December 11th, 1860.

Dr. J. E. Gray, V.P., in the Chair.

Mr. Sclater called the attention of the meeting to an important addition to the Society's Menagerie made by the recent accession of a fine young male Babirussa (*Babirussa alfurus*) (Mammalia, Pl. LXXXIII.), received in exchange from the Zoological Society of Rotterdam. The species of the *Suidæ* now living in the Society's Gardens were thus increased to nine in number, being undoubtedly the finest series of the group ever yet brought together; namely:—

1. *Sus scrofa*, ex Europa.
2. ———, var. *barbarus*, ex Afr. bor.
3. ———. *vittatus*, ex Java.
4. *Potamochoerus africanus*, ex Afr. merid.
5. ———. *penicillatus*, ex Afr. occ.
6. *Babirussa alfurus*, ex ins. Celebes.
7. *Dicotyles torquatus*, ex Am. centr. et merid.
8. ———. *albirostris*, ex Am. merid.
9. *Phacochoerus æthiopicus*, ex Afr. merid.

One of the female Peccaries (*D. torquatus*) had lately produced a young one,—the first occasion (so it was believed) that this animal had bred in confinement in England.

Mr. A. Newton informed the meeting of the important fact, that a recent discovery of bones, supposed to be those of a Dodo (*Didus*), had been made in the Mauritius by Dr. Ayres, which would be transmitted to the British Museum.

The following papers were read:—

1. NOTE ON OVIS POLII OF BLYTH. BY P. L. SCLATER, M.A.,
SECRETARY TO THE SOCIETY.

I beg leave to call the attention of the Society to a very fine pair of the horns of the Wild Sheep of Pamîr, *Ovis polii*, Blyth (P. Z. S. 1840, p. 62, and Ann. N. H. vii. p. 196), belonging to Major W. E. Hay, F.Z.S. This is one of the several pairs brought back by Lieut. Wood in 1838 on his return from his journey to the sources of the Oxus, when detached from Sir Alexander Burnes's mission to Cabool. Having been unaccountably neglected and thrown out into the open air at Loodianeh* to perish, they were rescued by Col. Stedman in 1843, and presented to Major Hay, who brought them home on his return from India in 1858.

There being, I believe, only two pairs of the horns of this magni-

* "A skeleton of this animal and several complete crania were deposited, I believe, at Loodianeh, with other specimens obtained by Sir A. Burnes's mission."
—Wood's Journey to the Source of the River Oxus, p. 193 (note).

ficent Sheep known to exist in this country, the acquisition of a third is of much interest. The following are the dimensions of this pair, which seem to be about the same size as those described by Mr. Blyth :—

	inches.
Distance between the horns, from point to point . . .	49
Length of each horn from the base to the tip, following the curvature	46
Girth at base	15

They also perfectly agree otherwise with Mr. Blyth's description, turning at their origin backwards and outwards, then descending nearly perpendicularly, but slightly inclined outwards, whence they curve upwards, and terminate in points directly divergent from the body, as shown in the subjoined woodcut.

2. REPORT ON THE INDIAN PHEASANTS BRED IN THE SOCIETY'S MENAGERIE DURING THE YEARS 1858, 1859, AND 1860*. BY PHILIP LUTLEY SCLATER, M.A., SECRETARY TO THE SOCIETY.

At the commencement of the present year, our breeding stock of the five species of Himalayan Pheasants consisted of three pairs of the Black-backed, two pairs of the White-crested, and one pair of the Purple Kaleege, one pair of Cheers, and three of Impeyans. These ten females produced altogether 141 eggs, being 27 less than the same number produced in the previous year. The number of young birds hatched, however, was greater, being 82 instead of 62. But the number reared, owing to the bad weather, for which the present summer has been notorious beyond all precedent, has been slightly less—being only 45 instead of 50. The whole of the young birds have been disposed of without difficulty among the members and correspondents of the Society, except the four young Impeyan

* For a previous Report on this subject, see P. Z. S. 1858, p. 544.

Pheasants; for which, however, there are numerous applicants as soon as the sex of the birds shall be ascertainable.

The following lists give the results of the breeding-seasons of 1858, 1859, and 1860, compared together in a tabular form :—

Date.		No. of Hens.	Eggs laid.	Young hatched.	Reared.	Died.
1858.	Black-backed Kaleege	5	184	63	61	2
"	White-crested Kaleege	1		6	5	1
"	Purple Kaleege	1		19	17	2
"	Cheer Pheasant	2		26	25	1
"	Impeyan Pheasant	2		12	8	4
		11	184	126	116	10
1859.	Black-backed Kaleege	3	59	18	16	2
"	White-crested Kaleege	2	33	12	9	3
"	Purple Kaleege	1	22	8	7	1
"	Cheer Pheasant	2	44	19	15	4
"	Impeyan Pheasant	2	10	5	3	2
		10	168	62	50	12
1860.	Black-backed Kaleege	3	47	27	14	13
"	White-crested Kaleege.....	2	24	20	12	8
"	Purple Kaleege	1	17	11	8	3
"	Cheer Pheasant.....	1	20	13	7	6
"	Impeyan Pheasant	3	33	11	4	7
		10	141	82	45	37

3. DESCRIPTION OF TWO NEW SPECIES OF ENTOMOSTRACOUS CRUSTACEANS FROM INDIA. BY W. BAIRD, M.D., F.L.S.

(Annulosa, Pl. LXXII.)

Order PHYLLOPODA.

1. STREPTOCEPHALUS DICHOTOMUS (male). (Pl. LXXII. fig. 2.)

The body of this little Phyllopod is elongate and of a dark brown colour (in spirits). In general form it resembles a good deal the *Branchipus torvicornis* of Waga, found in the neighbourhood of Warsaw. The peculiar twisted and elongated antennæ (characteristic of the male) are furnished with several filaments, and are divided at the extremity into two forks, one of the divisions of which (the longer) is again bifurcate at the extremity. This larger division of the fork is armed with several teeth on the outer edge. The tail is bifurcate, the divisions being, each of them, densely and strongly ciliated on the inner edges.

Length of body about three-fourths of an inch; length of antennæ about half an inch.

This curious creature was said to have been found alive in a pail of milk.

Hab. India.

Order CLADOCERA.

2. *DAPHNIA NEWPORTII*. (Pl. LXXII. fig. 3.)

Carapace-valves oval, terminating posteriorly in a rather long sharp spine directed a little backwards, and furnished on both sides with spines. The surface of the shell is reticulated and hirsute, being roughened all over with short spines. The margins of the carapace are beset with short spines also, the dorsal margin from the extremity to the base of the head, the ventral margin for nearly half its length. The head is very obtuse and rounded, terminating anteriorly in a short, sharp beak. The rami or inferior antennæ are of considerable size, and the setæ or filaments are finely plumose. The sixth segment of the body of the animal has five or six projections from it, two or three of which are small and rough, with very minute spines. The first is the longest, being prolonged and curved upwards; the second is large and well-marked; and between the last and the hooks in which this segment terminates, the edge is beset with numerous small spines, the inferior six or seven being much the largest.

I have named this *Daphnia* after my late friend Mr. George Newport, to whom I am indebted for the specimens sent to me several years ago.

Hab. India.

4. DESCRIPTION OF SOME NEW SPECIES OF INTESTINAL WORMS (ENTOZOA) IN THE COLLECTION OF THE BRITISH MUSEUM. BY W. BAIRD, M.D., F.L.S.

Order NEMATOIDEA.

1. *ASCARIS SALVINI*.

Head naked; the valves of the mouth very prominent. Body cylindrical, unequally attenuated at the two extremities, the tail being considerably more slender than the anterior extremity, which is obtuse. The body is of a ferruginous colour, and surrounded with very distinct striæ; striæ strong, about half a line apart from each other.

Length about $2\frac{1}{2}$ inches. The only specimen found is a female.

This species differs from *Ascaris inflexa*, to which it is nearly allied, by the head being more obtuse, and the anterior extremity altogether less attenuated; the striæ are very much stronger and more distant from each other; the valves of the mouth are much more strongly developed and prominent.

Hab. Found on the outside of the intestines of the *Oreophasis derbianus* of Guatemala.

This rare bird formed part of the collection made in Guatemala by Mr. Salvin. I have, accordingly, dedicated this species of *Ascaris* to him.

2. ASCARIS OBCONICA.

Head naked; valves of the mouth small but projecting. Body of male slender for three-fourths of its length, then rapidly becoming thicker till within a line or two of the extremity, which is blunt, straight, or only slightly inflexed, and terminating in a little papilla. The skin is strongly striated. Male spicula within half a line of posterior extremity. Colour of body slightly yellow, or light straw.

Length (male, largest specimen) 2 inches.

Hab. Intestines of a Freshwater Snake, *Uranops angulatus*, from Brazil. For this species I am indebted to Mr. Edward Gerrard of the British Museum.

3. ASCARIS BODDAERTII.

Head naked; valves of mouth distinct, large, somewhat triangular in shape. Body narrower at the anterior extremity, thicker towards the centre, and becoming narrower again at posterior extremity. Skin slightly striated; striæ rather distant. Lines on the two sides of the body very distinct. Anus nearly terminal. Colour yellowish, or a deep straw-colour.

Length of body (a female) 4 inches.

Hab. Intestines of *Herpetodryas boddaertii*, a snake from the West Indies. For this species I am indebted to Dr. A. Günther.

4. GORDIUS FULGUR.

Among the various objects brought to this country and collected by Mr. R. Wallace, was a species of *Gordius*, of which he gives the following account:—"This curious *Annelid* is found on the ground in the forests of Batchian, twisted among dead leaves or twigs. It glides slowly, has no perceptible head or mouth, but resembles exactly a smooth circular thread of india-rubber, the thickness of a very fine violin-string. It is called by the natives 'Ular langit,' (*lightning-snake*)."

One of the specimens measured $41\frac{1}{2}$ inches in length; a second $54\frac{1}{2}$ inches. After being immersed for some time in spirits (the specimens arrived dry and twisted round a piece of stick), they present the appearance of a twisted piece of copper wire, indistinctly striated across, and with a dark streak running down the centre throughout its whole length. This *Gordius* feels to the touch exceedingly slippery, like a piece of recent sea-weed. It is slightly more attenuated at the anterior than the posterior extremity. In all probability it is of a cylindrical form like other *Gordii*; but, owing to the way in which it was sent to this country, it is at present of a rather flattened form.

I have named it *Gordius fulgur* from its native name of *Lightning-Snake*.

Hab. Forests of Batchian; probably a native, in its immature state, of some large insect.

Order CESTOIDEA.

5. TETRABOTHRIUM GERRARDII.

The genus *Tetrabothrium* was indicated by Rudolphi in his 'Synopsis Entozoorum,' for containing those species of *Bothrioccephalus* which possess four bothria. It was afterwards fully adopted and characterized as a distinct genus by Diesing; and nine species are described by him. These were discovered all inhabiting the intestines of certain Mammalia, Birds, and marine Fishes; but none of them have been, till now, recorded as living in Reptiles.

The species now to be described, however, was found, by Mr. Edward Gerrard of the British Museum (to whom I am indebted for an opportunity of describing several new species of Entozoa), in the intestines of a *Boa constrictor* from South America.

The head is large, tetragonal; the four bothria disposed cross-wise, joined by the margins; each of them large, round, and having on one side a strong ridge. Body depressed, narrow, articulated. No distinct neck. Anterior extremity of body very narrow, and the articulations there are extremely small, becoming larger as they descend, the inferior being quadrangular and rather large. The margins of the articulations somewhat annulated, but having no appearance of genital apertures. The head is about three-fourths of a line broad; but I could not discover any mouth. Apparently only fragments of these worms were obtained; but some of these detached pieces were about 18 inches in length.

Hab. Intestines of *Boa constrictor*.

5. A COMMENTARY ON M. DESHAYES'S REVISION OF THE GENUS *TEREBRA*. BY LOVELL REEVE, F.L.S., ETC.

In the 'Proceedings' of the Society for last year, pp. 270-321, is a paper by M. Deshayes, entitled "A general Revision of the genus *Terebra*." Though most carefully elaborated, M. Deshayes was induced to undertake the revision of this genus of pectinibranchiate mollusks under circumstances hardly favourable to the correct discrimination of the species. Specimens of apparently new forms of shells were transmitted to him in Paris from the Cumingian collection, and they were described in the 'Journal de Conchyliologie' as new, without having been submitted to the test of a comparison with the types of previously described species, most of which were known only in this country.

Many of M. Deshayes's new species of *Terebra* have been described already; and many have been described by him as new, which a more extended series of specimens would have shown him to be merely varieties.

Out of 221 species of *Terebra* cited by M. Deshayes in his "General Revision," I have been so fortunate as to collect undoubted types of 214. M. Deshayes has himself generously sent me the types in his own very interesting collection. The remainder are

from the collections of Mr. Cuming, Dr. Gray, Mr. Taylor, Mr. Metcalfe, M. Crosse, and M. Lorois, and two are in the British Museum. The seven alleged species of which I have not obtained the types are three described by Mr. Hinds, which appear either to be lost or transferred to other species, and four described by Philippi in the 'Zeitschrift für Malacologie.' These 214 species I reduce (in my monograph of the genus in 'Conchologia Iconica,' where all the specimens are figured) by rejecting 65 as synonyms; and the number, thus reduced to 149, I bring up to 155 by describing six species which appear to me to be really new.

M. Deshayes, in his paper, described 93 species as new; of these I reject 41. The following is a list of the whole 69 which, I submit, are merely varieties, or duplicates, of species already described. The numbers which follow are those of M. Deshayes's list.

3. *T. nodoso-plicata*, Dunker, variety of *T. cosentini*, Philippi.
6. *T. ambriata*, Deshayes, variety of *T. crenulata*, Lamarck.
9. *T. patagonica*, D'Orbigny, the same as *T. gemmulata*, Kiener.
12. *T. reevei*, Deshayes, variety of *T. duplicata*, Linnæus.
16. *T. fatua*, Hinds, a bleached state of *T. cingula*, Kiener.
17. *T. festiva*, Deshayes, young of *T. senegalensis*, Lamarck.
18. *T. speciosa*, Deshayes, young of *T. senegalensis*, Lamarck.
23. *T. eburnea*, Hinds, variety of *T. affinis*, Gray.
31. *T. splendens*, Deshayes, variety of *T. dimidiata*, Lamarck.
33. *T. glabra*, Deshayes, a bleached *T. consors*, Hinds.
37. *T. crassula*, Deshayes, variety of *T. hastata*, Gmelin.
43. *T. albula*, Menke, variety of *T. hastata*, Gmelin.
44. *T. incolor*, Deshayes, a bleached *T. hastata*, Gmelin.
45. *T. casta*, Hinds, variety of *T. hastata*, Gmelin.
47. *T. bipartita*, Deshayes, variety of *T. hastata*, Gmelin.
52. *T. lactea*, Deshayes, a bleached *T. bacillus*, Deshayes.
54. *T. mera*, Hinds, variety of *T. hastata*, Gmelin.
55. *T. verreauxi*, variety of *T. strigilata*, Linnæus.
56. *T. argenvillii*, Deshayes, variety of *T. strigilata*, Linnæus.
58. *T. acumen*, Deshayes, variety of *T. strigilata*, Linnæus.
59. *T. concinna*, Deshayes, variety of *T. strigilata*, Linnæus.
60. *T. matheroniana*, Deshayes, variety of *T. aciculina*.
64. *T. modesta*, Deshayes, variety of *T. strigilata*, Linnæus.
66. *T. bourguignati*, the same as *T. plumbea*, Quoy.
67. *T. crossei*, Deshayes, variety of *T. venosa*, Hinds.
73. *T. jamaicensis*, Adams, the same as *T. cinerea*, Born.
74. *T. stylata*, Hinds, variety of *T. cinerea*, Born.
75. *T. luctuosa*, Hinds, variety of *T. cinerea*, Born.
76. *T. laurina*, Hinds, variety of *T. cinerea*, Born.
77. *T. castanea*, Kiener, variety of *T. cinerea*, Born.
79. *T. adansonii*, Deshayes, variety of *T. micans*, Hinds.
80. *T. inconstans*, Hinds, variety of *T. aciculina*, Lamarck.
81. *T. anomala*, Gray, variety of *T. aciculina*, Lamarck.
86. *T. lamarckii*, Kiener, variety of *T. duplicata*, Linnæus.
93. *T. plicatella*, Deshayes, variety of *T. nitida*, Hinds.

100. *T. subnodosa*, Carpenter, variety of *T. variegata*, Gray.
101. *T. hindsii*, Carpenter, variety of *T. variegata*, Gray.
102. *T. rufocinerea*, Carpenter, variety of *T. rudis*, Gray.
103. *T. albocincta*, Carpenter, variety of *T. variegata*, Gray.
104. *T. chilensis*, Deshayes, variety of *T. gemmulata*, Kiener.
108. *T. geminata*, Deshayes, variety of *T. spectabilis*, Hinds.
109. *T. marginata*, Deshayes, variety of *T. variegata*, Gray.
115. *T. crenifera*, Deshayes, variety of *T. cingulifera*, Lamarck.
125. *T. approximata*, Deshayes, variety of *T. undulata*, Gray.
129. *T. undatella*, Deshayes, variety of *T. cancellata*, Quoy.
130. *T. bermonti*, Lorois, the same as *T. pertusa*, Born.
133. *T. albicostata*, Reeve, variety of *T. armillata*, Hinds.
141. *T. petiveriana*, Deshayes, variety of *T. aspera*, Hinds.
142. *T. glauca*, Hinds, variety of *T. aspera*, Hinds.
144. *T. peasii*, Deshayes, variety of *T. puncticulata*, Deshayes.
148. *T. intertincta*, Hinds, variety of *T. variegata*, Gray.
158. *T. cinctella*, Deshayes, variety of *T. picta*, Hinds.
159. *T. areolata*, Reeve, variety of *T. columellaris*, Hinds.
177. *T. incomparabilis*, Deshayes, variety of *T. flammea*, Lamarck.
181. *T. insignis*, Deshayes, variety of *T. lingualis*, Hinds.
183. *T. hupei*, Lorois, the same as *T. variegata*, Gray.
186. *T. scabrella*, Lamarck, variety of *T. myuros*, Lamarck.
189. *T. chinensis*, Deshayes, variety of *T. cingulifera*, Lamarck.
192. *T. virginea*, Deshayes, a bleached *T. consors*, Hinds.
195. *T. columnaris*, Deshayes, variety of *T. cingulifera*, Lamarck.
197. *T. pallida*, Deshayes, variety of *T. cingulifera*, Lamarck.
201. *T. regina*, Deshayes, variety of *T. corrugata*, Lamarck.
209. *T. bitorquata*, Deshayes, variety of *T. corrugata*, Lamarck.
211. *T. loroisi*, Deshayes, young of *T. oculata*, Lamarck.
214. *T. decorata*, Deshayes, the same as *T. tessellata*, Gray.
216. *T. archimedis*, Deshayes, variety of *T. funiculata*, Hinds.
218. *T. circinata*, Deshayes, variety of *T. straminea*, Gray.
219. *T. acuta*, Deshayes, variety of *T. straminea*, Gray.
- T. loroisi*, Guérin-Méneville, the same as *T. robusta*, Hinds.

This addition to the list of synonyms of *Terebra* results partly from a want of acquaintance with the types of established species, partly from the want of a consideration of the difference between characters truly specific and characters which are modifications arising out of correlation of growth.

6. DESCRIPTION OF A NEW GENUS AND SPECIES OF MOLLUSK.

By HENRY ADAMS, F.L.S.

Genus ALCIRA, H. Adams.

Testa fusiformis, tenuis, spira elevata; anfractibus transversim striatis. Apertura ovalis, longior quam lata: columella antice truncata et plica obliqua instructa; labro tenui, intus lævi, postice expanso, antice ad marginem crenulato.

C.H. Ford.

W. West. inq.

1 Thamnophis aurifer.
2 Hyla holochlora.

Shell fusiform, thin, spire produced; whorls transversely striated. Aperture ovate, longer than wide; columella truncate, and with a single oblique fold anteriorly; outer lip thin, smooth internally, expanded at the hind part, and with the anterior margin crenulated.

ALCIRA ELEGANS, H. Adams.

A. testa elongata, rufo-fusca; anfractibus 6, convexiusculis, transversim striatis (striis ad basin ultimi anfractus pluribus et profundioribus), maculis nigrioribus, at prope suturam pallidioribus; apertura et spira pari longitudine.

Shell elongate, reddish-brown; whorls six, slightly convex, transversely striated (the striæ stronger and more numerous on the basal portion of the last whorl), variegated with darker markings, and with some lighter spots next the suture; aperture equalling the spire in length.

Long. $7\frac{1}{2}$ lin.

Hab. Natal.

This genus appears to belong to the *Columbellinæ*, in some of which a similar fold exists upon the columella; but the absence of any thickening or dentition of the outer lip, and its being expanded, distinguish *Alcira* from all the groups at present included in that subfamily. The shell has been recently obtained from Natal by Hugh Cuming, Esq., of whose extensive collection it now forms a part.

7. ON THE REPTILES OF GUATEMALA. BY OSBERT SALVIN, M.A., F.Z.S.

(Reptilia, Pl. XXXII.)

There is perhaps no portion of the two continents of America where an accurate record of the localities in which collections have been made is of such importance as in that long isthmus of varying width which joins the mainlands in the northern and southern hemispheres. It is neutral territory, on which the faunæ and floræ of the north and south contend for superiority in the forms of animal and vegetable life which give character to the respective regions. That portion of this isthmus to which I now particularly refer is the Republic of Guatemala, which, with British Honduras and Yucatan, includes within the definite limits of the isthmus of Tehuantepec and the comparatively narrow neck of land lying between the bottom of the Bay of Honduras and the Pacific Ocean a very considerable portion of the whole. Though the forms of life inhabiting the district thus defined lean decidedly to Neotropical types, yet there are just sufficient genera and species of Nearctic forms to render the consideration of the localities of observed species a matter of great moment in accurately defining the boundary between the two great zoological

provinces of the New World. Though this boundary must be sought for further to the northward, we yet find in Guatemala a *Sorex* among mammals, the great mass of the *Mniotiltidæ* among birds, *Tropidonotus* and *Ischnognathus* among snakes, and *Rana* among frogs.

It must not be supposed that a definite boundary line, beyond which the species of *either* region do not pass, can ever be drawn between these two or any two zoological provinces. The real division will probably prove in this case to extend over a wide tract of country, and to occupy a position within certain limits, which include a district inhabited by forms to be considered as typical of each; the true boundary being that portion of such a district where the typical forms of each are found in equal numbers.

In making such a comparison, it is evident that forms that are common to the two regions, as well as such as inhabit exclusively the district in question, need not be taken into consideration. Thus viewing the list I give below, we find the southern genera considerably predominating over the northern. Taking the genera of snakes peculiar to the south, we have *Homalocranion*, *Tomodon*, *Spilotes*, *Dromicus*, *Ahaetulla*, *Leptodeira*, and *Dipsas*; while the only genera peculiar to the north are *Ischnognathus* and *Tropidonotus*. Those common to the two continents are *Herpetodryas*, represented by the northern *H. flavogularis*, and by the southern *H. rappii*, *H. boddaertii*, and *H. brunneus*; and *Elaps*, represented by *E. corallinus* and *E. fulvius*. Of these, *Elaps* is hardly to be called a typical northern form, as it does not range far into the United States. The genera found in Guatemala, and not elsewhere in the Americas, are *Streptophorus* (*S. sebæ*) and *Dipsadomorphus* (*D. biscutatus*).

Of Batrachians, the North American genus *Rana* occurs, but no Tailed Batrachians: *Bufo nebulifer* is found at Dueñas, *Bufo aqua* in Vera Paz, *Engystoma carolinense* at Coban, and *Rana halecina* everywhere. Of Lizards, *Basiliscus* and *Corythophanes* occur at Lanquin; the former in abundance; they are also both found sparingly at Dueñas. *Tropidolepis* and *Cnemidophorus* occur both at Dueñas and Coban.

Again, referring to the division between the Nearctic and Neotropical regions, it appears certain that the northern forms extend far further to the southward along the table lands than along the hot districts of either seaboard; and again, the southern forms range farther to the northward along the coasts than along the table lands. In Guatemala the "tierra caliente" seems, *with very few exceptions*, to embrace purely Neotropical types; whereas on the table lands and the more elevated and temperate districts only, all the North American genera and species that are to be found in the country occur.

Besides the Snakes enumerated below, there is a Rattlesnake (*Crotalus*) found in many parts, specimens of which I did not obtain. There is also a *Cenchrus*, probably *C. piscivorus*, a fine example of which was one day brought to me by an Indian; but being too

large to be put into my bottle, I hung it up and left it till the following morning, intending to skin it. When I went to look for it at daylight, it was nowhere to be seen. The Indians said a dog had probably eaten it.

The principal places in the neighbourhood of which I collected during my stay in Guatemala last year and the early part of the present were Dueñas, Coban, and Lanquin. The former village is situated between the volcanos of Agua and Fuego, on an offshoot of the table lands. It is elevated about 4700 feet above the level of the sea. Coban, in Vera Paz, stands at an elevation of 4500 feet, on some broken and undulating ground, shut in on three sides by mountains. Its position is somewhat peculiar, being isolated in its temperate climate from the table lands by having on all sides a "tierra caliente," its only connexion with the back bone of the Cordillera being a tortuous and narrow ridge of mountains. Lanquin, though only about thirty-five miles to the eastward of Coban, is quite in the hot district. It lies in a hollow surrounded by high mountains. Here it was that most of the Tropical species were collected.

In collecting I received great assistance from Mr. Robert Owen of San Gerónimo, who secured for me many specimens at Coban while I was absent in the mountains, and also made several additions at San Gerónimo before forwarding my last collection to England.

The synonymy of each species I take from Dr. Gray's and Dr. A. Günther's Catalogues of the Reptiles in the Collection of the British Museum. I must add, that I have had the full benefit of Dr. Günther's great knowledge of this subject. Both in determining the species and in the remarks upon them, I have largely availed myself of his suggestions.

BASILISCUS AMERICANUS, Laur.

This Basilisk is very common at Lanquin, where I had no difficulty in obtaining plenty of specimens of both sexes and all ages, by offering the Indians a small reward for all they brought. They may frequently be seen on the low branches of a bush, and are particularly fond of basking on the boughs of a felled tree in a clearing near a stream. When running fast, they carry the tail slightly elevated. At Dueñas this species is more rare; I saw but three or four specimens, and only succeeded in securing one. In some specimens of the males, the tail is much more compressed than in others. In the series of young the crest is shown in all stages of development.

CORYTHOPHANES CRISTATA, Boie.

Agama cristata, Merrem.

Is not nearly so numerous as the Basilisk. I obtained but one specimen, which was brought to me at Lanquin.

ANOLIS SALLÆI, Günther, P. Z. S. 1859, p. 421.

I obtained two specimens of this *Anolis* at Dueñas.

ANOLIS FRASERI, Günther, P. Z. S. 1859, p. 407.

Coban ; several specimens. All the examples of both these species of *Anolis* are immature.

TROPIDOLEPIS TORQUATUS, Gray.

Agama torquata, Wieg. Herpet. Mex. p. 49. pl. 7.

By far the commonest Lizard in the country, and very generally distributed. The colouring appears to vary considerably in different individuals, as has been stated by Wiegmann. In some the blue of the under parts is barely traceable, nor is the black collar round the neck shown. In others these are very decidedly defined, while some have in addition a reddish-yellow crescent-shaped mark on the lower part of the chin. They are found usually about walls and hedge-rows.

CNEMIDOPHORUS UNDULATUS, Wieg. Herpet. Mex. p. 27.

This is also a common species, but not so abundant as *T. torquatus*. I found it at Dueñas, Coban, and Lanquin. This Lizard also exhibits a great diversity of colouring on the flanks. The shields of the head become very irregular in some of the older examples, and assume a tubercular appearance.

GERRHONOTUS WIEGMANNI, Gray, Cat. of Lizards, p. 54.

Not at all common. A single specimen obtained at Lanquin was the only one that came under my notice : this I caught on the convent wall. It was shown me by the priest, who said that he had noticed it on the same spot several nights in succession.

TYPHLOPS TENUIS.

Eyes imperceptible ; tail exceedingly short, obtusely conical, scarcely bent downwards. Middle of the trunk surrounded by seventeen series of scales. Nasal shields reaching as far backwards as the rostral shield ; two more shields behind the nasal. The length of the body 64 times the diameter of the girth. Each scale on the back brown, with lighter margin ; belly dirty whitish.

Length 12 inches ; length of the tail $1\frac{3}{4}$ line.

Hab. Coban in Guatemala.

One specimen of this apparently new *Typhlops* was brought to me at Coban by an Indian boy.

STREPTOPHORUS SEBÆ, Dum. et Bibr.

Very abundant at Coban, being found in the grass growing on each side of the streets.

One specimen is variegated, black and dirty white beneath.

HOMALOCRANION ATROCINCTUM, Dum. et Bibr.

Calamaria atrocincta, Schleg.

One specimen was killed at Dueñas among some logs of wood.

This example was very brilliantly painted, the white rings of the specimen in spirits were in life deep flesh-colour.

CORONELLA DECORATA, Günther, Cat. of Col. Snakes, p. 35.

One specimen was brought to me from the Volcan de Fuego. The under surface of this when fresh was ochreous yellow. It differs, moreover, from Dr. Günther's description in not having the yellow spots on the side of the head and the yellow band on the anterior part of the trunk.

TOMODON LINEATUS.

Tomodon lineatus, Dum. et Bibr. vii. p. 936. pl. 73.

A single specimen of this rare snake was taken at Dueñas by an Indian. There are probably but two other specimens known in collections.

The genus *Tomodon* appears to belong chiefly to Central America, *T. lineatus*, being found in Mexico and Guatemala, *T. strigatus*, Günther, on the island of Laguna, whilst *T. dorsatus*, the species nearest allied to *Xenodon*, extends southwards as far as Rio Janeiro. Dr. Günther has referred this species to the genus *Psammophis*; but its natural affinities point rather to *Dromicus lineatus*. It seems to be an intermediate form between those genera.

TROPIDONOTUS ORDINATUS, Linn.

The specimens collected by myself at Dueñas either have the stripes not very conspicuous, with the intervals unspotted, and without occipital spots, or the stripes are very conspicuous, with intervals spotted with black on the anterior part of the trunk, and occiput without spots. They are to be referred to *T. ordinatus*, Linn., and *T. siritalis*, Linn. A single specimen was brought to me at San Gerónimo, which does not quite agree with any of the numerous varieties of this Snake described by the North American Herpetologists as so many species. The scales are in nineteen rows; and there is one anterior, and on one side three and the other four posterior oculars. The scales are brown, except those forming the vertebral series and those of the three outer series, which with the ventral plates are yellowish olive. There are two alternate series of square black spots, in the intervals between the dorsal and lateral stripes, more strongly defined on the anterior part of the body, whilst they are more irregular and intermixed with yellowish olive spots on the posterior parts. The black spots, as well as the olive ones, are on the skin rather than on the scales. A series of black dots accompany the lateral stripe. There is a well-defined black collar on the neck. The scales on the tail are very strongly keeled.

At Dueñas this species is exceedingly common about the rushy margin of a small lake. Numbers may be seen on a sunny day basking among the reeds on the edge of the water, into which they dart on being alarmed.

ISCHNOGNATHUS DEKAYI, Dum. et Bibr.

Tropidonotus dekayi, Holbr.

Two specimens of this small Snake were brought to me at Coban by the Indians. The other species of this limited genus, *I. occipito-maculatus*, I never met with. It seems to have a more northern range.

SPILOTES CORAIS.

Coluber corais, Cuv.

Spilotes corais, Dum. et Bibr. p. 222.

Dueñas and Lanquín, not uncommon. The specimens which I collected belong to the Mexican variety described by Duméril as *Spilotes melanurus*.

HERPETODRYAS BODDAERTII.

Coluber boddaertii, Seetzen in Meyer's Archiv, ii. p. 59.

Herpetodryas boddaertii, Schleg.

Two specimens from Dueñas were brought to me by the Indians. These examples have a dark streak down the centre of the back, and two paler lateral streaks, constituting a very marked variety. They do not, however, differ in other respects.

HERPETODRYAS BRUNNEUS, Günther, Cat. Col. Snakes, p. 116.

I picked up a specimen of this Snake on the road between Coban and Lanquín. It had been killed by some Indians passing. Another was sent to me by Mr. Owen from San Gerónimo. In life the upper parts are grass-green, not brown as in the description. This colour disappeared almost immediately after the specimen was put into spirits. I believe it is known as a fact, that the green snakes become blue in spirits. This appears an exceptional case; for the skin is blue, while the epidermis has become brown.

HERPETODRYAS RAPPII, Günther.

One specimen, a young one, was caught under the wall of a house in Dueñas.

HERPETODRYAS FLAVIGULARIS.

Psammophis flavigularis, Hallow. Proc. Ac. Nat. Sc. Philad. 1852, p. 178.

Herpetodryas flavigularis, Günther.

One specimen, a very large one, but a good deal injured, was sent to me by Mr. Owen from San Gerónimo. I took a rat from the stomach.

DROMICUS MARGARITIFERUS.

Herpetodryas margaritiferus, Schleg, Ess. ii. p. 184.

Dromicus margaritiferus, Günther.

The scales of this species are in life decidedly bluish with a black

margin. It is common at Dueñas, where several specimens were brought to me by the Indians. I also obtained two examples at Lanquin. It seems to be generally distributed. If at some future period more stress is laid on the character of coloration, this species will form the type of a separate genus, as the other species constituting the genus *Dromicus* exhibit a very decided tendency to longitudinal bands.

AHÆTULLA MEXICANA.

Leptophis mexicana, Dum. et Bibr. vii. p. 53.

Ahætulla mexicana, Günther.

One specimen from Lanquin. This is a very beautiful species when fresh, the upper part being deep bluish-green.

LEPTODEIRA ANNULATA.

Coluber annulatus, Linn.

Leptodeira annulata, Fitzinger, Syst. Rept. p. 27.

One specimen (scales in twenty-three rows), killed in the thatch of a rancho near Dueñas.

DIPSAS CENCHOA, Linn.

Coluber cenchoa, Linn.

Dipsas cenchoa, Neuwied.

One specimen, a small one, from Coban, brought by an Indian boy.

DIPSADOMORPHUS BISCUTATUS.

Dipsas biscutata, Dum. et Bibr. p. 1153.

Dipsadomorphus biscutatus, Günther.

I picked up a dead example (a very large one) of this snake on the road between Coban and Lanquin. It had probably been killed and thrown there by an Indian. There were previously only three specimens known, one having been brought lately by M. Sallé from Oaxaca, which is now in the collection of the British Museum. The present specimen measures at least $3\frac{1}{2}$ feet.

ELAPS CORALLINUS.

I obtained from the Indians two specimens of *Elaps* from Dueñas, one of which seems to agree most nearly with *E. fetzingeri*, Jan., the other with *E. nigrocinctus*, Girard. The former of these has twenty-seven rings on the trunk and six on the tail. The number of ventral plates is 224, of the caudal 37. The black rings are placed at regular intervals. Each ring is narrowly edged with yellow, and the intervals between the rings filled in on the upper surface with dull red, which is darkest on the vertebræ, and gradually becomes lighter towards the flanks. The first ring on the neck commences anteriorly just within the occipital shields. Each black ring occupies a series of six scales. The spaces between the black rings occupy nine series of scales.

The latter has twenty-two rings on the trunk and five on the tail. The number of ventral plates is 221, of the caudal 39. The black rings are equidistant. Each ring is narrowly edged with yellow, the ground colour is dark blood-red, browner on the upper surface, which grows darker towards the centre of the back. The first ring commences anteriorly within the posterior angles of the occipital shields. Each black ring includes a series of six scales, and each interval between the rings mostly includes fourteen scales.

ELAPS FULVIUS.

At Lanquin I obtained three specimens of a snake of this genus, which appears to be the *E. aglæope*, Cope. The ground colour of all these is red, darkest on the centre of the back, and the character of the markings is the same. They, however, differ in some respects; and I therefore describe each fully, though without the slightest doubt they belong to the same variety.

No. 1 has forty-one black rings on the trunk and ten on the tail. Between each ring on the trunk is a series of black spots, more or less run together or isolated, and arranged so as to form an irregular line on the upper surface parallel to the rings. On the tail these intermediate markings do not exist. The ring on the neck passes over the head across the posterior margin of the occipital shields in an irregular line, converging anteriorly. A band of black crosses the head, and passing over the posterior frontal and vertical shields converges posteriorly. The rostral and anterior frontal shields are dark reddish-brown. The rings are interrupted in several cases on the belly. The rings include a series of four scales, and the intervals between the bands a series of six. The number of ventral plates is 207, of caudal 51.

No. 2 is coloured exactly as the preceding; but the rings are less frequently interrupted, and the intermediate markings assume more decidedly the form of a ring. The black rings are forty-five in number on the trunk, and nine on the tail. The ring round the neck passes behind the occipital shield, but has a square marking extending partially over those shields; a marking passes over the frontal superciliary and vertical shields, but not quite to the lower margin of the labials. The black rings include a series of three scales, and the intermediate spaces six. The number of ventral plates is 224, of caudal 40.

No. 3. The rings of this specimen are very much interrupted, and the intermediate markings very irregular. The number of rings is forty-three on the trunk, and on the tail twelve. The ring round the neck is the same as in the other specimens, having its anterior edge passing over the occipital shields in an irregular line. The marking on the anterior part of the head extends to the lower labials. The rings include three scales, and the intervals between the rings five; these, however, vary much. The number of ventral plates is 212, of caudal 55.

It certainly appears somewhat remarkable that I should have found the northern form *E. fulvius* in the hot district of Lanquin, and the southern *E. corallinus* at Dueñas, in the temperate region of the

Table lands. The reverse might certainly have been expected. But then the question arises, Are these two, *E. fulvius* and *E. corallinus*, really distinct species? The basis of the distinction seems to be laid entirely on the coloration, as no structural differences are traceable. It is true that the two, as I have given them above, represent great diversity in the number of the rings; but this inequality, being so noticeable in specimens that are certainly of the same species, seems to resolve itself into merely one of amount. The manner of arrangement is precisely the same in both, the series of rings being *equidistant* in both the species under consideration. If, then, we reject the number of rings as an insufficient ground for specific distinction, the other differences, such as the yellow bands and the intermediate black markings, can hardly be considered as such when no two specimens are exactly alike. The inequality existing in the number of the ventral plates and the proportion they bear to the caudal is such, that, if any one of the five specimens I have described be entitled to bear a specific appellation, so are they all.

Besides the great variation shown by my specimens, an examination of the series in the British Museum at once indicates that the great difference between extreme varieties can be filled in by an almost consecutive series of minor distinctions. Nor can these varieties be classed under the head of local varieties, and thus substantiate a title to specific distinction. In the present instance we find three, all of which bear separate names, inhabiting the same country. The deduction that *Elaps corallinus* and *E. fulvius*, and all the varieties which have been collected under each of these heads, belong in reality to one highly variable species, seems inevitable.

THAMNOCENCHRIS, n. g. (CROTALIDÆ.)

A pit on each side of the face. Posterior part of the body and tail much compressed, the latter ending in a horny spine. Subcaudals one-rowed. Tail prehensile. Head angular, anteriorly covered with irregular shields, and having small keeled scales posteriorly. No small scales between the superciliary and the orbit. The second upper labial forms the anterior part of the facial pit.

THAMNOCENCHRIS AURIFER, sp. n. (Pl. XXXII. fig. 1.)

Scales keeled in nineteen rows. Nine upper labial shields. Small shields between the fourth labial and the orbit. Green, with a dorsal series of orange spots edged with black. A black band from the orbit to the side of the occiput.

Hab. Coban, Vera Paz.

This new form is distinguished from *Teleuraspis* (Cope) by its peculiarly compressed body and tail, the latter being coiled as in some of the *Boidæ*, clearly indicating a habit of living in trees. It also differs from *Botriechis**, Peters, in having very large shields instead of very small scale-like ones on the upper surface of the snout. Nor does Prof. Peters mention in his description the pecu-

* Monatsb. Akad. Wiss. Berlin, 1859, p. 278.

liarly compressed tail, the most striking character of the present genus. The general form of the head is similar to that of *Cenchrus*, which it moreover resembles in having the anterior portion of the upper surface of the head covered with irregular shields of moderate size. Nostril in the middle of a single plate. Upper labials nine, the third, fourth, and fifth of which are the largest. There are about seven small shields between the orbit and the fourth and fifth. From the superciliary backwards the head is covered with keeled scales. Scales of the body keeled in very oblique series. 154 ventral shields; anal entire; 53 caudal shields. Posterior ventral shields extend very far up the sides. Colour green, paler and yellower below. A series of about thirty-five small golden-yellow spots runs along the back to the tail, where they become more irregular; each spot has a black edge posteriorly. The upper surface of the head is uniform dull green, bordered on each side by a black stripe proceeding from the eye to the side of the occiput. Length of the head 1 inch 4 lines; of the trunk 2 feet 3 inches; of the tail 6 inches.

A single specimen only of this new species was preserved for me at Coban by Mr. Owen while I was away in the mountains of Lanquin. It had been brought to him by an Indian.

RANA HALECINA, Kalm.

Common throughout Guatemala. It was the only species of *Rana* I met with. At Dueñas the Indians catch them to eat, spearing the larger ones and netting the larvæ.

ENGYSTOMA CAROLINENSE, Holbr.

Exceedingly common at Coban. In the day time they hide under stones and pieces of wood. About half the specimens I obtained have a fold in the skin across the occiput; the rest are without it. This character therefore cannot be considered of specific value.

BUFO AGUA, Latr.

Very abundant at Lanquin and also at Coban, but the specimens from the latter place seem to be smaller. Though numbers were brought to me, there was not a single large one among them. This species reaches its maximum development in the hottest parts of Brazil. It seems to diminish in size in more temperate regions.

BUFO NEBULIFER.

Bufo granulosus, Baird & Girard, Proc. Ac. Phil. 1852, p. 173.

Bufo nebulifer, Girard, Proc. Ac. Phil. 1854, p. 87.

Very abundant at Dueñas, where they are to be found under stones and logs of wood. After dark they come out of their hiding places and may be seen hopping about in all directions. It is a species peculiar to Central America and Mexico.

HYLA HOLOCHLORA, sp. n. (Pl. XXXII. fig. 2.)

Vomerine teeth in two slightly oblique series, beginning from the

anterior edge of the nostrils and converging posteriorly, more or less interrupted in the middle. Width of the tympanum two-thirds of that of the eye. Skin smooth. Disks of the toes very broad, as large as the tympanum; the three outer fingers almost entirely webbed. Uniform grass-green above, yellow below.

Hab. Coban in Guatemala.

Habit that of *H. arborea*. Head broad, with flat crown, rather short muzzle, and rounded canthus rostralis. Eye of moderate size, rather prominent. Tympanum two-thirds the width of the eye, with a small fold behind it. The legs of moderate size, with very large discs, and with the tubercles on the lower part of the feet very well developed. Toes entirely, and the three outer fingers almost entirely, webbed. No fold across the chest. Skin without any appendages. Tongue with a conspicuous notch posteriorly. Male with a single subgular sac. Sacral vertebra considerably dilated. Upper parts uniform grass-green, except the upper arms and thighs, which are colourless. Lower parts yellow. Length of the body of an adult female 3 inches; length of the fore leg 2 inches; length of the hind leg $4\frac{1}{2}$ inches.

Of this Tree Frog I obtained three examples at Coban, all of which were caught by the Indians. It was the only species I met with.

8. NOTE ON THE *BALÆNICEPS* REX. BY A. D. BARTLETT.

The question of the affinities of the *Balæniceps* having been discussed by so many able ornithologists, it may be interesting to know that this bird does not possess the remarkable patches of down found on each side of the breast in all the Herons and Bitterns.

Having had the opportunity of ascertaining this fact by an examination of the living bird, now in the Society's Gardens, I am enabled to say that these patches (which are of a singular dense and close structure, and are found beneath the feathers on each side of the front and fore part of the pectoral muscles) do not exist in the *Balæniceps*. The absence of this structure may, I think, assist in indicating the true affinities of this bird, as pointed out by Dr. Reinhardt in his communication to the Society on this subject*.

9. CHARACTERS OF TEN NEW SPECIES OF AMERICAN BIRDS. BY PHILIP LUTLEY SCLATER, SECRETARY TO THE SOCIETY.

1. *CAMPYLORHYNCHUS NIGRICEPS*.

Supra fulvo-rufescens nigro transfasciatus: pileo toto nigro: superciliis elongatis rufescenti-albidis, striga post-oculari nigra subtus limbatis: alis nigris, harum tectricibus fulvo extus lim-

* See antea, p. 377.

batis, remigibus autem in pogonio externo maculis ovalibus fulvis quater transfasciatis: cauda nigricante, rectricum pogoniis externis et harum extimarum pogoniis internis obsoletius fulvo transvittatis: subtus albidus, abdomine rufescente: rostro pedibusque corneis, illius culmine nigricante.

Long. tota 6·5, alæ 3·1, caudæ 3·2, rostri a rictu 1·0, tarsi 1·0.

Hab. In prov. Veræ Crucis Mexicana.

I possess two examples of this species of *Campylorhynchus*, one obtained by one of M. Sallé's correspondents at Orizaba, and the other from Señor de Oca's series collected at Jalapa. The latter is manifestly in immature plumage. I have until recently considered that they might perhaps be referable to an immature dress of *C. capistratus*, but such cannot be the case. The black head is distinctly marked in both of my examples; but there is no trace of the characteristic deep rufous nape and upper back of *C. capistratus*, or of the white termination to the black rectrices. The body is quite unspotted below, traces of blackish edgings to the feathers being apparent only in the younger specimen; while in *C. capistratus*, junior, there are decided round black spots. Though I should wish to examine further examples of *C. nigriceps*, I can entertain no doubt of its distinctness from other known Mexican species of the genus.

2. *CAMPYLORHYNCHUS GULARIS*, sp. nov.

Supra brunneus, plumis omnibus nigro ocellatis, et medialiter albo striatis: pileo toto et nucha brunnescenti-rufis unicoloribus: superciliis latis et elongatis albis, striga post-oculari et altera rictali utrinque nigricantibus: alis pallide nigricantibus, harum tectricibus sicut in dorso maculatis, remigibus autem solum in pogonio externo maculis pallide brunneis regulariter transvittatis: cauda nigricante, margine lato apicali albo: rectricibus quatuor intermediis pallido brunneo et nigricante omnino tessellatis, proximis duabus in pogonio exteriori albido maculatis, duabus utrinque extimis in utroque pogonio maculis magnis albis notatis: subtus lactescenti-albus, ventre rufescente: gula immaculata; ventre præcipue laterali maculis rotundis nigris asperso: rostro brevi plumbeo: pedibus pallide corneis.

Long. tota 7·0, alæ 2·8, caudæ 2·8, rostri a rictu 0·8, tarsi 0·8.

Hab. In Mexico.

Mus. P. L. S.

I have a single specimen only of this *Campylorhynchus*, received from Mr. Gould. It belongs to the group with rufous and black heads, containing *C. brunneicapillus*, *C. affinis*, *C. capistratus*, *C. jocosus*, and *C. nigriceps*; but differs from all in its pure wood-brown head, unspotted throat, and very short beak and tarsi. Its nearest ally is *C. jocosus*, but its short bill will at once distinguish it from that species.

3. *VIREO MODESTUS*.

Vireo noveboracensis, Gosse, B. of Jamaica, p. 192.

Supra olivaceus ; alis caudaque nigricanti-fuscis, illis albo bifasciatis : fronte et supercilis flavicante vix tinctis : subtus pallide flavicanti-albus : tectricibus subalaribus albis : rostro superiore pallide corneo, inferiore albescente : pedibus plumbeis.

Long. tota 4·5, alæ 2·3, caudæ 2·0.

Hab. In ins. Jamaica.

Obs. Similis *Vireoni modesto*, sed fronte aureo caret.

This Greenlet appears to have been taken by Gosse for the *Vireo noveboracensis* of the United States and Mexico, from which it may be immediately distinguished by the absence of the golden-yellow colour of the front and lores. It is also not so brightly coloured on the sides of the belly. Mr. Gosse informs us that it is resident all the year round in the island. One example of this bird in my possession is from Mr. Gosse's original collection. A second has been recently presented to me by J. H. Gurney, Esq., M.P., who received it from Jamaica; and I have lately obtained a third.

I was at first suspicious that this bird might be identical with Cabanis's *Vireo gundlachii* of the island of Cuba; but having forwarded one of my specimens to Dr. Hartlaub for comparison with examples of the Cuban species in the Museum at Bremen, I have ascertained through his kindness that such is not the case. In the size of the first spurious primary and the general conformation of the wings, *Vireo modestus* resembles *Vireo noveboracensis*.

4. VIREOSYLVA COBANENSIS.

Vireosylva philadelphica, Sclat. Ibis, 1859, p. 12 (nec *Americanorum*).

Supra olivaceus, pileo vix cinerascente induto : fronte, superciliis, et regione oculari albicantibus, alis et cauda nigricantibus, olivaceo extus anguste limbatis ; tectricum majorum apicibus albescentioribus : subtus pallide flavus, unicolor, mento albicante ; hypochondriis olivacescentibus ; tectricibus subalaribus pallide flavis : rostro plumbeo, pedibus nigro-schistaceis.

Long. tota 5·0, alæ 2·5, caudæ 1·75, rostri a rictu ·55, tarsi ·7.

Hab. In Guatemala (*Salvin*).

This *Vireosylva* belongs to the section of the genus in which the first primary is altogether absent. The second and third quills are equal in length and longest, the fourth is very little shorter, and the fifth nearly equals the first. The bill is smaller than in *Vireo gilvus*, and somewhat like that of *V. modestus* and *V. noveboracensis*, though more slender and more compressed.

This *Vireosylva* is quite distinct from any species of the genus with which I am acquainted. I have hitherto referred it to *V. philadelphica* of North America—a bird which appeared to approach it in the absence of the first primary, and in the yellow colour of the under-body—but Professor Baird, to whom I have sent examples, informs me that I have been wrong in so doing.

Mr. O. Salvin obtained many specimens of this bird at Coban and Tactic, in the province of Vera Paz, Guatemala, and I therefore propose to call it *Vireosylva cobanensis*.

5. MYIOBIUS FLAVICANS.

Flavicanti-olivaceus, pilei semi-cristati plumis infra rufescenti-aurantiacis; ciliis oculorum pallide flavidis: alis et cauda nigricanti-fuscis, remigum et tectricum alarum marginibus, harum latioribus, extus ochraceo-rufis: subtus valde dilutior, gula albicantiore, ventre crisso et tectricibus alarum inferioribus pallide flavis: remigum marginibus interioribus subtus pallide rufescenti-ochraceis: rostro nigro, pedibus fuscis.

Long. tota 4·3, alæ 2·6, caudæ 1·9, tarsi 0·7.

Hab. In rep. Equatoriali et Nov. Grenad.

Mus. P. L. S.

This Tyrant-bird belongs to the crested section of the group which contains *M. ornatus* (Lafr.) and *M. phoenicurus*, though its bill is slightly more compressed and less well provided with rictal bristles than in those species. My collection contains two specimens of this bird, one from Pallatanga in Ecuador, collected by Mr. Fraser (no. 1088), and a second received from M. Verreaux, apparently a Bogotan skin. The latter is either a female or young bird, and wants the orange crest.

The wings of this *Myiobius* are rather long, reaching beyond half the length of the tail. The third, fourth, and fifth quills are nearly equal and longest, the second and sixth are of the same length, the first being equal to the eighth and ninth.

6. MYIOBIUS PULCHER.

Olivaceus, pilei semicristati plumis intus aurantiacis; loris albidis; alis nigris albo bifasciatis, tectricum majorum et minorum apicibus necnon secundariorum marginibus externis conspicue albis aut flavicanti-albis: cauda fusca, extus olivaceo limbata: subtus flavus, gutture magis aurantio: tectricibus alarum inferioribus pallide sulphureis: rostro et pedibus nigris, illius mandibula inferiore carnea.

Long. tota 3·5, alæ 1·9, caudæ 1·6, tarsi 0·55.

Hab. In rep. Equatoriali.

Mus. P. L. S.

This pretty and well-marked species is allied in structure to the last, but is immediately distinguishable by its diminutive size and double-banded wings. I have two examples of it, both out of a collection received by Mr. Gould from Ecuador, as it is believed, from the eastern slope of the watershed. The third, fourth, and fifth quills are equal and longest, slightly exceeding the second and sixth; the first is rather shorter than the longest secondaries.

7. MYIOBIUS CRYPTERYTHRUS.

Fuliginoso-fuscus, uropygio brunnescentiore; pilei plumis interne rubris; loris albis; alis nigricantibus albo bifasciatis, tectricum majorum et minorum necnon secundariorum marginibus externis fulvescenti-albis: cauda fusca, marginibus pallidioribus: subtus albus lateraliter cinerascens, pectore nigricanti-cinereo

flammulato, tectricibus alarum inferioribus albis : rostro et pedibus nigris, mandibula inferiore carnea.

Long. tota 5·0, alæ 2·5, caudæ 2·3, tarsi 0·7.

Hab. In republ. Equator. reg. occidentalibus.

Mus. P. L. S.

This *Myiobius* is nearly allied to *M. nævius* (Bodd.) (Pl. Enl. 574, fig. 3) of Brazil, and of the same form and distribution of colours; but it is easily distinguishable by its larger size, sooty colouring above, and red crest. It appears to be common on the western side of Ecuador, examples having been procured by Mr. Fraser at Pallatanga, Babahoyo, and Esmeraldas.

8. MYIOBIUS CRYPTOXANTHUS.

Fuliginosus, uropygio magis olivaceo ; pilei plumis interne flavis : loris albis : alis nigris albo bifasciatis, tectricum majorum et minorum apicibus necnon secundariorum marginibus externis sordide albis : cauda fusco-nigricante, rectricum marginibus externis dilutioribus et harum ipsis apicibus anguste albis : subtus sordide cinereus, gutture albicantiore, abdomine flavido perfuso ; rostro et pedibus nigris illius mandibula inferiore carnea.

Long. tota 4·5, alæ 2·3, caudæ 2·1, tarsi 0·6.

Hab. In rep. Equator.

Mus. P. L. S.

This species is closely allied to the preceding, but may be distinguished by its smaller size, shorter bill, yellow hidden crest, and yellowish belly. Its discovery is also due to Mr. Fraser's researches, the only examples of it I have seen having been obtained by him at Gualaquiza and Zamora, in Ecuador. It is included in my list of Mr. Fraser's birds collected in those localities given in our 'Proceedings' for 1859*, but not named, as I was not then able to determine it satisfactorily.

The *Tyrannidæ* allied to *Muscicapa barbata* of the old authors—the type of Swainson's genus *Tyrannula* (a name which we must replace by Mr. Gray's term *Myiobius* in consequence of its approaching too near to *Tyrannulus*)—appear to me to form a group distinguished by their short flat bills, gay colouring, and hidden bright crests. I possess examples of the following species, which I am inclined to arrange together under one generic name:—

a. *Myiobius*.

1. *barbatus* (Gm.) : Pl. Enl. 830, fig. 1, ex Cayenna, Nov. Grenada et rep. Equat.
2. *xanthopygius* (Spix) : Cab. Mus. Hein. p. 67, ex Brasil.
3. *sulphureipygius*, Sclater, P. Z. S. 1856, p. 269.—*M. citrinopygius*, Cab. et Hein. Mus. Hein. ii. p. 67, ex Mexico et Guatemala.
4. *villosus*, Sclater, P. Z. S. 1860, p. 93, ex rep. Equat.

* See P. Z. S. 1859, p. 458, sp. 59*.

β. Pyrrhomyias, Cab. et Hein.

5. *cinnamomeus* (Lafr. et d'Orb.): Cab. et Hein. Mus. Hein. ii. p. 66, ex Nov. Grenad. et rep. Equat.
6. *vieillotides* (!), Lafr. R. Z. 1848, p. 174.—*Pyrrhomyias heinei*, Cab. et Hein. Mus. Hein. ii. p. 66, ex Venezuela.
7. *erythrurus*, Cab. in Wieg. Arch. 1847, p. 249, pl. 5. fig. 1; Sclater, P. Z. S. 1860, p. 295, ex rep. Equat.
8. *ornatus*, Lafr. Rev. et Mag. de Zool. 1853, p. 517; Sclater, P. Z. S. 1854, p. 113, pl. 66. fig. 2, ex Nov. Grenada.
9. *phaenicurus*, Sclater, P. Z. S. 1858, p. 70.—*Tyrannula phaenicura*, Sclater, P. Z. S. 1854, p. 113, pl. 66. fig. 1, ex fl. Napo.
10. *flavicans*, Sclater, ex Nov. Grenada et rep. Equat.
11. *pulcher*, Sclater, ex rep. Equat.

γ. Myiophobus.

12. *nævus* (Bodd.), Pl. Enl. 574. fig. 3.—*Musc. virgata*, Gm.—*Myiophobus nævus*, Cab. et Hein. Mus. Hein. ii. p. 69, ex Brasil.
13. *cryptoxanthus*, Sclater, ex rep. Equat.
14. *crypterythrus*, Sclater, ex rep. Equat.

9. *HETEROPELMA AMAZONUM*, sp. nov.

Saturate olivaceo-brunneum, subtus dilutius, ventre præcipue cinerascens, alarum remigibus extus rufescente limbatis: rostro nigro, basi mandibulae inferioris albida: pedibus fuscis.

Long. tota 6·75, alæ 3·4, caudæ 2·6.

Hab. In ripis fl. Huallaga, loco Chamicuros dicto (Hauxwell).

Mus. P. L. S.

Obs. Assimilis *H. turdinæ* sed statura minore, et vix major quam *H. virescens*.

This *Heteropelma*, of which I possess a single example, collected by Mr. Hauxwell on the Huallaga, is closely allied to *H. turdinum*; but is of a much brighter tinge above, and in size scarcely exceeds *H. virescens*. Its structure is strictly typical.

10. *HETEROPELMA FLAVICAPILLUM*.

Cinerascenti-olivaceum, pilei medii semicristati plumis, nisi in apicibus, flavis: alis caudaque fuscis olivaceo limbatis: subtus pallide cinereum, gula et ventre medio albicantioribus: tectricibus alarum inferioribus pallide sulphureis: rostro et pedibus nigris.

Long. tota 6·0, alæ 3·1, caudæ 2·5, tarsi 0·6, rostri a rictu 0·65.

Hab. In Brasilia Mer. Or.

Mus. P. L. S.

I have long had Brazilian specimens of this bird in my collection, but have never been able to find a name for it. Though small in

size, and somewhat abnormal in coloration, it appears to agree in every essential particular of structure with the typical *Heteropelmata*; the outer toe being united to the middle toe up to the commencement of the third phalange, the scales of the tarsi being similar, and the bill of the same formation. In colour this species very nearly resembles the *Muscicapa aurifrons* of P. Max. (*M. luteocephala*, Lafr.)—a bird referred by Cabanis to *Elainea* and by Burmeister to *Euscarthmus*; but which, I think, from the structure of the feet ought rather to be placed near to, if not in the genus *Heteropelma*.

The species of *Heteropelma*, as far as I am acquainted with them, may be arranged as follows:—

α. *Heteropelma*, Bp. (ex MS. Schiff).

Pedibus majoribus, fortioribus; rostro compresso, elongato, hujus apice uncinato.

Sect. α. *Pileo unicolore.*

1. HETEROPELMA TURDINUM.—*Muscicapa turdina*, P. Max. Beitr. iii. p. 817.—*Ptilochloris rufo-olivaceus*, Lafr. Rev. Zool. 1838, p. 238, et 1847, p. 155.—*H. rufo-olivaceum*, Cab. et Hein. Mus. Hein. ii. p. 100, ex Brasil. Mer. Or.

2. HETEROPELMA VERÆ-PACIS, Scl. et Salv. P. Z. S. 1860, p. 300, ex Guatemala.

3. HETEROPELMA AMAZONUM, Scl., ex fl. Amazonum sup.

4. HETEROPELMA VIRESCENS (Lafr.).—*Musc. virescens*, P. Max. Beitr. iii. p. 802.—*Ptilochloris virescens*, Lafr. Rev. Zool. 1838, p. 238.—*H. unicolor*, Bp. Cab. et Hein. Mus. Hein. ii. p. 100.—*Pipra unicolor*, Langsd. MS.—*Pipra inornata*, Mus. Vindob., ex Brasil. Mer. Or.

Sect. b. *Pileo subcristato, aureo.*

5. HETEROPELMA FLAVICAPILLUM, Sclater, ex Brasil. Mer. Or.

β. *Neopelma*, nob.

Pedibus debilibus, rostro brevior, latiore, apice non uncinato.

6. HETEROPELMA AURIFRONS.—*Musc. aurifrons*, P. Max. Beitr. iii. p. 829.—*M. luteocephala*, Lafr. Mag. de Zool. 1833, pl. 13.—*Elainea aurifrons*, Cab. in Schomb. Reise, iii. p. 701.—*Euscarthmus aurifrons*, Burm. Thiere Bras. ii. p. 489, ex Brasil. et Guiana.