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THE
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OF
CONCHOLOGY.

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BOOKS RECEIVED.

- The Proceedings of the Linnean Society of New South Wales, 8vo., 1876, pp. 546 and 9 plates. [Mr. John Brazier.]
- The Smithsonian Report for 1875, 8vo. pp. 422. [The Institution.]
- New and peculiar Mollusca of the Kellia, Lucina, Cyprina and Corbula families, procured in the "Valorous" expedition, by J. G. Jeffreys, L.L.D., F.R.S., &c., Dec., 1876. 8vo. pp. 12. [The Author.]
- New and peculiar Mollusca of the Order Solenoconchia procured in the "Valorous" expedition, 8vo. pp. 6, Feb. 1877, by J. G. Jeffreys, L.L.D., F.R.S., F.L.S., &c. [The Author.]
- New and peculiar Mollusca of the Pecten, Mytilus and Arca families procured in the "Valorous" expedition by J. Gwyn Jeffreys, L.L.D., F.R.S., &c. [The Author.]
- Jahrbücher der Deutschen Malakozoologischen Gesellschaft.—Edited by Dr. Wm. Kobelt.—April 1877, 8vo. pp. 98 and 3 plates. [The Editor.]
- Preliminary descriptions of new species of Mollusks, from the North West coast of America, by Prof. W. H. Dall, March 1877, 8vo. pp. 8. [The Author.]
- On the Californian species of *Fusus*, by Prof. W. H. Dall, March 1877, 8vo. pp. 8. [The Author.]
- The American Naturalist.—Edited by Prof. A. S. Packard, junr., May—July 1877, 8vo. [The Editor.]
- The Naturalist.—Edited by C. P. Hobkirk and G. T. Porritt, F.L.S., May—July 1877, 8vo. [The Editors.]
- Journal de Conchyliologie.—Edited by Crosse and Fischer.—April and July, 1877, 8vo. pp. 224 and 6 plates. [The Editors.]
- Proceedings of the Academy of Natural Sciences of Philadelphia, 1876, 8vo. pp. 440 and 17 plates. [The Academy.]
- On 40 proposed new forms of the genus *Nassa*.—By F. P. Marrat, 1877, 8vo. pp. 16 and plate. [The Author.]
- Description of a new species of *Helix* from South Australia, by G. French Angas, C.M.Z.S., &c., 1877, 8vo. p. 1. [The Author.]
- Descriptions of two genera and twenty species of Marine shells from New South Wales by G. F. Angas, C.M.Z.S., F.L.S., &c., 1877, 8vo. pp. 8 and plate. [The Author.]

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Journal de Conchyliologie, January, 1877.

CROSSE, H.—Faune malacologique des îles Kerguelen (Malacological Fauna of the Kerguelen Islands) pp. 5—15.

The naturalists attached to the English and American Transit of Venus Expeditions made collections at these islands, the mollusca of which have been described by Messrs. Smith and Dall. No land shells have been added to the species already known—*Helix Hookeri*, Reeve,—but 25 marine species are enumerated of which a large proportion are new. The name *Eatonia* given by Mr. Smith to a new genus of *Rissoide* having been already used by Hall for a genus of *Brachiopoda*, Mr. Dall has proposed to alter it to *Eatoniella*. Mr. Crosse remarks that the fauna of the Kerguelens whilst closely related to that of New Zealand, is not without affinity to that of the Straits of Magellan, and has also special peculiarities.

DUPUY—Note sur quelques Mollusques trouvés à Barbotan (Gers) (Note on some Mollusca found at Barbotan in the Department of the Gers) pp. 15—23.

The Abbé Dupuy and M. Dubalen had special opportunities for examining the fauna of this thermal station, having been staying there when the large hot water tank was emptied. In this tank, supplied by three hot springs which kept the water at a temperature of 30°—35° Cent. = 86°—95° Fahr., freshwater mussels, especially magnificent specimens of *Unio Requienii*, Mich., were found in abundance, and without the erosion which so commonly injures the beauty of fresh water shells. *Lymnææ* and *Physæ* were also found in water of the same temperature in other parts of the bathing establishment. At the foot of the walls of the church,

Pupa dilucida, Ziegl., a species new to France, occurred. It was previously known from the Tyrolese and Lombard Alps. 67 species of mollusca from the neighbourhood of Barbotan are catalogued.

MONTEROSATO.—Note sur quelques coquilles provenant des côtes d'Algérie (Note on some shells from the Algerian Coast), pp. 24—49.

The receipt of a collection of shells made by M. Joly in Algiers Roads has enabled the Marchese di Monterosato to add a considerable number of species to those enumerated by Weinkauff in his Catalogues of Algerian Shells (Journ. de Conch., 1862 and 1866), and in the present article, without giving a complete list, he mentions 148 species which are new to the locality or respecting which he has some remarks to make. *Tapes pullastra* (vera) occurs. *Chiton Polii*, is abundant in the Mediterranean, but Algiers is one of the few localities where uneroded and unencrusted specimens occur. The operculum of *Fossarus* is described, and only two true Mediterranean species are admitted. *Mitra fusca*, Swainson, a fine species, 40—45 mill. long is mentioned. The following species are figured, of the new ones general indications of the characters are given. *Defrancia concinna*, Scacchi, (Pl. ii, fig. 1.) *P. linearis*, Montagu, (fig. 2.) *Marginella cœlata*, Monterosato, (fig. 3.) *Ringicula conformis*, Monter., (fig. 4.) *Scalaria candidissima*, Monter., (fig. 5.) *Trochus Drepanensis*, (fig. 6.) *Odostomia internodula*, S. Wood, (Pl. iii, fig. 1.) *Eulina intermedia*, Cantraine, (fig. 2.) *Rissoa Weinkauffi*, Schwartz, (fig. 4.) *R. Algeriana*, Monter., (fig. 5.) *R. sculptilis*, Monter., (fig. 6.) *R. aurita*, Monter., (fig. 7.) *R. seminulum*, Monter., (fig. 8.) *R. lævis*, Monter., (fig. 9.) *Vermetus cristatus*, Biondi, (fig. 10).

M. Crosse remarks in a note on the use of the name *Scalaria*

Turtonis, Turton, by the author. With two of M. Crosse's objections we quite agree. No one should give his own name to a species, even under the pretext that it is so called in compliment to a member of his family, or to a namesake, and the shell, if named after Mrs. Turton, should have been *Turtonæ*, but we differ from him as to the use of the third declension. If a French Conchologist had the good fortune to bear the name of Cicéron, or the ill-luck to be named Néron, would M. Crosse in dedicating a shell to him call it *Ciceroni* or *Neroni*? Such a solecism would be enough to make the former of those men rise from his grave. In our opinion too great severity should not be exercised on this point of latinizing names, as we know that the Romans by no means always latinized "barbarous" names by merely tacking an "us," or an "a" to the end of them. The original of Caractacus for instance, was not Caractac but Caradoc, and we may be pretty certain that Boadicèa's Celtic designation differed a good deal from "Boadicee."

FISCHER, Dr. P.—Faune malacologique de la vallée de Caüterets,—additions et corrections (Malacological fauna of the Valley of Caüterets—additions and corrections), pp. 49—56.

A supplement to the article at pp. 51, et seq. of the last volume. The slug there called *Amalia marginata*, Drap., is now described as a new species, *Limax altilis*. Fischer, a curious hairy variety of *H. Moulinsi*, Farines, is described (var. *acrotricha*, Fisch.) and the occurrence of *Hydrobia Reyniesi*, Dup., var. *canaliculata* in a stream at a altitude of 1350 mètres is noted.

FISCHER, Dr. P.—Note sur le *Capulus Shreevei*, Conrad, (Note on *C. Shreevei*,) pp. 57.

This supposed *Capulus*, from South Carolina, turns out to be an ossicle of *Pholas*.

BAUDON.—Monographie des *Succinées* françaises (Monograph of the French *Succineæ*) pp. 57—69.

In this first part of his monograph Dr. Baudon gives some general observations on the genus, its history, characters, the habits of the mollusks, the geographical distribution of the French species, &c. He speaks of their great power of enduring cold, some specimens of *S. putris* having suffered no injury from an imprisonment of several months in a flask lined inside with ice. He then gives a list of the species, 10 in number, respecting which we would remark that *Suc. Pfeifferi* and *elegans* are usually considered synonymous, that *S. parvula* does not appear in Kobelt's Catalogue, (possibly it is a new species, but as no author's names are added to any of the species it is difficult to say). *S. Baudoni* is, according to Moquin-Tandon, a var. of *S. arenaria* and a "species dubiæ" of Kobelt. *S. acrambleia* is not in Kobelt, we suspect it is one of Bourguignat's species. *S. debilis* is placed by Kobelt among the "species dubiæ," but is probably good, and *S. humilis* is, according to Moquin-Tandon, as well as to Kobelt, only a var. of *S. oblonga*. This would reduce the number of species nearly to Moquin-Tandon's original 5, *S. debilis* being, we very much suspect, the only real addition, but the continuation of the article must be awaited before pronouncing a final opinion. We must, however, confess to very Herodian proclivities as to European species especially, and we highly approve of the massacre of the innocents which has been going on at the hands of Dr. Kobelt for the last few years.

CROSSE and FISCHER.—Note sur le nouveau genre *Acroptychia* de Madagascar—(Note on the genus *Acroptychia* from Madagascar), p. 70.

In consequence of the name *Euptychia* given by MM. Crosse

and Fischer to a beautiful new genus of Cyclostomidæ from Madagascar having been used in 1816 by Hübner for a genus of Lepidoptera, it has become necessary to find a new name for the mollusks. *Acroptychia* is therefore proposed.

CROSSE, H.—Note complémentaire sur l'*Eulina Stalioi*, Brusina, (Supplementary note on E. Stalioi), pp. 70—71.

This Dalmatian species was described in the 1869 Vol. of the Journal, (p. 242).—A figure is now given. (Pl. iii, fig. 3).

SOUVERBIE, Dr.—Descriptions d'espèces nouvelles de l'Archipel Calédonien (Descriptions of new species from the New Caledonian Archipelago), pp. 71—76.

Conus Lamberti, (Pl. i, fig. 1 and Pl. ii, fig. 7), a fine species nearly 4½ inches long, of a deep orange colour, with white spots, Uvea; *Amathina angustata*, (Pl. i, fig. 6); *Mitra turturina*, (fig. 2.) Lifou; *Rissoina hystrix*, Art & Nou.; *R. scolopax*, (fig. 3), Art, Nou & Lifou.

SOUVERBIE.—Description d'un *Scalenostoma* nouveau, (Description of a new *Scalenostoma*) p. 77.

S. apiculatum from Mauritius.

CROSSE & FISCHER.—Diagnosis Helicis novæ insulæ Madagascar dictæ incolæ, (Diagnosis of a new Madagascar Helix) p. 78.

H. Suarezensis.

Palæontology, Bibliography and Obituary, (Dumortier, Liénard, Taslé, Rambur, Küster and Appellius), pp. 78—97.

NEWS.—(pp. 97—100).—The existence of an operculum in *Voluta musica* is confirmed, a new genus (*Volutolyria*) is therefore proposed for it. Another example of the venomous properties

of the Cones is given, *Conus marmoreus* being the species in question this time. (This fact has now been abundantly confirmed, there can be no further doubt on this point).

Three coloured plates, representing 22 species, accompany this interesting number of MM. Crosse & Fischer's Journal.

C. P. G.

VERTIGO MOULINSIANA, DUPUY.

[From the Annals of Natural History.]

This interesting and local little land shell has been lately discovered by Mr. Henry Groves, while botanizing, in a small marsh between Winchester and Southampton. See "British Conchology," I., p. 256, and v. (Suppl.) p. 106. Mr. Grove's specimens are rather more swollen or barrel-shaped than mine from the West of Ireland; and they agree exactly with some Danish specimens, for which I am indebted to the kindness of Dr. Mörch, as well as with the descriptions and figures of Dupuy and Moquin-Tandon. Küster and Kreglinger called it *V. Charpentieri*, after a MS. name given by Shuttleworth. Heyneman described it as *V. ventrosa*, and Westerland as *Pupa Lilljeborgi*. Dupuy's name (*Moulinsiana*) dates from 1849, and has priority.—J. GWYN JEFFREYS.

HELIX PISANA.—MÜLLER.

By G. SHERRIFF TYE.

While in Guernsey in the summer of 1876, I found this species

plentiful in Vazon Bay, on plants of *Brassica oleracea* (wild cabbage) and at the roots of (*Armeria maritima*) sea pink. A noticeable fact which I am unable to account for, is, that with rare exceptions, all the shells on the plants, and there were many thousands, were young of various ages having fragile additions to the mouth of their shell of the season's growth, while all the shells adhering to the walls of a small brick building near, were "finished," having the usual number of whorls and ribbed mouth. I examined a large number of plants in search of adult shells before I discovered the specimens attached to the walls of the hovel, after which I soon obtained as many as I desired.

I have not met with any record of *H. pisana* having been found in Guernsey before. My friend, Mr. Wm. Randall, the well known enthusiastic and kind hearted marine zoologist, of Guernsey, mentioned a "banded shell of considerable size" which a friend of his had been pleased at finding near the Castle at S. Sampson's which I suspected was this species, but the only evidence I could find of its having existed there was one dead shell.

Its habitat at S. Clement's Bay, Jersey, is well known to most conchologists. I have had the pleasure of seeing it "at home" there. It lives within a few yards of the ordinary sea level, and I should imagine that at high tides the sea washes the "base of its habitation."

The largest shells here are much smaller than the largest Tenby specimens, and the prevailing colour of the banded shells is lighter. At Jersey (and Guernsey) the colour is umber of varying shades, at Tenby it is sepia of greater or less intensity.

In the Channel Isles I failed to find among many thousand shells, spread along a large extent of shore, an albino, or even a creamy-white opaque shell, the latter being common at Tenby,

and I believe often mistaken for the true variety *albida*, which is pure opaque white with translucent markings. The rose colour of the lip is not so intense in the Channel Island shells as the Welsh, although shells bearing this tint are less restricted at the former than at the latter place. Across "The Burrows" at Tenby there is a dry trench three or four yards wide, running at right angles with the present coast line, probably made when the sea was drained from this part of the land. Wm. Jenkins, the veteran collector of marine creatures at Tenby, told me I should not find many *Pisana* with a pink lip on the "other side" of this trench, (*i.e.* the farthest side from the town,) and I found his remark literally correct, only stray shells with this tinge occurring, and in all cases on the scrub near the line of shore sand, the great majority having a pale ochreous lip and rib. At Tenby there is a variety with red-brown markings, which invariably has a yellow lip, although yellow and pink are common alike to sepia and creamy white varieties.

I have a few shells exceedingly dark, the hue being given by the coalescence of the bands or markings.

H. pisana has a wonderful capability of bearing great solar heat. It crawls up the stem of plants, and fixes itself with its shell naked and exposed to the full rays of a burning sun, and so remains all day, descending at "dewy eve" to enjoy a feast and a ramble. This is a habit peculiar to the more delicately constituted mollusks which have survived the struggle for existence, and succeeded in establishing themselves in our more northern clime, *e. g.* *H. Carthagen.*

Why is it that this species is only found close to the sea in Great Britain? It does not seem to have any "likes and dislikes" in the way of food. I have not seen it more than half a mile from the shore, and the finest shells are always nearly, if not quite within reach of the sea spray when a strong wind blows.

In Spain it "is the common snail of the country," not being confined to the sea board. The Spanish habitat given to me with some of my shells is an inland one, and Dr. Gwyn Jeffreys gives "centre of France" as one of its habitats.

It varies somewhat in form in different localities. Shells which I have from Italy, Malta and North Africa being flatter spired, with less rounded whorls and sutures less marked than our own shells.

Besides the geographical localities named above I have shells from South France. A small form from Cannes given to me by Dr. Robert Battersby, which may be called *minor* being worth notice.

Its British habitats are those before named. St. Ives and Whitsand Bay, Cornwall, and Dublin Bay. It occurs in marvellous abundance at Tenby, and is wide spread (southward) reaching to Manorbeer, although in Montagu's time (beginning of this century) it was "confined to a small spot." It is in great profusion in both the Channel Island habitats the greater number being in Jersey.

H. pisana is said not to occur in France nearer to England than Brittany, but I suspect that it will be found somewhere along the coast line of that country nearer still.

May, 1877.

REMARKS ON THE GEOGRAPHICAL DISTRIBUTION OF THE MARINE *GASTROPODA* ON THE SOUTH AND EAST COASTS OF AFRICA.

By J. S. GIBBONS, M.B.

The part of the coast of Africa to be considered in this paper extends from the Equator to the Cape of Good Hope and belongs

to two very distinct regions—the Southern half composing the principal portion of the Cape Province, and the Tropical half belonging to the Indo-Pacific region, or if that is too extensive an area, to the subregion of East Africa and Madagascar.

The principal ports are Zanzibar in S. Lat. $6^{\circ}28'$, Mozambique some 500 miles to the south, and Inhambane on the Tropic of Capricorn separating the two provinces. The two next ports—Delagoa Bay and Port Natal—are both within 400 miles of the tropics, whilst Algoa Bay, Mossel Bay and Cape Town are situated towards the southern extremity of the Continent.

The physical conditions of the two regions are very dissimilar. In the one we have coral reefs, sloping sands and sheltered mud-flats, a smooth sea, warm water and a comparative absence of sea weed. In the other, steep exposed shores and primary rocks clothed with abundance of sea weed, and continually beaten by a stormy sea. Again, another difference is found in the tide, which at Cape Town and Algoa Bay is but trifling, whilst at Mozambique and Zanzibar the rise and fall is some 10 or 12 feet.

Port Natal in its physical conditions, no less than in its geographical position stands as it were, midway, between the two districts, shewing, however, in the general character of its mollusca a more decided alliance with the Cape than with the tropical East Coast.

A most important agent in influencing the distribution of the mollusca is to be found in the Mozambique current—a large body of water from the Indian Ocean, which strikes the East Coast at Cape Delgado, sweeps past Mozambique, Natal, &c., and finally passes round the Cape of Good Hope.

In regard to the mere number of species there is a similarity in the two regions. When on the Coast, I collected about 392 species of *Gastropoda*; of these 195 belong to the Cape region, 197 to the Coral seas.

When, however, the species and genera are considered there is a striking difference.

Of the entire 197 tropical species I did not find one at Cape Town and at Algoa Bay, but a few examples of one species (*Nerita albicella*, L.)

This can only be explained on the supposition that the physical conditions of the latter places are incompatible with the welfare of tropical species, as otherwise the Mozambique Current would undoubtedly bring down numerous species. At Natal, where conditions are more favourable, out of 85 species collected 33 were also found in the Indian Ocean. It is interesting to notice that the Cape species proper, do not extend beyond the limits of the Province, less than half a dozen being found at Inhambane, immediately within the tropics.

As might be expected the relative preponderance of the carnivorous and phytophagous gastropoda of the two regions is reversed. Of 214 species of Siphonostomata, 86 are found to the south of the tropics and 128 within the tropics. Of 166 species of Holostomata, 105 are found in the South and 61 within the tropics. At Natal the numbers are about equally balanced, 43 Siphonostomata to 42 Holostomata. Certain genera are confined to each province, e. g. *Pteroceros*, *Terebra*, *Turbinella*, *Hipponyx*, *Umbrella* are characteristic of the tropical parts, as are also *Aura*, *Aplysia*, &c., whilst *Cominella*, *Haliotis*, *Calyptrea*, *Crepidula* and others are found only in the Cape region.

Again, certain genera are distinguished by possessing a greater number of species in one province than in another by being individually more abundant, or by the species being more typical.

In South Africa the genus *Patella* (including subgenera) furnishes some 30 species; at Mozambique only two are found, of which one extends down to Natal.

Bullia is represented at Zanzibar by one or two scarce species ; at Natal and Algoa Bay there are 10 or 12 species and individuals are numerous.

The genus *Cypræa* furnishes more than 30 species on the tropical East Coast, and with few exceptions each species is individually numerous. Below Natal the species are few, principally belonging to subgenera, and individuals are rare. *Strombus* with 8 species at Zanzibar is represented at Natal by a solitary straggler, (*S. floridus*, Lam.) Typical species of *Nassa* prevail along the East Coast ; to the South they are replaced by species belonging to the subgenera *Desmoulea*, *Cyclonassa*, &c.

Fissurella (with the subgenera) contains 15 or more S. African species. I found but one in E. Africa.

The *Trochi*, 30 in number, cover the rocks at Cape Town and Algoa Bay in vast numbers from high water mark downwards. At Zanzibar a few species are sparingly found, lurking under stones at low water only.

Ricinula and *Cerithium* are well developed genera in the tropics, fairly represented at Natal and all but absent at the Cape. *Planaxis*, *Oliva*, *Nerita*, *Parmophorus* and other genera do not extend below Natal. Some genera are pretty evenly divided, having a common meeting ground at Natal and Inhambane, e.g., *Littorina*, *Cassis*, &c. In walking over a coral reef at Zanzibar, the shells that strike the eye are *Strombus*, *Cypræa*, *Turbinella*, *Cerithium* and *Ricinula*, whilst between tide marks at Algoa Bay or Cape Town, one notices the great abundance of *Patella*, *Siphonaria*, *Trochus*, *Cominella* and *Bullia*. On such a large extent of coast there are necessarily considerable local differences between Zanzibar and Mozambique, however, they are few or none. The molluscan fauna of Inhambane is peculiar, inasmuch as certain widely distributed tropical species are found there which are absent or scarce higher up the

coast, *e. g.*, *Fusus colus*, L. occurs in prodigious numbers at Inhambane, whilst at Zanzibar and Mozambique I failed to discover the slightest trace of a specimen. *Murex brevispinosa*, Lam. is still more numerous and with the last is burnt for lime, but at the other two ports I met with very few specimens. Several *Naticas* are confined to Inhambane and Natal.

I have already noticed some of the peculiarities of Port Natal; of 86 species I collected there, I found 33 in the tropics, and less than half that number at Algoa Bay, not more than one or two species being common to Natal and Cape Town. Between Algoa Bay and Mossel Bay there is little or no difference. Between these ports and Cape Town there is a very great difference, more however in the species than in the genera.

Cape Point appears to form a barrier, on each side of which the mollusca differ, as do the Algæ (Harvey) and Fishes (Pappe.) This is a subject of very great interest, but it is impossible to enter into it thoroughly in a paper of this length.



A LIST OF WEST AFRICAN SHELLS, INCLUDING
THREE NEW *PLEUROTOMÆ* AND ONE NEW
COLUMBELLA.

By F. P. MARRAT.

The shells here recorded were collected by Captain Davis, of Liverpool, from Madeira to the Gulf of Guinea.

This list is a continuation of the one published by my friend Mr. Edgar Smith, of the Zoological Department, British Museum, P.Z.S., 1871, p. 727.

- | | | |
|----|---|---------------------------|
| | | Other Localities. |
| 1 | Venus crenulata, <i>Chem.</i> | W. Indies, <i>Reeve</i> . |
| 2 | „ verrucosa, <i>L.</i> | |
| 3 | V. (<i>Callista</i>) striata, <i>Gray.</i> | |
| 4 | V. (<i>Circomphalus</i>) lamellata, <i>Lam.</i> | |
| 5 | Cardium costatum, <i>L.</i> | East Africa. |
| 6 | C. (<i>Pectunculus</i>) ringens, <i>Chem.</i> | |
| 7 | C. (<i>Lævicardium</i>) pectinatum, <i>L.</i> | |
| 8 | C. do. elenense, <i>Sow.</i> | St. Elene, <i>Sow.</i> |
| 9 | C. (<i>Fulvia</i>) radiatum, <i>Reeve.</i> | |
| 10 | Dosinia africana, <i>Gray.</i> | |
| 11 | D. torrida, <i>Reeve.</i> | |
| 12 | Lucina (<i>Cyclas</i>) divaricata, <i>L.</i> | |
| 13 | L. do. gibba, <i>Gray.</i> | |
| 14 | L. (<i>Codakia</i>) pecten, <i>Lam.</i> ; var. reticulata, <i>Poli.</i> | |
| 15 | Tellina (<i>Macoma</i>) plebeia, <i>Hanley.</i> Quite as rosy as any figured. | |
| 16 | Ungulina alba, <i>Rang.</i> | |
| 17 | Paphia mitis, <i>Desh.</i> Locality not previously recorded. | |
| 18 | Mactra (<i>Spisula</i>) sublanceolata, <i>Desh.</i> Do. | |
| 19 | Radula (<i>Mantellum</i>) orientalis, <i>Ad. & Reeve?</i> | |
| 20 | Spondylus unicolor, <i>Sow.</i> | |
| 21 | Macha strigillata, <i>L.</i> | |
| 22 | Leda bicuspidata, <i>Gld.</i> Locality not stated in <i>Reeve.</i> | |
| 23 | Axinæa formosa, <i>Reeve.</i> A small and very beautiful shell. | |
| 24 | Corbula sulcata, <i>Lam.</i> | |
| 25 | Actinobolus (= <i>Cardita</i> , <i>Lam.</i>) lacunosus, <i>Reeve</i> | |
| 26 | Do. do. sp. ? | |
| 27 | Mytilicardia variegata, <i>Brug.</i> | |
| 28 | Arca pacifica, <i>Sow.</i> , var., with the ribs strongly noduled. | |

Other Localities.

- 29 Arca (Senilia) senilis, *L.*
 30 A. (Scapharca) nux, *Sow.* W. Indies, *F.P.M.*, S. America, *Sow.*
 31 Pinna rudis, *L.* W. Indies.
 32 Procellaria sp. ?
 33 Avicula atlantica, *Lam.* Australia, *Jukes.*
 34 Terebra corrugata, *Lam.* As usual, this shell is imperfect.
 var., very narrow and quite perfect, about 12 specimens.
 35 T. (Hastula) festiva, *Desh.*
 36 T. do. cinerea, *Born.*
 37 T. do. micans, *Hinds.*
 38 T. do. strigillata, *L.*, very narrow.
 39 T. do. gracilis, *Gray.*
 40 T. do. cuspidata, *Hinds.*
 41 T. (Acus) senegalensis, *Lam.*
 42 T. do. duplicata, *L.*
 43 T. (Abretia) lepida, *Hinds.*

44 Pleurotoma (Drillia) rosolina, n. s.

P. testa turrata, acuminata, rosea; anfractibus longitudinaliter costatis et transversim striatis, costis obliquis, prope suturas concavis; apertura brevi, fauce rosea; profunde emarginato. Eximia venustate.

Hab. West Africa. Captain Davis.

This very beautiful shell resembles *P. rosea*, *Sow.*, from which it differs in being obliquely ribbed, closely striated and of a uniform rose colour.

-
- 45 Pleurotoma (Drillia) excentrica, *Sow.* Galapagos Islds.

46 *Pleurotoma gracilis*, n. s.

P. elongato-fusiforini, gracilis, cinerea inter nodulis fusco-maculata; anfr. plicato-nodulosis, creberrime striatis, spira elongata, canali acuminata; labro margine acuto, sinu amplo.

Hab. West Africa. Captain Davis.

This very slender shell is not like any of the forms figured.

47 *Pleurotoma (Drillia) filosa*, n. s.

P. testa acuminato-turrata; anfr. convexis, carinis numerosis prominentibus cinctis, interstitiis angustatibus, striis longitudinalibus obliquis eleganter sculptis; albida, apice fuscescente tincto; canali brevissimo; sinu amplo.

Hab. West Africa.

A white shell, corded with transverse thread-like bands. The *Pl. violacea*, Hinds, *Pl. crispata*, Crist. & Jan., and several others are similarly corded and closely allied shells.

-
- 48 *Pleurotoma (Clavatula) diadema*, *Kien.*
 49 *P.* do. *virginea*, *Chem.*
 50 *P.* do. *imperialis*, *Lam.*
 51 *P.* do. *muricata*, *Lam.*
 52 *P. (Genota) mitræformis*, *Wood.*
 53 *P. (Perrona) spirata*, *Lam.*
 54 *P.* do. *mandarina*, *Smith.*
 55 *P.* do. *Perronii*, *Chem.*

Other Localities.

- 56 *Latirus filusus*, *Schub. & Wag.*
 57 *Cymbium proboscida*, *Brod.*
 58 *C. porcinum*, *Lam.*
 62 *Melo neptuni*, *Gmel.*
 60 *Murex tumulosus*, *Sow.*
 61 *M. (Phyllonotus) rosarium*, *Chem.*
 62 *M. do. angularis*, *Lam.*
 63 *M. (Rhinocanthus) cornutus*, *L.*
 64 *Bullia (Iciodomus) turrata*, *Gray.*
 62 *B. (Dorsanum) icterica*, *Solander.*
 66 *Nassa æthiopica*, *Marrat.*
 67 *N. Webbei*, *Petit.*
 68 *N. sesarma*, *Marr.*
 69 *N. argentea*, *Marr.*
 70 *N. minor*, *Marr.*
 71 *Cyllene lyrata*, *Lam.*
 72 *Phos candeana* *D'Orb.* The *P. antillarum* and *gratcloupianus* *Petit*, are only varieties.
 73 *Purpura (Thalessa) guinensis*, *Wag.*=*coronata*, *Lam.*
 74 *Pseudoliva sepimenta*, *Rang.*
 75 *Pusionella nifat*, *Adanson*, and var. *scalarina*.
 76 *P. curvirostris*, *Marr.* Type in the Free Pub. Mus.,
 Liverpool.
 77 *P. buccinata*, *Lam.*
 78 *P. aculeiformis*, *Lam.*, and var. white. Australia.
 79 *P. subgranulata*, *Petit.* My specimens have three or
 four grooves below the sutures.
 80 *P. milleti*, *Petit.*
 81 *P. catalina*, *Petit.* The whole of these species, are very
 like varieties.
 82 *Oliva (Agaronia) megalostoma*, *Meusch*=*hiatula*, *Lam.*
 83 *O. (Olivella) leucozonias*, *Gray.*

84 Mitra (Nebularia) badia, *Reeve?* young.

85 M. (Ziba) carinata, *Swain*.

86 Columbella rustica, *L.*

87 **Columbella (Anachis) cuspidata, n. s.**

C. testa elongato-fusiforimi, utrinque attenuata, spira cuspidata; anfractibus longitudinaliter costatis et transversim sulcatis, costis subgranulatis; fulva fusco maculata vel pallide cinerea, epidermide leucophæa; columella arcuata, labio cum callo circumscripto tecto; apertura angusta; labro intus livato.

Hab. West Africa. Captain Davis.

- | | | |
|------|---|-------------------------|
| [88 | Marginella (Glabella) Cumingiana, <i>Petit</i> | } two v. of one species |
| 89 | M. do. helmetina <i>Rang.</i> | |
| 90 | M. do. Petitii, <i>Duval</i> . | |
| 91 | M. do. limbata, <i>Lam.</i> | |
| 92 | M. do. splendens, <i>Sow.</i> | |
| 93 | M. do. Bellii, <i>Sow.</i> | |
| 94 | M. do. Tyermani, <i>Marr.</i> | |
| 95 | M. do. faba, <i>L.</i> , var. Digsii, <i>Marr.</i> | |
| 96 | M. do. Davisiana, <i>Marr.</i> | |
| 97 | Marginella irrorata, <i>Menke.</i> | |
| 98 | M. nodata, <i>Hinds.</i> | |
| 99 | M. musica, <i>Hinds.</i> | |
| 100 | M. cleryi, <i>Petit.</i> | |
| 101 | M. (Cryptospira) diodochus, <i>Ad. & Reeve.</i> | |
| 102 | M. (Volutella) cornea, <i>Lam.</i> | |
| 103 | M. (Persicula) guttata, <i>Link.</i> | |
| 104 | M. persicula, <i>L.</i> | |
| 105 | M. (Volvarina) quadrifasciata, <i>Marr.</i> | |
| 106 | M. do. suavis, <i>Sow.?</i> | |

- Other Localities.
- 107 Marginella (Volvarina) capensis, *Krauss*, var. S. Africa.
 A smaller and more solid shell than the type.
- 108 M. do. Dunkeri, *Krauss* ?
- 109 Dolium melanostoma, *Fay*. Australia.
- 110 Cassis spinosa, *Desh*. Do.
- 111 C. (Cassidea) testiculus, *L*. West Indies.
- 112 Natica gambiæ, *Recluz*.

113 **Natica obliquata, n. s.**

N. testa subampliter umbilicata, oblique globosa, laxe convoluta, spira parva, subimmersa, sutura impressa; anfr. rotundatis, longitudinaliter dilatatis; apertura oblongo-ovata; columella callosa, callositate columnari spirali umbilicum intrante; alba, epidermide tenui fulva induta; operculum testaceum.

Hab. West Africa.

In form this shell resembles the *N. orientalis*, Gmel., but the likeness goes no further. Its small size, thin substance and peculiar form, will serve as distinctive characters.

- 114 Natica caffra, *Marr*.
- 115 N. faba, *Marr*.
- 116 N. variabilis, *Recluz*.
- 117 N. genuanus, *Reeve*.
- 118 Naticina semipellucida, *Marr*.
- 119 Cantharus (Tritonidea) variegatus, *Gray*.
- 120 C. do. rubiginosa, *Reeve*. Red Sea.
- 121 C. do. small spe. ?
- 122 Obeliscus dolobratus, *L*.
- 123 Conus (Chelyconus) guiniacus, *Hwass*, var.
- 124 C. (Dendroconus) papilionaceus, *Hwass*.

- Other Localities.
- 125 Cancellaria cancellata, *Lam.*
 126 C. piscatorum, *Chem.*
 127 Cypræa lurida, *L.* W. Indies, Mediterranean.
 128 C. (Aricia) rattus, *Lam.*
 129 C. (Luponia) zonata, *Chem.*
 130 Mezalia brevisalis, *Lam.*
 131 Eglesia spiralis, *Sow.* Coll. Keen. West Indies, *Reeve.*
 132 Turritella undulina, *L.*, light and dark vars.
 133 T. annulata, *Kien.*
 134 T. cornea, *Lam.* A large variety. Mediterranean.
 135 T (Zaria) triplicata, *Stud.*
 136 Protoma Knockeri, *Baird.* 5 or 6 specimens, very rare.
 137 Crypta porcellana, *L.*
 138 Concholepas
 139 Strombus fasciatus, *Gmel.* (=bubonius, *Reeve*) with operculum.
 140 Clanculus agrestis, *Chem.*
 141 Bulla Adansonii, *Phil.*
 142 Philine aperta, *L.* Britain, Mediterranean.
 143 Cylichna, sp. ?
 144 Mitra (Nebularia) rhodia, *Reeve.* Locality hitherto unrecorded



DESCRIPTION OF A NEW FORM OF *GLADIUS*,
 KLEIN=*ROSTELLARIA*, *LAM.*

By F. P. MARRAT.

G. Martinii, n. s.* (Plate I.)

*G. testa fusiformi, pallide luteo-spadicea, superne fascia livida
 obscura prope suturam cingulata, spira turrita; anfr. rotundatis,*

* Named after S. TRICE MARTIN, Esq., from whom I obtained it, and who has the second and only other specimen known.

subinflatis, omnibus creberrime transversim punctato-striatis, concinne cancellatis, prope suturas bisulcatis, ultimo tumidiusculo, late expanso; labro quinque vel sexdentato, extus fusco-maculato, superne calloso brevi caniculato-producto et crispato; columella arcuata, alba, fauce pallide castanea; canali breviusculo, vix recurvo.

Hab. Cebu, Philippines.

This very remarkable shell differs altogether from all those in the same genus with it, as follows; the upper whorls are not costate, the striæ are very closely placed and remarkably fine, the aperture is very elongated, the teeth are set on the outer edge of the lip, the callus does not reach the suture of the body whorl, and the transverse striæ are punctate.

These shells, for there are two of them, are all the more interesting in consequence of having been dredged from the ground on which many of the rarest and most curious, as well as the most beautiful, sponges were found. *Hyalonema cebuensis*, T. Higgin; *Meyerina claviformis*, Gray; *Rossella philippinensis*, Gray; and *Labaria hemisphærica*, Gray; have all been received by Mr. Martin himself, from this locality, and are in the Free Public Museum of Liverpool. It is also well known as the birth-place of the lovely *Euplectella aspergillum* of Owen.

Limax gagates at Hastings.—In the latter part of July, my valued correspondent, Miss Fairbrass, of Faversham, sent me amongst some other mollusca taken by her at Hastings, a living specimen of a slug that she was not able satisfactorily to identify. This on examination proved to be *Limax gagates* of Drap., and adds another locality to those recorded for this local species.

JNO. W. TAYLOR

NOTE ON *BULIMUS GOODALLII*.

By J. E. DANIELS.

This spring I received, through the kind offices of the Editor of "The Garden," a small parcel of shells, marked "Cucumber Snails." Some of the examples were of so large a size, that at first, I almost imagined they were *Spiraxis Swiftiana*, Pfr., also a West Indian animal, but after a careful examination and comparison with examples which had been procured from Messrs. Garraways' nurseries, Clifton, I have come to the conclusion that they are *Bulimus Goodallii*. The largest example measures 7-20th inch. whereas none of my other specimens exceeds 4-20th. These also are a clear white in colour, whereas the British specimens are more of a yellowish brown colour. Unfortunately I cannot put my hand upon the paragraph in "The Garden" in which a notice of this snail first appeared, but the impression left on my mind, was that they devoured the young shoots of the cucumber plants, and further that they were found in a cucumber house belonging to a highly scientific and horticultural loving gentleman, at Weybridge, Surrey. Now, if this is the case, they must feed on different substances. Those at the Durdham Downs Nursery, according to Gray's Turton (p. 6,) the late Mr. Miller was in the habit of feeding on small dead worms, and when he wanted a supply for his friends, "he merely placed a flat board upon the surface of the tan, and left two or three small dead worms beneath it, and never failed of finding it covered in a few days." They were first discovered by Mr. Miller in 1822, but had, I see, previously been discovered by a Mr. Drummond, to whom, I see, the above remarks belong; but although, at that time, I was a child of only five years of age, or very shortly after, I remember Mr. Miller telling my father and also showing them to me, and at the same time, searching about and finding an example of *Testacella*, and telling us that both these animals fed upon

worms, and how useful they were in a garden, and for many years I never killed a slug without carefully examining it, in the hopes of finding a worm-eating slug with a limpet's shell on its back.

Now the question arises whether they are different species, or omnivorous, that is, both carnivorous and vegetarian?

I have a vague idea that some authorities consider the genera *Glandina* and *Spiraxis* as carnivorous.



NOTE ON *CLAUSILIA BIPLICATA* VAR. *ALBIDA*.

By J. E. DANIELS.

During my residence at Heidelberg, I found several examples of this variety, and as might be expected from a species so numerous and abundant as it is in that district, several other slight variations in colour. One example I still retain in my cabinet of a pale fawn colour, almost transparent, and only half the usual length, owing to its having, from some cause, discontinued forming shell; the mouth is otherwise perfect. Any of your readers having time and opportunity, should visit the woods at Neckarau, a village nearer Mannheim than Heidelberg, where they will find the lovely banded forms of *Helix fruticum* and *Helix villosa* in great abundance.

And as no doubt they are lovers of nature generally, they will be much amused and interested in watching and possibly endeavouring to catch some of the exquisite green tree-frogs. One drawback, if they are thin-skinned, is that mosquitoes or huge gnats, or some other abominations of that kind swarm, and on myself personally produced unpleasant sensations.



Clausilia biplicata var. albida.—Just four years since I was staying for a short time at Heidelberg, and on a wet day, such as conchologists love, in the Castle grounds, among other treasures I found six or eight specimens of *Clausilia biplicata* var. *albida*.

In June 1875 I was again there, but found only a single specimen.—[Mrs.] J. FITZGERALD.

Helix hortensis monst. sinistrorsa at Bristol.—In a former number of this Journal (No. 6, p. 92) I mentioned finding a reversed *Helix hortensis* of a plain yellow color in Parry's Lane, Bristol; also that my sister had found a similar specimen a few months previously at Heynsham.

Last evening (August 7th), a very heavy rain having fallen during the day, I started on a snail hunt and was richly rewarded by taking near Horfield, a very beautifully banded sinistral *Helix hortensis*.—[Miss] FANNY M. HELE, Bristol.

Helix aspersa monst. sinistrorsa at Bristol.—In November last, whilst searching an hedgebank for Clausiliæ, a large and almost black, reversed *Helix aspersa* rolled into my hand. It was a fine specimen, but unfortunately dead.—[Miss] FANNY M. HELE, Bristol.

Bulimus obscurus v. alba at Bristol.—Last autumn my sister discovered a locality for this rare shell in Leigh Woods, near Clifton.—[Miss] FANNY M. HELE, Bristol.

Cochlicopa lubrica v. hyalina at Llandudno.—In July 1877 I found a single example of this variety under a stone by the roadside at Tan r allt near Llandudno. This I have had the pleasure of placing in the cabinet of my friend Mr. John W. Taylor.—WM. DENISON ROEBUCK, Leeds.

LAND SHELLS OF CAPRI.

By MRS. J. FITZGERALD.

It may interest some of your readers to have a list of the land shells found at Capri. This tiny island, situated in the most beautiful Bay of Naples, is richly endowed by nature, and is one of the most beautiful spots that I have ever visited. Its scenery defies description, combining bold precipitous cliffs rising abruptly from the sea, smiling vineyards, palm trees and orange-groves, with ruins of classic times and the remains of castles celebrated in the wars of the first Napoleon.

It has even the remnant of a Persian Temple dedicated to the sun.

Over this reigns a charming climate, where no ice or snow is found, where over 800 species of wild flowers are distributed, and 34, at present known species of land shells and one of freshwater have been discovered. Of these the most interesting and distinct is that of *Helix elata*, only found at Capri and Sicily. It is a very exquisite little pyramidal shell with each whorl separated by a ridge and beautifully striated. And it is always beautiful, even in its earliest form, with a finished look in its infant stage that most species do not possess. My stay in the island was too limited to obtain all the species, but my friend Dr. Cerio has assisted me in forming the list, and he gave me much valuable information as to the localities the species inhabited.

- 1 *Limax maximus*, *L.*
- 2 *L. agrestis*, *L.*
- 3 *L. marginatus*, *Müll.*
- 4 *Testaclea drymossiaë*.
- 5 *Helix Lefeburiana*, *Fer.* (rare).

- 6 *Helix aspersa*, Müll. (larger than ours).
 - 7 *H. vermiculata*, Müll.
 - 8 *H. aperta*, Born.
 - 9 *H. circumornata*, Fer.
 - 10 *H. cartusiana*, Müll.
 - 11 *H. pyramidata*, Drap. (very beautiful and rare).
 - 12 *H. turbinata*, Jan.
 - 13 *H. lenticula*, Fer.
 - 14 *H. striata*, Drap.
 - 15 *H. sorrentina*, A. Schmidt.
 - 16 *H. variabilis*, Drap.
 - 17 *H. elata*, Faure-Biguet, (peculiar to Capri and Sicily).
 - 18 *H. amta*.
 - 19 *H. rupestris*, Drap.
 - 20 *H. candidissima*, Drap., (rare).
 - 21 *H. cinctella*, Drap., (rare).
 - 22 *Hyalina Draparnaldi*, Beck.
 - 23 *Bulimus decollata*, L.
 - 24 *Bulimus quadridens*, Müll.
 - 25 *Bulimus acutus*, Müll.
 - 26 *Pupa avena*, Drap.
 - 27 *Pupa granum*, Drap.
 - 28 *Pupa Philippi*, Cantr.
 - 29 *Cionella acicula*, Müll.
 - 30 *Cionella folliculus*, Gronov.
 - 31 *Cyclostoma elegans*, Müll.
 - 32 *Clausilia cinerea*, Phil.
 - 33 *Clausilia paestana*, Phil. (rare).
 - 34 *Clausilia papillaris*, Müll.
 - 35 *Bythinia similis*, Drap.
-

DESCRIPTIONS OF NEW SPECIES OF LAND SHELLS
FROM THE EAST COAST OF AFRICA.

By JOHN W. TAYLOR.

Mr. J. S. Gibbons, M.B., of Southampton, who for some time resided on the Eastern coast of Africa, and availed himself of the opportunities he possessed to make a collection of the shells of that region, has placed in my hands for description and publication such of the species as appear to me to be new.

Mr. Edgar A. Smith, F.Z.S., has, with his customary courtesy looked over the shells, and was unable to refer them to any species in the British Museum collections.

The tropical Eastern coast of Africa and adjoining islands, form, according to Woodward, one province. The mainland, though possessing all the requisites for a numerous molluscan fauna, is singularly destitute of species, and appears to have less variety than any other part of the world as favourably situate.

Twenty-eight species of land shells have been recorded from this region to the present time. Thanks, however, to the researches of Mr. Gibbons this number has been considerably increased, and several genera not hitherto accredited to Eastern Africa have been discovered to exist there.

With the exception of the *Achatina*, the land shells are insignificant in size and coloring, the species also being usually confined to small areas and seldom plentiful.

About Zanzibar, *Achatina* is the only shell generally diffused, *Bulimi*, *Pupa*, &c., being restricted to small areas on the coast and to the coral islets.

In the preparation of the remarks and descriptions in this notice, I have availed myself largely of the very excellent and accurate descriptive notes prepared by Mr. Gibbons.

Gonaxis, Taylor.

SHELL pupiform, unsymmetrical, *axis* of the apical whorls diverted to the right, lower aspect of penultimate whorl of a somewhat triangular shape, forming a prominent hump on the left side.

The most important character of this genus is the deflection of the upper or apical whorls, whereas in *Streptaxis* it is the last whorl only that is diverted from the perpendicular.

This peculiarity appears to me to be of sufficient importance to warrant the erection of this genus.

There has been some little uncertainty as to the systematic position of *Streptaxis*, Messrs. Adams placing it in the subfamily *Helicinae*, while Prof. von Martens in his edition of "Albers' Heliceen," places it next *Pupa* and quite remote from *Helix*.

Gonaxis Gibbonsi, n. s. (Plate II, fig. 1).

ANIMAL small; *body* of a light dull yellowish: all four *tentacles* and *head* of a dull brick red colour.

SHELL elongate, cylindrical, thin and shining, semitransparent, slightly opalescent, smooth, but with a few slight irregular wrinkles in the line of growth: *epidermis* very thin: *whorls* $5\frac{1}{2}$, unsymmetrical, the body whorl very oblique, narrow in front, very broad and flattened behind aperture: *penultimate whorl* very broad and oblique, forming a large hump on the left side of the shell; remaining whorls small and compressed; the *nucleus* is rounded and placed on the right side of the shell, *suture* deep, very oblique, crossed by numerous short prominent plicæ; *mouth* oblong, longer than broad, rounded in front, squarish behind: *lips* almost parallel, slightly curved, thickened and a little everted, forming a smooth rounded rim, connected by a slight callus: *umbilicus* small, shallow, partly concealed by the inner lip.

Length 0.275, breadth 0.175.

Hab. Zanzibar.

Mr. Gibbons found but three specimens of this interesting species, all in one spot amongst dead leaves, of which only one was living. Mr. Sheppard, of H. M. S. London, found specimens of this species at the roots of Banama trees.

I have very great pleasure in associating with this interesting species the name of its discoverer.

Its nearest ally is *Streptaxis Kirkii*, Dohrn, from Lake Nyassa, from which it is, however, quite distinct.

Zonites (?) ventrosa, Gibbons, MS. (Plate II. fig. 2).

SHELL depressed, rounded, thin and glossy, of a deep rich brown colour, with faint transverse striulæ, strongly marked at the suture; *whorls* four, slightly convex, inflected above, the last occupying half the shell: *periphery* rounded: *base* very convex: *spire* depressed: *apex* obtuse, rounded: *suture* broad and very deep: *mouth* lunate, nearly as long as broad: the *peristome* semicircular, thin and direct except near the umbilicus where it is reflected: *umbilicus* deep and very broad disclosing the interior of the spire.

Length 0.175, breadth 0.1.

Hab. Zanzibar.

Mr. Gibbons found but a single specimen of this Zonites, dead, amongst dead leaves. Mr. Sheppard has, however, taken living specimens at the roots of banama trees.

Buliminus olivaceus, Gibbons, MS. (Plate II., fig. 5).

ANIMAL white, or yellowish white, opaque.

SHELL, oblong-conical, thin, glossy, semitransparent, of a darkish horn colour, distinctly and regularly striate transversely: *epidermis* rather thin, distinct: *whorls* eight, rounded, the last large

forming more than $\frac{1}{3}$ length of the shell: *spire* tapering: *apex* obtuse: *suture* deep: mouth elliptical, somewhat pointed below: *peristome* thin, direct: *outer lip* slightly curved: *inner lip* reflected and partially covering the umbilicus: *umbilicus* tubular and deep.

Length 0.762, breadth 0.312 in.

Hab. Bawri Island, Zanzibar, Channel.

Occurs amongst dead leaves, in old marine shells and under bushes, but rarely alive. Mr. Gibbons has not found it at Zanzibar nor on any of the other coral islands. It appears to be confined to Bawri.

The epiphragm secreted for hybernation is calcareous, white, very strong and solid, bears no slit in the middle like that of *Achatina*, is convex and level with the peristome.

Buliminus tumidus, *Gibbons*, M.S. (Plate II, fig. 4).

SHELL conically-turrite of a brown, colour, transversely striate in the line of growth: *striae* slight and irregular: *epidermis* distinct: *whorls* seven, very convex, compressed: *body whorl* large and tumid, occupying less than half the length of the shell: *spire* tapering: *apex* rather acute: *suture* deep and distinct: *mouth* ovate, rather broad: *peristome* thin and direct: *inner lip* reflected partly concealing the umbilicus: *umbilicus* large and very deep.

Length 0.5, breath 0.3:

Hab. Zanzibar and on Chapani I.

Occurs sparingly about Zanzibar, but dead only. Mr. G. also found specimens on one of the coral islets (Chapani Island) with *Bulimus punctatus*, Anton, *Helix Mozambicensis*, Pfr., &c., but it did not occur on Bawri Island.

It is distinguished from the preceding species by the greater convexity and compactness of its whorls, and by its smaller and rounder body-whorl.

Buliminus obesa, Gibbons, MS. (Plate II, fig. 3).

SHELL ovato-oblong, thick and solid : *colour* ? : surface smooth but with indications of irregular transverse striæ : *epidermis* ? *whorls* $6\frac{1}{2}$ —7, swollen, rounded : *body whorl* large, contracting towards the front ; *penultimate* nearly equally large, broader, rather unsymmetrical, the two preceding whorls are much smaller : *apex* abruptly rounded : *suture* moderate, distinct, shallow ; *mouth* squarely ovate, with a thickened everted peristome joined by a callus : *outer lip* nearly straight : *inner lip* a little oblique : *umbilicus* deep and distinct, rather narrow.

Length 0.825, breadth 0.45.

Hab. Bawri Island, Zanzibar.

Mr. Gibbons only obtained two specimens of this fine species dead and very aged.



BIBLIOGRAPHY.

THE "VALOROUS" EXPEDITION.

On some new and remarkable North Atlantic Brachiopoda.—New and peculiar Mollusca of the Pecten, Mytilus, and Arca Families.—New and peculiar Mollusca of the Kellia, Lucina, Cyprina and Corbula Families.—New and peculiar Mollusca of the Order Solenoconchia.—New and peculiar Mollusca of the Patellidæ and other Families of Gastropoda.—New and peculiar Mollusca of the Eulimidæ and other Families of Gastropoda, as well as of the Pteropoda, by J. Gwyn Jeffreys, LL.D., F.R.S., F.L.S., F.G.S., &c., &c.

In this series of deeply interesting and valuable papers are embodied the results of the deep sea dredgings, instituted under the

direction of Dr. Jeffreys during the cruise of the "Valorous." As the result of these dredgings, 46 species, new to science, were discovered and are here described by Dr. Jeffreys.

In addition to the three genera previously noted at p. 224, a genus is established for the reception of a species of *Mytilidæ*, viz.:

Idas, *Jeffreys*.

Resembles *Arca* in shape, the hinge plate crenated on both sides the beak, cartilage none.

The revolution in our ideas caused by the prolific results of the recent examinations of the deep sea, in which Dr. Jeffreys has taken so prominent and honorable a part, has shown that the greatest depths teem with a numerous fauna, and that the abysses of the ocean retain in a living state many species of mollusca hitherto supposed to be extinct and previously known only by their fossil remains.

A very full and carefully compiled synonymy is given of the species enumerated, and the different depths and localities at which the various species have been obtained in the present as well as former expeditions are all furnished.

The whole series contain a wealth of information on the deep sea mollusca, and is one of the most important contributions to science that has appeared for some time.

The following is a list of the new species, omitting those previously mentioned at p. 224.

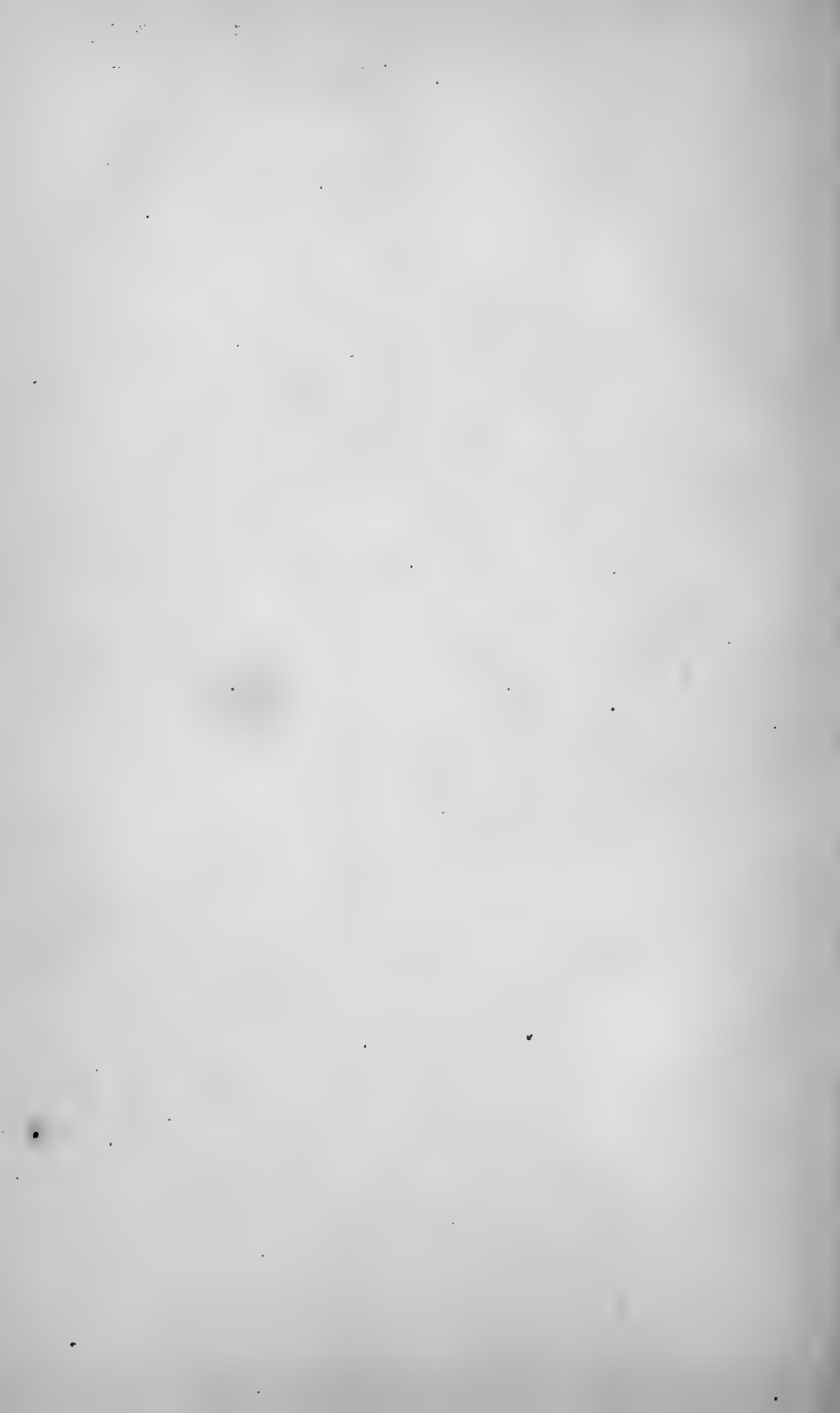
Seguenzia formosa, *Seguenzia carinata*, *Cerithium procerum*, *Limacina helicoides*, *Terebratula tenera*, *Amussium lucidum*, *Lima subovata*, *Idas argenteus*, *Leda pustulosa*, *L. lata*, *L. sericea*, *Limopsis tenella*, *L. cristata*, *Diplodonta Torelli*, *Poromya rotundata*, *Pecchiolia gibbosa*, *P. tornata*, *Næra striata*, *N. exigua*, *N. notabilis*, *N. circinata*, *N. papyria*, *N. angularis*, *Dentalium capillosum*, *D. ensiculus*, *D. subterfissum*, *Cadulus tumidosus*, *C. gracilis*, *C. cylindratus*, *Puncturella profundi*, *Scissurella tenuis*, *Cyclostrema basistriatum*, *Acirsa prælonga*.

Pl. I.



GLADIUS MARTINII.

J. Chard, del.





1



3



3



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4



5



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2

1 GONAXIS GIBBONSI. 2 ZONITES(?) VENTROSA. 3 BULIMINUS OBESA.
4 B. TUMIDUS. 5 B. OLIVACEUS.

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" Townsendiana	0 9
" " var. tenuis	1 3
" Newberryana	2 0
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" polygyrella, <i>Bland</i> , Idaho	1 0
" devia, var., Idaho	0 6
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Sillimanni, <i>Bland</i> , California	0 6
Oregonensis, <i>Lea</i>	0 6
PUPA.	
Arizonensis, <i>Gabb.</i> , Nevada	0 4
PUPILLA.	
Californica, <i>Rowell</i> , California	0 4
Rowelli, <i>Newcomb</i> , California... ..	0 4
Limax Hewstoni, <i>Cooper</i> , California	0 3
Prophysaon Hemphilli, <i>Binn-y</i> , California	0 3
Ariolimax niger, <i>Cooper</i> , California	0 3
ANODONTA.	
angulata, <i>Lea</i> , California	0 6
Oregonensis, <i>Lea</i> , California	0 6
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PISIDIUM occidentale, <i>Newc.</i> , California	0	3
compressum, <i>Prime</i> , Nevada	0	3
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dentatum, <i>Hald.</i> , Oregon	0	4
Spokanei, <i>Baird.</i> , Idaho	0	6
Alexia setifer, <i>Cooper</i> , California	0	3
Carinifex Newberryi, <i>Lea</i> , California	1	0
Flumnicola Nuttalli, <i>Lea</i> , Oregon	0	6
GONIOBASIS Bairdiana, <i>Lea</i> , Oregon		
Draytoni, <i>Lea</i> , California	0	6
plicifera, <i>Lea</i> , Oregon	0	6
rudens, <i>Lea</i> , Oregon	0	6
nigrina, <i>Lea</i> , California	0	9
LIMNOPHYSA		
Rowelli, <i>Tryon</i> , California	0	6
Nuttalliana, <i>Lea</i> , California	0	6
Traskii, <i>Tryon</i> , California	0	6
bulimoides, <i>Lea</i> , California	0	6
desidiosa, <i>Say</i> , Oregon	0	3
Binneyi, <i>Tryon</i> , Idaho	0	6
PHYSA,		
diaphana, <i>Tryon</i> , California	0	3
Gabbii, <i>Tryon</i> , Oregon	0	4
Carltoni, <i>Lea</i> , California	0	4
hypnorum, <i>L.</i> Utah	0	3
Traskii, <i>Tryon</i> , Oregon	0	4
Hawnii, <i>Lea</i> , Nevada	0	6
costata, <i>Newc.</i> , California	0	6
Cooperi, <i>Tryon</i> , California	0	6
distinguendo, <i>Tryon</i> , California	0	4
virgata, <i>Gould</i> , Lower California	0	6
propinqua, <i>Tryon</i> , California	0	4
VALVATA virens, <i>Tryon</i> , California		
Planorbis parvus, <i>Say</i> , Oregon	0	3
,, opercularis, <i>Gould</i> , California	0	6
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profunda, <i>Say</i>	0	3
Roemeri, <i>Pfr.</i>	1	0
multilineata, <i>Say</i>	0	3
Pennsylvanica, <i>Green</i>	0	4
clausa, <i>Say</i>	0	3
Mitchelliana, <i>Lea</i>	0	4
hirsuta, <i>Say</i>	0	3
monodon, <i>Rackett</i>	0	3
inflecta, <i>Say</i>	0	4
fallax, <i>Say</i>	0	4
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