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Contributions to the Natural History of South Africa, &c.
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No. I.

THERE was a time when it required no trifling degree of confidence to venture upon introducing a new species, much less a new genus or genera, to the notice of the public; and much in the form of apology to satisfy the vigilant guardians of the older systems, for attempting to interfere with their too indefinite and highly confused divisions. Of late, however, observation, rather than theory, has been the guide of the Naturalist; and the simple discovery of a form, not quite akin to any described, is now regarded as all that is necessary to warrant the formation and publication of an additional subdivision.

The advantages that have resulted from this new, and certainly far more scientific method of proceeding, must have been sufficient to have convinced even the most zealous anti-reformers and the most devoted admirers of the earlier classifications, that innovation was not resorted to before it was absolutely wanted; and every day's experience is forcibly proving, that still farther ramifications are imperatively called for, wherever the student of nature is, with real and acumen, extending his research.

South Africa, it is already known, possesses several forms not to be satisfactorily classed in any of the older genera, and numbers more exist, which are quite as much, if not more at variance with them, than even those that have already been described,—some of which I shall now proceed to notice.*

* In forming new Genera, I have generally taken care to particularise the type of each, by affixing to the species upon which it has been formed, as a trivial name the word *typicus*. If such a plan was to be universally adopted, many difficulties would be obviated, and the limits of Genera would be more clearly kept than they are even at present, in consequence of new forms being often compared with remote and absent species, from their discoverers not being acquainted with the type of the Genus, or with such of the species as are more nearly allied to it. To such as possess the organs of constructiveness, I would suggest the dividing of a nomenclature, whereby the relative affinities of the various species of a Genus, from the typical one downwards, might be indicated by the trivial names.

Class. MAMMALIA.

Order, FERÆ.

Genus, ERINACEUS.

ERINACEUS frontalis.

E. fronte et lateribus colli albis; mento et partibus inferioribus corporis nigris; aculeis albis nigro variegatis.

Muzzle short and black; ears and tail short, spines numerous and about half an inch long, of a white color variegated with black towards their bases; forehead white, and from thence to the origin of the fore legs extends a broad white band, immediately in front of the spinous covering of back; chin and under parts deep black. Length about eight inches.

Hedge hogs of this species are occasionally found in the northern parts of the District of Graaff-Reinet, but they are much more abundant in the country towards Latakôô, where they are sometimes seen alongside of, or even upon the high roads.

2. MACROSCELIDES rupestris.

M. supra subfulvus, pilis nigris variegatus, post aures fulvus, infra albus.

Muzzle, front and sides of head, a faint tawny grey; back tawny, slightly variegated by an intermixture of some black hairs; the former color deep and vivid, passing in some into a tawny chesnut immediately behind the ears; sides of body dusky white; under parts pure white. Length from tip of nose to base of tail six inches; length of tail three inches.

This species is rather larger than the *Macroscelides typicus*, upon which the genus was originally formed. The latter, as already mentioned, I only found in flat open country, whilst the present, on the contrary, I discovered upon the rocky mountains towards the mouth of the Orange River.

Order, GLIRES.

Genus, PETROMUS.

Dentes primores $\frac{2}{2}$ pagina antica lævigati, superiorum portione pagine interuæ excisa, pro recipienda acie inferiorum; *inferiores* scalpriformes. Pro *Losorius* diastema. *Molares* $\frac{4}{4}$ æque magni, coronidibus singulorum sulco transverso bipartitis.

Cutting-teeth $\frac{2}{2}$, smooth and even in front; *upper* ones notched behind near tips, for receiving the chisel-shaped points of the *lower* ones. *Canine* teeth wanting. *Grinders* $\frac{4}{4}$, equal in size, and the crown of each divided into two portions, by a transverse narrow groove.

Rostrum acutum. Auriculæ parvæ, subrotundatæ, nudius culæ.

Cauda mediocris pilosa, apice floccosa.

Pedes distincti ambulatorii, antici digitis 4 et verruca hallucari, postici penta-dactyli, ungues falculares.

Figura robusta.

Muzzle acute. Ears small, roundish, and nearly naked.

Tail shorter than body, hairy and with the tip somewhat bushy.

Feet formed for walking, the anterior with four toes, the posterior with five. Nails curved.

Figure robust.

PETROMUS typicus.

P. capite, cervice, lateribus colli et partibus anterioribus dorsi, laterumque subnigro et fulvo variegatis; parte posteriore dorsi, femoribus, basique caudæ subcaeruleis; apice caudæ nigro

Muzzle pale chesnut; head, back and sides of neck, together with the anterior part of back and sides, finely speckled fine dusky black and light tawny and tawny white, which colors are disposed in alternate rings upon the fur; hinder part of back and sides, as well as hinder legs and root of tail, brownish red or dull chesnut; rest of tail black. Chin, throat, breast and belly, pale tawny; whiskers long, rigid and deep black. Length from nose to root of tail eight inches; length of tail six inches.

This rat inhabits the mountains of *Little Namaqualand*, and may be seen running from rock to rock during the heat of the day, or in the mornings and evenings feeding upon various composite flowers that occur in situations where it resorts.

Class. AVES.

Fam. FRINGILLIDÆ.

Genus, PLOCEUS.

PLOCEUS stictonotus.

P. fronte, vertice et nucha flavis; dorso flavo, maculis nigris variegato; guttere, lateribus capitis, superciliisque nigris; pectore et ventre sulphuratis.

Throat, sides of head, and eyebrows, black; front, crown and nape, fine yellow, the former with a gold tinge; interscapulars, back, rump, and shoulders, mottled yellow and black; outer vanes of primary and secondary quill feathers greenish, edged with yellow or greenish yellow; inner vanes greenish brown, broadly edged towards quills with yellow. Tail even, greenish brown, all the feathers faintly edged with greenish yellow; breast, belly, vent, and thighs, sulphur yellow. Bill

long, sharp pointed, slightly curved, and of a jet black color; eyes vermillion; legs and toes reddish brown; claws light horn colored. Length from base of bill to root of tail, three inches and three quarters; length of tail two inches and a half. Inhabits the eastern parts of the colony, particularly about the banks of the Keiskamma river, and upon the trees and bushes which skirt the edges of that beautiful stream, it builds its pendulous nest.

VIDUA.

V. nigra, apicibus humerorum scarlatinis, intus castaneis.

Above and below black; tips of shoulders scarlet, which is edged behind by a broad band of dull chesnut; inside of shoulders chesnut; secondary wing coverts, scapulars and secondary quill feathers, edged with faint chesnut or reddish white; armillæ buff colored or pale reddish white; upper mandible pure black, lower flesh-colored inclined to red.

The only specimen I have yet seen of this bird was injured, and therefore the description is not so complete as could be wished. The tail feathers were of different lengths, so that there can be no doubt but that a part of them were progressing towards that state which characterises the birds of this genus during the summer months. It was shot in Cafferland, near the Kei river.

Fam. STURNIDÆ.

Genus, BUPHAGA.

EUPHAGA *Africanoides*.

B. supra sub-brunnea; mento et guttere sub brunneis; pectore et parte anteriore abdominis viridi brunneis; parte posteriore abdominis flavo alba; rostro coccineo.

Above dirty brown; primary and secondary wing coverts as well as primary and secondary quill feathers, brownish black; tail graduated and composed of twelve feathers of a dusky brown color; chin and throat dirty brown; breast and anterior part of belly greenish brown; posterior part of belly yellowish white variegated with brown; vent brownish. Bill between a crimson and a scarlet; legs, toes, and claws, black; round each eye a narrow circle, devoid of feathers, and of a yellow color. Length eight inches. Inhabits the country about Natal, and is commonly seen picking insects from the backs of cattle.

It differs from the *Buphaga Africana* in the colors of the legs, tail, belly, back, and rump, and also in the size of the legs.

Fam. CUCULIDÆ.

Genus, CORYTHAIX.

CORYTHAIX Burchellii.

C. capite cristato, crista et nucha purpureis; capistro et anulo circa oculos lucido viridibus; cervice et parte anteriore dorsi viridibus; parte posteriore dorsi, uropygio, caudaque cæruleis; ventre infimo cæruleo-nigro.

Head crested, crest and nape brilliant purple; front, and a circle round each eye, deep shining green; cervix and interscapulars light green with a shade of brownish red; scapulars, shoulders, back, rump, and tail, blue, varying in brilliancy, the tail slightly rounded. Primary quill feathers black with a tinge of blue, and the inner vanes towards the middle of the feathers crimson; chin, throat, and sides of neck, grass green; breast green with a shade of reddish; anterior part of belly dark green; posterior part and vent blackish blue; legs, toes, claws, and bill, black. Length sixteen inches, of which the tail forms nearly the half. Inhabits the country about Port Natal, and is named in honor of the indefatigable traveller and eminent botanist Wm. Burchell, Esq. author of *Travels in South Africa*, &c.

Fam. CINNYRIDÆ.

Genus, CINNYRIS.

CINNYRIS Veronii.

C. supra subviridis violaceo umbrata; infra cinnerea, pectore duobus maculis scarlatinis notata.

Front, crown, cervix, sides of head and neck, interscapulars, back, and shoulders, dusky green with shades of splendid violet or purple; quill feathers and tail brownish with a shade of green. Chin, throat, breast, belly, and vent, ash colored; the flanks with a tinge of green. On each side of breast immediately inside of the bend of the wing, a small scarlet tuft; bill and legs black, claws dark horn colored. Length from bill to base of tail two inches and three-quarters; length of tail two inches; length of bill one inch and a quarter. Inhabits Cafferland; and the specimen from whence the above description was taken, was given to me by Mr. VERREAUX, through whose liberality I have been put in possession of many new and interesting objects of Natural History.

Fam. HALCYONIDÆ.

Genus, *ALCEDO*.*ALCEDO Natalensis*.

A. fronte, vertice, nuchaque cœruleis, lineis transversis violaceis variegatis; lateribus capitis subcinnamomeis; dorso cœruleo; pectore et ventre subcastaneis.

Bill and legs bright scarlet; front, top of head and nape, deep indigo blue, variegated by pale blue or violet transverse bands; sides of head and neck light reddish brown with tints of purple; back fine bright blue; shoulders blackish with a shade of blue in addition to numerous spots of clear light blue. Primary and secondary quill feathers dusky black, with the inner vanes nearly all brownish red; chin and throat white; breast, belly, and vent, pale chestnut; tail dusky blue. Length from bill to tip of tail four inches: length of bill one inch. Inhabits the banks of rivers, &c. to the eastward of Cafferland.

Fam. OTIDÆ.

Genus, *OTIS*.*OTIS Afroudes*.

O. fronte, superciliis, lateribus capitis, collo, gutture, pectore et ventre nigris; vertice et parte nuchæ nigris albo variegatis, dorso nigro lineis transversis albis aut subrubris variegato; remigibus albo et nigro notatis.

Front, eyebrows, sides of head and neck, throat, breast, belly, vent, and thighs, pure black; crown and part of nape, black, variegated with irregular waved transverse white lines; between the black eyebrows and variegated crown a moderately distinct white line, which extends backwards and meets on the nape the corresponding one of the opposite side, where they form an irregular white mark. Behind each eye and covering the openings of the ears, a large somewhat circular white blotch; between interscapulars and base of neck an irregular transverse white band. Interscapulars, scapulars, and anterior part of shoulders, black, variegated by narrow reddish white angular transverse bands; back and rump black, with narrow transverse waved white lines; posterior part of shoulders white, inside white blotched with black. Primary wing coverts black, more or less broadly tipped with white; secondary similarly colored, only the quantity of white is much greater. Primary quill feathers black, with a great portion of the inner vanes white; secondaries black, several of them blotched or striped longitudinally with white. Tail rounded, and finely rayed

transversely with black and white, each feather besides with one or more broad pure black transverse bands, and the lateral ones with broad white tips; armillæ white. Bill horn colored towards tip, yellow towards base; legs and toes yellowish; claws horn colored. Length from bill to tip of tail nearly eighteen-inches.

This species is closely allied to the *Otis Afra*, or black Koran of the Colonists, but is at once distinguishable from it by the white markings of the inner vanes of the primary quill feathers. Its cry is also very different, being simply *kir* repeated many times in quick succession. I have never found this bird within the limits of the colony, but have seen many of them on the Bushman flats towards the Orange River. From the last circumstance, they are known to the farmers of the northern frontier by the name of "Bushman Koran*."

Class, REPTILIA.

Order, EMYDOSAURI.

Fam. CROCODILIDÆ.

Genus, ALLIGATOR.

ALLIGATOR *Cowicli*.

A. supra nigro-viridis; infra subflavus; scuta nuchæ 5; scuta cervicis 10; poria supra oculos.

Color above, blackish green; below, dusky yellow; hind head with six carinated plates placed in two transverse rows, viz. four in the first row and two in the last; upper part of neck with ten similar plates disposed in three rows, namely, four in the first row, three in the second, and two in the last; the outermost one on each side of the two first rows less distinct than the centre ones; over each eye an irregular elevated longitudinal boney ridge; top of head flat; muzzle rounded; teeth unequal, thirty-eight in the upper jaw and twenty-nine in the lower. Back with eight longitudinal rows of carinated scutæ; tail, above with first four rows, then with two, and lastly towards apex with only one, the scales of which are placed transversely, and upon their sides, with the edge of one overlapping the next to it like tiles upon a house.

* Many interesting species of this genus have already been discovered in South Africa, and doubtless the catalogue will yet be extended when more attention is devoted to the examination of the individual characters of birds. The species at present known to us are—*Otis Arabs*. Cuv. Kuif kop Peauw. —*Otis ruficollis*. Cuv. red necked Peauw —*Otis Coleii*. Smith mms. black throated Peauw —*Otis Afra*. Lin. black Koran. —*Otis Torgata*. Cuv. brown Koran —*Otis Vigorsii* Smith mms. Karoo Koran. —*Otis Verrilli* Smith mms. blue bellied Koran. —*Otis Afroides* Smith. Bushman Koran;

When full grown, this species measures from fourteen to sixteen feet, and abounds in the rivers beyond Currichane, and in those towards Natal and Delagoa Bay. It is much dreaded by the natives of the countries through which the rivers flow, and proves often destructive to individuals, when in the act of passing them. From that circumstance, such as have occasion to cross streams infested by it, usually assemble, if possible, in small parties, and after having supplied themselves with large stones, proceed slowly from one side to the other, casting them around, so as to prevent attacks. The species is named in commemoration of the late enterprising Dr. Cowie, who fell a sacrifice to the climate of Delagoa Bay, and who, as far as I know, was the first person that called attention to it.

Fam. TUPINAMBIDÆ.

Genus, VARANUS.

VARANUS Gillii.

V. vertice et lateribus capitis brunneis aut brunneo-flavis; collo flavo, fascia brunnea variegato; supra brunneus, fasciis flavis annulatus; infra flavus, lineis aut maculis nigris variegatus.

Head short and four-sided; muzzle obtuse; opening of ears large, and about an inch behind the angle of mouth: scales smooth and ovate, each surrounded by a rough granulated ring, and disposed upon body in waved transverse rows, and on tail in circular continuous rings. Crown and sides of head brownish or brownish yellow; neck yellow, variegated on each side by a blackish brown longitudinal stripe that commences at the hinder extremity of the eye and extends as far as hinder edge of shoulder, from which point another similar colored one descends downwards and forwards to the base of fore leg. Ground color of back and sides dusky brown, which is crossed by four broad transverse interrupted yellow bands that increase in width as they descend upon the sides; belly yellow mottled by blackish stripes or spots; insides of legs yellow mottled with brown; outsides brown mottled with yellow. Tail rounded at base but slightly compressed throughout the greater part of its length, and with a double and slightly dentated carina above, colors yellow and brown, disposed in sixteen alternate rings, the last, including the tip, is brown; claws dark horn colored and much curved. The yellow markings, wherever they occur, are, more or less, mottled with small blackish brown spots. Length of body eighteen inches; length of tail twenty-one inches. Inhabits the mountainous districts of Graaff-Reinet and the Orange river. The best specimens I have yet

seen were a male and female in the possession of W. Gill, Esq. to whose liberality I am indebted for the opportunity of describing the species, and in honor of whom it is named.

Fam. CAMELIONIDÆ.

Genus, CHÆMELIO.

CHÆMELIO *tæniabronchus*.

C. flavo viridis, lateribus corporis fasciis duobus longitudinalibus subaureis notatis; occipite su acuto, subcarinato; gula denticulata; guttere faciei nigris maculato.

Color yellowish green with two longitudinal buff stripes along each side, and four or six smooth oblong jet black marks upon the throat, which are only distinctly visible when the animal inflates itself, or when the skin of the neck is otherwise distended; occiput obtusely pointed behind and above, with a slight longitudinal carina near its middle, which, and the eyebrows, are finely denticulated. Chin and throat with a narrow longitudinal dentated fringe of a pure white color. Length of body two inches and a half, or of body and tail together five inches. Inhabits the neighbourhood of Algoa Bay,

CHÆMELIO *Namaquensis*.

C. cinereo-niger; occipite elevata et carinata; superciliis subdenticulatis; dorso dentato.

Occiput elevated, arched above, strongly carinated along the centre, and pointed behind; eyebrows very slightly denticulated; back strongly dentated; the apices of some of the teeth obtuse and divided or lobed; nails amber colored; head, back, sides, and tail, cinereous black, here and there with blotches of pure cinereous; under parts lighter. Inhabits the western coast of South Africa, near to the mouth of the Orange river.

Ordo. SERPENTES.

Fam. COLUBRIDÆ.

Genus, CORONELLA.

CORONELLA *Leucopilus*.

C. dorso lateribusque nigro-viridibus; ventre flavo-albo; labio superiore subalbido.

Head broader than the neck; body somewhat four sided; tail cylindrical and pointed. Color of back and sides blackish green with a metallic lustre; belly a mother-o'-pearl hue with a

slight shade of very pale brownish red; upper lip dusky white; tail mottled dusky greenish black and reddish white, and with a metallic lustre; scales somewhat six-sided and disposed in oblique transverse rows. Abdominal plates 170. Subcaudal scales 64 pairs. Length of body 17 inches, length of tail 4 $\frac{3}{4}$ inches. The body increases but little in thickness towards the middle; the tail tapers to a point. Inhabits damp and retired situations throughout South Africa.

LYCODYN Capensis.

L. supra sub-brunneus aut virido brunneus, apicibus squarum albis; infra fluvo-albus.

Back and sides imperfect brown or greenish brown, most of the scales, particularly in young specimens, narrowly tipped with pure white; belly a shining yellowish white; head much depressed, and the hind head wider than either the neck or body, the latter nearly of equal thickness; the tail three-sided and tapering to a point; eyes small; pupils circular.

In young specimens the color of the back and sides is blackish green with a tinge of purple. Abdominal plates 129, the extremities of each plate with a pure white spot. Subcaudal scales 37 pairs. Length of body seventeen inches, length of tail two inches and a half. I have only met with two examples of this species, the one near Cape Town and the other close to Port Elizabeth.

Classis, AMPHIBIA.

Ordo, BATRACHIA.

Fam. RANIADÆ.

Genus, TREMEROPUGUS.

Figura oblongo-ovata, depressa.

Caput, corpore confusum; *maxilla* ultra mandibulam extensa et serie dentium setaceorum armata; *mandibula* sine dentibus. *Oris* rictus medio-cris. *Oculi* parvi horizontales et versus apicem capitis.

Dorsum et *latera* convexa.

Extremities anteriores graciles, quatuor digitis libris, cylindraceis attenuatis, sine un-

Figure oblong-ovate, and depressed.

Head confounded with the body; *upper jaw* longer than the lower, and furnished with a single row of setaceous teeth; *lower jaw* toothless; *gape* moderate.

Back and *sides* convex.

Fore legs slender, short, and with four cylindrical attenuated free toes; *hinder legs* long, muscular, and with five com-

guibus: *posteriores* longæ, robustæ, *digitis* quinque palmatis, quorum tribus interioribus ungiubus armatis; *digitus* exterior longissimus.

Anus prolongus et trifidus.
Cutis lævis.

pletely palmated toes, the three innermost only armed with small nails; the outermost the longest.

Anus prominent and trifid.

Eyes small, horizontal, and near anterior part of head.

Skin smooth and glossy.

TREMEROFUGUS typicus.

T. supra subviridis, fasciis subnigris variegatis; infra subflavus.

Color above dusky green variegated by irregular waved blackish green lines, which, from various conjunctions with each other, form a sort of irregular net-work upon the back and sides; belly greenish yellow, which is also the color of the insides of the legs. *Eyes* dark blackish brown. Length about four inches. Inhabits fresh-water lakes and slow-running rivers in most parts of South Africa. It seldom leaves the water, and when upon dry ground leaps well.

Class. PISCES.

Fam. PERCIDÆ.

Genus, DIACOPOMA.

Dentes graciles, numerosi approximati, et minores in maxilla quam in mandibula, anteriores majores; series interrupta dentium in palato: *rixtus oris* magnus, *margo posterior operculi* incisus.

Squamæ magnæ et duræ.

Cauda leviter rotundata.

Figura subcylindrica formis.

Teeth slender, numerous, and closely set, smaller above than below; the front ones of both jaws the largest; an interrupted semicircular row of small teeth in the palate; *gape* large; *posterior margin of operculum* with a deep notch, which is filled up by a fine black membrane. *Scales* large and hard.

Tail somewhat rounded.

Figure approaching the carp.

DIACOPOMA typicus.

D. supra viridi-niger; infra flavo viridis.

Color of back and sides greenish black, the centre of the scales darkest; belly inclined to yellowish green. Pectoral fins greenish yellow, rest of fins greenish inclined to dusky greenish blue, particularly the dorsal one. Length from four to five inches. Inhabits most of the rivers towards the southern extremity of Africa, and is called *Carper* by the Dutch.

The color of this fish varies considerably according to the character of the water in which it resides; being in some nearly a uniform greenish black, and in others a light green with dark and pretty regular spots or blotches.

B. 5, D. $\frac{1}{2}\frac{2}{2}$, P. 12, V. $\frac{1}{6}$, A. $\frac{5}{16}$, C. 16.

DIACOPOMA typicoides.

D. *supra nigro-viridis infra nigro-viridis aut viridi-flava.*

Color blackish green verging to dusky green, the centres of the scales in this as well as in the typical species darkest; belly sometimes the same color as the back and sides, sometimes greenish yellow. Pectoral fins yellowish, rest greenish inclined to greenish blue, particularly the dorsal one, which is marked behind each spinous ray by a narrow vertical stripe. Length from three and a half to four inches. Inhabits the fresh-water lakes and rivers of the eastern part of the colony as well as those more to the interior of the continent. The perpendicular stripe behind each of the spinous rays of the dorsal fin, the difference in shape and arrangement of the scales on the top of the head, together with the habitat, at once characterize this as a distinct species.

B. 5, D. $\frac{1}{2}\frac{2}{2}$, P. 11, V. $\frac{1}{6}$, A. $\frac{5}{16}$, C. 15.

SERRANUS Cuvierii.

S. *supra brunneo-flavus, maculis viridi-nigris variegatis; infra rubro-flavus, nebulis brunneis notatus.*

Color of back and sides brownish yellow with blotches, streaks or irregular bands of dusky greenish black; lower part of sides and belly reddish yellow with a slight mixture of brown. Dorsal fins deep dusky brown, with the extremities of the spinous rays reddish; ventral fins towards apices brown, towards bases yellow; bases of pectoral fins bluish white finely spotted with orange, rest reddish brown; tail even, or only very slightly rounded, with the hinder edge narrowly margined with white. Eyes orange. A full grown specimen of this fish measures about two feet and a half. Inhabits the ocean along the south-east coast of Africa, particularly about *Algoa Bay*, where it is frequently caught by the fishermen, and highly esteemed as an article of food. It is called by them the *Rock Cod*.

B. 7, D. $\frac{1}{2}\frac{3}{1}$, P. 15, V. $\frac{1}{4}$, A. $\frac{6}{14}$, C. 17.

Class, MOLLUSCA.
Ordo. GASTEROPODA.
Fam. LIMACINEA.
Genus, LIMAX.

LIMAX melanostictus.

L. capite tentaculisque viridibus; scuto oviformi, granulis nigris variegato; ventre flavo

Head and tentacula light green, inclined to olive; shield oviform, centre greenish brown with a number of minute slightly elevated granulations; sides yellowish green, clouded with tints of brownish green or black, anterior edge finely dotted with white. Body greenish yellow, darkest above with a dotted yellowish white dorsal line; sides variegated with small white spots, most numerous towards the mantle. Belly yellowish green; mantle narrow with a white dotted line at its junction with the body. Length, when fully extended, three inches. This snail occurs during the winter season, in different parts of Zwartland, particularly towards the *Paarl* and the *Paardeberg*. When specimens are required they must be sought for early in the mornings after rains or heavy dews.

LIMAX Lamarckii.

L. tentaculis viridi flavis; capite scuto et corpore flavo-viridibus; linea dorsali ventre que flavis.

Tentacula greenish yellow; head shield and body yellowish green, the latter with a yellow dorsal line; belly and mantle yellow. Shield but slightly elevated, the hinder extremity somewhat semicircular; the anterior narrow and inclined to pointed; upper surface irregular but not granulated. Length three inches and a half. Inhabits, during the winter season, damp situations in the district of Zwellendam, and may generally be found after rains or heavy dews about *Kopman's Kloof*.

Class. CRUSTACEA.
Ordo. LAEMODIPODA.
Fam. OVALIA.
Genus, CYAMUS.

CYAMUS Leachii.

C. brunneus aut flavo-brunneus; pedibus imperfectis subcoccineis.

Color brown or yellowish brown; false feet crimson or brownish crimson. Length from a quarter to three-quarters of an

inch. When dried it loses the brown color and appears of a dusky dull white, the false feet are then reddish brown. Found upon the pectoral fins of the hump-backed whale.*

CYAMUS Latreillei.

C. albus aut sordido albus; pedibus imperfectis rubro-brunneis.

Color white or dusky white, with, in some specimens, a shade of dull brown along the centre of the back; false feet reddish brown. Length from an inch to an inch and a half. Found upon the common South Sea whale †. When dried it has almost the same color as when alive, the white only being a little clearer.

Note.—Besides the differences in the color and habitat of the two species just described, various other discrepancies are observable upon closely examining and comparing specimens of both species, most of which, however, are almost indescribable. The lateral projections at the base of the head in *Cyamus Leachii* are somewhat quadrangular, and even with the head; in *Cyamus Latreillei* they are sloped off before and partially separated from the head by a deep longitudinal narrow groove. In the first species the segments of the antennæ somewhat resemble flattened cylinders, in the last they are compressed or even concave.

Class. MYRIAPODA.

O. do. CHILOGNATHA.

Fam. ANGUIFORMIA.

Genus, JULUS.

JULUS dorsalis.

J. supra brunneo ruber; linea dorsali nigra; partibus inferioribus laterum et ventre rubro-brunneis; pedibus et antennis subrubris.

Male.—Head plate notched in front with a slight longitudinal furrow extending from the centre of the notch half-way across the segment, the notch itself finely dentated; eyes in somewhat quadrangular clusters; segments of body about 44; legs 8 pairs. Color of back and upper part of sides bright brownish red, with a narrow longitudinal black band along the centre of the former; lower part of sides and belly pale reddish brown, legs and antennæ reddish or reddish brown. Length about two inches.

Female.—Colors as in the male, with the exception of the head and anal plates, which are generally light brownish red;

* Balænoptera Australis. Smith.

† Balæna Australis. Cuvier.

size usually exceeding that of the male, and commonly measuring about two inches and a half in length. Dorsal line more or less strongly marked. All the segments, except the five in front and the last one behind, are marked on each side in both sexes, about half-way between the back and belly by a minute circular depression, which, from all those of the same side being disposed upon the same level, gives the appearance of a partial longitudinal dotted line. This species occurs in great abundance in bushy situations throughout the district of Uitenhage.

JULUS erythronotus.

J. supra rubro-brunneus; infra pallidior; dorso rubro flavo variegato.

Male.—Head plate notched in front; eyes in two triangular clusters; last joint of antennæ considerably compressed and oviform. Color above reddish brown, the dorsal portion of each segment with a reddish yellow blotch or transverse band at or near its anterior edge, so that when the animal is rolled up there is the appearance of an interrupted reddish yellow band along the centre of the back; belly, legs, and antennæ, pale reddish brown, inclined to flesh color; last segment with a slight obtuse carina above, and each anal flap at its hinder and upper edge with a very small recurved and pointed mucrone, one on each side of carina. Length about five inches; thickness about that of a goose quill. Occurs in the district of Uitenhage.

JULUS striatus.

J. brunneo niger, parte anteriore scutorum singulorum brunneo rubra; pedibus brunneo et rubro annulatis.

Male.—Head plate notched in front, notch slightly annulated, and immediately behind it four small depressions, disposed in a line parallel with the anterior edge of head. Color brownish black with the anterior half of each segment light brownish red, whereby two distinct colors, disposed in circular rings, are exhibited when the animal is rolled up; feet brownish, and flesh-coloured in alternate rings; eyes in somewhat triangular clusters, and between the clusters a short and slight longitudinal furrow. Hinder edges of segments rounded off at their extremities, and above where that commences to occur, each is more or less striated transversely; segments 60; legs 111 pairs. This species abounds in the district of Uitenhage, and is most readily procured after heavy rains.

JULUS Cuhas.

J. supra lucido-niger, portione scutorum flava; infra sub-flavus; pedibus, scutis ani, capite et antennis rubris.

Male.—Head plate notched in front, and margined before by a narrow thin edging of black; immediately behind notch some small hollow dots or streaks. Color of back and sides shining black, the anterior edges of segments, which are concealed when the animal is extended, are yellowish, particularly towards the belly, feet, anal flaps, head, and antennæ, red; belly mostly yellowish; segments 61; feet 115 pairs. Length five inches, thickness rather greater than that of a goose-quill. Inhabits like situations as the last described.

JULUS erythromelas.

J. nigro ruber, portione scutorum singulorum rubra; pedibus rubris; scuto ultimo spina recurvata.

Male.—Color blackish red, with half the breadth of each segment towards belly reddish; feet red; last segment with a strong recurved mucrone, which, and the anal flaps, are brownish red. In some the whole anterior edge of segments are reddish.

Female.—Color greenish with some reddish brown variegations on back and sides; mucrone yellowish. In some the back is dusky green, with the exception of two rows of reddish brown spots.

Note.—*Julus dorsalis* is readily distinguished from the other species by its black dorsal line and by the partial row of minute circular depressions on each side.—*Julus erythronotus* by its great length when compared with its thickness, by its very short and delicate feet, and by the anal flaps being terminated, each, by a small mucrone.—*Julus striatus* is characterised by the colors being disposed in somewhat circular rings, and by the striæ on the lower and hinder parts of each segment. This species rolls itself up very slowly, and never continues long in that state.—*Julus Cuhas* is distinguished from the last, to which it is most closely allied, by its not having the colors of the feet disposed in alternate rings.—*Julus erythromelas* by its strong mucrone, and by its being thicker in proportion to its length than any of the yet known South African species.

Port Elizabeth, Algoa Bay,
24th June 1831.