

Fam. *Doliidæ*.

Genus *DOLIUM*, Browne.

D. australe, Chemn. (*Buccinum*), Rve. Conch. Icon. (*Dolium*)
sp. 10.

Buccinum chinense, Dillw.

— *variegatum*, Phil. (not Lamk.).

D. Kieneri, Phil.

In Japanese, "Cimbu."

Hab. Hakodadi, Yokohama, Simoda.

Genus *LAGENA*, Klein.

1. *L. clandestina*, Chemn. (*Murex*), Lamk. An. s. Vert. vol.
ix. p. 639.

Triton clandestinus, Rve. Conch. Icon. sp. 13.

Buccinum cincticulum, Meusch.

Nept. doliata, Bolt.

Hab. Kino-O-Sima.

2. *L. rostrata*, Mart. (*Dolium*) pl. 3. f. 1083.

Fusus cutaceus, Lamk.

Cassidaria cingulata, Lamk.

Tritonium undosum, Kien.

Hab. Simidsu.

Fam. *Sycotypidæ*.

Genus *SYCOTYPUS*, Browne.

1. *S. reticulatus*, Lamk. (*Pyrula*), Hist. An. s. Vert. vol. ix.
p. 510.

Hab. Kuro-Sima.

2. *S. papyraceus*, Say (*Ficula*).

Hab. Kuro-Sima, Simoda, Satanomosaki.

L.—*List of Coleoptera received from Old Calabar, on the
West Coast of Africa.* By ANDREW MURRAY, F.L.S.

[Continued from vol. ii. p. 111.]

LONGICORNS.

The Lamellicorns are the group which I meant to take next; but my friend M. Candèze, of Liège, who has latterly paid much attention to that group, having been kind enough

to undertake the examination and description of the new species belonging to it, I entrusted my specimens of them to him for that purpose. His other engagements, however, have as yet prevented his carrying out his intention; and, after waiting for some time, I have come to the conclusion to postpone the Lamellicorns, and proceed at once with some other group, trusting that M. Candèze may be able to overtake them before I have done. Should he not, I shall then take them myself. I therefore now proceed with the Longicorns, which I take after the Buprestidæ, in preference to any other, on the strength of the general resemblance which the larvæ of these groups have to each other. In a list of this kind it matters little in what order the different larger groups are taken; each of them makes a little independent chapter by itself.

In the arrangement of the Longicorns I have, of course, followed the steps of Prof. Lacordaire in the main; but in a number of minor details I have ventured to deviate from them; and I do so now more than I have done hitherto, because it appears to me that the learned Professor has in none of his previous volumes sacrificed natural affinity to facility of reference so much as in the Longicorns. In his last volumes he frequently acknowledges the artificial character of much of his arrangement. Now the natural relations are precisely the very thing that I am most anxious to elucidate in these papers. Throughout I have written them with one eye on the beetles themselves, and the other on their geographical distribution and their relations to the beetles of other countries. It would therefore be to stultify myself, and sacrifice one of the principal aims which I have in view in these descriptions, were I to bend to the greater authority of M. Lacordaire, and follow him in details of arrangement which are acknowledged by himself, or patent to all, to be inconsistent with the true natural affinities of the species themselves. The great deference which is legitimately due, and which all entomologists must delight to pay, to the author of that wonderful work the '*Genera des Coléoptères*,' forbids my acting in contradiction to his views without first making this apology.

The greater number of my Old-Calabar Longicorns have been already described in Guérin's '*Revue et Magasin de Zoologie*,' by my friend M. Chevrolat, who was kind enough to undertake that task years ago at my request. A reference to his descriptions would therefore, strictly speaking, be enough; but those who may use this list will probably be glad to have brought to their hand a summary of the characters of at least those species which were new.

Parandridæ.

PARANDRA, Latr.

Parandra beninensis, Murr. Trans. Linn. Soc.
xxiii. p. 452 (1862), pl. 47. fig. 7a.

Ferrugineo-fusca, punctata, punctis rugosis, oblongis vel quadratis seu angulatis. ♂ ignot. ♀ Capite fronte inter oculos tenuiter canaliculata medio foveolata utrinque elevata, antice transversim excavata; clypeo prope oculos utrinque carinato, fere trilobato, lobo mediano obtuse subquadrato prominente; mandibulis crassis, convexis, dentatis; thorace transversim subquadrato, marginato, postice angustiore, fortius et rugosius utrinque antice punctato; utrinque bifoveolato, fovea una versus medium posita, altera deltoidea ad basin; angulis anticis subquadratis vix projicientibus, posticis obtusis, lateribus fere rectis; scutello glabro, impunctato; clytris subtricarinatis. Subtus mento rugoso; metasterno et segmentis abdominis glabris, nitidis, haud punctatis, ad latera lævissime subpapillosis, prosterni lateribus sparsim et parcissime et femoribus sat crebre leviter punctatis.

Long 9 lin., lat. 3 lin.

One specimen in my collection.

There is another species of this genus, from Gaboon, described by M. Thomson under the name of *P. gabonica* (Arch. Ent. ii. 145), which corresponds with this in size and colour; it is distinguished from it, however, by the form of the anterior angles of the thorax, which in *P. beninensis* scarcely project at all, and are subquadrate, while in the Gaboon species they project acutely, and the sides of the thorax are slightly rounded. It is, however, very nearly allied to it; and, from the point of view of geographical distribution, they cannot be regarded as other than climatal varieties of a representative of the American Parandras.

The distribution of the genus is remarkable, and deserves attention; for its character and facies are peculiar and well-marked, and the genus isolated and without allies or relations. So much is this the case that, although by very general consent it is placed among the Longicorns, heretics have from time to time appeared who think it ought either to be placed by itself or in other company, as the Cucujidæ or Brenthidæ. Its isolation and well-marked facies are of special value in a geographical point of view. No doubts or difficulty as to the identity of the genus can occur; it may be an aberrant form

itself, but we are not troubled with any aberrant forms of its own type.

Lacordaire records thirty-five species of *Parandra*: of these, twenty-eight are American (viz. seven from North America, one from Mexico, three from the West Indies, thirteen from the Columbian district, including New Granada, Columbia, Venezuela, and Cayenne, and three from Brazil), four from Africa (viz. one from Old Calabar, one from Gaboon, and two from the Cape), one from the neighbourhood of the Caspian Sea, and two from New Caledonia. We have here, as I read the distribution, four, if not five, main localities, which either are now or have been at some former period separated from each other by important gaps; and the question presents itself in as unmixed a form as can well be, Are we to suppose that the lands separated by these gaps were at some former period united, or is the wide distribution of *Parandra* due to accidental dispersal or ancient general distribution?

It seems to me that its preponderance in one country and extreme rarity elsewhere are adverse to the idea of its having originally been universally distributed. Where that explanation applies, as, for instance, in the ferns, both fossil remains and present distribution show the same typical forms in abundance in every quarter of the globe. But if we do not give it a general or universal distribution, we must fix on some one or more localities as its aboriginal site or centre of creation (using that term in a wide and liberal sense, and not confounding with it the question of single or multiple original creations); and where we have twenty-eight species in one region as against seven in all the rest, there seem grounds for holding that America was its aboriginal land, and New Granada or its neighbourhood the centre or starting-point of its distribution. Thence there is no difficulty in assuming that it has spread, on the one hand, into North America, and, on the other, into Brazil. It will not be so readily admitted, but I believe it to be equally true, that it has reached West Africa from the Brazilian coast by former and very ancient continuity of land, in the same way that the other South-American types which we have found in Old Calabar have done, and thence in later times spread into the other parts of Africa; and by the same line that the Cafferian *Adesmys* have made their way into Mongolia, this genus also has spread to the Caspian Sea. From the other (the western) side of South America it may have in like manner spread, by former more or less interrupted continuity, to New Caledonia, as the genus *Photophorus* has carried representatives of the fireflies out of South America into these islands.

Prionidæ.

DORYCERA, White.

Dorycera spinicornis, Fab.; White, Brit. Mus. Catal. Longicorns, i. p. 13, tab. 1. fig. 1 (1853); also figured by me in Trans. Linn. Soc. xxiii. tab. 47. fig. 8 a.

Apparently rare in Old Calabar.

This is another representative of a South-American form in Old Calabar. It has very much the appearance of *Orthomegas corticinus* from Cayenne, but still more that of *Polyzoa Lacordairei*, from Brazil. The former is placed near it by Lacordaire, but the latter is removed to a distance in another section. It seems to me that the natural affinities of all three are close together. I by no means desire to exalt one character to the disparagement, much less the exclusion, of others; but I must repeat the conviction I have long held and often urged, that surface and texture deserve much more attention than they usually receive as indications of natural affinity. If that test be applied here, it will bring together a number of opaque, sericeous-surfaced, depressed Prionidæ distinguished by large eyes, spined thorax, and flat or flabellate antennæ, and in particular the American and West-African species I allude to, showing that *Dorycera spinicornis* is a West-African representative of a Brazilian natural group.

MACROTOMA.

1. *Macrotoma palmata*, Fab. Ent. Syst. ii. p. 249.

Apparently rare at Old Calabar.

The genus *Macrotoma* is confined to the Old World, and is most numerous in Africa; so is the whole family of Macrotoimidæ, with one exception, a single species forming a separate genus (*Strongylaspis*), which is found in Mexico and Cuba. I am not disposed to refer its presence there to any communication between the west coast of Africa and South America; that communication took place (as I think I can show) before the union of Brazil with the rest of South America. And if *Strongylaspis* were an aberrant form of West-African *Macrotoma* which reached Mexico by filtration through Brazil, it should have left traces in Brazil, which do not exist, at least are not known. We know, however, that Mexico and some other parts of South America preserve traces of communication with Madagascar (where *Macrotoma* also occurs); and I should rather be disposed to look there for the origin or connexion of *Strongylaspis*.

2. *Macrotoma senegalensis*, Oliv. Ent. 66. p. 22.
no. 21, pl. 7. fig. 25.

Also rare at Old Calabar.

MALLODON, Serv.

Malldon Downesii, Hope, Ann. & Mag. Nat. Hist.
ser. 1. vol. xi. p. 366.

Tolerably abundant at Old Calabar.

With the exception of one species peculiar to Arabia, part of which, for the purposes of geographical distribution, may be regarded as an appendage of Africa, the Mallodons are confined to America and Africa. The other African species are few in number, consisting of two from West Africa and one from Madagascar, while those in America are more numerous, lending force to the idea which other instances of the same nature have already suggested, that, while there has been a very considerable infusion of South-American blood into West Africa, there has been comparatively little return from Africa to South America.

Cerambicidæ.

PLOCÆDERUS, Thoms.

1. *Plocæderus nitidipennis*.

Hammaticherus nitidipennis, Chevr. Rev. et Mag. Zool. 1858, p. 50.

Alatus, niger, nitidus; capite antice trinodoso, carinula sulcata inter oculos; antennis 1^{mo} articulo elongato rubro, 2^o—4^m nigris, sequentibus fuscis, planatis, angulatis; thorace transverso, valde polito, antice posticeque recto et bis plicato, angulo laterali medio valido obtuso; scutello opaco, semirotundato; elytris lævissime punctulatis, glaberrimis, nitidissimis, viridibus, ad latera et basin igneo vel violaceo micantibus, subrecte parum truncatis; corpore nigrofuscescente, leviter et in pectore dense pubescente, abdomine nitidiore; femoribus (basi et apice exceptis) tibiisque in dimidia parte apicali rubris; tarsis rufo-piceis.

Long. 10–13 lin., lat. 3½–4 lin.

Black. Head with three tubercles in front and a small ridge between the eyes, which is grooved behind, retracted behind into a sort of transverse neck, bearing on that part an ill-defined punctation and transverse wrinkling. Antennæ with the first article thick, elongated, rugose, red, obscure at the tip; second very small; third and fourth swollen at the extremity; all three black, those following brown, flattened

and angular at the apex on the exterior side. Thorax transverse; disk large, depressed, only slightly convex, highly polished and finely punctate, straight in front, suddenly constricted and bearing two tubercles intermingled with two or three grooves; base bisinuate, posterior angles feebly reflexed and acuminate; there are two folds along the base following its bisinuation; lateral tubercle strong and obtuse, unequal above, and strongly impressed on the margin. Scutellum semicircular, blackish. Elytra broader than the thorax, three, or in some individuals even four and a half, times as long, subparallel, slightly widened about two-thirds from the base, truncated slightly at the extremity; their surface is covered with a fine punctation, and is very smooth, glabrous, and shining, of a fine brilliant green, which turns into a brilliant igneous or violet reflection on the sides and base; base depressed, shoulders prominent and rounded. Body below blackish brown, with transverse folds under the thorax, covered with a dense, short velvety pile, which, however, is only slight on the breast, with the abdomen more shining, particularly on the margins of the segments. Thighs, with the exception of the base and apex and posterior half of the tibiæ, ferruginous red; tarsi yellowish or rufous brown.

This species resembles in its description the *Hammacherus glabricollis* of Hope, but differs in various respects. The antennæ and legs in *glabricollis* are described as reddish piceous; and no mention is made of the very striking character the igneous or violet sides and base of the elytra. Nevertheless it may be the same as *H. glabricollis*; but as Hope says that he is acquainted with other metallic species from the same locality, I have less hesitation than I might otherwise have had in regarding it as distinct. It, as well as the next species, approaches, in the form of its antennæ and the structure of its body, to the *H. gigas* and *humeralis* of White.

The commonest species of this genus, but far from abundant.

This type of *Plocæderus* is peculiar to West Africa; and the nearest relations of the African species are the East-Indian.

2. *Plocæderus chloropterus*, Chevr. Rev. et Mag. d.
Zool. 1856, p. 566.

Niger, opacus; palpis, antennis (1° articulo rubido, 5°–10^m singulatim ad apicem angulosis et parum dilatatis, ultimo emarginato) pedibusque ferrugineis (geniculis obscuris); thorace transversim et recte plicato, in lateribus anticis nodoso, medioque sat valide tuberculato vel fere spinoso; scutello lanugine alba vestito; elytris thorace latioribus, convexius-

culis, viridibus, crebre punctatis (fortiter versus basin, leviter versus apicem), alboque breviter setosis, apice recte truncatis et externe et ad suturam dentatis; pectore cum abdomine dense cinereo-villosis.

Long. 11–15 lin., lat. 3–4 lin.

Opaque, black. Head keeled between the eyes, with very fine transverse folds behind. Palpi ferruginous. Antennæ longer and more slender than in the preceding species, ferruginous, with the first article red and punctate, second and third nodulated at the tip, fifth to tenth elongated, depressed, somewhat dilated and angulated at the exterior tip, and terminal article elongate and obliquely emarginate at the apex. Thorax rather longer than broad, with transverse folds and oblique channels from the base on each side of the disk, which turn in and unite about the middle, and then proceed in the dorsal line to the front, the whole producing a somewhat crown-shaped discal island; a strong tubercle on each side in front, followed by a larger one in the middle, terminating in a rather stout short spine. Scutellum triangular, without perceptible punctures, but bearing a whitish velvety pile. Elytra broader than the thorax, convex, rounded subrectangularly on the outside of the shoulder, parallel on the sides, becoming oblique towards the apex, and truncated at the extremity, with the sutural and external angle sharp or toothed; they are broadly depressed at the base, bluish green, and, under the lens, very closely punctured (the punctures of different sizes, and sometimes running into each other, forming rugose punctation) at the base, and very finely and sparsely punctured towards the apex, and from the punctures proceed a short silky pile. Legs ferruginous, obscure at the knees. Breast and abdomen brownish black, clothed with a tolerably thick ashy pile.

I have a variety of larger size, coarser punctation, much larger and darker-coloured antennæ, elytra darker and not so blue, longer pile on the underside, and darker legs, but without any other distinction than an enlargement of all the details.

In describing this species, M. Chevrolat drew attention to its resemblance to the *Hammaticherus viridipennis* of Hope, but remarked that it differed by its smaller size and by its elytra being convex instead of flattened. Specimens subsequently received, more particularly the large variety above mentioned, show that no distinction can be drawn from the size; Mr. Hope gives 12 lines as the size of his species, and that of my specimens ranges from 10 to 15: and the other point of difference, that the elytra are flattened, is founded on

error; for Hope's description says nothing about the elytra being flattened. All that he says regarding them is, "Elytris viridibus, ad apicem abrupte truncatis et sub lente subtilissime punctatis." In other points my specimens agree with Mr. Hope's description; but it is very short, and I cannot think he would have overlooked the comparatively strong punctation (under the lens) on the basal portion of the elytra, had it been present in his species. Certainly the description of the elytra as "subtilissime" punctate under the lens does not apply to elytra which are so only towards the apex. My own anticipation is that my species will turn out to be the same as Hope's; but his description does not warrant my acting on this supposition. I find myself therefore constrained to follow the course taken by M. Chevrolat, and treat it as distinct until it be shown to be the same.

[To be continued.]

LI.—*Norwegian Mollusca*. By J. GWYN JEFFREYS, F.R.S.

A FEW hours' dredging last autumn at Dröbak, in Christianiafiord, produced results of such interest that I am induced to publish a list of the Mollusca which I then procured. Dröbak is a "classical" place, in consequence of the discoveries made there, now almost a century ago, by that great zoologist, Otho Frederick Müller. Dr. George Ossian Sars was my kind guide and companion, and assisted me in the work. The depth at which we dredged was from 40 to 60 fathoms; and it was in some places so close to the shore that littoral species were mixed with those from deepish water. Dredging in a Norwegian fiord is a very different matter from dredging on the coasts of Great Britain. The former can be managed easily between breakfast and dinner, in an inland sea resembling a river, which is frequently as smooth as a mill-pond and has a considerable depth. In the middle of Sognefiord, and within a mile from the land, there is a depth of 661 fathoms. On the other hand the 100-fathom line is more than thirty miles from any part of our own coasts; and the open sea there is always more or less agitated, often rough, and sometimes dangerous.

A list of the Christianiafiord Mollusca was published in 1846 by Herr Asbjørnsen; and Dr. G. O. Sars has within the last month edited a further list, which was prepared by his lamented father shortly before his death. I should not have thought it necessary, or even have presumed, to offer the present contribution, except for the belief that a few remarks on certain species, especially with respect to their geographical