The following paper was read by Robert McAndrew, Esq., F.R.S., F.L.S., &c.

ON THE GEOGRAPHICAL DISTRIBUTION OF TESTACEOUS MOLLUSCA IN THE NORTH-EAST ATLANTIC AND NEIGHBOURING SEAS.

The distribution of marine mollusca is a subject, not only interesting to the student of zoology and physical geography, but particularly so to the geologist, as by reference to it he is enabled to form an opinion of the climatal and other conditions that must have prevailed at the time when those strata were deposited, which contain fossils allied to existing forms.

Although shells, as objects of beauty and rarity, have long excited the cupidity of collectors, it is comparatively only of late years that qualified individuals have been found to investigate and record local *faunas*, and that the commanders and officers of exploring and surveying expeditions have been stimulated to take advantage of the opportunities within their reach of illustrating the natural history of remote regions, whereby the philosophic naturalist has been enabled to form a much more correct idea of the range and distribution of this class of animals, and how far the same is affected by temperature and other circumstances, than he could have derived from the grossly erroneous data supplied by many of the older writers on conchology.

Very much, however, still remains to be accomplished in this direction. The great sea, in which are "things creeping innumerable," is still the region of mystery; and people term it the "waste of waters," little reflecting how those waters teem with myriads of living beings; and that, even after its vast extent is taken into account, the ocean is pre-eminently the domain of animal, as the land is of vegetable, organization.

That there should be found those who still believe in the existence of sea serpents, mermaids, and other monsters, whose terrestrial brethren, the griffins and unicorns, have long since been banished to the realms of romance and of heraldry, proves the ignorance which exists concerning the things of the sea; while we need but to compare the extent of our knowledge of marine and of land animals, in order to perceive at once what a field is here presented to the lover of nature for research of the most pleasing and interesting kind, and for adding to our knowledge of the manifold works of the Creator.

These and similar considerations have induced me to direct my

attention to the exploring of the bottom of the sea, commencing with our own coasts, and occasionally extending my excursions to those of neighbouring countries. In laying before the Society some of the results of my investigations, I may be allowed to mention, as an evidence that they have not been altogether fruitless, the fact, that the marine fauna of the Canary Islands had been represented to be of African type, but is proved by me to be much more closely allied to that of the Mediterranean; and, in consequence, the line, marking on a physical map the limit of the tropical fauna, has had to be altered from the north to the south of those islands.

There exists a considerable analogy between the distribution of animals (particularly those which, in consequence of a lower organization, enjoy but very limited power of locomotion,) and of plants. The fauna, as well as flora, of the arctic and antarctic regions being poor in genera and species, but rich in the number of individuals, while the tropics furnish the greatest variety of form in both departments. Also, similar conditions in distant parts of the world present representative, but not identical, species and genera, both in the animal and vegetable kingdoms; and, although the region of Australasia would appear at first sight to form an exception to this rule, a closer observation will shew that its real peculiarity consists in its representing a more ancient state of things, such as may probably have existed in other parts of the world at some period prior to the creation of man.

This view is, I believe, borne out by the general character of the plants and vertebrate animals, whilst among the mollusca may be quoted the characteristic genus *Trigonia*, not met with elsewhere in a living state, but largely represented in the oolites of this country.

It is well known with respect to land vegetation, that a difference of elevation compensates for difference of latitude, and that arctic forms are repeated in the same or similar species on the lofty mountains of the temperate and even of the torrid zones. It might be supposed that the analogy would hold good with respect to the marine mollusca, but such is the case only to a very small extent. The temperature of the ocean, at great depths, being uniform in all latitudes at about 40 degrees of Fahrenheit,* it is very evident, that although the inhabitant of shallow seas in temperate regions may, by descending to a greater depth, procure a similar average temperature either in higher or lower latitudes, the same resource would not be available to the natives of

* Captain Denham states, that at 200 fathoms it averages 50° and 52°, no matter what the surface temperature may be; and below that depth, diminishes till it reaches the minimum of 40° at 900 to 1000 fathoms.

extreme climates. It is also necessary to bear in mind, that a suitable temperature is not the only condition necessary to the existence of animals, and that at the moderate depth (compared with the height of mountains) of 600 fathoms, there must exist total darkness, and a pressure equal to 120 times that of our atmosphere, or about 1800 pounds to the square inch; a state of things which we cannot imagine to be very convenient, even if it be not absolutely opposed, to animal existence.

As the depths of the sea are influenced by climate in an inverse ratio to their distance from the surface, till the point of an unvarying temperature is reached, it is evident that difference of latitude must be of much less importance to those beings which inhabit the deep sea, than to shallow water species, and we accordingly find the former to be more extensively distributed than the latter. A considerable variation, as regards the distribution of mollusca, takes place between the opposite sides of the north Atlantic. On the eastern shores, intervening between those of the arctic and tropical regions, are two distinct faunas, which have been termed the Celtic, and the Lusitanian or Mediterranean; and these so run into one another, that it would be difficult to fix upon an exact line as the commencement or termination of either of them. On the American shores, species generally characteristic of the arctic seas extend southward as far as Cape Cod in lat. 42° (the parallel of the north of Portugal), where they are said to disappear abruptly, and to be replaced by genera including *Pyrula*, *Ranella*, and *Columbella*, evidently forms of a more southern type, and which appear to represent those constituting the Lusitanian fauna on this side of the Atlantic.

Dr. Philippi has appended to his admirable work, on the Mollusca of Sicily, a comparison of the fauna of that country with the faunas of all the principal districts and localities of which there had been any list of shells published. I have considered that it would not be uninstructive to follow his example within a narrower sphere, by comparing together the shells of those parts which I have personally examined and some others of a similar character, with a view of illustrating the range of northern species southward, and likewise of southern species towards the north. I commence with

Western Scandinavia.

In a catalogue of the Mollusca of Western Scandinavia, published by Professor Lovén, of Stockholm, there are, after rejecting a few

which prove to be synonyms, 289 species provided with shells, consisting of—

Acephala lamellibranchiata	124
Acephala palliobranchiata	5
Pteropoda	3
Gasteropoda prosobranchiata	136
Gasteropoda opisthobranchiata	21

Of these the following are found in North America, being taken principally from Dr. Gould's catalogue of the Mollusca of Massachusetts :—

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis
Pholas crispata
Saxicava arctica
,, rugosa
Mya arenaria
,, truncata
Panopœa Norvegica
Solen ensis
Tellina proxima
Cyprina Islandica
Lucina borealis
,, flexuosa
Turtonia minuta
Astarte sulcata
Mytilus edulis
Modiola modiolus
Crenella discors
,, decussata
,, nigra
Nucula tenuis
Leda caudata
Leda pygmœa
Peten Islandicus
Anomia aculeata

ACEPHALA PALLIOBRANCHIATA.

Hippothyris psittacea
Terebratula caput serpentis

GASTEROPODA PROSOBRANCHIATA.

Chiton albus
,, asellus
,, marmoreus
,, ruber
,, cinereus
Acmœa testudinalis
Propilidium ancyloide ?
Puncturella noachina
Trochus (Margarita) cinereus
,, ,, undulatus
Trochus (Margarita) helicinus
Littorina rudis
,, tenebrosa
Lacuna vincta
,, puteolus
Scalaria Greenlandica
Natica clausa
,, pusilla
,, helicoides
Velutina lœvigata
Lamellaria perspicua
Trichotropis borealis
Admeta crispa
Purpura lapillus
Buccinum undatum
Fusus antiquus
,, Islandicus
Trophon clathratum
,, harpularium
Mangelia Trevilliana
,, turricula
,, rufa

Being in proportion to the Scandinavian species—

Acephala lamellibranchiata	24	in 124,	or 19 per cent.
Acephala palliobranchiata	2	,, 5,	,, 40 ,,
Pteropoda	—	3,	—
Gasteropodo prosobranchiata	32	,, 136,	,, 24 ,,
Gasteropoda opisthobranchiata	—	21,	—

Total of testaceous mollusca, common to Western Scandinavia and North America, 58 in 289, or 20 per cent. of the former.

The Scandinavian species found in the British seas are—

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis
,, Norvagica
Xylophaga dorsalis
Pholas dactylus
,, crispata
,, candida
Saxicava arctica
,, rugosa
Mya arenaria
,, truncata

Panopœa Norvegica
Corbula nucleus
„ rosea
Neœra cuspidata
„ costellata
„ abbreviata
Lyonsia Norvegica
Thracia convexa
„ phaseolina
„ distorta
Cochlodesma prœtenuc
Solen ensis
„ marginatus
„ pellucidus
Solecurtus coarctatus
Psammobia vespertina
„ ferroensis
„ tellinella
Tellina crassa
„ pygmœa
„ tenuis
„ solidula
„ proxima
Syndosmya alba
„ intermedia
„ prismatica
Scrobicularia piperata
Donax anatinus?
Mactra elliptica
„ subtruncata
Tapes virginea
„ aurea
„ pullastra
Venus casina
„ fasciata
„ striatula
„ ovata
Artemis exoleta
„ lincta
Lucinopsis undata
Cyprina Islandica
Astarte sulcata
„ elliptica
„ compressa
„ arctica
Isocardia cor
Cardium Norvegicum
„ echinatum
„ edule
Cardium fasciatum
„ nodosum
„ Suecicum
Lucina borealis
„ spinifera
„ flexuosa
Montacuta substriata
Turtonia minuta
Kellia suborbicularis
Mytilus edulis
Modiola modiolus
Crenella decussata
„ discors
„ marmorata
„ nigra
Nucula nucleus
„ nitida
„ decussata
„ tenuis
Leda caudata
„ pygmœa
Arca tetragona
„ raridentata
Lima hians
„ subauriculata
„ Loscombii
Pecten Varius
„ pusio
„ striatus
„ tigrinus
„ Danicus
„ maximus
„ opercularis
Ostrea edulis
Anomia ephippium
„ aculeata
„ patelliformis
„ striata

ACEPHALA PALLIOBRANCHIATA.

Hypothyris psittacea
Terebratula caput serpentis
„ cranium
Crania anomala

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Chiton Hanleyi
„ albus
„ cinereus
„ asellus
„ marmoreus
„ lœvis
„ ruber
Patella vulgata
„ pellucida
Acmœa testudinalis
„ virginea
Pilidium fulvum
Propilidium ancyloide
Dentalium entalis
Pileopsis Ungaricus
Puncturella noachina
Emarginula crassa
„ reticulata
Trochus zizyphinus
„ millegranus
„ cinerarius
„ tumidus
„ alabastrum
„ undulatus
„ helicinus
Scissurella crispata
Littorina littorea
„ rudis
„ neritoides
„ tenebrosa
„ saxatilis
„ littoralis
Lacuna pallidula
„ puteolus
„ vincta
Rissoa Zetlandica
„ Beanii
„ sculpta
„ costata
„ striata
„ cingillus
„ parva
„ rufilabrum
„ labiosa
„ ulvœ
Skenia planorbis
Turritella communis
Aporrhais pes pelicani
Cerithium reticulatum

Cerithium adversum
,, metula
Scalaria Greenlandica
,, Turtonis
,, communis
,, Trevilliana
Aclis supranitida
Stylifer Turtoni
Eulima subulata
,, distorta
,, polita (nitida)
Chemnitzia rufa
Odostomia Warreni
,, conoidea
,, spiralis
,, rissoides
,, eulimoides
Eulimella Scillæ
Natica monilifera
,, nitida
,, pusilla
,, Montagui
,, helicoides
Velutina lævigata
,, flexilis
Lamellaria perspicua
,, tentaculata
Trichotropis borealis
Murex erinaceus
Purpura lapillus
Nassa reticulata
,, incrassata
Buccinum undatum
,, Humphreysianum
Fusus Islandicus
,, antiquus
,, Norvegicus
Trophon clathratulus
,, Barvicensis
Mangelia turricula
,, Trevilliana
,, rufa
,, nana
,, teres
,, linearis
,, nebula
Mangelia costata
,, attenuata
Cypræa Europea
Ovula acuminata
Marginella lævis

Gasteropoda Opistho-branchiata.

Cylichna cylindracea
,, truncata
,, nitidula
,, strigella
,, umbilicata
Amphispira hyalina
Tomatella fasciata
Akera bullata
Bulla Cranchii
Scaphander lignarius
Philine aperta
,, quadrata
,, scabra
,, pruinosa
Aplysia hybrida

Showing the proportion to Scandinavian species of—

Acephala lamellibranchiata	97	in	124,	or 78 per cent.
Acephala palliobranchiata	4	,,	5, ,,	80 ,,
Pteropoda	—	,,	3	—
Gasteropoda prosobranchiata	101	,,	136, ,,	75 ,,
Gasteropoda opisthobranchiata	15	,,	21, ,,	71 ,,

Total of testaceous mollusca, common to the west of Scandinavia and the British seas, 217 in 289, or 75 per cent. of the former.

The Scandinavian species found on the north coasts of Spain, including Vigo, are the following.—N.B. Some of them which I have not actually procured within the district, are included in consequence of their having been met with further south, and these are distinguished by the addition of their locality:—

Acephala lamelli-branchiata.

Teredo navalis, Canaries and Madeira
Pholas candida, Malaga
,, dactylus do.
Saxicava arctica
,, rugosa
Corbula nucleus
Neœra cuspidata
Neœra costellata, Canaries & Madeira
,, abbreviata, Mediterranean
Lyonsia Norvegica
Thracia convexa, Gibraltar
,, phascolina
Solen ensis
,, marginatus
Solen pellucidus, Gibraltar
Solecurtus coarctatus Canaries & Mediterranean
Psammobia Ferroensis Canaries and Mediterranean
,, vespertina
,, tellinella
Tellina crassa

Tellina tenuis
,, solidula, Mediterranean
Syndosmya alba
,, prismatica
Serobicularia piperata
Donax anatinus
Mactra subtruncata
Tapes aurea
,, virginea
,, pullastra
Venus casina, Gibraltar, Canaries & Madeira
,, striatula
,, fasciata
,, ovata
Artemis exoleta
,, lincta
Lucinopsis undata
Astarte sulcata
Isocordia cor, Mediterranean
Cardium fasciatum, Mediterranean
,, Norvegicum
,, edule
,, echinatum
Lucina borealis, Mogador
,, spinifera
,, flexuosa
Montacuta substriata, Mediterranean
Kellia suborbicularis
Mytilus edulis
Crenella marmorata
Nucula nucleus
,, nitida
,, decussata
Arca raridentata, Gibraltar
,, tetragona
Lima Loscombii, Gibraltar
,, subauriculata, Canaries & Mediterranean
,, hians
Pecten maximus
,, opercularis
,, varius
,, tigrinus
Pecten pusio
,, striatus
Ostrea edulis
Anomia patelliformis
,, ephippium (squamulata)
,, aculeata

ACEPHALA PALLIOBRANCHIATA.

Terebratula cap. serp. Mediterranean
Anomia anomala

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Chiton asellus
,, cinereus
,, lœvis
Patella vulgata
,, pellucida
Acmœa virginea
Dentalium entalis?
Pileopsis Ungaricus
Emarginula reticulata, Mediterranean
Trochus millegranus, do.
,, zizyphinus
,, tumidus
,, cinerarius
Littorina littorea
,, rudis
,, littoralis
,, saxatilis
,, tenebrosa
,, neritoides
Lacuna puteolus
Rissoa sculpta, Mediterranean
,, ulvœ
,, cingillus
,, costata
,, labiosa
,, parva
,, striata
Turritella communis
Aporrhais pes pelicani
Cerithium reticulatum
,, adversum
Scalaria Turtonis
,, communis
Eulima nitida, Mediterranean
,, distorta, Canaries & Mediterranean
,, subulata
Chemnitzia rufa
Odostomia conoidea
Eulimella Scillœ, Gibraltar and Canaries
Natica nitida
,, monilifera?
Velutina lœvigata
Lamellaria perspicua
Murex erinaceus
Purpura lapillus
Nassa reticulata
,, incrassata
Mangelia attenuata
,, costata
,, nebula
,, linearis
,, teres, Mediterranean, Canaries, and Madeira
Cypræa Europæa
Ovula acuminata, Mediterranean

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna strigella
,, cylindracea
,, umbilicata
,, truncata
Amphispira hyalina, Canaries & Mediterranean
Tornatella fasciata
Akera bullata
Bulla Cranchii, Canaries and Mediterranean
Scaphander lignarius
Philine aperta
,, scabra
Aplysia hybrida? Canaries

Being—

Acephala lamellibranchiata	68	in 124,	or 55	per cent.
Acephala palliobranchiata	2	„ 5,	„ 40	„
Pteropoda	—	„ 3,	—	
Gasteropoda prosobranchiata	55	„ 136,	„ 40	„
Gasteropoda opisthobranchiata	12	„ 21,	„ 57	„

Total of Testaceous Mollusca, common to the west of Scandinavia and the north of Spain, 137 in 289, or 47 per cent. of the former.

All the species, enumerated in the list immediately preceding, inhabit the Mediterranean, or to the southward of Cape St. Vincent, except the following :—

ACEPHALA LAMELLIBRANCHIATA.

Donax anatinus?
Pecten tigrinus?

ACEPHALA PALLIOBRANCHIATA.

Crania anomala

GASTEROPODA PROSOBRANCHIATA.

Chiton cinereus
„ assellus
Trochus tumidus
„ cinerarius
Littorina rudis
„ littoralis
„ saxatilis
Littorina tenebrosa
Rissoa Ulvæ
„ striatula
„ vitrea
Lacuna puteolus
Natica monilifera
Velutina lævigata
Purpura lapillus

Consequently, there are of Scandinavian species extending into the Mediterranean region—

Acephala lamellibranchiata	66	in 124,	or 53	per cent.
Acephala palliobranchiata	1	„ 3,	„ 20	„
Pteropoda	—	„ 3,	—	
Gasteropoda prosobranchiata	40	„ 136,	„ 30	„
Gasteropoda opisthobranchiata	12	„ 21,	„ 57	„

Total of testaceous mollusca, common to the west of Scandinavia and the Mediterranean region, 119 in 289, or 41 per cent.

The Scandinavian species obtained in the Canary Islands are—

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis
Saxicava arctica
Corbula nucleus
Neæra cuspidata
„ costellata
Thracia phaseolina
Solecurtus coarctatus
Psammobia vespertina
„ ferroensis
Donax anatinus
Mactra subtruncata?
Venus casina
Cardium echinatum
Cardium fasciatum
„ Norvegicum
„ edule
Lucina flexuosa
„ spinifera
Kellia suborbicularis
Crenella marmorata
Arca tetragona
Lima hians
„ suborbicularis
Pecten opercularis
„ pusio

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Emarginula reticulata
Trochus zizyphinus
Littorina neritoides
Rissoa parva
„ costata
„ textilis?
Cerithrum adversum
„ reticulatum
Eulima nitida
Eulima distorta
Chemnitzia rufa
Odostomia conoidea
Eulimella Scillæ
Nassa reticulata

Nassa incrassata
Mangelia linearis
„ nebula
„ teres

Gasteropoda opisthobranchiata.

Cylichna cylindracea
„ truncata
Amphispira hyalina

Bulla Cranchii
Philine aperta
Aplysia punctata or hybrida

Being—

Acephala lamellibranchiata	25	in	124,	or 20 per cent.
Acephala palliobranchiata	—	„	5, „	— „
Pteropoda	—	„	3, „	— „
Gasteropoda prosobranchiata	19	„	136, „	14 „
Gasteropoda opisthobranchiata	6	„	21, „	29 „

Total number of marine testaceous mollusca common to the west of Scandinavia and to the Canary Islands, 50 in 289, or 17 per cent. of the former.

British Seas.

The number of species of British marine testaceous mollusca, recorded by Messrs. Forbes and Hanley, is 406.

Acephala lamellibranchiata	163
Acephala palliobranchiata	5
Pteropoda	4
Gasteropoda prosobranchiata	209
Gasteropoda opisthobranchiata	25

The following British species are common to North America :—

Acephala lamellibranchiata.

Teredo Norvagicus
Pholas crispata
Saxicava arctica
„ rugosa
Mya truncata
„ arenaria
Panopœa Norvegica
Solen ensis
Tellina proxima
Cyprina Islandica
Astarte sulcata
Lucina borealis
„ flexuosa
Turtonia minuta
Kellia rubra
Mytilus edulis
Modiola modiolus
Crenella discors
„ nigra
„ decussata
Nucula tenuis
Leda caudata
Leda pygmœa
Anomia aculeata

Acephala palliobranchiata.

Hypothyris psittacea
Terebratula caput serpentis

Gasteropoda prosobranchiata.

Chiton albus
„ assellus
„ cinereus
„ marmoreus
„ ruber
Acmœa testudinalis
Propilidium ancyloide?
Puncturella noachina
Trochus helicinus
„ undulatus
Janthina communis
Littorina rudis
„ tenebrosa
Lacuna vincta
Lacuna puteolus
Skenia divisa (serpuloides)
„ planorbis
Skenia? (margarita?) costulata
Scalaria Groenlandica
Natica pusilla
„ helicoides
Velutina lœvigata
Lamellaria perspicua
Trichotropis borealis
Purpura lapillus
Buccinum undatum
„ Dalei
Fusus Islandicus
„ antiquus
„ propinquus
Trophon clathratus
„ muricatus
Mangelia turricula
„ rufa
„ Trevilliana

Shewing the proportion to British species of—

Acephala lamellibranchiata	24 in	163,	or 14 per cent.
Acephala palliobranchiata	2 „	5, „	40 „
Pteropoda	—	4,	—
Gasteropoda prosobranchiata	35 „	209, „	17 „
Gasteropoda opisthobranchiata	—	25, „	—

Total of British marine testaceous mollusca, common to North America, 61 in 406, or 15 per cent.

Referring to the list of species common to Britain and Scandinavia, we find them to bear the following proportion to the British species :—

Acephala lamellibranchiata	97 in	163,	or 61 per cent.
Acephala palliobranchiata	4 „	5, „	80 „
Pteropoda	—	4,	—
Gasteropoda prosobranchiata	101 „	209, „	49 „
Gasteropoda opisthobranchiata	15 „	25, „	60 „

Total of British marine testaceous mollusca, common to Scandinavia, 217 in 406, or 53 per cent.

The following British species have been obtained on the coasts of the north of Spain, including Vigo, except those marked,* which, though not hitherto procured from the district, may be considered as belonging to it, in consequence of having been found in more southern localities :—

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis*
„ palmulata*
Pholas candida*
„ dactylus*
„ parva*
Gastrochœna modiolina ?
Saxicava arctica
„ rugosa
Petricola lithophaga
Venerupis irus
Corbula nucleus
Sphœnia Binghami*
Neœra cuspidata
„ costellata*
„ abbreviata*
Poromya granulata*
Pandora rostrata
„ obtusa

Lyonsia Norvegica
Thracia phaseolina
„ pubescens *
„ convexa *
Solen marginatus
„ ensis
„ siliqua
„ pellucidus *
Ceratisolen legumen *
Solecurtus coarctatus *
„ candidus *
Psammobia vespertina
„ tellinella
„ Ferroensis *
„ costulata
Diodonta fragilis
Tellina crassa
„ balaustina *
„ incarnata *
„ donacina

Tellina tenuis
„ fabula *
„ solidula *
Syndosmya alba
„ prismatica
„ tenuis
Scrobicularia piperata
Donax anatinus
„ politus *
Ervilia castanea *
Mactra subtruncata
„ solida
„ stultoum *
„ helvacea *
Lutraria elliptica
„ oblonga
Tapes decussata
„ virginea
„ pullastra
„ aurea

Cytheria chione*
Venus verrucosa
,, striatula
,, casina*
,, fasciata
,, ovata
Artemis exoleta
,, lincta
Lucinopsis undata
Circe minima
Astarte sulcata
,, triangularis
Isocordia cor*
Cardium aculeatum*
,, rusticum
,, echinatum
,, edule
,, fasciatum
,, pygmœum
,, Norvegicum
Lucina borealis*
,, spinifera
,, divaricata*
,, flexuosa
,, leucoma
,, ferruginosa*
Diplodonta rotundata*
Montacuta bidentata
,, ferruginosa*
,, substriata*
Kellia suborbicularis
,, rubra
Lepton squamosum
Galeomma Turtoni
Mytilus edulis
Modiola tulipa
,, barbata*
Crenella marmorata
,, costulata
,, rhombea*
Nucula nucleus
,, nitida
,, radiata
,, decussata*
Arca tetragona
,, lactea
,, raridentata*
Pectunculus Glycimeris
Auricula Tarentina
Pinna pectinata*
Lima subauriculata*
,, Loscombii*
,, hians
Pecten varius
,, pusio
,, striatus
,, tigrinus
,, similis
,, opercularis
,, maximus
Ostrea edulis
Anomia ephippium
,, patelliformis
,, aculeata*

ACEPHALA PALLIOBRANCHIATA.

Terebratula caput serpentis*
Crania anomala

PTEROPODA.

Hyalœa trispinosa*

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
,, discrepans
,, cinereus
,, asellus
,, cancellatus
,, lœvis
Patella vulgata
,, pellucida
Acmœa virginea
Dentalium Tarentinum
Pileopsis Ungaricus
Calyptrœa reticulata
Fissurella Sinensis
Emarginula reticulata*
,, rosea
Haliotis tuberculata
Trochus zizyphinus
,, granulatus
,, millegranus
,, exiguus
,, striatus
,, Montagui
Trochus tumidus
,, cinerarius
,, umbilicatus
,, magus
,, lineatus
Phasianella pullus
Adeorbis subcarinata
Janthina pallida*
,, exigua*
,, communis
Littorina neritoides
,, littorea
,, rudis
,, littoralis
,, saxatilis
Lacuna puteolus?
Rissoa striatula*
,, lactea
,, crenulata
,, calathus
,, sculpta
,, costata*
,, striata
,, parva
,, costulata
,, labiosa
,, semistriata*
,, rubra*
,, cingillus
,, vitrea
,, ulvœ
Jeffreysia opalina
Skenia nitidissima
,, lœvis*
Turritella communis
Cœcum trachea
Aporrhais pes pelicani
Cerithium reticulatum
,, adversum
Scalaria communis
,, Turtonis
,, Clathratula
Aclis ascaris
Eulima polita
,, distorta
,, subulata
Chemnitzia elegantissima
,, rufa
,, fenestrata

Chemnitzia scalaris
,, indistincta?
Odostomia conoidea
,, acuta*
,, spiralis*
Eulimella acicula*
,, Scillæ*
Truncatella Montagui* *
Natica monilifera?
,, nitida
,, sordida*
Velutina lævigata
Lammellaria perspicua
Cerithiopsis tuberculare?*
Murex erinaceus
,, corrallinus
Lachesis minima
Purpura lapillus
Nassa reticulata
,, incrassata
,, pygmæa
Trophon muricatus
Mangelia septangularis
,, teres
,, Lefroyi
Mangelia linearis
,, gracilis
,, brachystoma
,, purpurea
,, attenuata
,, costata
,, striolata
,, nebula
Cyprœa Europea
Ovula acuminata
Marginella lævis

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
,, truncata
,, mamillata
,, umbilicata
,, strigella*
Tornatella fasciata
Akera bullata
Bulla hydatis
,, Cranchii*
Scaphander lignarius
Philine aperta
,, scabra
,, catena*
Aplysia hybrida*

Shewing in proportion with the British species—

Acephala lamellibranchiata	122 in 163,	or 75	per cent.
Acephala palliobranchiata	2 ,, 5,	,, 40	,,
Pteropoda	1 ,, 4,	,, 25	,,
Gasteropoda prosobranchiata ...	107 ,, 209,	,, 51	,,
Gasteropoda opisthobranchiata...	14 ,, 25,	,, 56	,,

Total of British marine testaceous mollusca, common to the North of Spain, 246 in 406, or 61 per cent.

All the species common to Britain and the North of Spain, are likewise met with in the South Peninsula or Mediterranean except nineteen, viz., *mactra solida*, and those already enumerated as Scandinavian species, found in the North of Spain, but not to the southward of Cape St. Vincent. Consequently the South Peninsular and Mediterranean species, compared with the British are—

Acephala lamellibranchiata	119 in 163,	or 71	per cent.
Acephala palliobranchiata.....	1 ,, 5,	,, 20	,,
Pteropoda	1 in 4,	or 25	per cent.
Gasteropoda prosobranchiata ...	92 ,, 209,	,, 42	,,
Gasteropoda opisthobranchiata...	14 ,, 25,	,, 56	,,

Total of British marine testaceous mollusca, common to the South of Cape St. Vincent and the Mediterranean, 227 in 406, or 56 per cent. The following British species have been obtained in the Canary Islands.

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis?
Saxicava artica
Venerupis irus
Corbula nucleus
Neæra costellata
,, cuspidata
Pandora rostrata?
,, obtusa
Thracia phaseolina
,, pubescens

Solecurtus candidus
,, coarctatus
Psammobia vespertina
,, costulata
,, Ferroensis
Tellina incarnata
,, balaustina
Donax anatinus?
Ervilia castanea
Mactra subtruncata?
,, stultorum
Cytheria chione
Venus verrucosa
,, casina
Circe minima
Astarte triangularis
Cardium echinatum
,, rusticum
,, edule
,, fasciatum
,, Norvegicum
Lucina leucoma
,, flexuosa
Lucina divaricata
,, spinifera
Diplodonta rotundata
Kellia rubra
,, suborbicularis
Modiola tulipa
Crenella rhombea
,, marmorata

Arca lactea
,, tetragona
Pectunculus Glycimeris
Avicula Tarentina
Lima hians
,, subauriculata
Pecten opercularis
,, pusio

PTEROPODA.

Hyalœa trispinosa?

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Calyptræa Sinensis
Fissurella reticulata
Emarginula reticulata
Haliotis tuberculata
Trochus zizyphinus
,, striatus
,, magus
,, granulatus
,, exiguus
Phasianella pullus
Janthina communis
,, exigua
Littorina neritea
Rissoa costata
,, parva
,, textilis?
Cœcum trachea
Cerithurm reticulatum

Cerithurm adversum
Scalaria clathratula
Eulima distorta
,, polita (nitida)
Chemnitzia rufa
,, elegantissima
,, indistincta?
Odostomia conoidea
Eulimella Scillæ
Truncatella Montagui
Lemellaria perspicua
Cerithiopsis tuberculare
Murex corallinus
Nassa reticulata
,, incrassata
Mangelia purpurea
,, Lefroyi
,, striolata
,, linearis
,, nebula
,, gracilis
,, teres

GASTEROPODA OPISTHOBRANCHIATA

Cylichna cylindracea
,, truncata
,, mamillata
Bulla hydatis
,, Cranchii
Aplysia hybrida

Shewing, on comparison with the list of British species—

Acephala lamellibranchiata	49 in 163,	or 30 per cent.
Acephala palliobranchiata	— ,, 5,	,, — ,,
Pteropoda	1 ,, 4,	,, 25 ,,
Gasteropoda prosobranchiata ...	41 ,, 209,	,, 18 ,,
Gasteropoda opisthobranchiata	6 ,, 25,	,, 24 ,,

Total of British species, common to the Canaries 97 in 406, or 24 per cent.

NORTH COASTS OF SPAIN.

I am not acquainted with any catalogue of the mollusca of the district under consideration, and accordingly in treating of their distribution. I must refer to the following list of what I have myself collected on the coasts of the Asturias and Gallicia—a large proportion of them being from Vigo Bay.

ACEPHALA LAMELLIBRANCHIATA.

Gastrochœna modiolina, or cuneiformis
Saxicava arctica
,, rugosa
Petricola lithophaga
Venerupis irus
Corbula nucleus
Neœra cuspidata
Pandora rostrata
,, obtusa
Lyonsia Norvegica
Thracia phaseolina
Solen marginatus
,, ensis
,, siliqua
Psammobia tellinella
,, vespertina
Diodonta fragilis
Tellina crassa
,, donacina
,, distorta?
,, tenuis
,, serrata
Syndosmya alba
,, prismatica
,, tenuis
Scrobicularia piperata
Donax anatinus
Mesodesma donacilla
Mactra subtruncatra
,, solida
Lutraria elliptica
,, oblonga
,, rugosa
Tapes virginea
,, decussata
,, pullastra
,, aurea
Venus verrucosa
,, striatula
,, fasciata
,, ovata
Artemis exoleta
,, lincta
Lucinopsis undata
Circe minima
Astarte sulcata
Astarte triangularis
Cardium edule
,, echinatum
,, rusticum
,, ciliare
,, Norvegicum
,, papillosum?
,, pygmœum
Lucina leucoma
,, digitalis
,, flexuosa
,, spinifera
,, pecten
Montacuta bidentata
Kellia suborbicularis
Kellia? (genus uncertain)
Lepton squamosum
Galeomma Turtoni
Mytilus Galloprovincialis
,, edulis
Modiola tulipa
Lithodomus caudigerus
Crenella marmorata
,, costulata
Nucula nucleus
,, nitida
,, radiata
Arca tetragona
,, lactea
Pectunculus glycimeris
Avicula Tarentina
Lima hians
Pecten maximus
,, opercularis
,, varius
,, pusio
,, striatus
,, tigrinus
,, similis
Ostrea edulis
Anomia ephippium
,, patelliformis

ACEPHALA PALLIOBRANCHIATA.

Crania anomala

GASTEROPODA PROSOBRANCHIATA.

Chiton rufus
Chiton fascicularis
,, cinereus
,, asellus
,, lœvis
,, cancellatus
,, cajetanus
Patella vulgata
,, pellucida
Acmœa virginea
Dentalium Tarentinum
,, Dentalis
,, new spec.
Pileopsis Ungaricus
Calyptrœa Sinensis
Fissurella reticulata
,, gibba
Emarginula rosea
Haliotis tuberculata
Trochus zizyphinus
,, umbilicatus
,, tumidus
,, striatus
,, exiguus
,, Montagui
,, magus
,, Laugieri
,, cinerarius
,, lineatus
,, —
,, —
,, —
Phasianella pullus
Solarium luteum
,, straminium
Adeorbis subcarinatus
Turbo rugosus
Janthina communis?
Littorina neritoides
,, littorea
,, rudis
,, littoralis
,, tenebrosa
,, tigrina (Dorb.)
,, saxatilis
Lacuna puteolus
Rissoa ulvæ
,, cingillus
,, costata
,, costulata

Rissoa labiosa
,, striata
,, vitrea
,, parva
,, calathus
,, crenulata
,, lactea
,, purpurea
Jeffreysia opalina?
Skenia nitidissima?
Turritella tricostalis
,, communis
Cœcum trachea
Aporrhais pes pelicani
Cerithium reticulatum
,, adversum
Scalaria communis
,, Turtonis
,, clathraluta
Aclis ascaris
Eulima polita
,, subulata
Chemnitzia elegantissima
,, scalaris
,, rufa
Chemnitzia fenestrata
,, indistincta
,, —
Odostomia conoidea
,, —
Natica nitida
,, monilifera
Velutina lævigata
Lamellaria perspicua
Murex erinaceus
,, corallinus
,, Edwardsii
,, —
Lachesis minima
Purpura lapillus
,, hœmastoma
Nassa reticulata
,, incrassata
,, pygmœa
,, trifasciata
Buccinum corniculum
Cassis saburon?
Fusus contrarius
,, —
Trophon muricatus
Triton nodiferum
Triton corrugatum
Mangelia attenuata
,, costata
,, linearis
,, brachystoma
,, purpurea
,, septangularis
,, striolata
Pleurotoma elegans
Cypræa Europea
Marginella lœvis
Ringuicula auriculata

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
,, mamillata
,, truncata
Tornatella fasciata
Akera bullata
Bulla hydatis
Scaphander lignarius
Philine aperta
,, scabra
Aplysia Patersoni

Being of—

Acephala lamellibranchiata	88	212 Species.
Acephala palliobranchiata	1	
Gasteropoda prosobranchiata	13	
Gasteropoda opisthobranchiata	10	

The following species appear to be common to the North of Spain and to North America :—

ACEPHALA LAMELLIBRANCHIATA.

Teredo navalis?
Saxicava arctica
,, rugosa
Solen ensis
Astarte sulcata
Lucina flexuosa
Mytilus edulis

GASTEROPODA PROSOBRANCHIATA.

Chiton cinereus
Janthina communis?
Littorina rudis
Lacuna puteolus
Velutina lœvigata
Lamellaria perspicua
Purpura lapillus
Trophon muricatus

Shewing the proportion of North Spanish species recorded from North America to be—

Acephala lamellibranchiata	7	in	88,	or 8 per cent.
Acephala palliobranchiata	—	,,	1,	,, — ,,
Gasteropoda prosobranchiata	8	,,	113,	,, 7 ,,
Gasteropoda opisthobranchiata	—	,,	10,	,, — ,,

Total 15 in 212, or 7 per cent.

Referring to the list already given of species common to Scandinavia and the North of Spain, and deducting from it those species which are included upon the strength of their having been found further South, the proportion of North Spanish species common to Scandinavia will be found to be—

Acephala lamellibranchiata	49	in 88,	or 56	per cent.
Acephala palliobranchiata	1	,, 1,	,, 100	,,
Gasteropoda prosobranchiata ...	48	,, 113,	,, 42	,,
Gasteropoda opisthobranchiata...	8	,, 10,	,, 80	,,

Total 106 in 212, or 50 per cent.

On comparing the North of Spain list with species recorded from the South of Spain and Mediterranean, there appears to be absent from the latter district—

ACEPHALA LAMELLIBRANCHIATA.

Kellia? genus doubtful
Donax anatinus ?
Mactra solida
Tapes pullastra
Pecten tigrinus ?

GASTEROPODA PROSOBRANCHIATA.

Chiton rufus
,, cinereus
Chiton asellus
,, cancellatus
Dentalium, new spec.
Trochus tumidus
,, cinerarius?
Littorina rudis
,, littoreus
,, saxatilis
,, tenebrosa
Rissoa ulvæ
,, striata
,, vitrea
Jeffreysia opalina ?
Lacuna puteolus
Natica monilifera
Velutina lævigata
Murex —
Purpura lapillus
Fusus contrarius
,, —

GASTEROPODA OPISTHOBRANCHIATA.

Aplysia Patersoni

Leaving of Gallician and Asturian species known to inhabit South of Cape St. Vincent—

Acephala lamellibranchiata.....	83	in 88,	or 94	per cent.
Acephala palliobranchiata	—	,, 1,	,, —	,,
Gasteropoda prosobranchiata.....	91	,, 113,	,, 80	,,
Gasteropoda opisthobranchiata ..	9	,, 10,	,, 90	,,

Total 183 in 212, or 86 per cent.

The following species of the North of Spain have been obtained in the Canary Islands :—

ACEPHALA LAMELLIBRANCHIATA.

Gastrochœa cuneiformis ?
Saxicava arctica
Venerupis irus
Corbula nucleus
Neœra cuspidata
Pandora rostrata ?
,, obtusa
Thracia phaseolina
Psammobia vespertina
Tellina distorta
,, serrata
Donax anatinus
Mactra subtruncata
Lutraria rugosa
Venus verrucosa
Circe minima
Astarte triangularis
Cardium edule
,, echinatum
,, rusticum
,, papillosum
,, norvegicum
Lucina leucoma
,, flexuosa
,, spinifera
,, pecten
Kellia suborbicularis

Modiola tulipa
Crenella marmorata
Arca tetragona
„ lactea
Pectunculus glycimeris
Auricula Tarentina
Lima hians
Pecten opercularis
„ pusio

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Dentaluim dentalis
Calyptræa Sinensis
Fissurella reticulata
„ gibba
Haliotis tuberculata
Trochus exiguns
„ striatus
Trochus magus
„ zizyphinus
Solarium luteum
Turbo rugosus
Phasianella pullus
Janthina communis
Littorina neritoides
Rissoa costata
„ parva
.. purpurea
„ crenulata
Turritella tricostalis
Cœcum trachea
Cerithium reticulatum
„ adversum
Scalaria clathratula
Eulima polita?
Chemnitzia elegantissima
„ rufa
Chemnitzia indistincta?
Odostomia conoidea
Murex corallinus
„ Edwardsii
Purpura hæmastoma
Nassa reticulata
„ incrassata
Mangelia purpurea
„ striolata
.. linearis
„ nebula
Pleurotoma elegans

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
„ mamillata
„ truncata
Bulla hydatis
Philine aperta

Being in proportion to the whole number of north of Spain species—

Acephala lamellibranchiata.....	36 in	88, or 41	per cent.
Acephala palliobranchiata	—	1, „ —	..
Gasteropoda prosobranchiata	39 „	113, „ 35	..
Gasteropoda opisthobranchiata	5 „	10, „ 50	..

Total, 80 in 212, or 38 per cent.

MEDITERRANEAN SEA AND SOUTHERN COASTS OF SPAIN AND PORTUGAL.

One marine fauna is distributed generally throughout the Mediterranean, but many forms found in the East do not extend to its western extremity; and others, generally inhabitants of the Atlantic, seem to have penetrated but a short distance to the eastward of the Straits of Gibraltar. As examples of the former, may be mentioned the genera *Clavigella*, *Thecidia*, *Umbrella*, *Pedicularia*, *Dolium*, *Casidaria*, &c., with numerous species, such as *Venerupis decussatus*, *Trochus Sprattii*, &c.; and of the latter the genera *Ervilia*, *Siphonaria*, *Acmæa*, *Mesalia*, and *Cymba*, with the species *Lutraria eliptica*, *Venus striatula*, *Astarte sulcata*, *Astarte triangularis*, *Natica intricata*, and various others.

Some forms and species appear to have the whole of their range within the limits of the Mediterranean, as *Pedicularia*, *Thecidia*, *Casidaria echinophora*, &c.; while there exist a few, such as *Psammobia costata*, *Ervilia castanea*, *Lithodomus caudigerus*, found on the coasts of the Atlantic, both north and south of the Straits of Gibraltar, but not,

so far as is known, either within or to the eastward of these Straits.

Although various districts of the Mediterranean have been explored, and their fauna described by naturalists eminently qualified for the task, we do not yet possess a general catalogue of the mollusca of that sea. I trust that this desideratum will not remain long unsupplied; in the mean time it may suffice for the object of comparison, to give a list of species collected by myself in the district extending from Faro, at Cape St. Mary's in Algarve, to Carthagena near Cape de Gatt in Murcia, which includes the southwesternmost corner of the European continent.

Species obtained on the south coasts of Spain and Portugal—

ACEPHALA LAMELLIBRANCHIATA.

Gastrochæna cuneiformis
Saxicava arctica
Pholas dactylus
,, candida
,, parva
Petricola lithophaga
Venerupis irus
Panopœa Aldobrandi
Corbula nucleus
Neœra cuspidata
,, costellata
Pandora rostrata
,, obtusa
Thracia phaseolina
,, convexa
,, pubescens
Solen marginatus
,, ensis
,, siliqua
,, pellucidus
Ceratisolen legumen
Solecurtus coarctatus
,, strigillatus
,, candidus
Solemya Mediterranean
Psammobia vespertina
,, costata
,, costulata
,, tellinella
,, Ferroensis
Diodonta fragilis
Tellina tenuis
,, pulchella
,, distorta
,, donacina
Tellina crassa
,, serrata
,, balaustina
,, incarnata
,, planata
,, costæ
,, punicea
,, fabula
,, — (new)
Syndosmya alba
,, prismatica
,, intermedia
Scrobicularia piperata
,, Cotardi
Donax trunculus
,, venustus
,, politus
Mesodesma donacilla
Ervilia castanea
,, — (new)
Mactra subtruncata
,, helvacea
,, stultorum
Lutraria elliptica
,, oblonga
,, rugosa
Tapes decussata
,, aurea
,, virginea
,, Beudantii
,, geographica
,, florida
Cytheria Chione
,, Venetiana
,, — (new)
Venus gallina
,, striatula
Venus verrucosa
,, fasciata
,, casina
,, ovata
,, — (new)
Artemis exoleta
,, lincta
Lucinopsis undata
Circe minima
Astarte sulcata
,, incrassata
,, triangularis
Cardium erinaceum
,, rusticum
,, aculeatum
,, Norvegicum
,, papillosum
,, punctulatum?
,, minimum
,, echinatum
,, edule
,, pygmœum
,, fasciatum
Cardita sulcata
,, squamosa
,, calyculata
,, trapezium
Lucina leucoma
,, borealis?
,, spinifera
,, digitalis
,, divaricata
,, pecten
,, bullata
Ungulina —
Diplodonta rotundata
Kellia suborbicularis

Kellia corbuloides
,, complanata
,, ? — (genus uncertain)
Lepton squamosum
Chama gryphoides
Mytilus galloprovincialis
,, Afer
,, minimus
Modiola barbata
,, tulipa
,, vestita
,, petagnœ
Lithodomus dactylus, (Cadiz)
,, caudigerus, (Faro)
Crenella marmorata
,, costulata
,, rhombea
Nucula nucleus
,, nitida
,, radiata
,, decussata
Leda emarginata
,, striata
Arca Noœ
,, tetragona
,, barbata
,, lactea
,, antiquata
,, raridentata
,, obliqua?
,, —
Pectunculus glycimeris
,, pilosus or purpurascens
Avicula Tarentina
Pinna squamosa
Lima subauriculata
,, Loscombii
,, hians
,, scabrella
Pecten maximus
,, opercularis
,, varius
,, pusio
,, polymorphus
Pecten gibbus
,, striatus
,, similis
,, pes felis
,, hyalinus
Spondylus gædaropus
Ostrea edulis
Anomia ephippium
,, patelliformis

PTEROPODA.

Hyalæa tricornis
Cleodora cuspidata

GASTEROPODA PROSORANCHIATA.

Chiton fascicularis
,, Siculus
,, Rissoi
,, lœvis
Patelia vulgata?
,, athletica?
,, —
Siphonaria concinna
Acmœa virginea
Dentalium rubescens
,, Tarentinum
,, dentalis
Pileopsis Ungaricus
Calyptrœa Sinensis
Crepidula unguiformis
Fissurella reticulata
,, rosea
,, gibba
Emarginula elongata
,, reticulata
Haliotis tuberculata
Trochus zizyphinus
,, striatus
,, magus
,, granulatus
,, Laugieri
,, conulus
,, tesselatus
,, Richardii
,, divaricatus
,, articulatus
,, Viellotti
Trochus fragaroides
,, Montagui
,, dubius?
,, fanulum
,, millegranus
,, canalyculatus
,, —
Solarium straminium
,, pseudoscalaris
Turbo rugosus
Phasianella pullus
,, intermedia?
Janthina pallida
Littorina neritoides
,, littoralis
,, tigrina (Dor.)
Rissoa monodonta
,, labiosa
,, parva
,, purpurea
,, striatula
,, Bruguieri
,, cimex
,, calathus
,, Montagui
,, lactea
,, crenulata
,, acuta
Turritella communis
,, tricostalis
,, ? (Aclis?) new
Mesalia sulcata
,, striata
Aporrhais pes pelicani
Cerithium vulgatum
,, fuscatum
,, reticulatum
,, adversum
Scalaria communis
,, pseudoscalaris
,, Turtonis
,, crenata
,, clathratulus
Vermetus gigas
,, glomeratus
,, corneus
,, cancellatus
,, ——

Aclis ——
Eulima polita
„ nitida?
„ subulata
„ distorta
„ unifasciata?
Chemnitzia elegantissima
„ varicosa
„ scalaris
„ rufa
„ —
„ —
„ —
Odostomia conoidea
„ acuta
„ spiralis
„ — (new)
Eulimella Scillæ
„ acicula
Truncatella Montagui
Natica nitida
„ Guilleminii
„ intricata
„ bicallosa?
„ sordida
„ sagra?
„ macilenta
Neritina viridis
Sigaretus haliotideus
Lamellaria perspicua
Cancellaria cancellata
„ (new)
Murex corallinus
„ truncatus
„ Brandaris
„ erinaceus
„ Edwardsii
„ cristatus
Murex multilamellatus
Lachesis minima
Purpura hæmastoma
Nassa reticulata
„ incrassata
„ pygmœa
„ mutabilis
„ neritoides
„ variabilis
„ trifasciata
„ grana
„ —
Buccinum minus
„ corniculum
„ scriptum
Pollia maculosa
Cassis sulcosa
„ saburon?
Fusus pulchellus
„ rostratus
„ corneus
„ —
Trophon muricatus
Triton nodiferum
„ olearium?
„ cutaceum
„ corrugatum
Ranella gigantea
Columbella rustica
Pleurotoma elegans
Mangelia brachystoma
„ nebula
„ reticulata
„ purpurea
„ Lefroyii
„ septangularis
„ attenuata
„ gracilis
Mangelia crispata
„ Vauquelina
„ lævigata
„ striolata
„ —
Ringuicula auriculata
Mitra ebeneus
„ columbellaria
„ —
Cymba olla
Marginella lævis
„ clandestina
„ miliacea
„ catena?
Ovula spelta
„ acuminata
Cypræa pyrum
„ moneta?
„ Europea
„ pulex
Conus Mediterraneus

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
„ truncata
„ umbillicata
„ strigella
„ mamellata
„ — (new)
Tornatella fasciata
Bulla striata
„ Cranchii
Scaphander lignarius
Philine aperta

CEPHALOPODA.

Spirula Peronii

Being of—

Acephala lamellibranchiata	162	353 species.
Pteropoda.....	2	
Gasteropoda prosobranchiata	177	
Gasteropoda opisthobranchiata.....	11	
Cephalopoda	1	

Of these the following only are supposed to extend to North America—

Acephala lamellibranchiata.	Astarte sulcata	Gasteropoda prosobranchiata.
Saxicava arctica	Lucina borealis	Lamellaria perspicua
Solen ensis		Trophon muricatus
		Marginella miliacea

The identity of the two last with European species I conceive to be doubtful. Lucina flexuosa, mytilus edulis, and anomia aculeata, are common to the Mediterranean Sea and North America, though not included in the foregoing list.

The proportion of the south west European species common to the Scandinavian seas is—

Acephala lamellibranchiata	55 in 162	or 34	per cent.
Pteropoda	— 2	—	
Gasteropoda prosobranchiata	34 „ 177	„ 19	„
Gasteropoda opisthobranchiata	8 „ 11	„ 73	„

Total, 97 in 352, or 28 per cent.

Of the same common to the British seas—

Acephala lamellibranchiata	100 in 162	or 61	per cent.
Pteropoda	— 2	—	
Gasteropoda prosobranchiata	69 „ 177	„ 39	„
Gasteropoda opisthobranchiata	9 „ 11	„ 82	„

Total, 178 in 352, or 51 per cent.

There have been obtained of them as far north as Vigo—

Acephala lamellibranchiata	111 in 162	or 69	per cent.
Pteropoda	— 2	—	„
Gasteropoda prosobranchiata	92 „ 177	„ 52	„
Gasteropoda opisthobranchiata	9 „ 11	„ 82	„

Together, 212 in 352, or 60 per cent. of the species of the south of Portugal and Spain common to the north of Spain.

It is worthy of notice, that while of 212 species collected in the north of Spain only 29 do not extend to the south of Cape St. Vincent; out of 352 species obtained on the coasts of Portugal and Spain to the south of that Cape, 140 species have not been met with so far north as Vigo.

Following is the proportion of south peninsular species which have been procured in the Canary Islands—

Acephala lamellibranchiata	62 in 162 or	38 per cent.
Pteropoda	2 „ 2 „	100 „
Gasteropoda prosobranchiata	75 „ 177 „	42 „
Gasteropoda opisthobranchiata	7 „ 11 „	64 „

Total, 146 in 352, or 41 per cent.

Mogador.

In the mouth of April, 1852, I spent two days at Mogador, in the south west of Morocco, when I obtained 110 species of mollusca; the following is the list, not previously published—

Acephala lamellibranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Gastrochœna cuneiformis	2 fathoms	—	sand	1 valve
Saxicava artica	35 fath.	—	sand	1 valve
Pholas candida	shore	—	—	valves
Corbula nucleus	35 to 40 f.	35 to 40 f.	fine sand and mud	frequent
Pandora rostrata	3 fathoms	3 fathoms	sand	moderate
„ obtusa	35 to 40 f.	35 to 40 f.	fine sand	1 specimen
Thracia (young)	3 fathoms	3 fathoms	sand	1 young
Ceratisolen legumen	shore	—	—	frequent
Psammobia costata	shore	—	—	1 valve
Tellina costæ	shore	—	—	1 valve
„ fabula?	3 fathoms	3 fathoms	sand	1 specimen
„ tenuis?	3 fathoms	3 fathoms	sand	1 specimen
„ ——	35 fath.	—	sand	2 valves, species frequent at Madeira
Syndosmya alba	3 to 36 fth	—	sand	valves, frequent
Donax anatinus?	shore	—	sand	frequent
Mactra stultorum	shore	—	—	valves
„ subtruncata	3 fathoms	3 fathoms	sand	frequent
Lutraria rugosa	shore	—	—	1 valve
Tapes pullastra?	3 fathoms	—	sand	1 specimen
Venus striatula	36 fath.	36 fath.	sand	1 specimen
„ (undescribed)	36 fath.	36 fath.	sand	1 specimen
Cardium edule	shore	—	—	rare
„ fasciatum	3 fathoms	3 fathoms	sand	1 specimen
„ papillosum	3 fathoms	3 fathoms	sand	moderate
Cardita calyculata	shore	shore	—	frequent
Lucina flexuosa	36 fath.	36 fath.	sand & m.	1 specimen
„ spinifera	36 fath.	36 fath.	sand & m.	frequent
„ borealis?	3 fathoms	3 fathoms	sand	1 specimen
„ leucoma	3 fathoms	3 fathoms	sand	rare
Montacuta ferruginea	3 fathoms	3 fathoms	sand	rare

	Depth.	Living at	Ground.	Frequency, &c.
Montacuta ——	3 fathoms	3 fathoms	sand	rare
Kellia corbuloides	shore	—	—	rare
,, complanata	shore	—	—	1 valve
,, ? ——	shore	—	—	valves, species obtained at Faro
Mytilus Galloprovincialis	shore	shore	—	frequent
,, Afer	shore	shore	—	frequent
Modiola barbata	36 fath.	—	sand & m.	1 valve
Crenella costulata	shore	shore	—	2 specimens
Nucula nucleus	3 fathoms	3 fathoms	sand	frequent
Arca lactea	shore	shore	rocks	frequent
Pinna ——	36 fath.	—	sand & m.	frequent
Pecten pusio	shore	—	—	valves frequent
Spondylus goedaropus	shore	—	—	valves
Ostrea edulis?	shore	—	—	valves

GASTEROPDOA PROSOBRANCHIATA.

	Depth.	Living at	Ground.	Frequency, &c.
Chiton fascicularis	shore	shore	rocks	frequent, large
,, cinereus	shore	shore	rocks	frequent
,, —— (new)	shore	shore	rocks	very frequent, white
Patella ——	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
,, pellucida	3 fathoms	3 fathoms	weed	frequent, abundant on laminaria
Siphonaria concinna	shore	shore	rocks	rare
Acmœa virginea	3 fathoms	—	sand	frequent
Dentalium Tarentinum	3 fathoms	—	sand	rare
,, dentalis	36 fath.	36 fath.	sand & m.	1 live & 2 dead specimens
Fissurella rosea	shore	shore	rocks	frequent
,, reticulata	shore	shore	rocks	frequent
Haliotis tuberculata	shore	shore	rocks	frequent
Trochus zizyphinus	shore	shore	rocks	frequent
,, cinerarius	shore	shore	rocks	frequent
,, lineatus	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
Adeorbis subcarinatus	3 fathoms	—	sand	4 specimens
Phasianella pullus	3 fathoms	3 fathoms	weed	frequent
Turbo rugosus	3 fathoms	3 fathoms	sand	1 young specimen
,, ——	shore	sh. 1 spec.	rocks	frequent
Fossar Adansoni	shore	—	—	1 specimen
Littorina neritea	shore	shore	rocks	frequent

	Depth.	Living at	Ground.	Frequency, &c.
Littorina	shore	—	—	1 specimen
Rissoa crenulata	3 fathoms	—	sand	moderate
,, parva?	shore	—	—	moderate
,, lactea	shore	—	—	2 specimens
Cerithium adversum	3 fathoms	—	—	frequent
,, reticulatum	3 fathoms	—	—	frequent
Turritella communis	36 fath.	—	sand & m.	frequent
Mesalia sulcata var.	3 fathoms	3 fathoms	sand	frequent, 2 or 3 varieties
Scalaria pseudoscalaris	shore	—	—	moderate
,, crenata	shore	—	—	rare
,, clathratula	36 fath.	—	sand & m.	1 specimen
Chemnitzia elegantissima	3 & 40 f.	—	sand & m.	several specimens
Odostoma conoidea	36 fath.	—	sand & m.	several specimens
Natica macilenta	3 fathoms	3 fathoms	sand	rare
Murex coralinus	3 fathoms	3 fathoms	sand	frequent
,, torosus	shore	—	—	frequent
Lachesis minima	shore	shore	rocks	frequent
Purpura hœmastoma	shore	shore	rocks	frequent
,, ? (new)	3 to 5 fth.	—	sand	several
Nassa reticulata	3 to 5 fth.	3 to 5 fth.	sand	frequent; small size
,, variabilis	shr. to 5 f.	3 to 5 fth.	sand	frequent
,, trifasciata	35 to 40 f.	35 to 40 f.	sand & m.	frequent
,, mutabilis?	shore	shore	rocks	freq.; small, species at Cadiz & Can. Islands
,, scalariformis	2 to 5 fth.	2 to 5 fth.	sand	several
Buccinum corniculum	shore	shore	rocks	frequent
,, minus	shore	shore	rocks	frequent
Mangelia purpurea	3 fathoms	—	sand	rare
,, lævigata	3 fathoms	—	sand	several
,, brachystoma	36 fths.	—	sand & m.	frequent
Columbella Broderippii	3 fathoms	3 fathoms	sand	frequent
Mitra ebeneus	shore	shore	rocks	moderate
,, zebrina	shore	—	—	rare
Marginella glabella	shore	—	—	rare
,, (new)	2 to 5 fth.	2 to 5 fth.	sand	very frequent
,, miliacea?	shore	shore	rocks	rare
Ringuicula auriculata	35 to 40 f.	—	sand & m.	frequent

Gasteropoda Opisthobranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Cylichna cylindracea	3 and 36 f.	—	sand & m.	rare
,, truncata	3 fathoms	—	sand	rare
Tornatella fasciata	shore	—	—	1 specimen
Philine aperta	3 fathoms	3 fathoms	sand	rare; small
Aplysia hybrida?	3 fathoms	3 fathoms	sand	several specimens

It will be seen that the fauna of Mogador, as illustrated by the preceding list, is generally identical with that of the Mediterranean and southern peninsula, and that while a few (*Marginella, Mitra zebina*, a *Chiton, Columbella Broderippii*, and a *Turbo* unnamed) are probably natives of tropical Africa, and all but the last obtained in the Canaries; others, such as *Tellina fabula, Lucina borealis, Patella pellucida, Trochus crassus*, &c., are typical of a more northern fauna than that of the Mediterranean.

About one-half the species range as far north as Britain, but of 22 of them dredged in 35 to 50 fathoms, (the remainder being littoral or from shallow water,) all but 6 are well-known inhabitants of the British seas.

Canary Islands.

Messrs. Webb and Berthelot, in their valuable work on the Natural History of the Canary Islands, enumerate 124 species of Marine Testaceous Mollusca. During a month that I passed in these Islands, in 1852, I procured the following :—

Acephala Lamellibranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Teredo	shore	—	—	frequent; in the stock of an anchor
Gastrochnœa cuneiformis	2 to 60 f.	2 to 60 f.	coral	frequent
Saxicava arctica	12 to 40 f.	12 to 40 f.	sand	not frequent
Venerupis irus	shore	shore	—	frequent
Corbula nucleus	16 fath.	16 fath.	sand & m.	not frequent; Lancerote
Neœra cuspidata	20 to 35 f.	25 fath.	mud	rare; Teneriffe
,, costellata	20 to 35 f.	—	mud	valves; Teneriffe
Pandora obtusa	12 to 40 f.	16 fath.	sand	frequent
,, rostrata?	12 fath.	—	sand	1 valve
Thracia phaseolina	12 to 60 f.	—	sand	not frequent; Orotava
,, pubescens	40 to 60 f.	—	sand	valves?
Solecurtus candidus	12 to 40 f.	—	sand	valves; frequent
,, coarctatus	20 to 40 f.	—	mud	1 specimen, and valves
Solemya mediterranea	12 fath.	12 fath.	m. & weed	rare; Lancerote
Psammobia vespertina	12 fath.	—	sand & m.	frequent; Lancerote
,, costulata	30 to 60 f.	30 to 60 f.	sand & m.	very frequent
,, Ferroensis	30 fath.	—	sand	rare; Teneriffe
Tellina incarnata	sh. to 16 f.	—	sand	frequent; Lancerote
,, distorta	12 to 60 f.	12 to 60 f.	sand	very frequent
,, balaustina	25 fths.	—	mud	1 valve; Teneriffe
,, serrata	12 to 40 f.	20 fath.	mud	rare; dead valves frequent; Teneriffe

	Depth.	Living at	Ground.	Frequency, &c.
Donax anatinus?	shore	—	—	valves
Ervilia castanea	12 to 16 f.	12 to 16 f.	sand & m.	frequent; young; Lancerote
,, —— (new)	12 to 16 f.	12 to 16 f.	sand & m.	frequent; Lancerote; species obtained at Gibraltar & Madeira
Mactra subtruncata?	12 to 16 f.	—	—	rare; Lancerote
,, stultorum	35 fath.	—	sand	1 valve; Teneriffe
Cytheria chione	12 to 40 f.	12 to 40 f.	sand	frequent
,, Venetiana	20 to 35 f.	—	mud	rare; Teneriffe
,, —— (new?)	20 to 35 f.	25 fath.	mud	rare; white; obtained in Mediteranean and Madeira
,, —— (new)	50 fath.	50 fath.	sand	1 specimen; Orotava; large, thin, with brown spots
Venus verucosa	12 to 60 f.	12 to 16 f.	sand & m.	very frequent; small, with much colour
,, casina	20 to 40 f.	20 to 40 f.	sand	frequent; finely laminated and coloured
,, ——?	50 fath.	—	sand	rare; valves
Circe minima	12 to 50 f.	12 to 50 f.	sand	frequent
Astarte incrassata	16 to 70 f.	16 to 70 f.	sand	frequent
,, triangularis	40 to 70 f.	50 fath.	sand	rare; Orotava; small
Cardita calyculata	sh. to 60 f.	shore	rocks	frequent
Cardium echinatum	16 to 20 f.	16 to 20 f.	sand	not frequent
,, rusticum	16 to 40 f.	16 to 40 f.	sand	frequent; small
,, papillosum	12 to 60 f.	12 to 20 f.	s. & weed	frequent; bright colour
,, Norvegicum	30 fath.	—	mud	rare; valves; Teneriffe
,, fasciatum	16 fath.	—	mud	rare
Lucina Adansoni	12 to 16 f.	12 to 16 f.	m. & weed	frequent; Lancerote
,, leucoma	12 to 16 f.	—	m. & weed	frequent; Lancerote
,, flexuosa	20 to 60 f.	—	sand & m.	rare
,, divaricata	16 to 30 f.	—	sand & m.	rare
,, pecten	sh. to 60 f.	—	sand	rare
,, spinifera	20 to 35 f.	20 to 35 f.	sand & m.	frequent
,, transversa	12 to 35 f.	12 fath.	sand & m.	several; Lancerote
,, — (minute)	12 to 16 f.	12 to 16 f.	sand & m.	frequent; yellowish
Diplodonta rotundata	40 to 60 f.	—	sand	rare; Orotava
,, apicalis	12 to 60 f.	—	sand	rare
Kellia rubra	shore	shore	—	very rare; Lancerote
,, suborbicularis	12 to 20 f.	12 to 20 f.	mud	moderate
Modiola tulipa	50 fath.	—	sand	rare
,, ——	12 to 50 f.	20 fath.	coral & stone	frequent; allied to M. Petagnœ of Scacchi
Crenella rhombea	12 to 60 f.	12 to 16 f.	gravel & weed	frequent
,, marmorata	50 fath.	—	—	1 valve; Orotava

	Depth.	Living at	Ground.	Frequency, &c.
Chama gryphoides	12 to 60f.	20 fath.	m. & stones	frequent
Arca lactea	12 fath.	—	—	moderate; valves
,, tetragona	20 to 60 f.	—	sand	frequent; valves; Teneriffe
,, antiquata	20 to 35 f.	—	mud	rare; valves; Teneriffe
,, imbricata	40 fath.	—	sand	1 valve; Orotava
Pectunculus glycimeris	30 to 50 f.	30 to 50 f.	sand & m.	frequent
,, Siculus	30 fath.	30 fath.	sand	frequent
Avicula Tarentina	20 to 50 f.	—	mud	rare; valves
Pinna rudis	sh. to 35 f.	shore	—	rare
Lima squamosa	sh. to 70 f.	—	sand & m.	frequent; valves
,, hians	12 fath.	—	sand & m.	rare; valves
,, subauriculata	12 to 60 f.	—	sand & m.	rare
Pecten maximus	12 to 60 f.	—	sand&coral	frequent; fragments, and young valves
,, opercularis?	40 to 60 f.	50 fath.	sand	rare; 1 living; small
,, corallinoides	12 to 50 f.	16 fath.	coral & weed	moderate
,, pusio	12 to 50 f.	—	sand	frequent; valves
,, pes felis	50 fath.	—	coral	rare; valves
,, gibbus	20 to 40 f.	—	sand & m.	rare
Spondylus gœdaropus	sh. to 70 f.	—	—	frequent; valves, and fragments
Ostrea ——	30 to 40 f.	30 fath.	sand	rare

GASTEROPODA PALLIOBRANCHIATA.

	Depth.	Living at	Ground.	Frequency, &c.
Argyope decollata	60 fath.	—	sand&coral	rare; Orotava
,, truncata	60 fath.	—	sand&coral	rare; Orotava
,, Neapolitana	60 fath.	—	sand&coral	rare; Orotava
,, ——	60 fath.	60 fath.	sand&coral	rare; 1 specimen; Orotava

PTEROPODA.

	Depth.	Living at	Ground.	Frequency, &c.
Hyalœa trispinosa	20 to 50 f.	—	mud	rare
,, tridentata	20 to 50 f.	—	mud	rare
,, vaginella	—	surface	—	rare
Atalanta Peronii	shore	—	—	frequent
Creiseis spinigera	—	surface	—	frequent
,, ——	—	surface	—	frequent
,, ——	—	surface	—	frequent
Cuvieria ——	20 fath.	—	mud	rare
Spirialis ——	50 fath.	—	sand	rare

GASTEROPODA PROSOBRANCHIATA.

	Depth.	Living at	Ground.	Frequency, &c.
Chiton fascicularis	sh. to 20 f.	sh. to 20 f.	rock & w.	frequent; a small variety upon red weed in 12 to 20 fathoms
,, Canariensis	shore	shore	rock	rare; Orotava
,, —— (new)	shore	shore	rock	frequent; same species as at Mogador
Patella crenata	shore	shore	rock	rare
,, guttata	shore	shore	rock	rare
,, Lowei	shore	shore	rock	rare
,, Candei	shore	shore	rock	rare
,, Gussonii	12 to 50 f.	12 fath.	weed	rare
Dentalium dentalis	50 fath.	—	sand	one small specimen; Orotava
,, rubescens	12 to 20 f.	12 to 20 f.	sand & m.	frequent
,, —— (new?)	12 to 50 f.	12 fath.	sand	frequent
Umbrella Mediterranea?	40 to 60 f.	—	sand	rare; small
Gadinia Garnoti	shore	—	—	rare
Calyptræa Sinensis	16 to 30	30 fath.	sand	rare
Fissurella reticulata	shore	shore	rock	rare
,, gibba	sh. to 60 f.	—	sand	rare
Emarginula elongata	20 to 60 f.	—	sand	rare
,, reticulata	40 to 60 f.	—	sand	rare, small
Haliotis tuberculatus	shore	shore	rocks	frequent
Trochus zizyphinus	40 to 60 f.	—	sand	rare; fragments & young
,, conulus	20 fath.	20 fath.	sand	one specimen; Bocaina channel
,, crenulatus	12 fath.	12 fath.	sand	frequent
,, magus	16 to 20 f.	16 to 20 f.	sand	freq.; Bocaina channel
,, striatus	12 fath.	12 fath.	sand	frequent, Lancerote
,, granulatus	40 to 60 f.	40 to 60 f.	sand	rare; variety; Orotava
,, Sauleyii	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
,, ——	shore	shore	rocks	frequent
,, ——	60 fath.	—	—	frequent; minute; Orotava
,, ——	60 fath.	—	—	frequent; minute; Orotava
,, ——	60 fath.	—	—	frequent; minute; Orotava
Monodonta Berthelotti	shore	shore	rocks	moderate
Solarium luteum	shore	—	—	1 specimen; Lancerote
,, ——	25 to 60 f.	—	sand & w.	several; Orotava; one Santa Cruz
Turbo rugosus	12 to 60 f	12 to 16 f.	sand & m.	frequent; small
Fossar Adansoni	shore	—	—	rare; Lancerote

	Depth.	Living at	Ground.	Frequency, &c.
Phasianella pullus	12 to 60 f.	—	sand	frequent
Janthina fragilis	shore	surface	—	abundant
,, exigua	shore	surface	—	not frequent; small
Littorina striata	high wtr.	high wtr.	rocks	abundant
,, affinis	high wtr.	high wtr.	rocks	frequent; probably a variety of preceding
,, neritoides	high wtr.	high wtr.	rocks	frequent
Auricula Ferminii?	shore	shore	rocks	frequent
Pedipes ——	shore	shore	rocks	rare; Orotava
Rissoa Canariensis	40 to 60 f.	—	sand	frequent; Orotava
,, costata	12 to 60 f.	—	sand	frequent; Orotava and Lancerote
,, parva	12 fath.	—	sand & m.	frequent; Lancerote
,, purpurea	12 fath.	—	sand & m.	frequent; Lancerote
,, elata?	40 to 60 f.	—	sand	frequent; Orotava
,, textilis	40 to 60 f.	—	sand	frequent; Orotava
,, crenulata	12 to 60 f.	—	sand	frequent
,, ——	40 to 60 f.	—	sand	frequent; Orotava
,, ——	40 to 60 f.	—	sand	frequent; Orotava
,, ——	40 to 60 f.	—	sand	frequent; Orotava
,, ——	40 to 60 f.	—	sand	frequent; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
Jeffreysia? ——	12 fath.	—	sand	rare; Lancerote
Skenea ——	40 to 60 f.	—	sand	rare; Orotava
Turritella triplicata	12 to 50 f.	12 to 30 f.	sand & m.	frequent; small
Cœcum trachea	50 fath.	—	sand	frequent; Orotava
,, glabrum	12 to 50 f.	—	sand	frequent
Cerithium vulgatum	sh. to 16 f.	12 to 16 f.	sand & m.	frequent
,, fuscatum	shore	shore	rocks	frequent
,, adversum	sh. to 16 f.	shore	rocks	frequent dead, 2 living, at low water; Lancerote
,, reticulatum	sh. to 16 f.	—	sand	frequent
,, angustinum	60 fath.	—	sand	rare, Orotava
Scalaria pseudoscalaris	shore	shore	rocks	frequent
,, Webbii	25 fath.	—	mud	rare, Santa Cruz
,, cochlea	12 fath.	12 fath.	mud	rare; 1 spec.; Lancerote
,, crenata	shore	—	rocks	several
,, clathratula?	16 fath.	—	sand	rare
,, clathrus	shore	—	—	rare, (1 specimen)
,, —— (new)	12 to 16 f.	12 to 16 f.	sand & weed	moderate frequency; spire somewhat resembling Chemnitzia
,, ——	40 to 60 f.	-	sand	rare; concentrically grooved or striated; small

	Depth.	Living at	Ground.	Frequency, &c.
Scalaria ——	40 to 60 f.	—	sand	rare; resembling preceding but not striated
,, ——	25 fath.	—	mud	rare, Santa Cruz
Aclis? ——(new)?	40 to 60 f.	—	sand	rare, Orotava
,, ——(new)?	12 fath.	—	sand	rare, Lancerote
Eulima distorta	12 to 60 f.	—	sand	rare
,, nitida	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
Stilifer ——	40 to 60 f.	—	sand	rare; Orotava
,, ? ——	40 to 60 f.	—	sand	rare; Orotava
Chemnitzia rufa	16 fath.	16 fath.	sand	rare; Lancerote
,, elegantissima	sh. to 60 f.	—	sand	moderate
,, indistincta	40 to 60 f.	—	sand	rare
,, —— (new)	40 to 60 f.	—	sand	frequent; small; pupa-shaped, banded, species at Pantellaria
Odostomia conoidalis	12 to 60 f.	—	sand	moderate
,, ——	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
Eulimella Scillæ	20 fath.	—	mud	1 specimen; Santa Cruz
Truncatella Montagui	shore	—	—	rare; Lancerote
Scissurella Berthelotti	50 fath.	—	—	very rare; Orotava
Natica porcellana	sh. to 60 f.	12 to 16 f.	sand & m.	frequent
,, millepunctata	16 to 40 f.	20 to 40 f.	sand & m.	rare
,, sagra?	20 fath.	—	sand & m.	1 specimen; Santa Cruz
,, bicallosa	12 to 16 f.	12 to 16 f.	sand & m.	moderate
,, ——	sh. to 60 f.	—	sand & m.	rare
Neritina viridis	12 to 16 f.	12 to 16 f.	sand & m.	frequent; Lancerote
Lamellaria perspicua	12 fath.	—	sand & m.	rare; Lancerote
,, —— (new)	40 to 60 f.	—	sand	rare
Cancellaria —— (new)	12 to 20 f.	—	sand	rare; small, white; species at Gibraltar
,, —— (new)	12 to 20 f.	—	sand	rare; ditto, brown
Cerithiopsis tuberculare	40 to 60 f.	—	sand	rare; Orotava
Ranella lævigata	20 to 60 f.	50 fath.	sand	rare; Orotava; &c.
Murex corallinus	12 to 30 f.	—	sand	rare
,, Edwardsii	shore	shore	rocks	frequent; Lancerote
,, Brandaris	shore	—	—	rare
,, saxatilis	shore	—	—	rare
,, ——	shore	—	—	rare; white
Purpura hæmastoma	shore	shore	rocks	frequent
,, viveratoides	shore	—	—	moderate
Buccinum minus	12 to 16 f.	—	—	frequent
,, (new) or Purpura	20 fath.	—	—	1 specimen; Santa Cruz; species at Mogador

	Depth.	Living at	Ground.	Frequency, &c.
Nassa reticulata	sh. & 16 f.	16 fath.	sand	moderate; Lancerote
,, incrassata	shore	—	—	frequent; Lancerote
,, mutabilis?	shore	shore	—	frequent; small
,, variabilis	shore	—	—	frequent
,, Canariensis?	40 fath.	—	sand	rare; Orotava
,, prismatica	20 to 40 f.	30 fath.	mud	frequent
,, scalariformis?	20 fath.	—	mud	rare
Dolium perdix	sh. to 60 f.	—	—	rare; fragments
Terebra	shore	—	—	rare; Grand Canary
Fusus Maroccanus	sh. to 20 f.	—	s. & coral	rare; Lancerote
,, rostratus	20 fths.	—	mud	rare; Santa Cruz
,, pulchellus	40 fths.	40 fath.	sand	rare; Orotava
Triton nodiferum	shore	—	—	rare; Lancerote
,, cutaceum	shore	—	—	rare; Lancerote
,, pileare	shore	—	—	rare; Grand Canary
,, ——	20 to 40 f.	20 to 40 f.	sand	rare
Mangelia purpurea	sh. to 40 f.	—	—	rare
,, Lefroyii	12 fths.	—	sand & m.	rare; Lancerote
,, striolata	12 to 60 f.	—	sand & m.	moderate
,, Vauquelina	sh. & 25 f.	—	sand & m.	moderate; Lancerote
,, linearis	12 fths.	—	sand & m.	rare; Lancerote
,, ginniniana	12 to 25 f.	—	sand & m.	frequent; Lancerote
,, gracilis	20 fths.	—	mud	rare; Santa Cruz
,, teres	25 to 60 f.	—	sand & m.	rare; Santa Cruz
,, ——	40 to 60 f.	—	sand	frequent; Orotava
,, ——	40 to 60 f.	—	sand	rare; Orotava
Pleurotoma elegans	12 to 60 f.	—	sand & m.	rare
,, balteata	50 fths.	50 fath.	sand	1 specimen; Orotava
Mitra columbellaria	12 to 60 f.	—	sand & m.	rare
,, fusca	shore	shore	rocks	frequent
,, zebrina	shore	shore	rocks	frequent
,, ——	12 to 30 f.	—	sand & m.	frequent
Columbella rustica	shore	shore	rocks	frequent
,, cribella	shore	—	rocks	frequent
,, ——	12 to 30 f.	—	sand	moderate
Conus Mediterraneus	shore	shore	rocks	frequent; Lancerote, and Grand Canary; not in Teneriffe; whiter in colour than Mediterranean specimens
,, papilionaceus	12 & 20 f.	12 fath.	sand & m.	rare
Cyprœa spurca	shore	shore	rocks	frequent; dead
,, lurida	shore	—	—	rare
,, pyrum	shore	—	—	rare
,, moneta	shore	—	—	rare
,, pulex	12 fths.	—	sand & m.	rare

	Depth.	Living at	Ground.	Frequency, &c.
Cyprœa candidula?	12 to 50 f.	—	sand	moderate; white; very small
Ovula spelta?	40 to 60 f.	—	sand	rare; Orotava
Marginella glabella	sh. to 15 f.	12 fath.	sand & m.	frequent
,, guancha	20 to 60 f.	—	sand & m.	frequent
,, —	12 to 16 f.	12 to 16 f.	sand & m.	rare
,, —	shore	shore	rocks	rare
,, —	shore	shore	rocks	rare

GASTEROPODA OPISTHOBRANCHIATA.

	Depth.	Living at	Ground.	Frequency, &c.
Aplysia occellata	shore	shore	rocks	frequent; Orotava
,, hybrida?	sh. to 12 f.	sh. to 16 f.	rocks & s.	moderate
Cylichna cylindracea	12 to 50 f.	—	sand & m.	frequent
,, truncata	12 to 50 f.	—	sand & m.	frequent
,, mamillata	40 to 60 f.	—	sand	rare; Orotava
,, (new)	12 to 60 f.	—	sand & m.	frequent; white; striated and banded with opaque white
,, (new)	12 & 16 f.	—	sand & m.	rare; species at Carthagena, Spain
Philine aperta	12 to 20 f.	12 to 20 f.	sand & m.	rare; Lancerote
Amphispira hyalina	60 fath.	—	sand	rare; Orotava
Bulla ampulla	sh. to 60 f.	—	sand	frequent
,, hydatis	shore	—	—	frequent
,, Cranchii	12 fath.	—	mud	1 specimen; Santa Cruz
,, ——	shore	—	—	frequent; Grand Canary

CEPHALOPODA.

	Depth.	Living at	Ground.	Frequency, &c.
Spirula Peronii	shore	—	—	frequent
Octopus	sh. & 20 f.	sh. & 20 f.	rocks & s.	moderate

Of the 273 species, at least 170 were new to the fauna of the district. Among those recorded in the work before-mentioned are 30, generally of a more southern type, which I did not succeed in procuring. The whole number is composed of—

Acephala lamellibranchiata	84	302 species, (Two or three doubtful).
Acephala palliobranchiata	4	
Pteropoda	16	
Gasteropoda prosobranchiata	184	
Gasteropoda opisthobranchiata	12	
Cephalopoda	2	

Only two or three of them are found in North America, viz. : Saxicava arctica, Lucina flexuosa, Lamellaria perspicua ?

The Canary species, common to Scandinavia are—

Acephala lamellibranchiata	25	in	84,	or 30 per cent.
Acephala palliobranchiata.....	—	,,	4,	,, — ,,
Pteropoda	—	,,	16,	,, — ,,
Gasteropoda prosobranchiata.....	19	,,	184,	,, 10 ,,
Gasteropoda opisthobranchiata...	6	,,	12,	,, 50 ,,

Total, 50 in 302, or 17 per cent.

The proportion of Canary species found in the British seas is—

Acephala lamellibranchiata.....	49	in	84,	or 58 per cent.
Acephala palliobranchiata	—	,,	4,	,, — ,,
Pteropoda	1	,,	16,	,, 6 ,,
Gasteropoda prosobranchiata.....	41	,,	184,	,, 22 ,,
Gasteropoda opisthobranchiata....	6	,,	12,	,, 50 ,,
Cephalopoda.....	—	,,	2,	,, — ,,

Total, 97 in 302, or 32 per cent.

The Canaries have, in common with the north of Spain,—

Acephala lamellibranchiata.....	36	in	84,	or 43 per cent.
Acephala palliobranchiata	—	,,	4,	,, — ,,
Pteropoda	—	,,	16,	,, — ,,
Gasteropoda prosobranchiata	39	,,	184,	,, 21 ,,
Gasteropoda opisthobranchiata	5	,,	12,	,, 42 ,,
Cephalopoda	—	,,	2,	,, — ,,

Total 80 in 302, or 60 per cent.

The following species inhabit the Canaries and the Mediterranean, or south coast of Spain and Portugal.

ACEPAHLA LAMELLIBRANCHIATA.
Teredo navalis?
Gastrochœna cuneiformis
Saxicava arctica
Venerupis irus
Corbula nucleus
Necera costella
,, cuspidata
Pandora obtusa
,, rostrata
Thracia phaseolina
,, pubescens
Solecurtus candidus
,, coarctatus
Solemya Mediterranea
Psammobia vespertina
Psammobia costulata
,, Ferroensis
Tellina incarnata
,, distorta
,, balaustina
,, serrata
Ervilia castanea
,, ——
Mactra subtruncata
,, stultorum
Lutraria rugosa
Cytheria chione
,, Venetiana
,, ——
Venus verrucosa
,, casina
Circe minima
Astarte incrassata
,, triangularis
Cardita calyculata
,, corbis?
Cardium echinatum
,, rusticum
,, papillosum
,, Norvegicum
,, fasciatum
Lucina leucoma
,, flexuosa
,, divaricata
,, pecten
,, spinifera
Diplodonta rotundata
,, apicalis
Kellia suborbicularis

Kellia rubra
Modiola tulipa
Crenella rhombea
,, marmorata
Chama gryphoides
Arca lactea
,, tetragona
,, imbricata
,, antiquata
,, Noœ
Pectunculus glycimeris
,, Siculus
Avicula Tarentina
Pinna rudis
Lima squamosa
,, hians
,, subauriculata
Pecten Jacobœus
,, opercularis
,, pusio
,, pes felis
,, gibbus
Spondylus goedaropus

ACEPHALA PALLIOBRANCHIATA.

Argyope truncata
,, decollata
,, Neapolitana
,, ——

PTEROPODA.

Hyalœa trispinosa
,, tridentata
,, vaginella
Creiseis spinigera
,, ——
,, ——
Atalanta Peronii

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Patella Gussonii
Dentalium dentalis
,, rubescens
,, ——
Gadinia Garnoti?
Calyptrœa Sinensis
Fissurella reticulata
,, gibba
Emarginula reticulata
,, elongata
Haliotis tuberculata
Trochus exiguus
,, striatus
,, magus
,, conulus
,, granulatus
,, zizyphinus
,, —
,, —
Solarium luteum?
Turbo rugosus
Fossar Adansoni
Phasianella pullus
Littorina neritoides
Rissoa costata
,, parva
,, purpurea
,, elata?
,, textilis?
,, crenulata
Skenia —— ?
Turritella triplicata
Coecum trachea
,, glabrum
Cerithium vulgatum
,, fuscatum
,, adversum
,, reticulatum
,, angustinum
Scalaria pseudoscalaris
,, crenata
,, clathratula
Eulima distorta
,, nitida
Chemnitzia rufa
,, elegantissima
,, indistincta
,, —— (undescribed)
Odostomia conoidea
,, ——
,, ——
Eulimella Scillœ
Truncatella Montagui
Natica millepunctata
,, sagra?
,, bicallosa?
Neritina viridis
Lamellaria perspicua
Cancellaria —— (undescribed)
Cerithiopsis tuberculare
Murex brandaris
,, corallinus
,, Edwardsil
,, trunculus
Purpura hœmastoma
Buccinum minus
Nassa reticulata
,, incrassata
,, mutabilis?
,, variabilis
,, prismatica
,, scalariformis
Dolium galea
Fusus rostratus
,, pulchellus
Triton nodiferum
,, cutaceum
Mangelia purpurea
,, Lefroyii
,, striolata
,, Vauquelina
,, linearis
,, nebula
,, gracilis
,, teres
Pleurotoma elegans
,, balteata
Mitra ebenea
,, columbellaria
Columbella rustica
Conus Mediterraneus
Cyprœa spurca
,, lurida
,, pyrum
,, moneta
,, pulex
Ovula spelta

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
,, truncata
,, mamillata
,, ——
Bulla hydatis
,, Cranchii
Aplysia hybrida
Umbrella Mediterranea

CEPHALOPODA.

Spirula Peronii
Argonauta Argo

The proportion which these bear to the Canary species is—

Acephala lamellibranchiata.....	72 in 84,	or 76	per cent.	
Acephala palliobranchiata	4 „	4, „ 100	„	
Pteropoda.....	7 „	16, „ 44	„	
Gasteropoda prosobranchiata.....	97 „	184, „ 53	„	
Gasteropoda opisthobranchiata ..	8 „	12, „ 67	„	
Cephalopoda.....	2 „	2, „ 100	„	

Total 190 in 302, or 63 per cent.

The Canary species which have not been found in the south of Europe or Mediterranean are generally of more southern type, and such of them as are not already known inhabitants of Western Tropical Africa, will probably prove to be so. Of these, the species of *Pedipes* is found in Fayal, *Littorina Striata* and *Mitra fusca* in Madeira and the Azores, *Modiola* (unnamed), *Pecten corallinoides*, *Patella crenata*, *P. guttata*, *P. Lowei*, *P. Candei*, *Monodonta Bertheloti*, *a Solarium*, *Scalaria cochlea*, *Eulima?* (new), *Natica porcellana*, and another *Natica*, a new *Cancellaria Mitra zebrina*, and another *Mitra*, *Cypræa candidula ? Marginella guancha*, and an undescribed *Cylichna* extend to Madeira. *Neritina viridis*, and *Columbella cribraria* are common to the Canary, Madeira, and West India Islands.

The marine fauna of the Canary Islands is characterized by the presence of numerous species of *Scalaria*, and by the absence of all representatives of the genera *Nucula*, *Leda*, and *Anomia*.

Madeira.

During a few days spent in the Madeira Islands I obtained 156 species of marine testaceous Mollusca.

Acephala lamellibranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Gastrochoena cuneiformis	20 fath.	sand & m.	sand & m.	1 valve
Saxicava arctica	20 fath.	—	sand & m.	1 valve
Venerupis irus	20 fath.	—	sand & m.	1 valve
Neœra cuspidata	18 to 24 f.	20 fath.	sand & m.	rare
„ costellata	18 to 24 f.	24 fath.	sand & m.	rare
Poromya granulata	20 fath.	—	sand & m.	1 valve
Lyonsia Norvegica	20 fath.	20 fath.	sand & m.	
Thracia phaseolina	15 to 24 f.	—	sand & m.	valves
Solecurtus candidus	20 fath.	—	sand & m.	valves
„ coarctatus	20 fath.	—	sand & m.	valves
Tellina incarnata	20 fath.	—	sand & m.	valves

	Depth.	Living at	Ground.	Frequency, &c.
Tellina distorta	15 to 24 f.	20 fath.	sand	rare
,, balaustina	20 fath.	—	sand & m.	rare; valves
,, donacina	20 fath.	—	sand & m.	rare; valves
,, ——	18 to 24 f.	—	sand & m.	frequent; species obtained off Mogador
Psammobia costulata	15 to 20 f.	15 to 20 f.	sand	frequent
Ervilia castanea	15 to 20 f.	15 to 20 f.	sand	moderate
,, —— (new)	15 to 20 f.	15 to 20 f.	sand	moderate; species obtained at Lancerote and Gibraltar
Cytheria chione	15 to 24 f.	15 to 24 f.	sand & m.	frequent
,, —— (new)	18 to 24 f.	18 to 24 f.	sand & m.	moderate
Venus verucosa	20 fath.	20 fath.	sand & m.	rare
,, casina	15 to 20 f.	15 to 20 f.	s. & coral	abundant
Circe minima	15 to 20 f.	15 to 20 f.	sand & m.	frequent
Cardium echinatum	18 to 24 f.	18 to 24 f.	sand & m.	rare; young
,, rusticum	18 to 24 f.	18 to 24 f.	sand & m.	moderate
,, papillosum	18 to 24 f.	18 to 24 f.	sand & m.	moderate
,, Norvegicum	18 to 24 f.	—	sand & m.	rare
,, ——	18 to 24 f.	—	sand & m.	valves; small; oval
Cardita calyculata	sh. & 15 f	shore	sand	frequent; on shore
Lucina spinifera	18 to 24 f.	20 fath.	sand & m.	rare
,, divaricata	15 & 20 f.	—	sand	rare
,, pecten	15 fath.	—	sand	rare
,, —— (new) ?	20 fath.	20 fath.	sand & m.	frequent; minute
Diplodonta rotundata	20 fath.	—	sand & m.	rare
,, apicalis	20 fath.	20 fath.	sand & m.	rare
Kellia rubra	20 fath.	—	sand & m.	1 valve
Modiola ——	20 fath.	20 fath.	in nullipore	rare
Arca tetragona	20 fath.	20 fath.	s. & coral	rare; but frequent valves
Pectunculus glycimeris	15 to 20 f	15 to 20 f.	sand	frequent
,, Siculus	15 to 20 f.	15 to 20 f.	sand	frequent
Avicula Tarentina	24 fath.	—	mud	rare
Pinna squamosa	shore	shore	gravel	1 specimen
Lima squamosa	sh. & 15 to 20 f.	shore	s. & coral	one living; and valves
,, hians	20 to 24 f.	—	sand & m.	valves
Pecten maximus	18 to 24 f.	20 fath.	sand & m.	rare; young
,, pusio	15 to 24 f.	—	sand & m.	valves
,, similis	18 to 24 f.	18 to 24 f.	sand & m.	frequent
,, corallinoides	sh. to 24 f.	—	s. & coral	frequent; valves
,, polymorphus	15 to 24 f.	—	sand & m.	valves
,, pes felis	18 to 24 f.	—	sand & m.	valves
,, opercularis	18 fath.	18 fath.	sand	one; minute
,, gibbus	20 fath.	—	sand & m.	two (from stomach of fish,) and valves
Ostrea ——	20 fath.	—	sand & m.	rare
Anomia ephippium	shore	—	—	rare

Gasteropoda Palliobranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Argyope decollata	20 fath.	—	sand & m.	local

Pteropoda.

	Depth.	Living at	Ground.	Frequency, &c.
Hyalœa tridentata	20 fath.	—	sand & m.	one specimen
,, trispinosa	20 fath.	—	sand & m.	rare
,, vaginella	20 fath.	—	sand & m.	rare
,, ——	20 fath.	—	sand & m.	rare
Cuvieria	20 fath.	—	sand & m.	one

Gasteropoda Prosobranchiata.

	Depth.	Living at	Ground.	Frequency, &c.
Chiton fascicularis	shore	shore	rocks	frequent
,, —— (valves)	15 to 20 f.	—	sand	frequent
Patella Gussonii	15 to 20 f.	—	sand	frequent
,, guttata?	shore	shore	rocks	abundant on the Dezertas
,, crenata	shore	shore	rocks	
,, Lowei	shore	shore	rocks	
,, Candei	shore	shore	rocks	
,, tenuis (Dillwyn)	shore	shore	rocks	
Dentalium dentalis	18 to 24 f.	18 to 24 f.	mud	frequent
Calyptræa Sinensis	18 to 24 f.	18 to 24 f.	m. & sand	rare
Fissurella reticulata	18 to 24 f.	—	sand & m.	rare
Emarginula —— (new?)	sh. to 20 f.	sh. & 20 f.	sand & m.	frequent
,, —— (new?)	sh. & 20 f.	sh. & 20 f.	sand & m.	frequent
,, reticulata	18 to 24 f.	—	sand & m.	rare
Haliotis tuberculata	shore	shore	rocks	frequent
Trochus zizyphinus	15 to 20 f.	—	s. & coral	rare
,, conulus	20 fath.	—	mud	one specimen
,, crenulatus	15 to 20 f.	—	sand & m.	frequent
,, magus	15 to 20 f.	15 to 20 f.	s. & coral	frequent; small
,, striatus	15 to 20 f.	—	s. & coral	frequent
,, granulatus	20 fath.	—	mud	rare
Monodonta Bertheloti	shore	shore	rocks	rare
Solarium ——	20 fath.	—	mud	rare; small
Bifrontia Zanclæa	18 to 24 f.	18 to 24 f.	sand & m.	frequent
Janthina communis	shore	—	—	frequent
,, pallida	shore	—	—	frequent
,, exigua	shore	—	—	rare
Turbo rugosus	15 to 20 f.	—	s. & coral	frequent; small

	Depth.	Living at	Ground.	Frequency, &c.
Phasianella pullus	15 to 20 f.	—	s. & coral	frequent
Littorina striata	shore	shore	rocks	frequent
,, neritoides	shore	shore	rocks	frequent
Rissoa purpurea	18 to 24 f.	—	sand & m.	rare
,, crenulata	15 to 24 f.	—	sand & m.	moderate
,, ——	18 to 24 f.	18 to 24 f.	sand & m.	frequent
,, ——	18 to 24 f.	18 to 24 f.	sand & m.	moderate
,, ——	18 to 24 f.	—	sand & m.	moderate
Cerithium reticulatum	15 to 24 f.	—	sand & m.	frequent
,, adversum	15 to 20 f.	—	s. & coral	frequent
,, angustinum	15 to 20 f.	—	s. & coral	rare
Turritella?(Aclis?)--new	20 fath.	—	mud	rare
,, ,, new	20 fath.	—	mud	rare
Mesalia striata?	20 fath.	—	mud	rare; (one)
Scalaria Turtonis	18 to 24 f.	18 to 24 f.	sand & m.	moderate
,, cochlea	18 fath.	18 fath.	s. & coral	rare; (one) Porto Santo
,, ——	20 fath.	—	sand & m.	rare; small
Eulima subulata	18 to 24 f.	18 to 24 f.	sand & m.	moderate
,, nitida	18 to 24 f.	—	sand & m.	rare
,, distorta	18 to 24 f.	—	sand & m.	rare
,, —— ?	18 fath.	—	sand & m.	rare
Chemnitzia rufa	18 to 24 f.	18 to 24 f.	sand & m.	frequent
,, elegantissima	18 to 24 f.	—	sand & m.	moderate
,, ——	18 to 24 f.	—	sand & m.	rare; species obtained in Canaries, and at Pantellaria
Eulimella Scillœ	18 to 24 f.	—	sand & m.	rare
Natica Porcellana	18 to 24 f.	—	sand & m.	moderate
,, —— (new?)	11 to 24 f.	—	sand & m.	frequent
Lamellaria perspicua	15 fath.	—	sand	rare; one specimen
Neritina viridis	15 to 20 f.	—	sand & m.	frequent
Cancellaria —— (new)	15 to 20 f.	—	sand	rare; small white
,, —— (new)	15 to 20 f.	—	sand	rare; small brown
Murex corallinus	15 to 20 f.	—	sand	rare
,, Edwardsii	15 fath.	—	sand	one specimen
,, cristatus	shore	—	—	rare
,, erinaceus	shore	shore	rocks	frequent
,, ? ——	shore	shore	rocks	rare; species obtained in Canaries
Cassis sulcosa	20 fath.	—	sand & m.	rare
Buccinum minus	15 to 20 f.	—	sand	rare
Nassa prismatica	18 to 24 f.	—	sand & m.	rare
,, incrassata	sh. to 20 f.	shore	sand & m.	frequent
,, variabilis	sh. to 20 f.	—	—	frequent
Triton pilcare	shore	—	—	one specimen
Mangelia teres	18 to 24 f.	18 to 24 f.	sand & m.	rare
,, secalina	18 to 24 f.	—	sand & m.	rare

	Depth.	Living at	Ground.	Frequency, &c.
Mangelia Vauquelina	18 to 24 f.	—	sand & m.	moderate
,, nebula	18 to 24 f.	18 to 24 f.	sand & m.	frequent
,, gracilis	18 to 24 f.	—	sand & m.	rare
,, variegata	18 to 24 f.	—	sand & m.	rare
,, linearis	18 to 24 f.	—	sand & m.	rare
,, purpuera	18 to 24 f.	—	sand & m.	rare; one specimen
,, ——	18 to 24 f.	—	sand & m.	rare
Lachesis minima	shore	—	—	moderate
Mitra zebrina	sh. to 20 f.	shore	—	moderate
,, fusca	shore	shore	—	frequent
,, ——	15 to 20 f.	—	sand	frequent; species obtained in Canaries
Cyprœa pulex	18 to 24 f.	—	sand & m.	rare
,, candidula	15 to 24 f.	—	sand & m.	rare; very small
Columbella rustica	sh. to 20 f.	shore	rocks	frequent
,, cribraria	shore	shore	rocks	frequent
,, ——	18 to 24 f.	—	sand & m.	moderate
Marginella guancha	15 to 24 f.	—	sand & m.	frequent
,, miliaria	15 to 20 f.	—	sand & m.	rare
Ringuicula auriculata	15 to 24 f.	20 to 24 f.	sand & m.	frequent

GASTEROPODA OPISTHOBRANCHIATA.

	Depth.	Living at	Ground.	Frequency, &c.
Cylichna cylindracea	18 to 24 f.	—	sand & m.	rare
,, ——	15 to 24 f.	—	sand & m.	frequent; species obtained in Canaries
,, ——	18 to 24 f.	—	sand & m.	rare
Bulla ampulla	20 fath.	—	sand & m.	a fragment
Amphispira hyalina	20 fath.	—	sand & m.	one specimen
Philine aperta	18 to 24 f.	—	sand & m.	rare

ANELIDES.

	Depth.	Living at	Ground.	Frequency, &c.
Diturpa subulata	20 to 24 f.	20 to 24 f.	sand & m.	extremely abundant

Being—

Acephala lamellibranchiata	54	156 Species.
Acephala palliobranchiata	1	
Pteropoda	5	
Gasteropoda prosobranchiata	90	
Gasteropoda opisthobranchiata	6	

Of these all that are recorded as North American species are *Saxicava arctica, Janthina communis, Lamellaria perspicua.*

The following species are common to Madeira, and Scandinavia.

ACEPHALA LAMELLIBRANCHIATA.

Saxicava arctica
Neœra cuspidata
„ costellata
Lyonsia Norvegica
Thracia phaseolina
Solecurtus coarctatus
Venus casina
Cardium Norvegicum
„ echinatum
Lucina spinifera
Arca tetragona
Lima hians
Pecten pusio
„ opercularis
„ maximus
Anomia ephippium

GASTEROPODA PROSOBRANCHIATA.

Trochus zizyphinus
Littorina neritoides
Cerithium reticulatum
„ adversum
Scalaria Turtonis
Eulima subulata
„ nitida
Chemnitzia rufa
Eulimella Scillœ
Lamellaria perspicua
Murex erinaceus
Nassa incrassata
Mangelia teres
„ nebula
„ linearis

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
Amphispira hyalina
Philine aperta

Being of the Madeira species—

Acephala lamellibranchiata	16	in	54,	or 30 per cent.
Acephala palliobranchiata	—	„	1,	„ — „
Pteropoda	—		5,	—
Gasteropoda prosobranchiata	15	„	90,	„ 17 „
Gasteropoda opisthobranchiata	3		6,	„ 50

Total 34 in 156, or 21 per cent. of Madeira species common to Scandinavia.

Madeira possesses, in common with the British seas—

ACEPHALA LAMELLIBRANCHIATA.

Saxicava arctica
Venerupis irus
Neœra cuspidata
„ costellata
Poromya granulata
Lyonsia Norvegica
Thracia phaseolina
Solecurtus candidus
„ coarctatus
Tellina incarnata
„ donacina
„ balaustina
Psammobia costulata
Ervilia castanea
Cytheria chione
Venus verrucosa
„ casina
Circe minima
Cardium echinatum
„ rusticum
Cardium Norvegicum
Lucina spinifera
„ divaricata
Diplodonta rotundata
Kellia rubra
Arca tetragona
Pectunculus glycimeris
Avicula Tarentina
Lima hians
Pecten maximus
„ pusio
„ similis
„ opercularis?

PTEROPODA.

Hyalœa trispinosa

GASTEROPODA PROSOBRANCHIATA.

Chiton fascicularis
Calyptrœa Sinensis
Fissurella reticulata
Emarginula reticulata
Haliotis tuberculata
Trochus zizyphinus
„ magus
„ granulatus
„ striatus
Janthina communis
„ pallida
„ exigua
Phasianella pullus
Rissoa crenulata
„ ——
Cerithium reticulatum
„ adversum
Scalaria Turtonis
Eulima subulata
„ nitida
„ distorta
Chemnitzia rufa
Eulimella Scillœ
Lamelleria perspicua
Murex corallinus

Murex erinaceus
Nassa incrassata
Mangelia teres
„ nebula
„ striolata
Mangelia linearis
„ gracilis
Lachesis minima

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna cylindracea
Amphispira hyalina
Philine aperta

Being—

Acephala lamellibranchiata	33	in 44,	or 61	per cent.
Acephala palliobranchiata	—	„ 1,	„ —	„
Pteropoda	1	„ 5,	„ 20	„
Gasteropoda prosobranchiata ...	33	„ 90,	„ 37	„
Gasteropoda opisthobranchiata ..	3	„ 6,	„ 50	„

Total of Madeira species common to the British seas, 69 in 156, or 44 per cent.

All the species common to Madeira and Britain are likewise to be found in the Mediterranean and Lusitanian district, with addition of the following:—

ACEPHALA LAMELLIBRANCHIATA.

Gastrochœna cuneiformis
Tellina distorta
Ervilia ——
Cytheria ——
Cardium papillosum
Cardita calyculata
Lucina pecten
Diplodonta apicalis
Pectunculus Siculus
Pinna squamosa
Lima squamosa
Pecten polymorphus
„ pes felis
„ gibbus

ACEPHALA PALLIOBRANCHIATA.

Argyope decollata

PTEROPODA.

Hyalœa tridentata
„ vaginella

GASTEROPODA PROSOBRANCHIATA.

Patella Gussonii
Dentalium dentalis
Trochus crenulatus
„ conulus
Turbo rugosus
Rissoa purpurea
Cerithium angustinum
Mesalia striata
Neritina viridis
Cancellaria, undescribed
Murex Edwardsii
„ cristatus
Cassis sulcosa
Buccinum minus
Nassa prismatica
„ variabilis
Mangelia Vauquelina
„ secalina
„ variegata
Cyprœa pulex
Columbella rustica
Marginella miliacea
Ringuicula auriculata

GASTEROPODA OPISTHOBRANCHIATA.

Cylichna ——

Making of Madeira species common to the Mediterranean and Peninsula;

Acephala lamellibranchiata	47	in 54,	or 87	per cent.
Acephala palliobranchiata	1	„ 1,	„ 100	„
Pteropoda	3	„ 5,	„ 60	„
Gasteropoda prosobranchiata	55	„ 90,	„ 61	„
Gasteropoda opisthobranchiata	4	„ 6,	„ 67	„

Total 110 in 156, or 70 per cent.

All the Madeira species were obtained in the Canary Islands, except the following:—

ACEPHALA LAMELLIBRANCHIATA.

Poromya granulata
Lyonsia Norvegica
Tellina donacina
" ——
Lucina ——
Pecten similis
" polymorphus
Anomia ephippium

PTEROPODA.

Hyalœa tridentata
" ——

GASTEROPODA PROSOBRANCHIATA.

Chiton —— ?
Patella tenuis
Emarginula ——
" ——
Bifrontia Zanclœa
Janthina pallida
Rissoa ——
" ——
Turritella? (Aclis?) ——
" " ——
Mesalia striata
Scalaria Turtonis
" ——
Murex erinaceus
Mangelia variegata
" secalina
Amphispira hyalina

Consequently the Madeira species common to the Canaries are—

Acephala lamellibranchiata	46 in 54,	or	85	per cent.
Acephala palliobranchiata.....	1 ,, 1,	,,	100	,,
Pteropoda	3 ,, 5,	,,	60	,,
Gasteropoda prosobranchiata ...	73 ,, 90,	,,	81	,,
Gasteropoda opisthobranchiata...	6 ,, 6,	,,	100	,,

Total, 129 in 156, or 83 per cent.

From the foregoing statements it will appear that several species and forms typical of the Arctic fauna range far to the southward, whil scarcely one of those characteristic of warm latitudes extends into hig northern regions. This would appear in a still greater degree, were th more southern districts as thoroughly explored as have been the coasts of Britain, and the fact that such has not been the case should always be borne in mind when drawing a comparison between the Mollusca of Britain and of foreign countries. It will also be seen that the Acephala, animals gifted with smaller power of locomotion, are more widely distributed than the Gasteropoda.

I now proceed to give the result of my observations regarding the particular points at which certain species and forms reach the extreme limit of their range, northward or southward.

Although, as already remarked, the transition from one fauna to another is effected gradually, yet there are certain geographical points at which a considerable change is observed to take place. The following northern species reach their most southern habitat about the northern and central parts of the British seas, though a few of them re-appear on the Nymph bank, a kind of Arctic outpost off the south of Ireland.

Panopœa Norvegica, North Sea
Tellina proxima, ,,
Astarte elliptica, Clyde and North Sea
" arctica, Zetland
Cardium Suecicum, Irish Sea
Crenella nigra, North Sea, Hebrides
" decussata, ,, ,,
Nucula tenuis, Scotland, Irish Sea
Leda pygmœa, Hebrides
Pecten niveus, ,,

Anomia striata, Hebrides
Hippothyris psittacea, North Sea
Terebratula cranium, Zetland
Chiton Hanleyi, North Sea, Hebrides
,, marmoreus, ,, ,,
Acmœa testudinalis, Irish Sea
Pylidium fulvum, Clyde & S. of Ireland
Propylidium ancyloide, ,,
Puncturella noachina, ,,
Emarginula crassa, Carnarvonshire
Trochus alabastrum, Orkney
,, undulatus, Hebrides
,, helicinus, Hebrides & Irish Sea
Scissurella crispata, Clyde
Aporrhais pes carbonis, Zetland
Cerithium metula, Zetland
Scalaria Greenlandica, North Sea
Chemnitzia rufescens, Clyde
Natica helicoides, Orkney & North Sea
,, pusilla, North Sea
Velutina flexilis, ,,
Trichotropis borealis, South of Scotland
Fusus berniciensis, North Sea
,, Norvegicus, ,,
,, Turtoni, ,,
Trophon clathratus, Irish Sea
,, Barvicensis, North Sea
Mangelia Trevilliana, ,,
,, nana, Orkney
Philine quadrata, North Sea

The following are northern species, extending only to the British Channel, or but little to the south of it.

Xylophaga dorsalis
Mya truncata
,, arenaria
Thracia villosciuscula
Cochlodesma prætenue
Tellina pygmœa
Cyprina Islandica
Astarte compressa
Modiola modiolus
Leda caudata
Megathyris cistellula
Chiton ruber
Lacuna pallidula
,, vincta
,, crassior
Rissoa Zetlandica
Skenia planorbis
Scalaria Trevilliana
Aclis nitidissima
Eulima bilineata
Natica Montagui
Buccinum undatum
,, Humphreysianum
,, Dalei
Fusus Islandicus
,, propinquus
,, antiquus
Mangelia rufa
,, turricula

Crenella discors, I have never met with south of the British seas, and suspect that when reported from the south of Europe, it has been confounded with *Crenella marmorata*, and *Crenella costulata*. Philippi's description evidently applies to the former.

The following find their southern limit in the neighbourhood of Vigo.

Mactra solida
Pecten tigrinus?
Crania anomala
Chiton asellus
,, cancellatus
Emarginula rosea?
Trochus tumidus
Lacuna puteolus
Rissoa vitrea
,, striata
Rissoa cingillus
Natica monilifera
Velutina lœvigata
Purpura lapillus

Littorina littoralis, and *Littorina rudis* are met with in Lisbon.

I refer to lists already given for northern species, which are to be found in the Mediterranean, and the Canaries, most of which probably do not extend far to the south of these districts. *Ceratisolen legumen*, *Venus striatula*, *Patella pellucida*, *Acmœa virginea*, and *Trochus cinerarius?* appear to reach their extreme southward limit about Mogador.

Proceeding from the south northward, we find the following species

of tropical type to be recorded from the Canary Islands, but not to have been met with in a more northern locality :—

Crassatella divaricata
Cardium costulatum
Lucina Adansoni
Cerithium nodulosum
Murex saxatilis
Ranella lævigata
Cassis flammea
,, testiculus
Cymba Neptuni
,, porcina
Cymba proboscidalis
Conus betulinus
,, Prometheus
,, Guinaicus
,, papilionaceus

Marginella glabella and a few other species, probably belonging to tropical Africa, reach as far north as Mogador.

The coast from Cadiz to Cape St. Vincent appears to mark the northern limit of various members of the Mediterranean fauna. The following species, inhabitants of the south coast of Spain and Portugal, and of the Atlantic, are not recorded to have been obtained further north than Cape St. Vincent :—

Solecurtus strigillatus
Solemya Mediterranea
Psammobia costata
Tellina Costæ
,, planata
,, pulchella
,, punicea
Scrobicularia Cotardi
Ervilia —— (undescribed)
Tapes Beudantii
,, florida
,, geographica
Cytheria Venetiana
,, ——
Astarte incrassata
Cardium erinaceum
Cardita, all the species
Ungulina ——
Kellia corbuloides
,, complanata
Chama gryphoides
Mytilus Afer
,, minimus
Modiola vestita
,, petagnæ
Lithodomus dactylus
Leda emarginata
,, striata
Arca antiquata
,, barbata
,, Noæ
,, ——
Pectunculus pilosus, or purpurascens
Lima scabrella
Pecten gibbus
,, pes felis
,, hyalinus
Spondylus goedaropus
Chiton Siculus
,, Rissoi
Siphonaria concinna
Dentalium rubescens
Crepidula —— the genus
Fissurella rosea
Emarginula elongata
Trochus tessellatus
,, Richardii
,, divaricatus
,, articulatus
,, Viellotti
Trochus fragaroides
,, fanulum
,, canalyculatus
Rissoa acuta
,, Bruguieri
Mesalia sulcata
,, striata
Cerithium vulgatum
,, fuscatum
Scalaria pseudoscalaris
,, crenata
Vermetus, all the species
Natica Guillemini
,, macilenta
Natica intricata
,, bicallosa
,, sagra?
Neritina viridis
Sigaretus haliotideus
Cancellaria cancellata
,, ——
Murex trunculus
,, brandaris
,, cristatus
Nassa mutabilis
,, neritoides
,, grana
,, variabilis
Buccinum minus
Pollia maculosa
Cassis sulcosa
Fusus pulchellus
,, rostratus
,, corneus
Ranella gigantea
Columbella rustica
,, corniculata
Mangelia reticulata
,, Vauquelini
,, crispata
Mitra ebenus
,, columbellaria
Marginella clandestina
,, miliacea
Cyprœa pyrum
,, pulex
,, moneta
Conus Mediterraneus

Cymba melo, *Pecten polymorphus*, and *Panopæa Aldebrandi*, are met with as far as the neighbourhood of Lisbon. The fine *Chiton rufus*, the largest European representative of the genus, I have only obtained in Lisbon and Vigo, and am not aware of its being recorded from any other locality.

The following species range from the southward to the coasts of Gallicia and Asturias :—

Tellina serrata
Mesodesma donacilla
Lutraria rugosa
Cardium papillosum
,, ciliare
Lucina digitalis
,, pecten
Kellia ? —— (genus uncertain)
Mytilus Galloprovincialis
Lithodomus caudigerus
Chiton cajetanus

Dentalium dentalis
Fissurella gibba
Trochus Laugieri
,, ——
,, ——
,, ——
Solarium luteum
,, straminium
Littorina tigrina
Rissoa purpurea
Turbo rugosus

Turritella tricostalis
Fusus contrarius
Murex Edwardsii
Purpura hæmastoma
Nassa trifasciata
Cassis saburon ?
Triton nodiferum
,, corrugatum
Pleurotoma elegans
Ringuicula auriculata
Aplysia Patersoni

Of the following species, the most northern known habitat is the south of Great Britain and the coasts of Ireland :—

Pholas parva
Gastrochœna modiolina
Petricola lithophaga
Venerupis irus
Pandora rostrata (Channel Islands
Diodonta fragilis (Carnarvonshire)
Syndosmya tenuis
Donax politus
Ervilia castanea
Mactra helvacea
Lutraria oblonga
Tapes decussata (Carnarvonshire)

Cytheria chione, (Carnarvonshire)
Venus verrucosa ,,
Cardium aculeatum
,, rusticum
Lucina divaricata
Diplodonta rotundata
Galeomma Turtoni
Modiola barbata
Crenella costulata
,, rhomboa
Avicula Tarentina
Calyptræa Sinensis (Milford)
Emarginula rosea

Haliotis tuberculata
Trochus exiguus
,, striatus
Adeorbis subcarinatus
Rissoa lactea
,, striatula
Scalaria clathratula
Chemnitzia scalaris
,, fenestrata
Truncatella Montagui
Murex corallinus
Lachesis minima
Nassa pygmœa
Mangelia gracilis (Clyde)
Ovula patula

It is a fact to be noted, as probably bearing some relation to an ancient distribution of land, that the range of many species of mollusca, in proceeding northward, takes a curve to the west. Several inhabitants of the Mediterranean, such as *Tellina balaustina*, *Circe minima*, *Psammobia costulata*, *Neæra* all the species, *Mangelia Lefroyii*, *Marginella lævis*, &c., touching upon the extremity of Cornwall, and extending round the west of Ireland to the Hebrides, although absent from the Channels and the north sea ; also a few species being found common to

the coast of West Africa, the Canary, Madeira, and Azore Islands, which are not to be obtained in Morocco or the south of the European continent.

In treating of the distribution of mollusca, some notice should be taken of species which are considered to be local, that is, limited to a particular locality or a small area, though the number of these is constantly diminishing as we extend our knowledge.

A newly-discovered species is supposed to be confined to the spot where it was first obtained, until it re-appears in a locality where it was perhaps least expected to be met with; this more particularly happens with some of the deep water species. Many marine shells supposed to be peculiar to the Canary Islands are probably common to a large unexplored tract of the African coast—several of them I have found in Madeira.

The interesting shell *Pleurotoma*, or *Mangelia teres*, was first discovered by Professor E. Forbes on the coast of Lycia; it was next met with, a few years afterwards, in the Channel of the Minch, between the Isle of Skye and the outer Hebrides, and has since been procured pretty generally throughout the British seas. I have obtained it in various parts of the Mediterranean, in the Canary and Madeira Islands, and it is in Loven's enumeration of the shells of Scandinavia. *Crenella rhombea*, one of the rarest species of our seas, having been only found in three or four instances and one locality (off Weymouth), I have met with in the Bay of Gibraltar, Gulf of Tunis, and abundantly off Lancerote, one of the Canary Islands. *Chemnitzia fenestrata*, discovered only six years ago in Dartmouth harbour, has since been obtained from at least two other localities in the South of England; I have procured it in Vigo bay, and it has been found in the result of dredgings from Alexandria in Egypt. It would be easy to cite many similar instances, but what I have mentioned may suffice to prove how unsafe it is to conclude that a species is restricted to a peculiar locality, from the negative fact of its not having been found elsewhere.

For my part, I believe that very few, if any, marine species are confined to very small areas. With reference to the curious mollusk *Bifrontia zanclæa*, which was only known as a very rare fossil obtained at Messina, and no recent example even of the genus recorded to have been seen, but which I found living in considerable abundance at Madeira, it is probable that further researches will discover its existence in other parts of the Atlantic; if not, it will appear to be an exception, and that its present habitat is its last refuge and stronghold, after becoming elsewhere extinct.

As has been already shown, the Islands of the Canaries, Madeiras, and the Azores possess a marine fauna closely allied to that of the old continent, notwithstanding that the prevailing set of the currents is from America. Very few mollusca are common to both sides of the Atlantic, except such as are inhabitants of the Arctic Seas, and extend along the coasts radiating from that centre. Out of about 160 species of shells of the Canary Islands and Mediterranean, of which I sent specimens to the late Professor C. B. Adams, he informed me that he could only identify one *(Columbella cribraria)* with a West Indian species—he had probably overlooked *Neritina viridis*, and perhaps one or two others.

Saxicava arctica appears to be the most cosmopolitan of mollusks; belonging, as its specific name imports, to the Arctic Seas, but able to accommodate itself to a variety of climate, and to all zones of depth, as far as about a hundred fathoms; it has been brought from Spitzbergen, China, Behrings Straits, California, and Australia. This, with perhaps a few others, forms an exception to a general law which appears to limit the range of species in animals of this class.

The distribution of mollusca depending partly on the nature of the sea bottom, and on other conditions difficult of appreciation, is liable to great intervals of space. *Neæra costellata*, inhabiting the Mediterranean, Canaries, Madeira, and Norway, has only been met with at one point (Loch Fyne) between the first and last-mentioned localities, or in about 20 degrees of latitude, and there are other species which present parallel circumstances.

Before concluding, I may be allowed to make a few remarks on the distribution of Land Mollusca, which must, it is evident, be affected by many conditions, different from those which influence the spreading of their marine relatives.

We find among snails and allied genera an astonishing variety of habit. Some affect moist situations and dense forests never penetrated by the rays of the sun, feeding voraciously upon a rank vegetation; while others prefer the most arid tracts, where their food must be scanty and deficient in succulence; some, like *Bulimus decollatus*, pass most of their time buried in the earth; while others, "through winter's cold and summer's parching heat," select exposed situations, and are enabled to retain their vital powers through extreme changes of temperature. Of these our little *Helix umbilicata* and *Helix pisana* may be quoted as examples. Most species seek shelter in the crevices of rocks, and under stones.

Although many terrestrial mollusca are capable of enduring not only extremes of heat and cold, but of existing for an astonishing long period

without food, (properties which, as admirably adapting them for a sea stock upon long voyages, are extensively taken advantage of for that purpose by sailors of the south of Europe; and I may here remark, that as an article of food, the mollusca, with very few exceptions, have been too much neglected by ourselves, and that snails are not only wholesome and nutritious, but even, where prejudices do not interfere, esteemed a delicacy, not to mention that their being in request for culinary purposes would be the means of relieving our gardens from their inroads); notwithstanding, I say, their powers of endurance, they appear to be particular in the selection of locality. The arctic climate and productions are evidently not suited to snailish and sluggish habits and tastes. Even in the colder temperate regions species are few, but increase in numbers as we proceed southward, and they are found particularly to abound in limestone formations.

It is a most remarkable fact connected with the distribution of land shells, that some species are extended over very wide districts, while others are restricted to an area of a few square miles, or even less. Great Britain does not offer for observation a single species which is not likewise an inhabitant of France or Germany, though the neighbouring countries of the continent possess some which are not to be met with in this kingdom; and while thus among the hundreds of islands of Great Britain not one produces a species peculiar to itself, in the groups of the Canaries, Madeiras, and Azores, each island presents some species supposed to be strictly local.

This fact is particularly striking in the Madeiras—where Madeira proper contains but few species, while the small island of Porto Santo supplies an astonishing number, in general specifically distinct from those of Madeira, and the rocky islets called the Desertas, with difficulty accessible by man, have each some peculiar forms and in great abundance.

These facts seem to indicate that Great Britain and Ireland, including the Hebrides, Orkney, Zetland Islands, &c., have at one time formed part of the European continent, but that the more distant islands which I have named—raised by volcanic action from the depths of the Atlantic, have been each the scene of the creation of certain species which have been confined within their narrow limits by the surrounding sea.

Opposed to this idea is the fact already alluded to, that some marine littoral species, I may particularly mention *Littorina striata*, are common to West Africa, the Canaries, Madeira, and the Azores, which (as it is quite impossible for littoral phytophagous animals to have travelled

along the bottom of the ocean,) would lead us to infer that the African continent had at one time extended as far west as the last-named islands, in accordance with an opinion very ably supported by Professor Edward Forbes, in his report on the connexion between the distribution of the existing Fauna and Flora of the British Isles, published in the memoirs of the Geographical Survey of Great Britain. Which of these theories is correct, or whether they can both, with some modification, be reconciled to each other, I must leave for geologists to determine. The only solution which suggests itself to me is, that the shores of the African continent may have extended as far west as the islands in question, and that immediately on the subsidence of the land, when it was barely submerged, and the conditions not yet incompatible with the existence of littoral species of marine Mollusca, the volcanic action took place, elevating the lofty masses of which most of these islands are composed, and that their peculiar land mollusca are of more recent origin.

Such an explanation would, I believe, be consistent with established geological facts, but I merely suggest it for the consideration of those who are more qualified than I can pretend to be to grapple with the vast subject of the history and conditions of our planet, in times anterior to the present distribution of land and water.

THIRD MEETING.

Royal Institution.—November 14, 1853.

JOSEPH DICKINSON, M.D., F.L.S., &c., President, in the Chair.

At an Extraordinary Meeting, held previous to the Ordinary Meeting, the following resolution, passed at the last Extraordinary Meeting, was read and confirmed, viz.—"That the Subscription, payable by Ordinary Members, be increased to £1 1s. 0d. for the present session."

It was moved by Mr. John Forshaw, and seconded by the Rev. Dr. Hume: "That this Society appoint five members of Council, viz.—The Treasurer and Secretary, Mr. J. P. G. Smith, Dr. W. Ihne, and