 22, fig. 1, Syst. Nat. Ed. X, p. 219, Ed. XII, p. 379.

Syn. in Boul. Cat. Sn. I, p. 253, **Tropidonotus stolatus** (L.) Boie. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh., a true Tropidonotus stolatus.

Total length 490 mm. Tail 135 mm. Sq. 19. V. 144. C. 76.

The characteristics of the specimen agree with the description in Boulenger's catalogue, except that there are four postoculars on the right side instead of three.

 $^{^{1}\ \}mathrm{As}\ \mathrm{already}\ \mathrm{mentioned}\ \mathrm{by}\ \mathrm{Linn}.\mathrm{\texttt{\texttt{mu}}}\mathrm{s},\ \mathrm{the}\ \mathrm{tail}\ \mathrm{of}\ \mathrm{this}\ \mathrm{specimen}\ \mathrm{is}\ \mathrm{evidently}\ \mathrm{mutilated}.$

Coluber vittatus.

Described by Linnæus in Mus. Ad. Frid. I, p. 26.

LINNÆUS seems to have had no less than four specimens at his disposal in writing the description of this species in Mus. Ad. Frid. According to the catalogue of 1802 there was then only one specimen to be found in the museum. At present there is no specimen of this form bearing the Drottningholm label; and, as LINNÆUS does not mention anything characteristic in his specimens, I cannot decide whether anyone of the specimens now in the museum is LINNÆUS'S type.

Coluber miliaris.

Described by Linnæus in Mus. Ad. Frid. I, p. 27, Syst. Nat. Ed. X, p. 220, Ed. XII, p. 380.

Syn. in Boul. Cat. Sn. II, p. 168, Rhadinæa merremii (Wied.) Boul. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh., a true Rhadinæa Merremii,

Total length 600 mm. Tail 120 mm. Sq. 17. V. 163. C. 59.

Boulenger puts a ? to Linnæus's Coluber miliaris as synonymous with Rhadinæa Merremii (Wied.). I am now able to prove that the two species are identical, wherefore the name of this snake should be Rhadinæa miliaris (L.).

Coluber rhombeatus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 27, tab. 24, fig. 2,* Syst. Nat. Ed. X, p. 220, Ed. XII, p. 380.

Syn. in Boul. Cat. Sn. III, p. 138, Trimerorhinus rhombeatus (L.) Smith.

(For other synonyms see Boul. loc. cit.)

There is a jar from Mus. Drottningh., labeled Coluber rhombeatus. This contains two true Trim. rhombeatus (L.) and two Pseudaspis cana (L.) Cope. — No doubt exists that Linnæus in his description of Col. rhombeatus meant the former, though he, or some one else, afterwards, misled perhaps by the resemblance in colour between the two forms, regarded the specimens of Pseud. cana as being Col. rhombeatus.

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Trim. rhombeatus: Total length 600 mm. Tail 145 mm. Sq. 17. V. 156, C. 74.
                                                        Sq. 17. V. 155. C. 35.1
                                               75¹ »
                                480
Pseudaspis cana:
                                450
                                                70 »
                                                        Sq. 31. V. 206. C. 54.
                                                       Sa. 31. V. 206. C. 54.
                                405
                                               65 »
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Coluber natrix.

Described by Linnæus in Mus. Ad. Frid. I, p. 27.

There is no specimen of this snake bearing the Linneanlabel to be found in the museum. This is also the case with regard to the following.

Coluber agilis.

Described by Linnæus in Mus. Ad. Frid. I, p. 27.

Coluber mycterizans.

Described by Linnæus in Mus. Ad. Frid. p. 28, tab. 5, fig. 1, tab. 19, fig. 2, Syst. Nat. Ed. X, p. 226, Ed. XII, p. 389.

Syn. according to Boul. Cat. Sn. III, p. 182, Dryophis mycterizans (L.) Boul.

In the jar in the museum, which is labeled Coluber mycterizans from Museum Drottningh., there are two snakes, but neither of these represents Boulenger's Dryophis mycterizans. One is Dryophis xanthozona Bore and the other is Oxybelis acuminatus Wied. From Linnæus's description and figure on table 5 in Mus. Ad. Frid. it is evident that the former was the type for his description of Coluber mycterizans.2 His description of the colour corresponds with this specimen (»color supra carneus, linia longitudinali ferruginea, fasciis in antica parte subcoerulescentibus»), although the ferruginous band on the back is rather discoloured. The number of the ventral shields agrees also. The caudals are stated by Linnæus to be 39; but it is evident that a unit has been omitted before 39, which should be 139, as this number corresponds with that of this specimen.3

¹ The tail is mutilated.

² The figure on table 19 might possibly represent the specimen of Oxyb.

acuminatus; this is, however, very uncertain.

3 In Syst. Nat. Linneus states the caudal shields at 167, but he must have counted the shields of some specimen of another species.

In the Catalogue of Snakes Boulenger only speaks of green-coloured specimens of Dryophis xanthozona, which would not agree with the supposition that the specimen in question belongs to this species. It is, however, probable that the colour of this form varies as well as that of the nearly related *Dryoph. prasinus* Boie, from which it seems to differ only in a slightly different number of shields. The colour of this latter is, according to Boulenger, sometimes green, sometimes pale-olive or gray-brown. In other respects the description of Dryophis xanthozona agrees completely with this specimen.

Therefore the Linnean name mycterizans ought to be given to this snake, which will thus be named Dryophis mycterizans (L.).

According to the synonymy in Boulenger's catalogue the Dryophis mycterizans of the authors must instead be called *Dryophis nasutus* (Lacep.) Schleg.

Dryoph. mycterizans: Total length 730 mm. Tail 245 mm. Sq. 15. V. 192. C. 140. Oxybelis acuminatus: > 840 > 340 > Sq. 17. V. 182. C. 170.

Coluber Lacteus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 28, tab. 18, fig. 1,* Syst. Nat. Ed. X, p. 220, Ed. XII, p. 381.

Syn. in Boul. Cat. Sn. III, p. 409, Homorelaps lacteus (L.) Boul. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 480 mm. Cauda 50 mm. Sq. 15. V. 203. C. 31.

This specimen differs from the description of Hom. lacteus in Boulenger's catalogue by *two* postoculars, the lower of which enters the eye only with a corner. The 5:th upper labial is not in contact with the parietals, from which it is separated by the anterior temporal.

Coluber Aesculapii.

Described by Linnæus in Amoen. Acad. Tom I, N:o XVI, p. 497, N:o 15; *Mus. Ad. Frid. I, p. 29, tab. 11, fig. 2*, Syst. Nat. Ed. X, p. 220, Ed. XII, p. 380.

Syn. in Boul. Cat. Sn. III, p. 200, Erythrolamprus aesculapii (L.)

(For other synonyms see Boul. loc. cit.)

There are three specimens from Mus. Drottn., labeled Coluber Aesculapii. Two of these are identical with Erythrolamprus aesculapii, the third is a specimen of Elaps lemniscatus (L.) Schneid.

Erythr. aesculapii: Total length 390 mm. Tail 90 mm. Sq. 15. V. 176. C. 40.

350 > 105 > Sq. 15. V. 184. C. 50.

Elaps lemniscatus: > 385 > 55 > Sq. 15. V. 261. C. 35.

Of the two specimens of Erythr. aesculapii the longer has been the type for the figure in Mus. Ad. Frid. On this specimen there are 16 pairs of black annuli, if those on the tail be counted. (It belongs to forma C. in Boul. cat.) The other specimen has 24 pairs of annuli and belongs to forma L. in Boulenger's catalogue, which form he pronounces to be identical with Linnæus's Coluber agilis.

Coluber Buccatus.

Described by Linnæus in Mus. Ad. Frid. I, p. 29.

There is no Linnean type-specimen of this snake in the Royal Museum.

Coluber anliens.

Described by LINNÆUS in *Mus. Ad. Frid. I, p. 29, tab. 12, fig. 2,* Syst. nat. Ed. X, p. 220, Ed. XII, p. 381.

Syn. in Boul. Cat. Sn. I, p. 352, Lycodon aulieus (L.) Boil. (For other synonyms see Boul. loc. lic.)

One specimen (a young-one) from Mus. Drottn.

Total length 250 mm. Tail 45 mm. Sq. 17. V. 185. C. 65.

A brown band runs along the upper part of the labials from the nostril to behind the eye, for which reason I cannot, as Boulenger does, declare Linnæus's Coluber aulicus to be identical whith Boulenger's forma A of Lycodon aulicus, but rather consider it as identical with his forma D. (= Lycodon capucinus Boie, according to Boul.).

Coluber lineatus.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 30, tab. 12, fig. 1 and tab. 20, fig. 1, Syst. Nat. Ed. X, p. 221, Ed. XII, p. 382.

Syn. in Boul. Cat. Sn. II, p. 158, Aporophis lineatus (L.) Cope. (For other synonyms see Boul. loc. cit.)

Three specimens from Mus. Drottn., all true Apor. lineatus.

Total length 750 mm. Tail 210 mm. Sq. 19. V. 169. C. 84.

- > 580 » > 160 » Sq. 19. V. 168. C. 81.
- > 555 > 160 > Sq. 19. V. 165. C. 83.

Coluber Najas.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 30, tab. 21, fig. 1, Syst. Nat. Ed. X, p. 221, Ed. XII, p. 382 (Coluber naja).

Syn. in Boul. Cat. Sn. III, p. 380, Naja tripudians Merr. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh.

Total length 1140 mm. Tail 205 mm. Sq. 23. V. 195. C. 63.

This is not the specimen which was the type for LINNEUS'S description and figure in Mus. Ad. Frid., as that one was very much smaller (»sesquipedalis»). If we want to retain the Linnean name, this snake ought to be named Naja naja (L.).

Coluber pallidus.

Described by Linnæus in Amoen. Acad. Tom I, N:o XVI, p. 494, N:o 11, *Mus. Ad. Frid. I, p. 31, tab. 7, fig. 2*, Syst. Nat. Ed. X, p. 221, Ed. XII, p. 381.

From Mus. Drottningholmense there is a snake, labeled Coluber mycterizans, which evidently is the one described by LINNEUS as Coluber pallidus. It is probable that a change of labels has been made. We find on the same jar another old label, marked Col. pallidus L.

This type is not as yet identified by the authors. I am now able to state its identity with *Thamnodynastes punctatissimus* (Wagl.) Günther (Boul. Cat. Sn. III, p. 117). The specimen is a discoloured but true specimen of this form. Thus, the name of this snake ought to be **Thamnodynastes pallidus** (L.).

Total length 580 mm. Tail 165 mm. Sq. 17. V. 157. C. 94.

Coluber carinatus.

Described by Linnæus in $Mus.\ Ad.\ Frid.\ I,\ p.\ 31,$ Syst. Nat. Ed. X, p. 223, Ed. XII, p. 384.

Syn. in Boul. Cat. Sn. II, p. 73, Herpetodryas carinatus (L.) Schleg. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh.

Total length 1500 mm. Tail 470 mm. Sq. 12. V. 151. C. 107.

Coluber canus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 31, tab. 11, fig. 1,* Syst. Nat. Ed. X, p. 221, Ed. XII, p. 382.

Syn. in Boul. Cat. Sn. I, p. 373, Pseudaspis cana (L.) Cope.

(For other synonyms see Bour. loc. cit.)

One specimen from Mus. Drottn.

Total length 330 mm. Tail 62 mm. Sq. 31. V. 188. C. 85.

Coluber laticaudatus.

Described by Linnæus in Mus. Ad. Frid. I, p. 31, tab. 16, fig. 1, Syst. Nat. Ed. X, p. 222, Ed. XII, p. 383.

Syn. in Boul. Cat. Sn. III, p. 307, **Platurus laticaudatus** (L.) Girard. (For other synonyms see Boul. loc. cit.)

There are two specimens from Mus. Drottningh., labeled Coluber laticaudatus. Of these one is Platurus laticaudatus, the other is Platurus colubrinus (Schneider) Girard. The former has probably been the type for the figure in Mus. Ad. Frid. Linnæus's description corresponds with both specimens, but his nomen specificum (»coluber scut. abdom. 220 squamis caudalibus 42») evidently refers to the specimen of Pl. colubrinus, wherefore the Linnean name ought to have been perhaps applied rather to this one. But as this diagnosis may be just as well referred to the species Platurus laticaudatus, and as the figure represents this species, I consider it better not to change the usual names.

Pl. laticaudatus: Total length 690 mm. Tail 85 mm. Sq. 19. V. 222. C. 31. 1
Pl. colubrinus: > 600 > 85 > Sq. 23. V. 220. C. 42.

Coluber fuscus.

Described by Linnæus in Mus. Ad. Frid. I, p. 32, tab. 17, fig. 1, Syst. Nat. Ed. X, p. 222, Ed. XII, p. 383.

Syn. in Boul. Cat. Sn. II, p. 75, Herpetodryas fuscus (L.) Dum. & Bibr. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottningh. It is a true *Herpetodryas fuscus* (L.) Dum. & Bibr. forma A. according to Boulenger.

Total length 955 mm. Tail 340 mm. Sq. 10. V. 148. C. 116.

¹ LINNEUS states 38 caudals for the other species he has had under examination, probably a misprint.

Coluber nebulatus.

Described by Linnæus in Mus. Ad. Frid. I, p. 32, tab. 24, fig. 1, Syst. Nat. Ed. X, p. 222, Ed. XII, p. 383.

Syn. in Boul. Cat. Sn. II, p. 293, $\bf Petalognathus$ nebulatus (L.) Dum. & Bibr.

(For other synonyms see Boul. loc. cit.)

There are three specimens from Mus. Drottningh., named Coluber nebulatus. One of these only, however, proves to be identical with Petalognathus nebulatus (L.) Dum. & Bibr., and it is this specimen that Linnæus used as type for his description and figure. The two others are specimens of Lycognathus cervinus (Laur.) Boul.

Petal. nebulatus: Total length 640 mm. Tail 170 mm. Sq. 15. V. 184. C. 83. Lycog. cervinus:

640

145

145

Sq. 19. V. 242. C. 102.

Sq. 19. V. 250. C. 108.

Coluber Saturninus.

Described by Linnæus in Mus. Ad. Frid. I, p. 32, tab. 9, fig. 1, Syst. Nat. Ed. X, p. 223, Ed. XII, p. 384.

Syn. in Boul. Cat. Sn. II, p. 75, Herpetodryas fuscus (L.) Dum. & Bibr. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 430 mm. Tail 145 mm. Sq. 10. V. 147. C. 119.

LINNÆUS pronounced this specimen to be a distinct species and some post-Linnean authors have maintained that it was so. Günther and Boulenger, however, put it in their catalogues as synonymous with Coluber (Herpetodryas) fuscus L. I am able to prove the correctness of this.

LINNEUS'S Coluber fuscus is an old and dark specimen, his Coluber Saturninus is a young and light one of the same species. The light black-edged crossbands, which, according to Boulenger, ought to be found on the form saturninus, are not visible, as the specimen is very much discoloured. A light streak along the back and small brown spots scattered about appear on the pale grey ground-colour.

Coluber atrox.1

Described by Linnæus in Amoen. Acad. Tom. I, N:o XI, p. 305, N:o 35, Mus. Ad. Frid. I, p. 33, tab. 22, fig. 2, Syst. Nat. Ed. X, p. 222, Ed. XII, p. 383.

¹ By misprint called angulatus in Mus. Ad. Frid.

Syn. accord. to Boul. Cat. Sn. III, p. 537, Lachesis atrox (L.) Boul. (For other synonyms see Boul. loc. cit.)

From Mus. Drottn. there are two specimens, labeled Coluber atrox. They agree completely with the description of Lach. atrox in Boulenger's catalogue, except for the scales, as to which they seem rather to correspond with Lachesis lanceolatus (Lacep.) Boul. The fact is that the keels on the scales are low and extend nearly to the extremity of the scales. If we wish to distinguish the two species, judging by this character alone (the keels on the scales), the low-and long-keeled form ought to be named Lachesis atrox. I consider however this character as too slight a specific difference, especially as Boulenger says that intermediate forms are met with.

Total length 725 mm. Tail 100 mm. Sq. 25. V. 204. C. 67.

Coluber candidus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 33, tab. 7, fig. 1*, Syst. Nat. Ed. X, p. 223, Ed. XII, p. 384.

Syn. in Boul. Cat. Sn. III, p. 368, Bungarus candidus (L.) Cantor. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 925 mm. Tail 120 mm. Sq. 15. V. 220. C. 50.1

Coluber corallinus.

Described by Linnzus in Mus. Ad. Frid. I, p. 33, Syst. Nat. Ed. X, p. 223, Ed. XII, p. 384.

Syn. in Boul. Cat. Sn. III, p. 634, Liophis triscalis (L.) Jan. (For other synonyms see Boul. Cat. Sn. II, p. 129.)

There is one specimen of this snake from Mus. Drottn. Total length 450 mm. Tail 100 mm. Sq. 17. V. 188. C. 87.

This is a specimen out of Seba's museum and has been the type for his figure in »Thesaurus» tab. XVII, N:o 1. It probably came with that part of Seba's collections which was bought by Adolf Fredrik and Lovisa Ulrika in 1752. The type was first identified in 1896 by Boulenger in his »Addenda» to the Catalogue of Snakes, in which he puts it

¹ LINNÆUS'S supposition that the tail was broken is probably not consonant with the fact.

as a synonym to *Coluber triscalis* L. I am now able to prove the correctness of this. The specimen is a true *Liophis triscalis* (L.) Jan.

Coluber exoletus.

Described by Linnæus in Mus. Ad. Frid. I, p. 34.

There is no specimen of this type from Mus. Drottning-holmense.

Coluber lemniscatus.

Described by Linnæus in Amoen. Acad. Tom I, N:o V, p. 118, N:o 6 and N:o XVI, p. 493, N:o 9, Mus. Ad Frid. I, p. 34, tab. 14, fig. 1, Syst. Nat. Ed. X, p. 224, Ed. XII, p. 386.

Syn. in Boul. Cat. Sn. III, p. 430, Elaps lemniscatus (L.) Schneid. (For other synonyms see Boul. loc. cit.)

In the Royal Museum there are two jars from Mus. Drottn., marked Coluber lemniscatus, each of which contains two specimens, but in only one af these jars are the specimens really Coluber (Elaps) lemniscatus; those in the other are Hydrops triangularis (WAGL.) BOUL. It is clear that LINNÆUS in his description of Coluber lemniscatus meant the former.

Coluber annulatus.

Described by Linnæus in Amoen. Acad. Tom I, N:o V, p. 120, N:o 9, Amoen. Acad. Tom I, N:o XI, p. 305, N:o 34, Mus. Ad. Frid. I, p. 34, tab. 8, fig. 2, Syst. Nat. Ed. X, p. 224, Ed. XII, p. 386.

Syn. in Boul. Cat. Sn. III, p. 97, Leptodira annulata (L.) Günth. (For other synonyms see Boul. loc. cit.)

In the Royal Museum there are six specimens of this type from Mus. Drottn., all true Leptodira annulata.

Total	length	735	mm.	Tail	185.	Sq. 19.	V. 189.	C. 85.
>>	,	570	>	>	135.	Sq. 19.	V. 191.	C. 80.
9	>	640	>>	*	180.	Sq. 21.	V. 192.	C. 91.
,	>	570	>	>	70.1	Sq. 19.	V. 193.	C. 32.1
>	>	550	>	>>	130.2	Sq. 19.	V. 185.	C. 69. ²
»	D	460	>	>>	115.	Sq. 19.	V. 190.	C. 83.

¹ The tail is broken.

² The tail is somewhat mutilated.

Coluber Ahatulla.

Described by LINNÆUS in Amoen. Acad. Tom I, N:o V, p. 115, N:o 2 and N:o XVI, p. 495, N:o 12; Mus. Ad. Frid. I, p. 35, tab. 22, fig. 3, Syst Nat. Ed. X, p. 225, Ed. XII, p. 387.

Syn. according to Boul. Cat. Sn. II, p. 79, Dendrophis pictus.

In the Royal Museum there are three specimens from Mus. Drottn., labeled *Coluber Ahætulla*. One of these snakes is identical with *Dendrophis pictus* (GMEL.) Boie, the two others are *Leptophis liocercus* (Wied.) Dum. & Bibr.

From the description of Coluber Ahætulla in Mus. Ad. Frid. it is evident that the former was the type used by Linnæus. Lönnæus, however, has shown that Linnæus's type-specimens for the descriptions in the two above quoted Amoen. acad. were Leptophis liocercus, wherefore he thinks that this snake ought to be named Ahætulla, as it is by some authors. In the 10:th edition of Syst. Nat., from the publication of which we reckon the initiation of the binomenclature, Linnæus refers to the descriptions of Col. Ahætulla both in Amoen. acad. and in Mus. Ad. Frid. The number of the shields he gives in Syst. Nat. is that which we find in Lept. liocercus, for which reason it is probably most correct to give the name Ahætulla to this one, and to let Dendrophis pictus retain its name, given by Gmelin.

```
      Lept. ahætulla:
      Total length
      1150 mm.
      Tail 440 mm.
      Sq. 15.
      V. 162.
      C. 156.

      >
      >
      930 
      >
      360 
      >
      Sq. 15.
      V. 162.
      C. 165.

      Dendr. pictus:
      >
      940 
      >
      285 
      Sq. 15.
      V. 166.
      C. 120.
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Coluber Petolarius.

Described by Linnæus in *Mus. Ad. Frid. I, p. 35*, tab. 9, fig. 2, Syst. Nat. Ed. X, p. 225, Ed. XII, p. 387.

Syn. in Boul. Cat. Sn. III, p. 101, Oxyrhopus petolarius (L.) Dum. & Bibb.

(For other synonyms see Boul. loc. cit.)

There are five specimens of this type from Mus. Drottn. All are true Ox. petolarius.

```
Total length 845 mm.
                        Tail 225 mm.
                                         Sq. 19.
                                                   V. 212.
                                                             C. 102.
             740
                              200
                                         Sq. 19.
                                                   V. 195.
                                                             C. 106.
             490
                                         Sq. 19.
                                                   V. 200.
                                                             C. 89.
                              115
             450
                              105
                                         Sq. 19.
                                                   V. 208.
                                                             C.
                                                                 91.
             410
                              105
                                         Sq. 19.
                                                   V. 202.
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¹ E. LÖNNBERG, Linnean Type-specimens in the Zoological Museum of the University in Upsala in Bih. t. K. Vet.-Akad. Hand., Bd 22, Afd. IV, N:o 1.

Coluber pullatus.

Described by LINNÆUS in Amoen. Acad. Tom 1, N:o XI, p. 300, N:o 25, *Mus. Ad. Frid. 1*, p. 35, tab. 20, fig. 3, Syst. Nat. Ed. X, p. 225, Ed. XII, p. 388.

Syn. in Boul. Cat. Sn. II, p. 23, Spilotes pullatus (L.) Wagl. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 580 mm. Tail 140 mm. Sq. 16. V. 208. C. 109.

As shown above, the number of the shields differs slightly from that stated by Linnæus (220 + 102). It is possible, however, that in the time of Linnæus there might have been another specimen, now lost, with the number of shields he gives; but there is no need for this way of explaining Linnæus's slightly different number of shields, as we find that he was not always quite exact, in counting the shields. According to Quensel there was in 1802 only one specimen in the R. Museum.

This specimen; as also others in the museum, differs from the description in Boulenger's catalogue in the number of the upper labials. Boulenger states these at 6 or 7, the third and the fourth entering the eye. In this specimen and in some others there are 8, the fourth and fifth entering the eye, in another 9, the fourth, fifth, and sixth entering the eye. On Schlegel's 1 figure there are also 8 upper labials, the fourth and fifth entering the eye.

Coluber filiformis.

Described by Linnæus in Mus. Ad. Frid. I, p. 36, tab. 17, fig. 2, Syst. Nat. Ed. X, p. 225, Ed. XII, p. 388.

This Linnean type has not been identified by the authors. One specimen from Mus. Ad. Frid. is preserved in the Royal Museum, which evidently was the type for Linnæus's description of Col. filiformis in Mus. Ad. Frid. It is a young Leptophis liocercus (Wied.) or Leptophis ahætulla (L.).

The specimen is of a pale brown colour with light coloured lips and a trace of the dark streak through the eye.

Total length 300 mm. Tail 115 mm. Sq. 15. V. 165. C. 158.

 $^{^{\}rm 1}$ Essai sur la Physionomie des Serpens. Amsterdam 1837, Planche 6, fig. 2.

Coluber hippocrepis.

Described by Linnæus in Mus. Ad. Frid. I, p. 36, tab. 16, fig. 2, Syst. Nat. Ed. X, p. 226, Ed. XII, p. 388.

Syn. in Boul. Cat. Sn. I, p. 409, Zamenis hippocrepis (L.) Günther. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.: it is a true Z. hippocrepis.

Total length 340 mm. Tail 70 mm. Sq. 27. V. 232. C. 95.

Coluber Mineryæ.

Described by Linnzus in *Mus. Ad. Frid. I*, p. 36, Syst. Nat. Ed. X, p. 226, Ed. XII, p. 388.

LINNÆUS'S description of this species is too defective, especially as a figure is wanting, for which reason it could not be identified by the authors. The two specimens from Mus. Drottn. which are preserved in the Royal Museum, and which were probably Linnæus's type-specimens are Aporophis lineatus (L.) Cope. Linnæus's description of Coluber minervæ agrees completely with these specimens, excepting as to the ventral and caudal shields, the number of which differs very much from what LINNEUS stated. He says that Coluber Minervæ has 238 ventrals and 90 caudals, wheras in these the shields are 167 + 83 and 163 + 76. One can scarcely suppose that Linnæus made such a great mistake, but it is possible that he or some transcriber confounded the number of the shields in this snake with that in some other, as both specimens are marked with Linnean labels, and we find in the catalogue of 1802 that there should be two specimens of Col. Minervæ from Mus. Drottn. The Linnean type Coluber Minervæ may therefore perhaps be declared to be a synonym to his Coluber (Aporophis) lineatus.

Total length 550 mm. Tail 150 mm. Sq. 19. V. 163. C. 76.

Coluber scaber.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 36, tab. 10, fig. 1.

From Mus. Drottn. there is a snake, labeled *Coluber scaber*. It is evidently not Linnæus's type of this snake, it is a *Tropidonotus natrix* (L.). Probably, the labels have been changed.

Coluber cinereus.

Described by Linnæus in *Mus. Ad. Frid. I, p. 37, tab. 23, fig. 2,* Syst. Nat. Ed. X, p. 226, Ed. XII, p. 388.

This Linnean type has not been identified by the authors. In the Royal Museum there is one specimen from Mus. Drottn., labeled *Coluber cinereus*. This is a Rhadinæa cobella (L.) Boul.

Is is, however, very doubtful, whether this specimen is the one Linnæus had as type for his Coluber cinereus. The number of the shields stated by Linnæus (200 + 137) differs considerably from that of this specimen (156 + 54). Linnæus also states the rows of scales at 19 instead of 17. In other respects the description may be referred to this snake, and the figure shows in some respects a remarkable resemblance to this specimen, though the tail is rather too long. As the specimen is in a bad condition, Linnæus may have made a mistake in counting the scales and shields, or there has been an error in copying, so that it is possible after all that this specimen may be the true Linnean type, though there are some reasons against this.

According to the catalogues of 1802 and 1808, there were then two specimens in the R. Museum. If this statement be correct, it is also possible that the other specimen, now lost, was the true type of Coluber cinereus.

Total length 450 mm. Tail 90 mm. Sq. 17. V. 156. C. 54.

Coluber mucosus.

Described by LINNÆUS in *Mus. Ad. Frid. I, p. 37, tab. 23, fig. 1,* Syst. Nat. Ed. X, p. 226, Ed. XII, p. 388.

Syn. in Boul. Cat. Sn. I, p. 385, Zamenis mucosus (L.) Boul. (For other synonyms see Boul. loc. cit.)

From Mus. Drottn. there are two specimens in the R. Museum, labeled *Coluber mucosus*, of these one, which was evidently the type for LINNÆUS'S description, is identical with *Zamenis mucosus*; the other is a discoloured specimen of *Petalognathus nebulatus* (L.) Dum. & Bibr.

Zamen. mucosus: Total length 455 mm. Tail 125 mm. Sq. 17. V. 201. C. 135. Petal. nebulatus: > 455 > 1101 > Sq. 17. V. 179. C. 76.1

¹ The tail is broken.

Coluber coerulescens.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 37, tab. 20, fig. 2, Syst. Nat. Ed. X, p. 227, Ed. XII, p. 389.

Owing to the incompleteness of the description, given by LINNÆUS, this type could not be identified by the authors. From Mus. Drottningh. there is one specimen, marked Coluber coerulescens. This is a Herpetodryas fuscus (L.) Boul. In the number of shields the specimen differs very much from what LINNAUS states. This has 155 + 115 shields, that of LINNÆUS 215 + 170, and of the bright blue colour mentioned by him nothing is visible except on the lower part of the head. Consequently it is hardly probable that this specimen was the type of Linnæus's Coluber coerulescens. According to Quensel's catalogue of 1802 there were at that time five specimens from Mus. Drottn., which were said to be Coluber coerulescens L. One of the four which are now lost was probably Linnæus's type-specimen. Whether Linnæus named this specimen Col. coerulescens, or whether this is only an incorrect conjecture of Schwartz is impossible to say.

Total length 520 mm. Tail 165 mm. Sq. 10. V. 155. C. 115.

Coluber hortulanus.

Described by LINNÆUS in Mus. Ad. Frid. I, p. 37, Syst. Nat. (named Boa hortulana) Ed. X, p. 215, Ed. XII, p. 374.

A jar from Mus. Drottn., labeled »Boa hortulana», contains a specimen of *Himantodes cenchria* (L.) Cope; but it certainly is not the type of Linnæus's Coluber hortulanus. It is possible, however, that he regarded it as being a young-one of this snake, as the colour of this specimen corresponds somewhat with that of Boa (Coluber) hortulana; but it is also possible that, by some accident, the labels have been changed.

Total length 600 mm. Tail 190 mm. Sq. 17. V. 259. C. 166.

Boas Constrictor.

Described by LINNÆUS in Amoen. Acad. Tom I, N:o XVI, p. 497, N:o 16, tab. 17, fig. 3, *Mus. Ad. Frid. I*, p. 38, Syst. Nat. (Boa constrictor) Ed. X, p. 215, Ed. XII, p. 373.

Syn. in Boul. Cat. Sn. I, p. 117, **Boa constrictor** L. (For other synonyms see Boul. loc. cit.)

There are two specimens of this type from Mus. Drottn.

Total length 890 mm. Tail 90 mm. Sq. 96. V. 241. C. 59.

30. 30. 30. 30. 30. V. 240. C. 51.

Boas caninus.

Described by Linnæus in Mus. Ad. Frid. I, p. 39, tab. 3, Syst. Nat. (named Boa canina), Ed. X, p. 215, Ed. XII, p. 373.

Syn. in Boul. Cat. Sn. I, p. 102, Corallus caninus (L.) Boul. (For other synonyms see Boul. loc. cit.)

In the museum there is a specimen of this snake, which evidently is the Linnean type-specimen, although it is not marked with the Linnean label. It agrees completely with Linnæus's description and figure of Boas caninus.

Total length 1440 mm. Tail 150 mm. Sq. 66. V. 203. C. 77.

Crotalus horridus.

Described by Linnæus in Mus. Ad. Frid. I, p. 39.

From Mus. Drottn. there are two jars labeled *Crotalus horridus*, one of which contains a head in a rather bad condition, which, however, does not belong to any Crotalus (possibly it is the head of a *Lachesis mutus* (L.) DAUD.). In the other jar we find a tail of a rattle-snake; the rattle has 12 horny rings, on the tail there are 28 shields.

II. Museum Regis Adolphi Friderici. Tom II.

Boa Hipnale.

Described by Linnæus in Mus. Ad. Frid. II, p. 41.

There is no type-specimen of this Linnean snake in the R. Museum.

Boa Cenchria.

Described by LINNÆUS in Mus. Ad. Frid. II, p. 41, Syst. Nat. Ed. X, p. 215, Ed. XII, p. 374.

Syn. in Boul. Cat. Sn. I, p. 94, Epicrates cenchris (L.) Gray. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn. It is a true Epicrates cenchria (L.) Gray.

Total length 475 mm. Tail 58 mm. Sq. 49. V. 266. C. 57.

Boa murina.

Described by Linnæus in Mus. Ad. Frid. II, p. 42, Syst. Nat. Ed. X, p. 215, Ed. XII, p. 374.

Syn. in Boul. Cat. Sn. I, p. 115, Eunectes murinus (L.) Grav. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 930 mm. Tail 100 mm. Sq. 53. V. 255. C. 67.

The specimen differs from the description in Boul. Cat. Sn. in that it has only 53 rows of scales and that the two subscular shields on the left side are confluent into one.

Coluber Vipera.

Described by LINNÆUS and HASSELQVIST in HASSELQVIST'S Iter Palæstinum p. 314 and by LINNÆUS in *Mus. Ad. Frid. II*, p. 43, Syst. Nat. Ed. X, p. 216, Ed. XII, p. 375.

Syn. in Boul. Cat. Sn. III, p. 503, Cerastes vipera (L.) Boul. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. Drottn.

Total length 380 mm. Tail 30 mm. Sq. 25 (26). V. 117. C. 19.

Coluber Cerastes.

 $\mathbf{Syst.}\ \mathbf{Nat.}\ \mathbf{Ed.}\ \mathbf{X,\ p.\ 217,\ Ed.\ XII,\ p.\ 376}.$

Syn. Coluber cornutus L. in Hasselqvist's Iter Palæst. p. 315.

vipera L. in Mus. Ad. Frid. II, p. 43.

> Ceraster cornutus (L.) FORSK. in BOUL. Cat. Sn. III, p. 502. (For other synonyms see BOUL. loc. cit.)

Though LINNÆUS at a later period follows Hasselqvist and pronounces this snake to be a distinct species, he at first regarded it as a specimen of Col. vipera deformed by human art, which appears from the following remark in the description of Col. vipera in Mus. Ad. Frid. »Vipera cornuta, ab Hasselqvist in Act. Ups. 1750 p. 27 descripta, est hæc ipsa species, Arabum astuta arte deformata, intrusis 2 unguibus volucris alicujus per caput, quibus Auctor seductus fuit.»

In a jar from Mus. Drottningholmense, labeled Coluber vipera, we find, besides the above-mentioned specimen of this snake, the forepart of a specimen of Col. cerastes L. probably put there by Linnæus. In the 10:th and 12:th editions of Syst. Nat., which are written later than Mus. Ad. Frid. II, Linnæus again, however, distinguishes Col. cerastes, by which he means Hasselqvist's Coluber cornutus, from Coluber vipera. — Linnæus's name for this snake is Col. cerastes, not Col. cornutus, which latter is given by Hasselqvist, yet on publishing the "Iter Palæstinum" Linnæus did not alter the name. The present name of this snake thus ought to be Cerastes cerastes (L.).

Coluber lebetinus.

Described by Linnæus in Mus. Ad. Frid. II, p. 43.

There is no Linnean specimen of this snake in the R. Museum.

Coluber Padera.

Described by Linnæus in Mus.~Ad.~Frid.~II,~p.~44,~Syst.~Nat.~Ed.~X,~p.~221,~Ed.~XII,~p.~382.

This Linnean type has not been identified by the authors. A specimen from Mus. Drottningholmense is to be found here. This snake shows that LINNÆUS'S Coluber Padera is identical with his Coluber canus or with Pseudaspis cana (L.) COPE.

Total length 310 mm. Tail 50 mm. Sq. 31. V. 198. C. 59.

Coluber Situla.

Described by Linnæus in $Mus.\ Ad.\ Frid.\ II,\ p.\ 44,\ Syst.\ Nat.\ Ed.\ X,$ p. 223, Ed. XII, p. 385.

This type also is so imperfectly described that it could not be identified by the description alone. I am now able to prove that it is identical with Coluber leopardinus (BONAP.) BOUL. (BOUL. Cat. Sn. II, p. 41).

It is a specimen of the striped form (= Col. quadrilineatus Pall. according to Boulenger). It differs from the figure of this one in Jan's »Icon. générale des ophidiens», Livr, 13, pl. 5 in narrower dark stripes on the back and by the fact that some sutures between the upper labials are darkcoloured.

as well as the one below the eye. The two stripes on the sides are to some extent dissolved into spots, especially on the anterior and posterior parts of the body.

There is a specimen of this snake from Mus. Drottn., evidently Linnæus's type of Coluber Situla, which name thus has priority over *Col. quadrilineatus* Pall. and over *Col. leopardinus* (Bonap.), if, in accordance with Boulenger, we use this name for both forms.

(For other synonyms see Boul. loc. cit.)

Total length 890 mm. Tail 110 mm. Sq. 27. V. 235. C. 45.1

Coluber Tyria.

Described by Linnæus in Mus. Ad. Frid. II, p. 45.

The type-specimen no longer exists in the museum.

Coluber jugularis.

Described by Linnzeus in Mus. Ad. Frid. II, p. 45, Syst. Nat. Ed. X, p. 225, Ed. XII, p. 387.

On account of the short and slightly characteristic description of this type, given by Linnæus the authors have not been able to identify it. I can now prove that Linnæus's Coluber jugularis is identical with Zamenis gemonensis (LAUR.) Schreib. (Boul. Cat. Sn. I, p. 395), wherefore its name ought to be Zamenis jugularis (L.).

(For other synonyms see Boul. loc. cit.)

Total length 1415 mm. Tail 370 mm. Sq. 19. V. 203. C. 103.

The specimen seems to be, according to BOULENGER, a melanotic form of var. asianus BOETTG. Thus the colour underneath is, except on the head, the throat, and the tail, rather lighter than on the upper side, where it is dark olivebrown, usually with one or more small light spots on the middle of each scale.

LINNÆUS states the number of the shields at 195 + 102: that does not, however, quite correspond with this specimen. His description of the colour does not agree either with the specimen in its present state. LINNÆUS says, »sub capite albo subsanguineum», which is difficult to understand, as the specimen is white (yellowish white) below the head only, and

¹ The tail is slightly mutilated.

the sanguineous colour is very slightly visible and only on the throat. In Syst. Nat. Linnæus says that the snake is »niger jugulo sanguinolento» and does not speak about the white head. Thus, it is possible that »albo» is a misprint and ought to be album, and »subsanguineum» may be referred to an omitted »jugulo».

Coluber Haje.

Described by Linnæus and Hasselqvist in Hasselqvist's Iter Palæst. p. 317, N:o 62 and by Linnæus in Mus. Ad. Frid. II, p. 46, Syst. Nat. Ed. X, p. 225, Ed. XII, p. 387.

Syn. according to Boul. Cat. Sn. III, p. 374, Naia haje.

From Mus. Drottn. there is a specimen, labeled *Coluber Haje*. This is, however, not identical with Naia haje (L.) MERR., but is *Spilotes pullatus* (L.) WAGL.

The first description of Coluber Haje is given by Hassel-quist, in accordance with which Linnæus, at a later period, in Mus. Ad. Frid. and in Syst. Nat. defines the species Coluber Haje. He then gives, however, a different number of shields from that of Hasselquist. As the number of the shields given by Linnæus is the same as that we find in this specimen and the description in other respects agrees with it, it is probable that this one was the type of Col. Haje in Mus. Ad. Frid. He reckons Hasselquist's specimen, however, as synonymous with this. It is strange that Linnæus, who laid such great stress upon the number of the shields, did not suspect that Hasselquist's specimen, with 60 caudal shields, and this one, with 109, must be different species; but possibly he may have considered Hasselquist's as mutilated. Where Hasselquist's specimen or the true type is, I do not know.

As well as other specimens of Spilotes pullatus (see p. 23) here, this one also differs from the description in Boul. cat. by 8 upper labials, the 4:th and 5:th entering the eye. This specimen has also a triangular shield wedged in between the prefrontalia.

Total length 2000 mm. Tail 500 mm. Sq. 16. V. 207. C. 109.

Coluber viridissimus.

Described by Linnæus in *Mus. Ad. Frid. II*, *p. 46*, Syst. Nat. Ed. X, p. 226, Ed. XII, p. 388.

A jar from Mus. Drottn. labeled Coluber viridissimus contains a snake, which evidently is not the one Linnæus

described in Mus. Ad. Frid. It is a specimen of *Dendro-* phis pictus. A change of labels has probably been made.

Anguis Meleagris, Anguis Jaculus, and Anguis laticaudatus.

Described by Linnæus in Mus. Ad. Frid. II, p. 48.

Linnæus's specimens seem not to be found in the R. Museum.

III. Museum De Geer.

Boa Enydris.

Described by Linnæus in Syst. Nat. Ed. X, p. 215, Ed. XII, p. 374. Syn. according to Boul. Cat. Sn. I, p. 101, Corallus hortulanus (L.) Gray.

Most authors regard this Linnean snake as a form of LINNÆUS'S Boa hortulana. LINNÆUS does not give any differences between these types, except the colour and the number of the caudal and ventral shields, which are more numerous in Boa hortulana (290 + 128: in Boa Enydris 270 + 105). On the ground of the same characters, GRAY, however, in The Zoological Miscellany, p. 42, in 1842 introduces a new species, nearly allied to Boa hortulana, to which he gives the name Corallus Cookii. Boulenger maintains this species in his catalogue, distinguishing it from Cor. hortulanus by the number of the rows of scales, and by that of the ventral and caudal shields. The formula of C. Cookii is: Sq. 39-47, V. 253-285, C. 101-118, and of C. hortulanus: Sq. 51-59, V. 270-299, C. 108-128. Otherwise the two descriptions agree completely. As to the colour, it seems to vary considerably; for which reason no constant character is established in this respect.

If, on the ground of these characters, the two forms be regarded as distinct species, Linnæus's Boa Enydris ought to belong to Corallus Cookii, which then might be named Corallus enydris, to which this snake in every particular seems to correspond. The dark colour above, which is said to exist in this species, has completely disappeared on the Linnean specimen. On the sides of the body, however, there are some

alternating brown spots with light centra, which are characteristic of the principal form of Corallus Cookii.

The question is, however, whether one ought to regard the two as distinct species judging only by the above-mentioned characters, though they also have the same geographical range. The only respect in which the two forms do not merge into each other is the number of the rows of scales. Linnæus's specimen, however, shows a trace of such an intermediate form, and it is probable that more such ones would be detected, was the material greater. I feel much inclined to put Corallus Cookii Gray as a synonym to Boa Enydris Linnæus, and this form as a variety of Corallus hortulanus (L.) Gray.

Total length 1275 mm. Tail 255 mm. Sq. 48. V. 270. C. 105.

Boa Ophrias.

Described by LINNÆUS in Syst. Nat. Ed. X, p. 215 (Boa Orophias); Ed. XII, p. 374 (Boa Ophrias).

Syn. in Boul. Cat. Sn. I, p. 118, Boa divinoloqua (Laur.) Dum. & Bibr. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. de Geer.

Total length 1620 mm. Tail 210 mm. Sq. 72. V. 280. C. 65.

The authors seem to have been doubtful about the identification of this snake. Schlegel considers it to be a variety of Boa constrictor. Dumeril and Bibron reckoned one of Laurenti's species, Constrictor divinologuus, though with?, as a synonym to this; so also does Boulenger. I am now able to prove that Linnæus's Boa ophrias is the same as the Boa divinologua of the authors, which thus ought to be named Boa ophrias (L.).

Coluber Typhlus.

Described by Linnæus in Syst. Nat. Ed. X, p. 218, Ed. XII, p. 378. Syn. in Boul. Cat. II, p. 136, **Liophis typhlus** (L.) Jan. (For other synonyms see Boul. loc. cit.)

One specimen from Mus. de Geer. It is a true Liophis typhlus.

Total length 630 mm. Tail 120 mm. Sq. 19. V. 140. C. 54.

Coluber Alidras.

Described by Linnæus in Syst. Nat. Ed. X, p. 217, Ed. XII, p. 376.

This Linnean type is not identified by the authors. It is a completely discoloured specimen of Helicops angulatus (L.) Dum. & Bibr., from which it however differs by 21 rows of scales on the thickest part of the body instead of 19.

Thus, Linnæus's Coluber Alidras is synonymous with his Coluber angulatus.

One specimen.

Total length 720 mm. Tail 165 mm. Sq. 21. V. 121. C. 58.1

Coluber monilis.

Described by Linnæus in Syst. Nat. Ed. X, p. 221, Ed. XII, p. 381.

In the Royal Museum there are four snakes, called *Coluber monilis* L. Of these one agrees completely with Linnæus's description, and it is very probable that this one was Linnæus's type. It is a **Homalopsis buccata** (L.) Schleg.

Total length 245 mm. Tail 65 mm. Sq. 39. V. 164. C. 82.

Coluber niveus.

Described by LINNEUS in Syst. Nat. Ed. X. p. 223, Ed. XII, p. 384.

There is in the Royal Museum one snake, called Coluber niveus L. It is evidently the Linnean type-specimen. In his Catalogue of Snakes III, p. 374 BOULENGER considers Coluber niveus L. as a synonym to Coluber Haje L. This is however a mistake. I am now able to state that LINNÆUS'S Col. niveus is synonymous with Naia flava (MERR.) BOUL., which snake therefore should be called Naia nivea (L.).

Total length 975 mm. Tail 165 mm. Sq. 21 V. 209. C. 62.

Coluber Pelias.

Described by LINNÆUS in Syst. Nat. Ed. X, p. 224, Ed. XII, p. 386.

This Linnean type is not identified by the authors. It is a *Chrysopelea chrysochlora* (Reinw.) Boul., the name of which therefore should be **Chrysochlora Pelias** (L.).

One specimen from Mus. de Geer.

Total length 975 mm. Tail 165 mm. Sq. 17. V. 187. C. 103.

¹ The tail is somewhat mutilated.

Coluber Molurus.

Described by Linnæus in Syst. Nat. Ed. X, p. 225, Ed. XII, p. 387. Syn. in Boul. Cat. Sn. I, p. 87, **Python molurus** (L.) Gray.

One specimen from Mus. de Geer, which is a true Python molurus.

Total length 1140 mm. Tail 125 mm. Sq. 67. V. 248. C. 65.

Coluber constrictor.

Described by LINNÆUS in Syst. Nat. Ed. X, p. 216, Ed. XII, p. 385. Syn. in Boul. Cat. Sn. I, p. 387, **Zamenis constrictor** (L.) Boul. (For other synonyms see Boul. loc. cit.)

In the R. Mus. there is a specimen of this snake marked with Linnean label, and stated in the catalogue of 1802 to be from Mus. Drottn., though Linneus does not give it in his descriptions of this museum. It is a true Zamenis constrictor.

Total length 1380 mm. Tail 305 mm. Sq. 17. V. 183. C. 82.