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XXXIV.—List of Coleoptera received from old Calabar, on the West Coast of Africa

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XXXIV.—*List of Colcoptera received from Old Calabar, on the West Coast of Africa.* By ANDREW MURRAY, Edinburgh.

[Continued from page 326.]

Addenda to Nycteis and Belonognatha.

SINCE my remarks on these genera were published (in the April number of the *Annals*) I have received another species, which confirms the view I there threw out that they should be conjoined. The species now received has the elongate labrum canalculated at the apex of *Belonognatha*, and also has the mandibles longer and sharper than in *Nycteis*, although not quite so prominent as in the other species of *Belonognatha*, while its form is less tumid, and possesses the other characters of *Nycteis*, except that the apex of the elytra is rounded at its emargination instead of being toothed. This combination of characters renders it, I think, impossible to keep the two genera separate; or, at all events, if we do so, we must alter the characters,—we must retrench the elongate mandibles, as well as the form of the labrum and of the apex of the elytra, from the characters. There is, indeed, a trivial character which separates the species (after abstraction of the above characters) into two groups, nearly equivalent to *Nycteis* and *Belonognatha*, viz. that under a powerful lens we see that one group has the elytra finely aciculated or reticulated, something in the same way as the *Calathi*, while the other has the elytra polished and shining, without this aciculation, and generally appearing metallic when looked at from in front, and dark-coloured when looked at from behind. My arrangement of this genus would therefore stand thus : viz.—

NYCTEIS.

Essential characters the same as in *Coptodera*, but without the middle tooth to the mentum.

Subgenus I. (*Nycteis* proper).

Elytra finely aciculated or reticulate, and body not very convex. Under this head fall—

Coptodera flexuosa, Schmidt-Goebel, and probably all the other Eastern *Coptodera* described by him. *Coptodera bicincta*, Hope. Probably all the Caffrarian species described by Boheman, Chaudoir's *C. figurata*, and possibly Klug's *Beleopteris signatus*, besides my species *N. Championi*, and the new species (*N. intermedia*), the description of which follows.

Subgenus 2. (*Belonognatha*).

Elytra polished and shining, without aciculation or reticulation. Body convex, and mandibles usually prominent and acute.

This subgenus contains the species I have already described under the names of *Belonognatha rugiceps*, *obesa*, and *quadri-notata*, besides, doubtless, Chaudoir's species, *B. pustulata*, and possibly Klug's *Beleopterus cyanipennis*.

The characters of the new species lately received are as follow :

2. *N. intermedia*, mihi.

Valde affinis *N. Championi*, sed parum minor, labro magis elongato et ad apicem canaliculato ; mandibulis acutioribus ; thorace minus transverso et postice angustiore ; elytris apice emarginatis sed non dentatis, angulis posterioribus rotundatis, cum maculis anticis grandioribus et maculis posticis minus continuis.

Long. 3 lin., lat. $1\frac{1}{3}$ lin.

Has very much the appearance of *N. Championi*, but, on comparison, is readily distinguished by the characters mentioned in the above diagnosis. The insect is smaller, and the coloration is the same, only a little darker. The labrum is longer, and narrowed towards the point, where it is canaliculated. The mandibles are more slender, more acute, less rounded on the exterior, and narrower at the base. The head is narrower, and is marked by a number of minute longitudinal wrinkles. The thorax is not so transverse and is narrower behind, and the reflexed margin is not quite so broad. The elytra are rounded at the posterior angles instead of being toothed, and the testaceous markings on them are slightly different ; the anterior marking is confined to the same striæ, but is rather larger from the colour running further on some of them ; it runs up on the second and third striæ nearly as far as on the fourth, only sloping very slightly towards the suture, while in *N. Championi* the fourth goes a good deal beyond the third. The posterior markings are the same as in *N. Championi*, but are narrower, and consequently appear almost interrupted where they advance at the third stria and retreat at the fifth. They both have the elytra very finely transversely aciculated, but the aciculations are finer on *intermedia* than *Championi*, the power of lens which shows them in the latter scarcely showing them in the former. In other respects they correspond.

There is yet another species which I have no doubt belongs to this section, and which I would name *quadrimaculata* ; but, as

yet, I have only received a broken specimen, wanting both head and thorax, and am therefore unable to describe it. It has two large yellow patches on each elytron, the basal nearly round, and the apical transversely oblong, both with very slight traces of jagged edges.

Ozenidæ.

GONIOTROPIS, Gray.

The species which follows certainly belongs to this genus, although it differs in one or two unessential points from the characters which have been given as generic by Gray. That author gives the mandibles as pluridentate on the inner side, and the anterior thighs as dentate on the under side, neither of which is the case in my *G. Wyliei*; but, as in all other respects it agrees with the diagnosis of *Goniotropis**, I do not propose to make a new genus for it on account of them, but merely withdraw the above specialties from the characters of the genus, and thus widen it to receive the following species.

1. *G. Wyliei*, mihi.

Castanea, nitida, lævis; capite antice et postice levissime punctato, vertice elevato, impunctato; mandibulis elongatis, robustis, non dentatis; labro integro; thorace marginato, angulis posticis fere rectis sine emarginatione; elytris, capite et thorace paulo longioribus, parallelis, cum carina marginali interrupta et fortius plicata versus apicem; femoribus non dentatis, tibiis anterioribus arcuatis, intus fortiter emarginatis. Long. 5 lin., lat. $1\frac{1}{2}$ lin.

Colour uniform chestnut, shining, smooth; head faintly, aciculary, irregularly punctate in front, and still more sparingly behind, with the vertex raised and impunctate; clypeus solid and smooth, outline in front very slightly concave; labrum transverse, and almost as broad in front as behind, entire†, a row of punctures, from which hairs proceed, extending along

* The reader will find the generic as well as the specific characters noticed in the following description, so that he can satisfy himself that I have not overlooked any of importance.

† The labrum certainly cannot be called emarginate, although perhaps the anterior angles may be said to be very slightly more advanced than the centre of the anterior margin; still the line of margin is very nearly straight. A similar slight inequality would perhaps explain how the figure published by Gray of his *G. Brasiliensis* shows an emarginate labrum, while he makes no mention of its emargination in the text, and would confirm the view taken by Lacordaire, that the genus *Ictinus* of Castelnau (which has the

the front; mentum with a tooth in the middle; ligula short, narrow, truncate; paraglossæ broad, truncate, adhering to the ligula throughout their length; labial palpi short and robust, last joint somewhat securiform; maxillary palpi longer, last joint subcylindric, depressed, and truncate; mandibles robust, elongate, and rounded in front, a few scattered hairs along their exterior, without teeth along the interior margin; antennæ about as long as the head and thorax, flattened, gradually increasing in size to the end, the last joint more than twice as long as the preceding; thorax as long as broad, cordiform, surrounded with a border along the sides, flat anteriorly, but broader and reflexed behind, ending in a fovea near the basal angles, which are nearly right-angled; no emargination in front of them; a dorsal longitudinal line not reaching quite to the front, a semi-circular line in front, and a transverse line a little before the base, which is truncate and almost straight; elytra elongate and nearly parallel, with a reflexed margin or raised keel running along the exterior sides to near the extremity, where it terminates, and then another keel commences a little within it, with a more prominent fold, which continues for a very short space, and is then replaced by an ordinary raised margin, which disappears near the apex; an inner raised callosity or rounded ridge commences near the above fold, and continues parallel to it and the raised margin till near the apex, where it joins it, and both cease. Under a powerful lens, the elytra are seen to be sparingly and faintly punctate; one or two rows of deeper, distant punctures (eight or nine in number) occur on the disk, and a series of foveæ runs along the marginal depressed space next the raised margin. Under side and legs a little paler than upper side, shining, bearing throughout a few scattered punctures, and somewhat pubescent, more particularly the tibiæ and tarsi. Anterior legs with thighs without teeth, but with a hollow space on the under side; tibiæ strongly arched and very deeply emarginate on the inside, the margin of the excised space very closely fringed with pubescence, and the tooth behind the emargination slightly incurved, with a few hairs projecting; intermediate and posterior legs simple; coxæ of the former adjoining each other; anterior pair more separated, and posterior pair widest apart; trochanters of the latter large and broad; tarsi of all the legs short and robust; claws simple.

I have named the above species of this rare and interesting genus after Mr. Wylie, to whom I am indebted for this as well as many other valuable species discovered and sent home by him.

labrum entire) is identical with the *Goniotropis* of Gray, notwithstanding this apparent though trifling discordance in their characters.

Morionidæ.

MORIO, Latr.

1. *M. Guineensis*, Imhoff, Verh. d. nat. Gesells. in Basel, vi. 166.

M. Senegalensis, Dej. Cat.

Niger, nitidus, depressus; prothorace lato, subcordato, angulis anticis prominulis, posticis rectis, medio et utrinque intra basin sat profunde canaliculato; elytris prothoracis fere latitudinis quam latis non duplo longioribus, parallelis, evidententer striatis, interstitiis subconvexis lævibus; pedibus ferrugineofuscis.

Long. $8\frac{1}{2}$ lin., lat. 3–2 lin.

This species varies considerably in size, so much so as almost to lead one to suppose that there are at least two species con-founded in it, particularly as the larger individuals seem to the eye broader in proportion than the smaller ones. Careful ex-amination and measurement, however, show that this is a mere ocular deception, the relative proportions being the same. It ap-proaches very nearly to *anthracinus*, Bohem., and *parallelus*, Klug. The relative proportions of this species are as follow:—Thorax broader than long. Length of elytra rather more than twice the length of thorax, and about $1\frac{1}{2}$ or $1\frac{3}{4}$ times the breadth of the elytra. In my specimens from Senegal the elytra are rather more elongate, being nearly twice as long as they are broad; but as I can find no other difference, I have not considered it a new species.

PLATYNODES, Westw.

1. *P. Westermanni*, Westw. Trans. Ent. Soc. 1845, p. 278. vol. iv. pl. 21. fig. A. Pl. XIII. fig. 7.

Niger, subnitidus; capite magis nitido, antennarum articulis api-calibus brunneis, superficie corporis lævi; singulo elytrorum striis 7 simplicibus et gracillimis instructo, spatio inter striam 6 et 7 ad latera in carinam elevato, spatioque intra marginem lateralem punctis parvis rotundatis impresso.

Long. $13\frac{1}{2}$ lin., lat. $4\frac{1}{2}$ lin.

The insect I have from Old Calabar seems to be the same species that has been already described and figured by Mr. West-wood (*loc. cit.*). I have only received a single specimen, and I find one or two trifling discrepancies between it and the figure given by Mr. Westwood, as well as a typical specimen of *Wester-*

J. Mignonez pinet.

Lebrun sculp.

6. *Storcestoma Whittei.*

7. *Platynodes Westermanni.* Westw.

8. *Panageus grossus.* Hope.

9. *Chlaenius elongatus.*

10. — *Chevolatii.*

11. — *diaphanicollis.*

manni in the magnificent collection of the Count Mnizseck in Paris. These are the following:—The antennæ in my specimen are not quite so much thickened; the anterior tarsi are less dilated; the scutellum is smaller, and the posterior angles of the thorax are less salient. Some of these may be mere sexual distinctions, and the remainder possibly accidental variations; at all events, none of them, according to my views, suffice to constitute a new species.

Mr. Westwood, in his generic description of this insect, says that the abdomen has only four segments. I would express this differently. It may only have four separable segments, but the segments are in reality five, the first two segments being soldered together, so that their line of separation is indistinct in the middle; but it is quite distinct and well marked at the sides. This appears to be the normal state of matters in the *Morionidae* and *Scaritidae*. There is also a side-piece before the first segment, which may be viewed as part of another segment.

STEREOSTOMA, mihi (στερεὸς and στόμα).

Caput parvum, parum convexum, quadratum, pone oculos sine tumore et sine collo retractato. Labrum breve, transversum. Mandibulæ robustæ, subtus concavæ et excavatæ, supra rotundatæ, apice acutæ, intus sine dente. Maxillæ parvæ. Palpi breves et robusti: articulus ultimus palporum externorum ovato-cylindricus et truncatus; palporum labialium grandis, crassus et late securiformis. Mentum breve, transversum, profunde excavatum et fortiter emarginatum, cum dente medio simplici et malis acutis, lateribus rotundatis, extus caput valde alveato. Ligula curta et angusta, truncata. Paraglossæ nullæ. Antennæ breves, moniliformes, articulis apicalibus velutinis, compressis et dilatatis versus apicem, cum spatio sat lato lævi et nitido singulis relicto et supra et subtus. Prothorax subquadratus, parum subcordatus, capite multo lator, postice quam antice parum angustior et longitudinaliter bifoveolatus; basi medio leviter transverse productus. Pro-

sternum sat latum et prominens retro paulo projiciens. Scutellum parvum. Elytra elongata, parallela, striata, sat convexa, apice abrupte declivia et leviter emarginata hand truncata. Pedes mediocres. Tibiæ anticæ dilatatæ, subtus excavatæ, intus emarginatæ. Tarsi breves, transversi, fere moniliformes, antici breviores; in fœmina, et supra et subtus nitidi et politi, sine setis vel squamis, ciliis ad marginem anteriorem singulorum adstrictis exceptis; in mari, antici setis longis instructi, ceteris ut in fœmina*; unguiculi simplices. Corpus elongatum, parallelum et parum convexum. Abdomen segmentis quinque, quorum primum et secundum conglutinata sunt.

1. *St. Whitei*, mihi. Pl. XIII. fig. 6.

Nigrum, politum, nitidum; capite foveis quatuor fronte impressis, quadrangulariter positis, et lineis impunctatis tribus lateribus junctis; thorace clytris angustiore, postice longitudinaliter bifoveolato et linea dorsali, postice profundiore impresso, angulis posterioribus rectis, non productis; clytris striatis, striis leviter punctatis, interstitiis impunctatis planis.

Long. 6 lin., lat. $2\frac{1}{2}$ lin.

Black, polished and shining. Antennæ short, robust, compressed and dilated towards the apex; first three joints smooth, with one or two large punctures on the first and second, the rest dull pubescent, with a broad, flat, polished line running up the middle of the compressed sides, both above and below, till near the end of the last joint; some of the joints with one or two punctures on the polished space. Head smooth and polished. Mandibles above having some resemblance to the beak of a hawk, and hollowed out below. Clypeus marked off from the head by a straight impunctate line, which ends at each side in a deep puncture or fovea, from which a shorter and fainter line runs obliquely outwards and forwards to the exterior base of the mandibles; from each of these two foveæ an impunctate line runs straight backwards and very slightly outwards, ending in another deep elongate puncture or fovea on each side of the front between the eyes, so that the marking on the front consists of three lines forming three sides of a square, each corner being marked by a deep puncture, the fourth or posterior side of the square being open or without any line; besides these punctures, there are two others on the inner edge of each eye, one at the middle, which partly interrupts a longitudinal groove which

* I make this statement only from the examination of a male specimen of *St. Whitei* and a female of *St. solidum*, these being all which have come into my hands. But I have no doubt it is correct, as I find a similar difference in structure in the other *Morionidæ*.

runs along the side of the eye and head, and the other behind, where the groove terminates at the posterior inner angle of the eye. There is no tumour behind the eye, but its posterior margin is slightly encroached on by the black chitinous substance of the head, but without the contour of the eye being altered. The head behind is smooth and rather convex. Thorax subquadrate, with a slight tendency to be cordiform, impunctate, shining, much wider than the head, narrower than the elytra, emarginate, becoming narrower behind; anterior angles projecting and rounded; sides gently rounded and margined, the margins extending round the anterior angles, and then gradually becoming wider and disappearing before the middle, the base not margined; a channel runs along the sides inside the margin, in which six or eight large impressions are placed widely apart; the base is transversely produced in the middle, as in *Lebia*; at the sides it is straight, and the posterior angles are nearly right-angled. Dorsal stria faint and interrupted till towards the base, where it becomes deeply impressed; a very deep fovea on each side of it nearer the sides, with a longitudinal impunctate groove in the bottom of the fovea. Prosternum with a faint longitudinal depression, impunctate. Scutellum small and impunctate. Elytra elongate, parallel, margined, punctate-striate, the striae deepest towards the apex and margin, the punctures in the striae small, and not very close to each other; the striae are seven in number, and there is no abbreviated stria near the scutellum. Interstices flat and impunctate, except the marginal interstice, which is impressed with a row of large, round, circular depressions, with a point in the centre. The elytra are somewhat flat on the top, except near the sides and apex, where they suddenly and rapidly descend; the apex is not truncate, but sinuate; the first and second striae join together at the apex, and the third and fifth or sixth enclose those between them; under side polished, shining, impunctate, except a row of four or five large punctures on each segment of the abdomen. There are five segments, besides a side-piece in front of them, but the first and second are soldered together, and the separation between them is not to be seen except at the sides, so that on a cursory view there only appear to be four segments. Tibiae with spinous hairs on the exterior, strongest on the anterior pair; posterior and middle tarsi longer than anterior.

I have dedicated this species to my friend Mr. Adam White, of the British Museum, to whose extensive information and kind assistance I have been on many occasions much indebted.

2. *St. solidum*, mihi.

Præcedenti valde affinis sed grandior, latior et convexior; tho-

race elytris vix angustiore, angulis posticis productis; elytris striato-punctatis, interstitiis impunctatis convexis.
Long. $7\frac{1}{2}$ lin., lat. 3 lin.

Exceedingly close to the preceding species, but larger, broader, and more convex; the posterior margin of the eye is more encroached on by the chitinous substance of the head than in the last; the polished space in the middle of the flat sides of the antennæ is rather broader, and is entirely smooth and without punctures. Thorax more convex, broader, and less narrowed behind than in the preceding species, scarcely narrower than the elytra, bisinuate in front, and with the posterior angles projecting backwards. There is a greater number of impressions in the channel along the margin than in the last species. Prosternum with several deep punctures arranged somewhat in a longitudinal double row along its projecting part. Elytra punctate-striate; interstices impunctate and convex, the punctures and impressions on the sides deeper and more distinct than in the last species; the stria next to the suture also is nearer it, which makes the rest of the interstices look wider; the part of the elytra beside the suture is more depressed than the rest. In other respects the two species agree.

BUDERES, mihi (βοῦς and δέρη).

Caput parvum, quadratum, parum convexum, pone oculos sine tumore, sed parte posteriore oculorum tegumento tecta, foveis duabus sinuatis fronte longitudinaliter valde impressis. Labrum transversum, antice quam postice latius, angulis anticis projicientibus margineque antico emarginato et ciliato. Mandibulæ robustæ, extus rotundatæ supra carinatae, apice acutæ intus sine dente. Maxillæ acutæ. Palpi breves et mediocriter robusti; articulus ultimus palporum externorum longus et cylindricus, articulus penultimus triangularis basi pedunculatus; articulus ultimus palporum labialium elongato-ovatus. Mentum latum, leviter excavatum et profunde emarginatum, cum

dente medio bifido et malis rotundatis. Ligula curta, truncata, leviter emarginata, antice quam postice latior, carinata. Paraglossæ nullæ. Antennæ breves moniliformes, articulis apicalibus velutinis compressis et dilatatis, cum spatio sat lato lævi et nitido singulis relicto et supra et subtus. Prothorax subquadratus, anguste marginatus, capite multo latior, antice quam postice parum angustior, linea tenui longitudinali media et lineis duabus posticis longitudinaliter impressus, angulis anticis parum acutis, posticis fere rectis. Prosternum sat prominens et paulo projiciens. Scutellum mediocre. Elytra prothoracis fere latitudine, breviora, sat convexa et sat fortiter marginata, striata, apice emarginata haud truncata. Pedes mediocres. Tibiæ anticæ dilatatæ, intus emarginatæ, subtus excavatæ. Tarsi breves transversim et moniliformes, antici breviores; in fœmina et supra et subtus nitidi et politi, sine setis vel squamis, ciliis ad marginem anteriorem singulorum adstrictis exceptis; in mari antici squamis setisque instructi, ceteris ut in fœmina. Unguiculi simplices. Corpus haud elongatum, parum convexum. Abdomen segmentis quinque, quorum primum et secundum conglutinata sunt.

This genus is nearly allied to the preceding, but it differs in its shorter, more compact, and convex shape, somewhat different form of the thorax, and in its mentum having a bifid tooth in the middle instead of a single tooth; in the last joint of the labial palpi being slender elongate-ovate instead of large, swollen and securiform, and in the underside of the anterior tarsi in the male being furnished with closely applied squamulæ instead of long bristles.

1. *B. Oberti*, mihi.

Nigrum, politum, nitidum; capite foveis duabus sinuatis fronte longitudinaliter impresso, singulis lineis duabus antice conniventibus impressis; antennis brunneis; thorace impunctato, lineis duabus posticis angustis impresso; elytris septem striis impunctatis impressis, postice profundioribus, interstitiis convexis; pedibus brunneis.

Long. $5\frac{1}{4}$ lin., lat. $2\frac{1}{4}$ lin.

Black, polished, shining. Antennæ ferruginous-brown, short, robust, compressed and dilated towards the apex; the first three and greater part of the fourth joints polished, the rest dull pubescent, with a flat, polished line running up the middle of

the compressed sides, both above and below, nearly to the end of the last joint. Head smooth and polished. Labrum with a row of large punctures (from which spring hairs) in front. Mandibles with a bisinuated keel, broadest in the middle, running along the upper side. A narrow marginal ridge runs along each side of the head until it reaches behind the eye. The two frontal impressions are sinuate, each composed of two deep lines which meet in front and extend in a sinuate manner backwards, diverging gradually from each other; they are joined in front by a straight transverse line: all these lines are impunctate. Head behind smooth and convex. The thorax is subquadrate, and has somewhat the form (in miniature) of that of some species of *Pasimachus* (e. g. *P. sublevis*, Beauv.); it is smooth, shining, and impunctate; the dorsal median line is faint, and reaches neither to the front nor base; the two foveated lines at the base are placed nearly midway between the median line and the margin, but rather nearer the middle; they are long, deep, well defined and narrow, and at their base turn off towards the sides at a right angle, forming a narrow ridge on the exterior portion of the base of the thorax, which is wanting in the centre, and which continues along the lateral margins round to and past the anterior angles, and a considerable distance along the anterior margin, but fades away before reaching its middle. A deep channel thus runs along parallel and close to the margins of the thorax. The prosternum is rather broad, and slightly produced and expanded behind. Near the termination of the expansion there is a sort of double depression, which leaves a narrow raised margin. Scutellum impunctate, scarcely reaching to the part of the elytra where the striae commence. Elytra smooth, shining, and impunctate, with seven deep impunctate striae besides the marginal stria; the striae become deeper towards the apex; there is no abbreviated sutural stria. The first two striae run alongside up to the apex; the third and fourth join together a short distance from the apex, and their united line goes on for a short distance; the fifth and sixth do the same; the seventh runs the whole length, becoming wider towards the apex, where one or two circular punctures or foveae occur. The marginal stria has a number of these impressed on it; it runs up to the apex, where it widens much, and is divided by a raised line, which proceeds from the emargination near the apex. The marginal ridge of the elytra is rather broad and prominent. A faint stria runs along the under margin of the reflexed edge of the elytra; the interstices between the striae are convex, but more so on the sides and towards the apex than at the middle and base. The under side is smooth, polished, and impunctate, except two minute punctures, one on each side of

the middle of each segment of the abdomen. The segments also show depressions along the sides. The legs are ferruginous-brown.

I have named this interesting species in honour of my esteemed correspondent, M. Obert, of the corps of Cadets, Paulow, St. Petersburg.

OCHYROPUS, Schiödte.

Prof. Lacordaire disallows this genus, not considering it sufficiently distinct from *Scarites*, the only differential characters given being, that the second joint of the labial palpi is enlarged on the inner side and prolonged at its anterior internal angle, that the mandibles are toothed in their whole length, and that the last joint of the tarsi is of the length of the preceding joints united. The last of these characters is incorrect; the last joint, although long, not being so long as represented, and scarcely longer than that in other species of *Scarites*. The second character is wholly unimportant, even although it were not found in other species of *Scarites* (which it is). But the first is of more value: the first joint of the labial palpi is long, broad and flat, prolonged inwards at its anterior angle, and strongly ciliated on its inner side, so that it seems to be almost a second maxilla, and no doubt serves the purpose of such. This seems a sufficiently important character to justify us in retaining the genus as distinct, the rather that the *facies* of the insect is somewhat different from that of *Scarites*. Its thorax is narrowed in front more than in any other species, and its form is deeper.

1. *O. gigas*, Schiödte in Kroyer Naturhist. Tidssk. ser. 2. ii. p. 350. tab. 4.

Grandis, niger, nitidus; mandibulis fortiter dentatis, supra bicarinatis, capite longioribus; capite foveis duabus elongatis postice convergentibus, fronte impresso, postice lateribus sparsim punctato, vertice impunctato; thorace antice angustato, marginato, linea punctorum ad marginem et pluribus ad angulos anteriores impresso, margine exciso ante medium; elytris parallelis, substriatis, interstitio secundo, quarto et sexto sparsim et irregulariter, leviter sed distincte punctatis; crinibus ferrugineis sat longis ex punctis, tam capite quam thorace et elytris orientibus; subtus minus nitidus; tarsis robustis, articulo ultimo elongato.

Long. 24 lin., lat. 7 lin.

SCARITES, Fabr.

1st Division of Dej. *Intermediate tibiæ with two prominent external spines.*

1. *Scarites Hercules*, mihi. Pl. XII. fig. 4.

Niger, subdepressus; tibiis anticis tridentatis, postice haud denticulatis; mandibulis magnis, fere usque ad apicem dentatis, thorace longioribus; mento valde concavo, cum duabus foveis profundis et rotundis in medio ad basin; thorace transverso, duplo latiore quam longiore; elytris elongatis, thorace triplo longioribus, subquadratis, subparallelis, marginatis, pone medium paulo dilatatis, carina basali, dente humerali, et carina longitudinali ex humeris orienti paratis, subtiliter punctato-striatis, ad basin et lateribus usque ad apicem papillois.

Long. 23–20 lin., lat. $6\frac{1}{2}$ – $5\frac{1}{2}$ lin.

A fine large species. Black and shining. The head and mandibles broad and massive, but varying in size. Mandibles longer than the thorax, bicarinated on the exterior side, declive at the tip, dentated interiorly almost to the tip, the teeth consisting of one or two larger ones at the base, and three or four smaller ones before them. Antennæ black or piceous, the basal joints rounded and shining, the rest flattened and pubescent, with a broad polished line running along them both above and below. Head smooth, with two deep longitudinal foveæ turning away in front nearly at right angles towards the antennæ; wrinkles more or less distinct radiate from these depressions; an irregular depression lies in the margin just behind the labrum, which, as in the other species of this genus, is small and transverse, rounded on the sides, and toothed in the centre; a very large and prominent projection behind the eye encroaches on the posterior half of it; a few scattered, very faint punctures and wrinkles may be seen about the vertex. Thorax transverse, twice as broad as long (taking the measurement of the breadth at the widest, and of the length at the middle), sloping gently from the anterior angles to the fold or tooth on the margin, and rapidly from thence to the base; dorsal line distinct to the anterior marginal line, which is faint; space along that line marked with short, faint, longitudinal lines or folds. Scutellum situated on the peduncle, basal portion somewhat rugose; prescutellar space coarsely rugose, except in front and on the sides, where it is smooth. Elytra elongate, a little more than three times the length of the thorax, subparallel and subquadrate, margined, the margin dilated a little behind the middle, faintly punctate-striate, the base and margins covered with small papillæ; three

impressions on the third stria, the first about a third from the base, the next rather more than a third from the apex, and the last between this and the apex, but furthest from the latter. A ridge runs from the base to the shoulder, and terminates in a prominent tooth; it is not greatly curved, and just within the tooth a ridge commences, running nearly parallel to the sides of the elytra, but converging a little; it has a scarcely perceptible sinuation near the base, and disappears before it reaches the apex. Traces of a row of punctures inside this ridge are visible near the base, and the stria next to it is the deepest. Under side shining; the back part of the head below is irregularly and pretty closely punctate. Mentum very concave; middle part with a deep rounded hole (about the size of a pin's head) on each side of the middle ridge, which forms the apex of the middle tooth; a double line (connected here and there) runs up the middle of the back part of the head, terminating in front in two punctures; one puncture, or two combined into one, lies immediately behind the posterior angles of the mentum; projection of prosternum smooth and rounded, with traces of three faint lines behind, the two marginal ones diverging outwards. In one specimen which I possess, this projection is slightly depressed in the middle. One distinct puncture on the posterior coxæ, also two punctures on each of the segments of the abdomen, one on each side of the middle, besides shallow depressions along the sides, and transverse wrinkles more or less distinct; the last segment has also another puncture on the margin, a little exterior to the other two. Anterior tibiæ tridentate, without denticulations behind; under side of the palmate portion with a number of papillæ or small spines; middle tibiæ with a strong spine projecting externally near the apex, a smaller one behind it, and a row of minute papillæ or spines further back.

2. *S. Ajax*, mihi. Pl. XII. fig. 5.

Præcedenti affinis, sed minor; niger, subdepressus; tibiis anticis tridentatis; mandibulis bidentatis, thorace brevioribus; thorace haud duplo latiore quam longiore; elytris clongatis, thorace fere triplo longioribus, subquadratis, subparallelis, marginatis, pone medium paulo dilatatis, subtiliter punctato-striatis, carina basali, dente humerali, et carina longitudinali ex humeris orienti paratis, ad basin et lateribus usque ad apicem papillosis.

Long. 18 lin., lat. $5\frac{1}{2}$ lin.

Allied to the preceding, but smaller, and at once distinguishable by its shorter mandibles, which are not so long as the thorax, and have only two teeth instead of six or seven; by the

thorax not being twice as broad as long, and the exterior margins not sloping so much inwards towards the tooth on the sides of the thorax, so that the thorax looks rather more quadrate. The ridge running down the elytra from the shoulder has less appearance of sinuation, though it is so slight in either, that it scarcely deserves to be spoken of. The impressions on the third stria seem also different, the two posterior impressions being placed further back; but, as they vary in different examples, and even on different elytra of the same individual, no value can be placed on this character. In other respects the description of *S. Hercules* will apply also to this. It is still more nearly allied to *S. Feisthamelii*, Laferté. It is, however, larger and more massive, the striæ on the elytra seem more defined and less punctate, and the thorax is comparatively narrower, particularly in front, the length of both being nearly the same (3 lin.), while the greatest breadth in front of *S. Feisthamelii* is $4\frac{3}{4}$ lin., and in *Ajax* $5\frac{1}{4}$ lin.

It is possible that a larger series of specimens may show these two to be the same species; but, until we obtain this, I have preferred to keep them distinct.

3. *S. Patroclus*, mihi.

Niger, nitidus, elongatus, subcylindricus; tibiis anticis tridentatis, postice quadridenticulatis, subtus transverse corrugatis; mandibulis thorace brevioribus, oblique corrugatis; mento corrugato, carina media parato; capite antice longitudinaliter corrugato, fronte bifoveolato; thorace parum convexo, sesquialtiore quam longiore, lateribus antice fere parallelis, ad angulos posticos leviter papilloso; elytris parallelis, parum convexis, anguste marginatis, punctato-striatis, carina basali, vix dente humerali paratis, et sine carina longitudinali, ad basin et lateribus usque ad apicem papillosis; subtus prosterno truncato.

Long. 15 lin., lat. $4\frac{1}{2}$ lin.

Black, shining, elongate, subcylindric. Mandibles not longer than the thorax; left mandible with one large subquadrate tooth, right mandible with two; the upper side with two ridges or keels on the exterior side, and the whole furrowed with strong, oblique corrugations curving inwards. Labrum longitudinally corrugated, with three projections or teeth, and a large, deep puncture in the middle of the central projection. Head corrugated longitudinally in front, and with two longitudinal frontal foveæ, turning off transversely towards the exterior anterior angle; a ridge or projection in front of the eye, and a very slight swelling behind the eye encroaching on part of it. Mentum

corrugated and papillose, a central keel with a longitudinal fovea on each side of it running up the middle of the median tooth. Antennæ as in the other species, but rather more slender in proportion, fuscous. Thorax subquadrate; sides subparallel, only sloping very slightly in, till they reach the marginal tooth (which is scarcely one-fourth from the base), when they turn in directly to the base. In the posterior angles there are a number of faint papillæ; there is a margin all round the thorax continued in front, where it is widest; the dorsal line, which is distinct, reaches this margin, but does not at all enter on it. Scutellum on peduncle, smooth; prescutellar space rugose in the middle, smooth all round. Elytra nearly parallel, subconvex, punctate-striate, interstices impunctate; a narrow margin surrounds the elytra, next to which, both at the base and all round, there is a space covered by papillæ; a row of impressions runs up the middle of these papillæ; the margin at the base takes the shape of a keel, ending in a small tooth at the shoulder. There is no longitudinal keel starting from this and running up the elytra. There is no appearance of larger impressions upon the striæ. There is some appearance of the papillæ spreading themselves in a very faint form near the apex. The under side is not so smooth as the upper. The segments of the abdomen are very finely granulated. The prosternum and mesosternum have a number of minute, scattered papillæ on their sides, and the back part of the under side of the head is slightly rugose or granular. Two distinct punctures occur, one on each side of the middle of the abdominal segments, the last segment having another puncture on the exterior margin; the first and second segments are soldered together, and appear as one. The anterior tibiæ are tridentate, with four smaller distinct teeth behind them. The inferior surface of the palmated space is transversely corrugated. The middle tibiæ have two larger teeth projecting near the apex, and a number of minute denticulations behind them.

2nd Division. *Intermediate tibiæ with only one prominent projecting spine.*

4. *S. rotundicollis*, mihi.

Niger, nitidus; antennis pedibusque ferrugineo-brunneis; tibiis anticis tridentatis, postice unidenticulatis; capite fronte bifoveolato et antice bipunctato; thorace angulis posticis rotundatis, et intra eos leviter papilloso; elytris curtis, obovatis, striatis, punctis tribus impressis.

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

Black, with the antennæ and legs ferruginous brown. Man-

dibles with two longitudinal carinæ, and several smaller carinæ within them sloping obliquely inwards. Labrum tridentate; front of head with a tooth projecting on each side of labrum, and one or two longitudinal grooves beside these teeth; two longitudinal foveæ on each side of the front at equal distances between the eyes, deepest in front; and on each side, a little on the exterior and in front of their termination, is a round, flat-bottomed puncture with a depression in its centre, and a faint line leading from this towards the anterior corner of the head; the eyes with a very slight, scarcely observable tumour behind and below them. Mentum longitudinally rugose, two elongate foveæ in the middle, the space between which forms a ridge, which becomes the point of the middle tooth. Thorax somewhat quadrate, with the posterior angles rounded behind from the tooth on the margin, and alongside and within them a few small papillæ gathered together; margined both on the sides (which are slightly rounded) and behind, but not in front; dorsal line faint, not reaching to the front. Scutellum situate on the peduncle, transverse, smooth, with a ridge across; prescutellar space rugose. Elytra short and obovate, except at the base, which is truncate; deeply and broadly striate, particularly on the sides and apex, where the striæ are almost as broad as the interstices; the striæ impunctate; interstices impunctate and convex, particularly so where the striæ are deepest; three impressions on the third interstice (counting the sutural space as an interstice), the first more than half-way from the base, the second about a fourth from the apex, and the third on the point where the third and fifth interstices combine together shortly before reaching the apex. A few very minute papillæ at the base degenerate into a slightly rugose surface along the margin, and a row of punctures occurs on the marginal space and at the base; the margin distinct and equal all round, not being expanded; the humeral tooth distinct. Under side polished and shining; division of head behind mentum marked; punctures on segments of abdomen same as in preceding species; anterior tibiæ furnished with two long teeth, one short one behind, and a small one behind it,—so that they may be said either to be bidentate and bidenticulate behind, or tridentate and unidenticulate behind, it being doubtful whether the third tooth should go with the large teeth or the small one; intermediate tibiæ with one prominent projecting tooth, and a number of smaller and decreasing ones; posterior tibiæ without teeth.

5. *S. Clivinoides*, mihi.

Niger, nitidus; antennis pedibusque nigro-piceis; tibiis anticis tridentatis, postice unidenticulatis; capite fronte bifoveolato, foveis longitudinaliter rugosis, postice una et altera parte ru-

goso et punctato, vertice lævi; thorace lateribus fere parallelis; elytris parallelis, longitudine dimidii corporis, striato-punctatis, ad basin forte et lateribus leviter papilloso-rugosis, striis apice paulo lævioribus.

Long. $6\frac{1}{2}$ – $5\frac{5}{8}$ lin., lat. $1\frac{3}{4}$ lin.

Small; black, shining. Antennæ and legs nigro-piceous. Mandibles moderate, shorter than head, bicarinate, with oblique wrinkles or subcarinæ within the interior ridges. Labrum with a slight rounded projection on each side and in the middle, and a puncture in each. Head quadridentate in front, the two outer teeth longest; two deep longitudinal foveæ on each side of front, exactly behind margins of labrum. The foveæ are longitudinally rugose; from each a sinuate furrow runs backwards and outwards, and two or three others on each side start off from it or near it about the middle, faintly at first, but becoming wider and deeper as they go backwards, and stopping about the same distance from the front as the back part of the eye does; where they stop there are some smaller lines or furrows, and two or three irregularly-shaped punctures, which extend faintly across the head, except at the middle, which is smooth, as is also the space behind. The eyes are rather flat, and are somewhat encroached on behind by the integument, but there is no swelling behind them. Thorax rather broader than long, impunctate; sides nearly parallel, narrowly margined; angles rounded; tooth or fold on the sides very small; dorsal line distinct, reaching from base to anterior marginal line, and very faintly beyond it; the anterior marginal line is deep, and shows marks of punctuation, particularly on the anterior side; the space in front of this line is comparatively narrow. Pre-scutellar space rugose in the middle, and scutellum more finely so. Elytra of the length of the half of the body, with sides parallel, punctate-striate, papilloso-rugose on the inflexed portion of the base, and very faintly so with a series of punctures on the space within the margin, which is strongly raised. Viewed in profile, the margin takes a sudden descent from the humeral tooth, for about a fourth part of the length of the elytra, where it forms an angle and follows the line of the elytra; the striæ are fainter at the apex, the terminal portions of some of them being obliterated; the third and fourth striæ join together about one-fourth of the length of the elytra from the apex. Under side impunctate, except the posterior part of the head, which is faintly punctate, and the usual row of punctures on each side of the middle of the abdominal segments; mentum obliquely rugose; anterior tibiæ tridentate, with a small tooth or tubercle behind them; thighs of middle legs with a row of punctures along the under side.

CLIVINA, Lat.

1. *C. grandis*, Dej. ii. 478.

Nigrà; thorace quadrato; elytris elongatis, parallelis, punctato-striatis, punctis quatuor impressis, margine tenui, macula postica, antennis pedibusque rufis.

Long. $5\frac{1}{4}$ lin., lat. $1\frac{1}{2}$ lin.

[To be continued.]

XXXV.—*Descriptions of two new species of Heteropodous Mollusca*. By ARTHUR ADAMS, Surgeon R.N.

To the Editors of the *Annals and Magazine of Natural History*.

GENTLEMEN,

South Atlantic, off Cape Frio.

Since writing my last note on the Equator, two species of *Simusigera* of D'Orbigny, or *Cheletropis* of Forbes, have occurred to us among the contents of the towing-net, and both different from *S. Huxleyi*, Forbes. One is of a dark reddish-brown colour, with an elevated spire, and keeled on the last whorl; the other is of a delicate pink or flesh-colour, and is much more globose; both species are finely reticulated. The dark species I presume to be that originally described by D'Orbigny, *S. cancellata*; the other species I have dedicated to that eminent naturalist and accurate observer. The animal, so well figured and described by Mr. Macdonald of the "Herald," is by no means shy, and appears to employ the cephalic arms for reptation, crawling head downwards somewhat in the manner of an *Octopus*; they also answer the purpose of tentacular arms for the capture and retention of the minute crustaceans on which they prey. The genus *Simusigera* belongs to the family *Macgillivrayidae*, established by my brother and myself in our 'Genera of Mollusca,' which appears, however, to differ sufficiently from the other Heteropods to stand by itself as an independent sub-order, which might be called *Brachiocephala*. The new species may be thus characterized:—

Simusigera D'Orbignyi, A. Adams.

S. testa turbinata, subglobosa; spira obtusa, carneola, vertice luteola, pulcherrime reticulata; anfractu ultimo ventricosus, ecarinato. Apertura semiovali; labro margine vix incrassato, lobis duobus instructo, lobo antico simplici et obtusim acuminato, postico canaliculato et ad apicem truncato.

Hab. in Oceano Atlantico Australi.

Shell turbinate, subglobose, with an obtuse spire, flesh-co-