

The Marine Mollusca of Bombay. By James Cosmo Melvill, M.A., F.L.S., and Alexander Abercrombie.

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(a) *General Remarks.*

The shores of the coast in the vicinity of Bombay are of trap rock, with occasional sandy bays. Running behind the coast-line are immense tracts of low-lying land (at times covered by the sea), or tidal creeks, with slimy mud banks, and mangrove bushes. During the rainy season, the fall in which averages some 80 inches, these creeks and swamps become the mouths of rivers, and for many months the water contained therein must be very brackish. These bring down and pour into the sea a nearly perpetual stream of mud-laden water, and the ocean for some distance around Bombay is, therefore, rarely clear enough to enable one to see down into its depths, even a few feet.

In consequence of the rocky nature of the coast, and, not least, the mud, dredging does not seem to answer, and the collector must, therefore, be satisfied with what can be found between tide marks, and, happily, the expanse of shore at the lowest spring tides laid bare is considerable, and it is on these occasions that the rare cowries, *e.g.*, *C. Lamarckii*, *lentiginosa*, and *ocellata*, are collected in fine living condition.

Both univalves and bivalves, the latter especially, are largely collected by the fisherman class for edible purposes.

The common oyster, for instance, (*O. crenulifera*), clustered in masses on rocks left bare at half-tide, is broken open by means of a small hammer or stone, and the animal

extracted with ease, and as regards the large species (*O. bicolor* and its varieties) the markets are regularly supplied with them. *Purpura carinifera* and *Cantharus spiralis* are regularly gathered off the stones and rocky beach, and enormous quantities of the shells of such species as *Circe divaricata* and *Arca granosa*, are often found in the vicinity of the dwellings of those who live by the sea shore.

At all the low tides women and children are employed, standing almost up to their knees in black slimy mud, digging up with their hands *Chione pinguis*, a very abundant species, allied to the clam of the United States (*M. mercenaria*); and, in addition to the species just mentioned, *Chione radiata*, the handsome *Tapes textrix*, and the curious brachiopod *Lingula hians*, all found in similar places, are often offered for sale, as edible species, in the markets.

For the collector who is satisfied with specimens, often, it is true, in dead condition, but mostly of fresh appearance and lustre, there are few of the Bombay species that cannot be obtained in one or other of the two sandy bays in the island, where a rich harvest may be said to be always awaiting him. Most of the smaller species, e.g., *Pleurotomæ*, *Rissoæ*, *Pyramidellidæ*, and the like, have been obtained by sifting shell-sand obtained in abundance at low water. During the monsoon season, especially, many rare specimens may be obtained which are never, or at all events seldom, seen otherwise.

The collection of Marine Shells now to be catalogued has been formed almost entirely in the Island of Bombay, and comprises about 320 species. A few have been obtained from districts lying immediately north, and from Ratnagiri, 150 miles to the south, and where this is the case, the locality is given in the list appended.

The Mollusca of Bombay are specially interesting in a two-fold way.

Firstly, because of the wide range westward that many

species, known to have their metropolis in the Philippine Islands, or even in Japan and S. E. Australia, show, when found to occur here; and, secondly, because several interesting forms are endemic, or nearly so.

Such are—

*Cyllene fuscata* (Ad.),  
*Ziyyphinus scobinatus* (Ad.),  
*Fairbankia Bombayana* (W. Blanf.),  
*Nerita oryzarum* (Récluz),  
*Conus lentiginosus* (Reeve),

and, so far as is known at present, the new species to be described at the present opportunity.

A very few would appear to be outlying forms, almost, if not quite, identical with British or Mediterranean species, e.g.:

*Calyptrea Sinensis* (L.) var.  
*Arca lactea* (L.) var.  
*Cylichna cylindracea* (Pennant).

Amongst the specimens found on the open sea shore are the following brackish or fresh water shells. These, for the most part, we do not include in our Catalogue, since they should be classed more with the Fluviate Mollusca than with Marine, as

*Neritina crepidularia* (Lam.).  
*Potamides (Tympanotonos) fluviatilis* (P. & M.).  
*Telescopium fuscum* (Schum.).  
*Lymnæa pinguis* (Dohrn).  
*Melania tuberculata* (Moll.).  
*Auricula Judæ* (Linn.).  
*Cassidula nucleus* (Mart.).  
*Ampullaria nux* (Reeve).  
 „ *dolioides* (Reeve).

Of these, the two first mentioned are especially abundant. The following twenty shells, described as more or less endemic in Bombay, we have not, so far, been able to find

amongst our mass of material collected. The majority of these have been catalogued by Mr. G. Nevill, as being in the collection of the Indian Museum, Calcutta, a catalogue of which, unfortunately, only two parts have been issued, the first of which is devoted to the Terrestrial and Fluvial species :

- Mangilia (Cythara), gradata* (Nevill).  
*Ringicula minuta* allied to *propinquans* (Hinds).  
*Marginella inconspicua* (Nevill).  
*Stenothyra minima* (Sowb.).  
*Rissoina ambigua* (Gould).  
 " *plicatula* (Gould).  
 " (*Isseliella*) *abnormis* (G. Nevill).  
*Fenella pupoides* (A. Ad.).  
*Onoba delicata* (Philippi).  
 [This may be the *Onoba* sp. in our collection.]  
*Scaliola arenosa* (A. Ad.).  
*Littorina carinifera* (Menke).  
*Fossar (Couthouya) reticulatus* (A. Ad.).  
 " " *styliferinus* (G. Nevill).  
 " " *subreticulatus* (G. Nevill).  
*Conradia doliaris* (A. Adams).  
*Diala sulcifera* (A. Adams).  
 " *macula* (Récluz).  
*Alaba Blunfordi* (A. Adams).  
*Cerithium mamillatum* (Rieso).  
*Clanculus sulcarius* (Blanford).

On the other hand, we have thirty or more species, apparently undescribed, but which we are holding in reserve until fresh material can be obtained.

The Bombay shores are particularly rich in specimens of the following, which may be considered typical of the locality :—

Gasteropoda.		Pelecypoda.	
<i>Conus mutabilis</i> (Chem.)		<i>Placuna placenta</i> (Linn.)	C.
<i>Pleurotoma crenularis</i> (Lam.)		<i>Arca lactea</i> (Linn.)	A.
" <i>amicta</i> (Smith)		" <i>bistrigata</i> (Dunker)	
<i>Oliva nebulosa</i> (Lam.)	K.C.	" <i>granosa</i> (Lamk.)	
<i>Cantharus spiralis</i> (Gray)	K.	<i>Cardita antiquata</i> (Lamk.)	
<i>Eburna spirata</i> (Lam.)	K.C.	<i>Cardium coronatum</i> (Speng.)	
<i>Nassa ornata</i> (Kiener)	C.	<i>Libitina vellicata</i> (Reeve)	K.
" <i>nodifera</i> (Powis)		<i>Meretrix morphina</i> (Lam.)	C.
<i>Columbella terpsichore</i> (Leathes)	K.C.P.	<i>Circe divaricata</i> (Chem.)	
<i>Murex adustus</i> (Lam.)		<i>Meroe solandri</i> (Gray)	K.
<i>Ranella tuberculata</i> (Brod.)	K.	<i>Venus imbricata</i> (Sowb.)	
<i>Cerithium morus</i> (Lam.)	P.	<i>Chione pinguis</i> (Hinds)	K.C.
<i>Planaxis sulcatus</i> (Bon.)	K.C.	" <i>radiata</i> (Chem.)	C.
<i>Turritella duplicata</i> (Linn.)	K.	<i>Tapes Texitrix</i> "	C.
<i>Littorina malaccana</i> (Phil.)		<i>Donax dysoni</i> (Desh.)	
<i>Natica didyma</i> (Bolten)	A.C.	<i>Solen truncatus</i> (Sowb.)	A.C.
" <i>maculosa</i> (Lam.)		<i>Standella capillacea</i> (Desh.)	
" <i>lineata</i> (Lam.)	C.	<i>Pholas bakeri</i> (Desh.)	K.
<i>Nerita oryzarum</i> (Recluz)		<i>Tellina edentula</i> (Spen.)	A.
<i>Clanculus depictus</i> (A. Ad.)	C.	" <i>ala</i> (Hanley)	C.
<i>Trochus radiatus</i> (Gmelin)	A.	" <i>sinuata</i> (Spen.)	
<i>Rotella vestiararia</i> (Lam.)	C.P.	" <i>truncata</i> (Jonas)	
<i>Patella aster</i> (Reeve)		" <i>capsoides</i> (Lam.)	
		<i>Semele cordiformis</i> (Sowb.)	

(b) *Comparison with other shores on the Western half (Arabian Sea) of the Indian Ocean.*

We have, as far as possible, compared this list with catalogues and descriptions of shells from

- (I.) *Aden* [A.].
- (II.) *Persian Gulf* [P.].
- (III.) *Karachi* [K.].
- (IV.) *Ceylon* [C.].

(I.) *Aden*.—In an interesting article by Mr. Edgar A. Smith (*Proc. Zool. Soc.*, 1891), we find only five species contained in our list, and these are all, as might be expected, of very wide distribution in Eastern Tropical Seas; indeed one, *Arca lactea*, we have already referred to as being a European shell, extending throughout the East to Japan; and of the *Tellinidæ* only one, *T. edentula*, occurs at Aden.

(II.) *Persian Gulf*.—This Fauna has been but very little studied, and we cannot discover more than three papers which have been published exclusively on the subject.

1. Issel, in 1865, gave to the world a list of shells found at Bunder-Abbas, and the Isle of Ormus, by G. Doria and Philippi, but only 17 species are included.\*

2. Dr. E. von Martens in 1874 enumerated the Mollusca of Bushire, as found by M. Hausknecht, amounting to 49 in all, and to which a treatise is devoted.—*Ueber Vorderasiatische Conchylien*, Cassel, 1874.

3. Lastly, M. F. Houssay† explored the shores near Bender-Bouchir, on the East coast of the Persian Gulf, in 1884—1886, and Dr. P. Fischer has catalogued 33 species, of which the following are found also in Bombay.

*Siphonaria Kurracheensis* (Reeve).

*Purpura carinifera* (Lam.).

*Cerithium morus* (Lam.).

(but of the form *C. clypeomorus* (Jousseaume).

*Potamides fluviatilis* (P. & M.).

*Umbonium vestiarium* (L.).

*Lucina fibula* (Reeve).

(III.) *Karachi*.—We can find no very recent catalogue of shells from this port, but in Dr. P. Fischer's *Manual de Conchyliologie*, p. 160, a list is given, as having been formed by the late Col. Baker. Unfortunately, many are only generically, not specifically, alluded to, which renders identification not possible. We are, however, able to point to ten species common to both places, and this number will probably some day be very largely increased.

(IV.) *Ceylon*.—The lists of the Molluscan Fauna of Ceylon that we have compared with our Bombay catalogue are chiefly those of Sir J. Emerson Tennant (Ceylon, Vol. I.,

p. 235 sqq., 1859), which was supplied by Mr. Sylvanus Hanley, F.L.S., and one of the marine *Gasteropoda* only, by the late Mr. A. W. Langdon (*Journ. of Conch.*, Vol. I., p. 71 sqq., 1874). The principal contributors since those dates towards the elucidation of the Fauna have been Messrs. G. and H. Nevill, whose results have been mainly published in the *Journ. Asiatic Soc. Bengal*.

Mr. Hanley's catalogue is much fuller than that of Langdon, which latter does not include the *Pelecypoda*.

Of the 265 *Gasteropoda*, 32 occur in our Bombay list, and of the 130 *Pelecypoda*, 21.

Too much weight should not, however, be given to these proportionate figures, as in the Ceylon catalogue the smaller genera were hardly taken count of, and, naturally, this island being several degrees nearer the Equator than Bombay, a more varied selection of tropical forms is to be expected. For instance, 47 to 50 *Conus* are there reported, 26 *Cypræa*, 9 *Murex*, and 11 *Oliva*.

Considering that Bombay is one of the most cosmopolitan centres in the world, it seems somewhat strange that, as yet, no list of the Marine Mollusca has been issued. Such a list, we believe, was some years ago contemplated by the Rev. S. B. Fairbank, an American clergyman, who collected largely at this port, but we have been unable, unfortunately, to communicate with this gentleman. If we except such well-known names as Mr. W. T. Blanford, F.R.S., his brother, Mr. Henry F. Blanford, F.R.S., the late Dr. F. Stoliczka, and Mr. Geoffrey Nevill, late of the Indian Museum, Calcutta, we cannot find that any collector has turned his attention to these shores. And the same remarks would apply to almost the whole coast of Hindustan proper. Ceylon, the Andaman Islands, and the Mergui Archipelago off the coast of Tenasserim, have been more assiduously investigated, the latter by Dr. John Anderson, superintendent of the Indian Museum, Calcutta,

\* Catalogo dei Molluschi raccolti dalla Missione Italiana in Persia (*Memoire della Reale Accademia delle Scienze di Torino*, série II., vol. 23, 1865).

† Vide *Journ. de Conch.*, 3rd Ser., Tome XXXI. pp. 222 sqq.

and the results published two or three years ago in *Proc. Linn. Soc.*

Our best thanks are due to Mr. Edgar A. Smith, F.Z.S. of the Zoological Department, Mus. Brit., South Kensington, for his ever-ready help and assistance. To Mr. W. T. Blanford and Mr. Henry Blanford\* we are also indebted for information and advice on several points, and also to Mr. R. D. Darbishire, of Manchester, for the loan of an interesting little collection of Bombay Shells found about five years ago by Mr. Herford.

The collections, a catalogue of which is now given, were formed by Mr. Alexander Abercrombie during the years 1888—1892.

(c) *Catalogue of Marine Mollusca of Bombay and immediate neighbourhood*:—

The sequence observed is altogether that of Dr. Paul Fischer's *Manuel de Conchyliologie*.

## GASTEROPODA.

### Fam. SIPHONARIIDÆ.

#### SIPHONARIA (Blvllé).

*S. Kurracheensis* (Roe).

*S. Basseinensis* (Melvill), *sp. nov.*

The latter a little brown shell, pretty common amongst shingle.

### Fam. ACTÆONIDÆ.

#### LEUCOTINA (A. Adams).

*L. eximia* Lischke.

\* It is with unfeigned regret that we have to record the death of Mr. Henry Francis Blanford, F.R.S., which occurred at Folkestone on January 23rd, 1893, while these pages were under process of revision. Mr. Blanford will be remembered not only on account of his eminence as a student of Mollusca, especially those of India, but also as being for many years Meteorological Reporter to the Indian Government.

#### MYONIA (A. Adams).

*M. amaena* (Adams).

An extremely beautiful little shell, transparent, with fine transverse markings.

### Fam. TORNATINIDÆ.

#### TORNATINA (A. Adams).

*T. involuta* (Nevill) allied to *sandwichensis* (Pease).

#### SAO (H. and A. Adams).

*S. Pellyi* (Smith).

### Fam. SCAPHANDRIDÆ.

#### SMARAGDINELLA (H. & A. Ad.).

*S. (Glaucanella) Andersoni* (Nevill), from Ratnagiri.

#### CYLICHNA (Loven).

*C. cylindracea* (Pennant).

### Fam. BULLIDÆ.

#### HAMINEA (Leach).

*H. galba* (Pease).

Fairly common, but so extremely delicate that it is rarely found perfect.

### Fam. APLUSTRIDÆ.

#### BULLINA (Ferrussac).

*B. ziczac* (Muhlfeld).

Of this beautiful little shell only a single specimen was found, and though widely distributed over the tropics, both of E. and W. Hemispheres, it seems common nowhere.

### Fam. RINGICULIDÆ.

#### RINGICULA (Desh.).

*R. propinquans* (Hinds).

Common amongst shingle. Adult shells very massive for their size, and mouth much closed in by callosity of outer lip and columella. Young shell spirally and beautifully incisely lined, which disappears in the older shell. *R. apicata* (Nevill) seems allied.

## Fam. TEREBRIDÆ.

## TEREBRA (Adanson).

*T. cinctella* (Desh.).

Also in Mus. Brit., from Karachi.

## ABRETIA (H. &amp; A. Ad.).

*A. tenera* (Hinds).

This shell seems common in Ceylon.

## Fam. CONIDÆ.

## CONUS (Linn.).

*C. monachus* (L.) var. *achatinus* (Chem.).*C. mutabilis* (Chem.).*C. lentiginosus* (Reeve).*C. piperatus* (Reeve).*C. textile* (Linn.).*C. insculptus* (Kiener), only in young condition.

*Mutabilis* is the common species. *Monachus* and *lentiginosus* are frequently met with, the last-named belonging to the sub-genus *Leptoconus*, and being apparently endemic to Bombay.

## Fam. PLEUROTOMIDÆ.

## CLAVATULA (Lam.).

*C. virginia* (Bech.).

## SURCULA (H. and A. Ad.).

*S. javana* (L.) = *nodifera* (Lam.).*S. fulminata* (Kiener).*S. amicta* (Smith) = *cincta* (Lam.).

## DRILLIA (Gray).

*D. Atkinsonii* (Smith) = *crenularis* (Lamk.).

## CLAVUS (Montfort).

*C. sacra* (Reeve).*C. crassa* (Smith).*C. praeclara* (Melvill) *sp. nov.*

## MANGILIA (Risso).

*M. fulvocincta* (Nevill).*M. lucida* (Smith).*M. fortistriata* (Smith).*M. decipiens* (Smith).*M. Fairbanki* (Nevill).*M. perplexa* (Nevill).*M. foraminata* (Reeve).*M. (Clathurella) tincta* (Reeve) = *lemniscata* (Nevill).*M. Armstrongi* (Nevill)*M. Smithii* (Nevill)*M. bicinctula* (Nevill)

} these with doubt.

*D. atkinsonii* is the common shell, and it seems impossible, satisfactorily, to separate our specimens from *crenularis* (Lam.), which has also been described as from Bombay. Young specimens are brownish with purple tinge, and differ a good deal from the massive appearance of the old shell. We should also not be surprised to find out that *crassa* (Smith) will turn out to be but another form of this species. *S. amicta* seems very common on the coast to the north of Bombay.

*S. fulminata* is a beautiful shell when in perfect condition. Lives in deep water, and occurs in Bombay Harbour in mud.

Of the *Mangilia fortistriata*, *decipiens*, and *foraminata* occur most frequently. *Tincta* is a beautiful little shell, easily known by the brown band at the suture.

The Nevill types being in the Calcutta Museum, it has been difficult to feel certain of the naming of some of our specimens.

## Fam. CANCELLARIIDÆ.

## CANCELLARIA (Lam.).

*C. (Trigonostoma) scalarina* (Lam.).*C. „ costifera* (Sowb.).

This family is not at all common, and it may be that these two species are but forms of one. All were found in one locality, washed up by heavy seas. They are deep water shells.

*C. (Merica, H. and A. Ad.) bifasciata* (Desh.)=*oblonga* (Sowb.).  
Rare.

## Fam. OLIVIDÆ.

OLIVA (Brug).

*O. nebulosa* (Lam.).*O. maura* L., var. *B. sepulchralis* (Lam.).

OLIVELLA (Swainson).

*O. nympha* (Adams).

*Nebulosa* and its variety *intricata* (Marrat) are exceedingly common on sandy shores, but live specimens are not found.

## Fam. HARPIDÆ.

HARPA (Lam.).

*H. conoidalis* (Lam.) appears in Mr. Herford's collection, but we have not found it.

## Fam. MARGINELLIDÆ.

MARGINELLA (Lam.).

*M. mazagonica* (Melvill), *sp. nov.*

Very common in shingle.

## Fam. MITRIDÆ.

MITRA (Lam.).

*M. procissa* (Reeve).

*M. chinensis* (Gray). A single worn specimen.  
Specimens of this family are rare.

## Fam. FASCIOLARIIDÆ.

FASCIOLARIA (Lam.).

*F. trapezium* (Lam.) from Ratnagiri.

## Fam. TURBINELLIDÆ.

TURBINELLA (Lam.).

*T. gravis* (Dillwyn), *napus* (Lam.).*T. (Myristica, Swainson) bucephala* (Lam.).

## Fam. BUCCINIDÆ.

CYLLENE (Gray).

*C. fuscata* (A. Ad.).

TRITONIDEA (Swainson).

*T. rubiginosa* (Reeve).*(Cantharus) spiralis* (Gray).

ENGINA (Gray).

*E. zea* (Melvill), *sp. nov.*

DIPSACCUS (Klein).

*D. (Eburna) spiratus* (Lam.).

NASSARIA (Link).

*N. suturalis* var. = *recurva* (Sowb.).

*C. spiralis* and *D. spiratus* are very common, the former on rocks, the latter in sand. *C. fuscata* may frequently be found at very low tides from its habit of exposing itself when left stranded. It apparently burrows in sand. In its normal form it appears to be a somewhat smooth-backed shell with marbled markings and white transverse lines fletted with brown. Some specimens, however, are longitudinally corrugate, and they do not appear to have the beautiful coloration just mentioned.

## Fam. NASSIDÆ.

NASSA (Lam.).

*N. (Uzita, H. & A. Ad.), nodifera* (Powis).*ornata* (Kiener).

Both very common on sand.

*N. (Arcularia, Link.) Thersites* (Brug.) from Ratnagiri.*lentiginosa* (A. Ad.).

Very rare at Bombay.

*N. (Telasco, H. and A. Ad.) filosa* (Gray).var. *picta* (Dunker).

Common on coast to North of Bombay.

*N. (Telasco) mucronata* (Ad.).

There appear to be one or two more species of *Nassa*, but specimens are worn and unnameable. Mr. F. P. Marrat,

of the Liverpool Museum, has kindly examined most of our specimens.

## BULLIA (Gray).

*B. Mauritiana* (Gray). Rare.

*B. (Leiodomus, Swainson) lineolata* (Wood) = *belangeri* (Kiener).

*B. Malabarica* (Hanley) also occurs, but we were not fortunate enough to secure specimens.

## Fam. COLUMBELLIDÆ.

## COLUMBELLA (Lam.).

*C. scripta* (Lam.).

*C. (anachis, Ad.) Terpsichore* (Leathes).

*C. (Mitrella, Risso) Marquesa* (Gaskoin).

*C. " (Risso) Euterpe* (Melvill), *sp. nov.*

*C. " flavilinea* (Melvill), *sp. nov.*

*C. (Seminella, Pease) atrata* (Gould).

*C. " atomella* (Dudos).

*C. Terpsichore* and both the *Seminella* are common, and the latter are represented in the Mus. Brit. by specimens found by Mr. Craven, at Bombay.

## Fam. MURICIDÆ.

## MUREX (Linn.).

*M. tributus* (Linn.)

*M. (Chicoreus, Montfort), adustus* (Lam.).

*M. " maurus* (Brod.).

## OCINEBRA (Gray).

*O. Bombayana* (Melvill) *sp. nov.*

## UROSALPINX (Stimpson)

*U. contracta* (Reeve).

## PURPURA (Brug.).

*P. echinulata* (Lam.).

*P. bufo* (Lam.).

*P. carinifera* (Lam.).

*P. Rudolphi* (Lam.) = *persica* (Linn.).

*P. Tissoti* (Petit).

*P. hippocastanum* (Lam.).

*P. Blanfordi* (Melvill) *sp. nov.*

*P. (Cuma, Swainson), sacellum* (Lam.).

## RICINULA (Lam.).

*R. (Sistrum, Mont.) tuberculata* (De Blain).

*Konkanensis* (Melvill) *sp. nov.*

*subnodulosa* (Melvill) *sp. nov.*

*xuthedra* (Melvill) *sp. nov.*

## CORALLIOPHILLA (H. and A. Ad.).

*C. Jeffreysii* (Smith).

*M. adustus* is pretty common amongst muddy stones. *P. bufo* and *P. Rudolphi* amongst boulders at low tides. *P. carinifera* very common on muddy rocks. *U. contracta* also common. There seem to be two forms, one with white bands crossing the ribs at the angle, the other nearly uniform in colour, generally red brown, but sometimes dull white. *P. sacellum*—the spire of this handsome shell bears some resemblance to a pagoda; it is not uncommon in chinks of rocks at low tides. Young specimens light yellow. *S. tuberculatum*, a common and remarkably massive shell for its size.

## Fam. TRITONIDÆ.

## TRITON (Montfort).

*T. pilearis* (Linn.).

*T. aquatilis* (Reeve).

Both rare.

*T. (Linatella, Gray), cingulata* (Pfeiffer), from Ratnagiri.

## RANELLA (Lam.).

*R. (Apollon, Montf.), tuberculata* (Brod.) = *olivator* (Mensch).

*R. spinosa* (Lam.).

*R. subgranosa* (Bk.).

*R. tuberculata* is the only common shell and frequents low tide rocks.



## Fam. DOLIIDÆ.

## DOLIUM (Lam.).

*D. maculatum* (Lam.).

Fairly common. A deep sea shell. Some specimens seem a little to approach *fimbriatum*, which after all may be only a variety.

## PYRULA (Lam.).

*P. ficus* (Linn.), *Ficus laevigata* (Lam.).*Sycotopus ficus* (Linn.).

Rare at Bombay.

## Fam. CYPRAEIDÆ.

## OVULA (Brug.).

*O. pudica* (Adams).*O. Trailii* (Adams).*O. indica* (Reeve).*O. (Radius, Mont.), spelta* (Linn.).

None of the *ovulae* are common.

## CYPRÆA (Linn.).

*C. arabica* (Lam.) with var. *histrion* (Gmelin).*C. ocellata* (Lam.).*C. Lamarckii* (Gray) allied to *miliaris* (Gmelin).*C. pallida* (Gray).*C. lentiginosa* (Gray).*C. moneta* (Linn.).*C. annulus* (Linn.).

## ERATO (Risso).

*E. pellucida* (Reeve).

*C. arabica* and *pallida* are the commonest under rocks and stones, but are rarely found except at very low tides. *Ocellata* and *Lamarckii* much less common, and latter seems to frequent muddy places or seaweedy rocks and stones. *Lentiginosa* is rather rare. *Moneta* and *annulus* are seldom found.

## Fam. STROMBIDÆ.

## STROMBUS (Linn.).

*S. gibberulus* (Linn.).

## PTEROCERA (Lam.).

*P. lambis* (Linn.).

## ROSTELLARIA (Lam.).

*R. curta* (Sowb.).

The *Rostellaria* is fairly common, but never found alive, generally with a crab in possession, though a heavy tapering shell.

## Fam. CERITHIIDÆ.

## CERITHIUM (Adanson).

*C. morus* (Lam.).*C. rubus* (Mertyn).

*Morus* is very common on half-tide rocks, and very variable in shape.

*Cerithidea Bombayana* (Sowb.), *Layardi* (A. Ad.), and also *Rhizoporarum* (A. Ad.) are all mentioned as from Bombay, but out of a great number of specimens of the family we have not been able to satisfactorily trace any but the two above named.

## TRIFORIS (Desh.).

*T. perversa* (Linn.).*T. sp.*

*Perversa* is a Mediterranean species, but our specimens appear to differ little from it.

## CERITHIOPSIS (F. Han.)

*C. (Seila, A. Ad.) Bandorensis* (Melvill) *sp. nov.*

## Fam. PLANAXIDÆ.

## PLANAXIS (Lam.).

*P. sulcatus* (Born).*P. similis* (Smith).

*Sulcatus* very common upon rocks which are only in reach of full tide.

## Fam. VERMETIDÆ.

## VERMETUS (Adams).

*V. sp.* One species uncertain, found amongst shingle.

## Fam. TURRITELLIDÆ.

## TURRITELLA (Lam.).

*T. (Zaria) duplicata* (Linn.).

Very common on all the shores. It may be that *T. cerea* (Reeve), *bacillum* (Kiene), also occurs, but as live full-grown specimens have not been found, it is a little uncertain.

## Fam. LITORINIDÆ.

## LITORINA (Ferussac).

*L. (Melaraphe) intermedia* (Phil.).

Young specimens only.

*L. ventricosa* (Phil.).

## TECTARIUS (Val.).

*T. Malaccanus* (Phil.).

This last is very abundant, and lives high on the sun-heated rocks above the reach of all, excepting spray, or the highest spring tides. *L. ventricosa* is also very common, more to the south, and lives in similar positions.

## Fam. FOSSARIDÆ.

## FOSSARUS (Philippi).

*F. tornatilis* (Gould) = *stolickzanus* (Nevill).

*F. fenestriatus* (Adams).

*F. trochlearis* (Adams).

*F. sp.*

*F. sp.*

All very uncommon. As to the two (or three) unnamed species, we have left them for the present, not having been able to examine the Nevill types in the Calcutta Museum.

## Fam. SOLARIIDÆ.

## SOLARIUM (Lam.).

*S. lævigatum* (Lam.).

Worn specimens only.

## TORINIA (Gray).

*S. (Torinia) delectabile* (Melvill), *n. sp.*

*S. ( " ) homalaxis* (Melvill MSS.).

Both very rare. The latter not described at present, owing to its mamillate apex, and consequently young state. Allied to *S. virgatum* (Hinds). Some remarks will follow later on in this paper, upon this form, after the description of *S. delectabile*.

## Fam. LITIOPIDÆ.

## DIALA (H. and A. Adams).

*D. Leithii* (Smith).

## ALABA (H. and A. Adams).

*A. rectangulata* (Craven).

The former is a rare shell, apparently peculiar to Bombay. The latter an elegant little species with brown transverse lines and swollen white varices, not uncommon in shell sand.

## Fam. RISSOIDÆ.

## RISSOINA. (Orbigny).

*R. Seguenziana* (Issel) allied to *pulchra* (Adams).

*R. (Zebina, H. & A. Ad.) appplanata* (Melvill) *sp. n.*

*R. " canaliculata* (Schwartz).

*R. (Pyramidelloides) insolita* (Desh.).

*R. sp.*

## RISSOA (Fremv.).

*R. Versoverana* (Melvill) *sp. n.*

## ONoba (H. and A. Ad.).

*O. sp.*

## ALVANIA (Risso).

*A. Mahimensis* (Melvill) *sp. n.*

## IRAVADIA (W. T. Blanford).

*I. trochlearis* (Gould).

## FENELLA (H. and A. Ad.).

*F. cerithina* (Phil.).

## FAIRBANKIA (W. T. Blanford).

*F. Bombayana* (Blanford).

We have named *Rissoina canaliculata* (Sch.) from specimens so labelled in the National Collection, S. Kensington, but we are doubtful whether the *R. ambigua* and *plicatula*, of Nevill's Catalogue, could we but examine the types now in the Calcutta Museum, would not clear up some difficulties with regard to them. *I. trochlearis* (Gould) is a beautiful white transversely sulcated little species, not uncommon in shell sand; the sculpture of *R. insolita* (Desh.), is very curious. Other specimens of this genus we have at present unnamed, owing to the difficulty attending the synonyms throughout, and the want of a good monograph of the whole order.

## Fam. HYDROBIIDÆ.

## STENOTHYRA (Bern.).

*S. Woodmasoniana* (Nevill).*S. sp.*

We have two, if not three, species of this closely-allied genus.

## Fam. ASSIMINEIDÆ.

## ASSIMINEA (Leach).

*A. cornea* (Leith).

Very small and obscure brackish water species; we have about three or four species altogether, but have not been able to differentiate them with absolute certainty, not having seen the named types. They will probably fall under the following names:—

*A. Bombayana* (Grateloup).*A. marginata* (Leith).*A. subconica* (Leith).*A. rotunda* (Blanford).

## Fam. CAPULIDÆ.

## CRUCIBULUM (Schum.).

*C. violaceum* (Carp.).

Only worn specimens.

## CALYPTRÆA (Lam.).

*C. pellucida* (Reeve), probably a variety of *C. sinensis* (L.).

## ERGÆA (H. and A. Ad.).

*E. Walshi* (Hermannsen).

This last is common: *C. pellucida* (Reeve) does not appear to differ materially from the *C. sinensis* (L.) found on British shores, as well as many other parts of the world.

## Fam. NATICIDÆ.

## NATICA (Adanson).

*N. lineata* (Lam.).*N. maculosa* (Lam.).*N. rufa* (Bern.).*N. ala papilionis* (Chem.), rare.*N. pulicaria* (Phil.).*N. (Neverita, Risso) didyma* (Bolten).*N. (Mammilla, Schum) Zanzibarica* (Recluz).*N. (Naticina, Guild.) fibula* (Reeve), rare.*papilla* Gmelin), rare.*pomatiella* (Melvill) sp. nov., rare.

## SIGARETUS (Lam.).

*S. Cuvierianus* (Recluz), rare.*planulatus* „ rare.

*N. lineata*, *didyma*, and *maculosa* are all common, and may be found alive in sandy places at low tides—*rufa* and *Zanzibarica* rarely found except during rough weather, when dead specimens get washed up. Among our specimens of *lineata* is one bearing five to six transverse canaliculations at somewhat irregular distances from each other, and giving a slightly angled appearance to the last whorl.

## Fam. IANTHINIDÆ.

## IANTHINA (Lam.).

*I. communis* (Lam.).

And another species.

## RECLUZIA (Petit).

*R. Rollandiana* (Petit).

The former washed up in some quantity during rough weather, the latter rare.

## Fam. SCALARIIDÆ.

## SCALARIA (Lam.).

*S. pretiosa* (Lam.).*S. consors* (C. and F.).

Surely this species is the same as *perplexa* (Pease).

*S. aculeata* (Sowb.).*(Acrilla, H. Ad.), acuminata* (Sowb.)*minor* (Sowb.) = *gracilis* (H. Adams).

A worn specimen of ours resembles *S. ovalis* (Sowb.), the locality of which does not seem to be known.

Species of this family are uncommon at Bombay. Only one specimen of *S. pretiosa* occurred.

## Fam. EULIMIDÆ.

## EULIMA (Risso).

Two species, undetermined at present. One of these is probably a novelty, with broad oblique mouth, ten whorled, whorls incurved, and a little distorted.

## Fam. PYRAMIDELLIDÆ.

## PYRAMIDELLA (Lam.).

*P. pulchella* (A. Ad.).

## AMATHIS (H. and A. Ad.).

*A. filia* (Melvill), *sp. nov.*

## OSCILLA (A. Ad.).

*O. tornata* (A. Ad. MSS. inedit.) *sp. nov.*

## MONOPTYGMA (Gray).

*M. fulva* (Gray).

## ODOSTOMIA (Fleming).

*O. sp.* Not yet worked out.

## TURBONILLA (Leach).

*T. sp.* Four species.

## PYRGULINA (A. Ad.).

*P. casta* (A. Ad.).*P. callista* (Melvill), *sp. nov.**P.* Three other species, undetermined.

## Fam. NERITIDÆ.

## NERITA (Adanson).

*N. oryzarum* (Récluz).*albicilla* (Linn.).*polita* (Linn.).

## NERITINA (Lam.).

*N. crepidularia* (Lam.).*pulchella* (Reeve).

*N. oryzarum* is extremely common under stones at half-tide, and is variable both in shape and colouring. *Nerita Longii* (Récluz), *Dombeyi* (Récluz) and *quadricolor* (Gmelin) have all been mentioned as found in Bombay, but out of a large number of specimens we have not been able to set apart any as truly distinct from the *oryzarum* type.

## Fam. TURBINIDÆ.

## TURBO (Linn.).

*T. elegans* (Phil.) = *intercostalis* (Phil.).

## ASTRALIUM (Link.).

*A. stellatum* (Gmelin).

Both common.

## Fam. TROCHIDÆ.

TROCHUS (Linn).

*T. (Polydonta, Schum.) radiatus* (Gmelin).

CLANCULUS (Mont.).

*C. depictus* (A. Ad.) = *Trochus scabrosus* (Phil.)?

We think these two must be forms of one species. White specimens of *C. depictus* are also not unfrequent, and may be designated as var. *albidus*.

*C. ceylanicus* (Nevill).

ISANDA (H. and A. Ad.).

*I. crenulifera* (A. Ad.).

ROTELLA (Lam.), = UMBONIUM (Link.).

*R. vestiaria* (Lam.) and var. *elegans* (Beck).

GIBBULA (Risso).

*G. Swainsonii* (A. Ad.).

ZIZYPHINUS (Gray).

*Z. scobinatus* (Adams). Not common. Peculiar to Bombay shores.

EUCHELUS (Phil.).

*E. tricarinatus* (Lam.).var. *horrida* (Phil.).*Indicus* (A. Ad.).

*T. radiatus* is extremely common, and some specimens appear to agree very closely with *incrassata* (Lam.). *C. depictus* and *E. Indicus* also abound, and the little bright coloured *R. vestiaria* is present in countless millions, in many beautifully coloured varieties.

## Fam. DELPHINULIDÆ.

LIOTIA (Gray).

*L. pulchella* (Dunker). Our specimens of this little shell agree very closely with *Cyclostrema eburneum* (Nevill), so far as we can judge from the figure.

CYCLOSTREMA (Marryat).

*C. solariellum* (Melvill), *sp. nov.**C. cingulatum* (Dunker).

## Fam. HALIOTIDÆ.

HALIOTIS (Linn).

*H. rufescens* (Sowb.).

A large species, of which we have only one somewhat imperfect specimen, from Bombay. It occurs also at Ceylon.

## Fam. FISSURELLIDÆ.

FISSURELLA (Brug.).

*F. Bombayana* (Sowb.) = *lima* (Sowb.).

This shell is very variable, being sometimes oval, and at other times a good deal elongated. In colour it is white to blackish brown, and sometimes rayed with brown.

EMARGINULA (Lam.).

*E. elongata* (Phil.).*E. radiata* (Gould).

SCUTUM (Montfort).

*S. unguis* (Linn.).

This shell is pretty common on muddy rocks and under stones. The animal envelopes the whole shell, excepting the very apex.

## Fam. PATELLIDÆ.

PATELLA (Linn).

*P. aster* (Reeve).

This shell is very common, and perhaps another species also occurs.

CLYPIDINA (Gray).

*C. notata* (Linn.).

## Fam. SCAPHOPODA.

DENTALIUM (Linn.).

*D. longitrorsum* (Reeve).

And another species of which our specimens are in too young a condition to name.

CADULUS (Phil.).

*C. gadus* (Sowb.).

Most abundant in shell-sand.

## PELECYPODA.

## Fam. OSTREIDÆ.

## OSTREA (Linn.).

*O. crenulifera* (Sowb.) = *plicata* (Chem.).

*O. bicolor* (Hanley).

We give these names as most closely corresponding to the Bombay specimens that have come under our notice, but this family is so widely distributed in all seas, and the similarity of shell sculpture is so close, whilst the shape is so varied, and also frequently encrusted with nullipores, that it is impossible to speak with absolute certainty.

*O. lacerata* (Hanley). Found on stones at low tide, densely clustered, and arranged vertically.

## Fam. ANOMIIDÆ.

## ANOMIA (Linn.).

*A. Achæus* (Gray). Common.

*A. (Ænigma) ænigmatica* (Ant.).

## PLACUNA (Brug).

*P. placenta* (Linn.).

Very common.

## Fam. SPONDYLIDÆ.

## SPONDYLUS (Linn.).

*S. rubicundus* (Reeve).

*S. Nicobaricus* (Chem.).

Both species uncommon, and only imperfect specimens obtained.

## Fam. PECTINIDÆ.

## PECTEN (P. Belot).

*P. senatorius* (Gmel.).

*P. Singaporinus* (Sowb.).

This family is very poorly represented, and only worn and small specimens of the above were collected.

## Fam. AVICULIDÆ.

## PINNA (Linn.).

*P. nigra* (Chem.).

A single specimen found attached by its byssus to a clump of stones.

## Fam. MYTILIDÆ.

## MYTILUS (Linn.).

*M. smaragdinus* (Chem.).

## MODIOLA (Lam.).

*M. (Brachydontes) emarginata* (Benson).

Shells belonging to this family rare in Bombay, but commoner to the south.

## Fam. ARCIDÆ.

## ARCA (Linn.).

*A. bistrigata* (Dunker).

*A. (Scapharca, Gray) inaequalis* (Brug).

*A. " japonica* (Reeve).

*A. " rhombea* (Bern.).

*A. (Anadara, Gray) granosa* (Lam.).

*A. (Barbatia, Gray) obliquata* (Wood).

*A. " lactea* (Linn.).

*A. (Acar, Gray) tenebrica* (Reeve).

Fairly largely represented in Bombay, and *inaequalis*, *granosa*, and *bistrigata* all common, the last-named attached to rocks and stones by a strong byssus. *Obliquata* occurs commonly at Aden, but is rare at Bombay, while *rhombea* is likewise found at Ratnagiri. *Lactea* very common, and also reported from Japan, Aden, Coast of Africa, Mediterranean, and British waters; this includes *A. Zebuensis* (Reeve).

## Fam. NUCULIDÆ.

## NUCULA (Lam.).

*N. Layardi* (Adams).

## LEDA (Schum.)

*L. (Nuculana, Link.) Mauritiana* (Sowb.).

## YOLDIA (Möller).

*Y. Nicobarica* (Brug).

Specimens of this family are uncommon.

## Fam. CARDITIDÆ.

## CARDITA (Brug.).

*C. antiquata* (Lam.).

*C. calyculata* (Lam.).

The former is very common at Bombay, while the latter occurs at Ratnagiri.

## Fam. CARDIIDÆ.

## CARDIUM (Linn.).

*C. coronatum* (Speng.) = *Asiaticum* (Brug.).

*C. latum* (Bern.).

*Coronatum* is extremely common, and from an examination of a vast quantity of specimens, we conclude that *Asiaticum* is merely a larger form of the same shell.

*Latum* is uncommon, some specimens covered with a bristly epidermis, others nearly smooth.

## Fam. CHAMIDÆ.

## CHAMA (Linn.).

*C. macrophylla* (Chem.).

A single specimen from Bombay is, without much doubt, this species, which is of unusually wide distribution, having its centre of distribution in the West Indies.

## Fam. CYPRINIDÆ.

LIBITINA. (Schum.) = CYPRICARDIA (Lam.).

*L. vellicata* (Reeve). Common.

## Fam. VENERIDÆ.

## MERETRIX (Lam.).

*M. morphina* (Lam.)

*b. Var. castanea* (Lam.).

*c. Var. petechialis* (Lam.).

*d. Var. impudica* (Lam.).

Very common, and our range of specimens show these forms merging into each other, though usually considered distinct species.

## CIRCE (Schum.).

*C. divaricata* (Chem.).

Very common amongst muddy stones.

## MEROE (Schum.).

*M. effossa* (Hanley).

*M. Solandri* (Gray).

*M. hians* (Wood) = *Solandri*.

*M. contempta* (Smith) = *Solandri*.

*M. effossa* is very common in sand. *Solandri* also very common, and it is a question whether there are more than these two species at Bombay. From an examination of a large quantity of perfect specimens, we come to the conclusion that *hians* and *contempta* are only *Solandri* in various younger stages of growth.

## DOSINIA (Scopoli).

*D. pubescens* (Phil.).

*D. gibba* (Adams).

*D. rustica* (Romer).

*D. prostrata* (Linn.).

*D. pubescens* is fairly common in all stages of growth. Young specimens are nearly circular, silky in appearance, and often tinged with pink; in the older forms the beak becomes more prominent, and shell somewhat elongated. *Rustica* is somewhat closely allied in form, but is rougher and more chalky in texture. *D. prostrata* is easily known by its light brown and slate-coloured tinge, and is only found during seasons of rough weather.

## VENUS (Linn.).

*V. imbricata* (Sowb.)

This little shell abounds in the sandy shingle of the shore.

*V. (Chione, Megerle) cor.* (Wood), also found at Karachi.*V.* " *pinguis* (Hinds.).*V.* " *Layardi* (Reeve) = Ratnagiri.*V.* " *radiata* (Chem.) = *Tapes marmorata* (Lam.)" *orientalis* (Reeve).

*C. pinguis* and *radiata* are extremely common, and the latter is very variable in shape, young specimens being of the typical *Tapes* form, whilst the old ones become much more gibbous. Both are much sought for edible purposes, and perfect specimens of all growths can easily be obtained.

*V. (Anaitis, Römer) isabellina* (Phil.), Rare.

## CLEMENTIA (Gray).

*C. papyracea* (Gray).

A single valve, which we cannot think can be other than this species, though it is smaller than the typical specimen.

## TAPES (Megerle).

*T. (Pullastra, Sowb.) Malabarica* (Chem.).*T.* " *textrix* (Chem.).*T.* " *Indica* (Sowb.)

These are all beautiful shells when perfect, and *T. Malabarica* and *T. textrix*, the latter especially, are common. With *textrix* the general form is very smooth and shiny, but old specimens are often irregularly concentrically striated and lose the characteristic web markings.

## VENERUPIS (Lam.).

*V. macrophylla* (Desh.)

N.B.—*Petricola bipartita* (Desh.) There are specimens in the British Museum of this shell from Bombay, but we have not been fortunate enough to find it ourselves.

## Fam. GLAUCOMYIDÆ.

GLAUCOMYA (Woodward) = GLAUCONOME (Gray).

*G. cerea* (Reeve).

A fairly common little shell, living in brackish waters.

## Fam. UNGULINIDÆ.

DIPLODONTA (Brown) = MYSIA (Leach).

*D. Indica* (Desh.).*D. rotundata* (Turton).

*D. Indica* is frequently met with as a little delicate globular shell, the full grown specimens being only found at times of rough seas. *D. rotundata*—This British shell occurs at Aden, and a valve or two of what appears to be the same is in our collection.

## Fam. DONACIDÆ.

DONAX (Linn.).

*D. scortum* (Linn.).*D. incarnatus* (Chem.) = *Dysoni* (Desh.).*D. abbreviatus* (Lam.).

All are pretty common.

*D. Dysoni* appears to be *incarnatus* in a young form, and is frequently prettily coloured with pink and purple.

*D. abbreviatus* is sometimes pure white inside and out, and sometimes deep purple inside and brown outside, with all intermediary variations.

## Fam. PSAMMOBIIDÆ.

PSAMMOBIA (Lam.).

*P. Malaccana* (Reeve) = *pallida* (Desh.). Rare.

SOLENOTELLINA (Blainv.).

*S. (Psammotæa, Lam.) atrata* (Desh.).



ASAPHIS (Modeer) = CAPSA (Brug.).

*A. deflorata* (Linn.) = *Sanguinolaria* vel *Capsa rugosa* (Lam.)

*P. atrata* is the only purple bivalve in Bombay, and is fairly common.

*A. deflorata*. Dead specimens only found of this large and handsome shell.

Fam. SOLENIDÆ.

SOLENOCURTUS (Blainv.).

*S. exaratus* (Phil.). Rare.

SILIQUA (Megerle).

*S. albida* (Dunker).

SOLEN (Linn.).

*S. truncatus* (Sowb.).

*S. brevis* (Hanley).

The *Siliqua* is not common, but both forms of *Solen* are, and when young the shells are so closely allied that it is difficult to differentiate them.

Fam. MACTRIDÆ.

MACTRA (Linn.).

*M. plicataria* (Linn.). Rare.

*M. cornea* (Desh.) Rare.

*M. Luzonica* (Desh.).

*Luzonica* is not uncommon, and it seems generally distributed over the whole Indian peninsula, as we have seen specimens from Madras and Calcutta.

RAETA (Gray).

*R. Abercrombiei* (Melvill) *sp. nov.* Only found after rough weather.

HARVELLA (Gray).

*H. (Standella, Gray) capillacea* (Desh.).

*H. (Standella) pellucida* (Chem.).

Both these shells are common, and attain a large size, say 4" × 2½/3". Only dead specimens procured.

LUTRARIA (Lam.).

*L. planata* (Chem.). Rather rare.

*L. (Caecella, Gray) transversalis* (Desh.). Fairly common.

Fam. MYIDÆ.

CORBULA (Brug.).

*C. modesta* (Hinds).

Rare at Bombay, but occurring to the South in some quantity.

CRYPTOMYA (Conrad).

*C. Philippinarum* (A. Ad.).

One specimen collected by Mr. Herford, besides two of our own. Although all are dead specimens, and not in good condition, we identify them with this Philippine species with considerable certainty.

Fam. PHOLADIDÆ.

PHOLAS (Linn.).

*P. (Barnea, Leach) Bakeri* (Desh.).

*P. (Martesia, Leach) striata* (Lam.).

Single valves of *P. Bakeri* are common, but the live shell we have not met with.

Fam. LUCINIDÆ.

LUCINA (Lam.).

*L. fibula* (Reeve). From Ratnagiri. A species of very wide distribution, occurring in the Tropics of both hemispheres.

Fam. TELLINIDÆ.

TELLINA (Linn.)

*T. capsoides* (Lam.).

*T. emarginata* (Sowb.).

*T. Kolabana* (Melvill), *sp. nov.*

- T. Homala*, Schum.) *ala* (Hanley).  
*T.* " *sinuata* (Spengler).  
*T.* (*Angulus*, Megerle) *rubra* (Desh.) = *culta* (Hanley).  
*T.* " *rubella* (Desh.).  
*T.* (*Moera*, H. and A. Adams) *lechriogramma* (Melvill)  
*sp. nov.*

## GASTRANA (Schum.)

- G. Brugieri* (Hanl.)  
*G.* (*Metis*, H. and A. Adams) *edentula* (Spen.)  
 = *angulata* (Chem.).  
*G.* " *polygona* (Chem.).  
*G.* (*Macoma*, Leach) *truncata* (Jonas).

Specimens of this large family abound in Bombay waters, and the first four are very common. *G. edentula* and *M. truncata* are equally plentiful. *T. rubra* and *rubella* seem more plentiful to the south, as we obtained many specimens from Ratnagiri. Of *G. polygona* only a few valves were found after rough weather. We have another small orange pink shell belonging to this family, but as it appears to be young, we await further specimens before attempting to differentiate it.

## Fam. SCROBICULARIIDÆ.

ABRA (Leach) = SYNDOSMYA (Récluz).

*A. opalina* (Hinds). Rare.

SEMELE (Schum.) = AMPHIDESMA (Lam.).

*S. cordiformis* (Sowb.).

*S. regularis*. (Sm.).

*S. cordiformis* is common in muddy places, though described by Reeve as a shell of extreme rarity. Of *regularis* we have only one valve, which appears to agree with specimens of this name in the British Museum, though it is also allied to *scabra* (Hanley).

## Fam. PANDORIDÆ.

PANDORA (Brug.).

*P. flexuosa* (Sowb.).

Common in shingle.

## Fam. ANATINIDÆ.

ANATINA (Lam.).

*A. labiata* (Reeve).

Found in some quantity amongst seaweed cast up by a storm, otherwise rarely met with, perhaps because of its extreme fragility.

THRACIA (Blaine.).

*T. Salsettensis* (Melvill), *sp. nov.*

Like the last, extremely fragile, which may account for so large and fine a shell having hitherto escaped description. Have only met with single valves.

## Fam. LINGULIDÆ.

LINGULA (Brug.).

*L. hians* (Swainson).

Dug up in quantity at low tides out of black mud.

N.B.—The arrangement followed is that adopted by M. Paul Fischer in the *Manuel de Conchyliologie*, 1887.

\* \* \* \*

Whilst these sheets have been passing through the press, we have had the opportunity of perusing a very interesting article by a writer signing himself 'Keswal,' in the *Journal of the Bombay Natural History Society*, in which much pleasant, if discursive, information is given about the productions of the waters of Western India, especially those of the Konkan region. He does not name, however, any specimens of *Mollusca* (excepting one or two *Cephalopoda*), to which we have not already made reference.