

## NOTES ON THE NOMENCLATURE OF THE MOLLUSKS OF THE FAMILY TURRITIDAE.

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In the course of my revision of the West American mollusk fauna, the Turritidae (formerly Pleurotomidae) were reserved until nearly the last, owing to my knowledge of the extremely unsatisfactory condition of their nomenclature.

Owing chiefly to a want of thoroughness and consequent inaccuracy the recent revisions of the group by Tryon and Cossmann were quite unreliable, though to their labors in bringing material and references together and so giving a starting point for investigation I am much indebted. Furthermore several recent writers on the group have in my opinion excessively divided it, forming genera, subgenera, and sections on merely specific, or even individual, characters of no physiological or systematic importance. Of the more than 175 names of more than specific importance which have been applied to members of this family, probably not more than one third are indicative of characters of sufficient value to warrant a separate name.

Another difficulty in a satisfactory treatment of the family arises from the fact that these animals often differ among themselves anatomically in ways not expressed in the shell characters; species generically distinct sometimes having extremely similar shells. This has been amply proved in the cases of *Leucosyrinx*, *Irenosyrinx*, *Steiraxis*, and *Aforia* for instance. Therefore until much more is known of the anatomy of the species any arrangement must be merely tentative, though it is not unreasonable under the circumstances to put like shells of unknown anatomy in the same systematic group for the present.

From the recent species we must reason by analogy to determine the proper place of fossils, as no other course is open. It would require several years' work and access to European collections to place the known species and determine the synonymy of the entire

family, a task beyond my powers under present conditions. I shall therefore only attempt to review our West American species, and to determine the original types and consequent characteristics of some of the more familiar genera of the family. To these data I add references to the various names which have been given to members of the group, making a basis from which later workers may be able to proceed with the review of the whole family. Some scattered names may have escaped discovery during my search, but this is a misfortune hardly to be avoided in such work. The rules by which I have been guided in recognition of valid names are those of the International Committee on Zoological Nomenclature and, while applying these rules with precision as far as the facts are known to me, I have endeavored to use in doubtful cases a rational conservatism, changing nothing for the mere love of change and avoiding the whimsicalities by means of which some recent writers have endeavored to justify their retention of familiar but unfortunately invalid names.

The Turritidae are an ancient group, originating in Mesozoic time and have naturally a world-wide distribution. There are probably more species of the family in the recent fauna than of any other family of mollusks. The distinctness of the group was recognized by Rumphius as early as 1704 and his name *Turris* with his typical species has been adopted into binomial nomenclature in its original sense, though the group has been multifariously subdivided since. It is a pity that Lamarck disregarded the work of his predecessors so far as to apply to the group a name different from that by which it had been known for nearly a century, thus necessitating an inconvenient revision nearly another century later.

#### Genus *TURRIS* Bolten, 1799.

The name *Turris* for the typical part of the genus was given by Bolten a year earlier than Lamarck's application of the name *Pleurotoma* to the same type. Still earlier, Helbling had given the name *Fusus* to a group consisting chiefly of Turritidae, but fortunately, by applying the method of elimination to his assembly, the name *Fusus* could be fixed upon a small and inconspicuous group of Gastropods, and a shifting of names which would have been practically intolerable was thus avoided. The rejection by the International Committee of the anonymous Museum Calonnianum of 1797, removes that source of confusion from consideration in systematic binomial nomenclature, though in this instance the author of that work merely followed Rumphius, and the sole identifiable species in his list is the type of *Turris* Bolten.

Link in 1807 followed Lamarck, though (possibly due to a typographical error) the name is spelled *Pleurotome* in his publication.

In the quadrinomial system of Dumeril the name is spelled *Pleurotomarius* as a designation for the animal of *Pleurotoma*. To these synonyms may probably be added *Lophiotoma* and *Tomopleura* Casey, 1904.

Genus CLAVATULA Lamarck, 1801.

The first subdivision of the genus was the proposal of Lamarck in 1801 of a genus *Clavatula*, which was typified by *C. coronata* Lamarck, but which is not *Clavatula* Swainson, 1840, typified by *C. sulcata* Swainson. Synonyms are *Clavicantha* Swainson, 1840, and probably the typical *Drillia (umbilicata)* Gray, 1838. Lamarck afterward united his *Clavatula* with *Pleurotoma*, but subsequent investigations have shown that *Clavatula*, according to its type-species, is entitled to subfamily distinction. The operculum, dentition, and anatomy are different from those of the group typified by *Turris babylonius*. It is a west African group in the main.

Genus CLAVUS Montfort, 1810.

Under the name of *Clavus* Montfort separated, in 1810, a genus typified by *C. flammulatus* Montfort, figured and described in the same place, and specifically designated as the type. Because at the same time he cited one of Lamarck's *Clavatulae*, the latter has been mistaken as the type. An unjustified attempt to reject *Clavus* on account of the perfectly distinct prior name of *Clava* Martyn, has been made, but Tryon correctly preserved the genus for smooth Turritidae with a short last whorl, long spire, nodulous shoulder, no spiral sculpture, a wide, deep anal sulcus adjacent to the suture and, in the completely adult, a marked subsutural callus on the body. Such species as *Pleurotoma crenularis* Reeve (Conch. Iconica, fig. 54 (not of Weinkauff), 1845; *P. lanceolata* Reeve (fig. 182), *P. maculosa* Reeve (fig. 45); and *P. echinata* Reeve (fig. 48) appear to be properly located in the genus *Clavus*.

Genus TURRICULA Schumacher, 1817.

The next to be considered is the genus *Turricula* Schumacher, 1817, based on *T. flammea* Schumacher, founded on figures 1337 and 1338, volume 4, of Martini's Conchylien Cabinet. This shell is *Turris javanus* Bolten, but not *Murex javanus* of Linnaeus and Gmelin. It is the *Murex tornatus* of Dillwyn, 1817, but not of Bolten, 1798. It is not *Clavatula flammea* Hinds, 1843.

The type of *Turricula* is an almost perfectly smooth shell of the kind ordinarily called *Surcula* H. and A. Adams, 1853, of which the type is *Murex javanus* Linnaeus and Gmelin, not Bolten. The only distinction between *Turricula* and *Surcula* is the rough sculpture of



the latter. *Surcula*, if based on the adjacency of the anal sinus to the suture can only be maintained as a minor section of *Turricula*. A futile attempt has been made to reject *Turricula* on account of the use of that name in the worthless polynomial system of Klein, but that is quite inadmissible on any genuine nomenclatorial basis. The *Turricula* of Herrman, 1783, was not used in a generic sense. The *Turricula* of the Museum Calonnianum has been rejected by the International Committee on Nomenclature. The use of the name by Fabricius, 1822, and Beck, 1837, being later than Schumacher's date, need not be further considered.

*Surgula* Weinkauff, 1875, is a Germanized rendering of *Surcula*, but whether due to author or compositor is uncertain.

#### Genus MANGILIA Risso, 1826.

The next name to be considered is *Mangelia* Risso, 1826. The first species is *M. costulata* Risso, which is identical with or merely a variety of *nebula* Montagu. Risso named no type, but *costulata* was selected by Bellardi in 1847, Kobelt in 1905, and Dall in 1908. The selection of other types by authors subsequent to Bellardi has created a good deal of confusion, since Risso's group of species was not homogeneous. As has been already shown by Iredale<sup>1</sup> Gray, in the Proceedings of the Zoological Society of London for 1847, selected as the type of Leach's manuscript genus *Bela* this same *Murex nebula* of Montagu which makes *Bela* an exact synonym of *Mangelia*, this being the first valid publication of *Bela*. *Mangelia ginnania* Risso (fig. 130) to which Gray in 1847 referred the manuscript name of *Ishnula* Clark, is apparently identical with *Mangelia* s. s., though Monterosato proposed a sectional name *Ginnania* for it in 1884. *Raphitoma* Bellardi, 1844, was a heterogeneous group. Later in his preliminary synopsis of 1875, he divides the group into two sections: I, typified by *R. vulpecula* Brocchi, and II, by *R. harpula* Brocchi. In his subsequent monograph of the Pleurotomidæ he specifies (p. 323) *vulpecula* as the type of the genus. The latter is a typical *Mangelia* and *Raphitoma* therefore becomes a synonym of *Mangelia*. Other authors disregarding Bellardi's selection of a type have made extraordinary confusion of the relations of this genus.

Its chief characteristics are the absence of an operculum; the entire, hardly thickened, and nonvaricose outer lip; the unarmed pillar; and shallow anal sinus near the suture. The shell is usually axially ribbed and spirally minutely sculptured. The fact that the author intended to be honored was named Mangili led Lovèn and many subsequent writers to correct the spelling to *Mangilia*, which, as it hardly affects the location of the name in indices, though a little irregular

<sup>1</sup> Proc. Mal. Soc., London, vol. 11, p. 299, 1915.

from a nomenclatorial standpoint, may without too much reprehension be accepted.

Genus DRILLIA Gray, 1838.

The name *Drillia* was proposed in 1838 for a peculiar African species (*umbilicata* Gray) by J. E. Gray. What is probably the same species *Brachytoma castanea* Swainson, 1840, was one of the two types of Swainson's *Brachytoma* (not *Brachystoma*, as misspelled by several authors) and both of them probably may turn out to be *Clavatulæ*. At any rate the shells which have been commonly called *Drillia* have to take another name.

The small blackish Drillias so common in Panamic waters, of which *Pleurotoma bottæ* Valenciennes is the type, will take the name of *Crassispira* Swainson, 1840.

The light-colored species, with an oily gloss, thin shells, and prominent riblets usually crossed by rather widely spaced spiral striations, will take the new name of *Elaeocyma* Dall. This group appears to be peculiar to the Pacific coast of America. *Drillia empyrosia* Dall may be taken as type and *D. unimaculata* Sowerby, *hemphilli* Stearns, and several others belong to it.

*Cymatosyrinx* Dall, 1889, based on *Pleurotoma lunata* Lea, will cover the thin-shelled light-colored species of its type.

For the generally brown or brownish clathrate species a few of which are found in nearly every fauna, and of which *Pleurotoma gibbosa* Reeve may be specified as a typical example, the new name of *Clathrodrillia* Dall may be used. *Drillia ostrearum* Stearns is an American example.

Genus MELATOMA Swainson, 1840.

Swainson in 1840 described and figured under the name of *Melatomia costata* a shell which he supposed to be fluviatile but which really belonged to the Turritidae. Seven years later Gray gave the name of *Olionella (sinuatum* Born) to a species of the same conchological type. This group which by its dentition and operculum is related to the *Clavatulæ* must take the earlier name.

There is a group of species typified by *Pleurotoma penicillata* Carpenter which in sculpture and periostracum closely resemble the African *Melatomia*, but their operculum has an apical nucleus and is long and narrow. They may be called *Pseudomelatomia*. *Melatomia* Anthony, 1847, is quite a different thing.

Genus MONILIOPSIS Conrad, 1865.

This name was applied in 1865 to a very beautifully sculptured species (*M. elaborata* Conrad) from the Eocene. The West American

species formerly called *Surcula cancellata* Carpenter, *inermis* Carpenter, etc., though with much less elaborate ornamentation appear to be related to the Eocene fossil and may tentatively be referred to the same group. At all events they can not be comprised in *Surcula* as properly restricted. I may note that Conrad's species was very insufficiently figured by him.

**Genus ANCISTROSYRINX Dall, 1881.**

This group, which has a wholly superficial resemblance to *Columbarium*, is an evident development from *Cochlespira* Conrad, 1865, of the Eocene. It should be stated, however, that some wholly incongruous species have been referred to this section by authors unfamiliar with the original type, *A. elegans*, which is figured in Dr. A. Agassiz' Three Voyages of the *Blake* (vol. 2, p. 66, fig. 282, 1888). The distinctions which may serve to retain *Ancistrosyrix* as a section of *Cochlespira* are recorded in Bulletin Museum of Comparative Zoology (vol. 43, p. 257, 1908). *Candelabrum* Dall, MS. not of Blainville, is a synonym.

**Genus GEMMULA Weinkauff, 1876.**

This section of *Turris* with short canal and beaded or rugose anal fasciole was named without a designated type, but, in 1896, Cossmann selected *Pleurotoma gemmata* Hinds. The section *Hemipleurotoma* Cossmann, is regarded as synonymous by Casey.

There is a numerous group of abyssal Turritidae with a sculpture somewhat like that of *Gemmula* but covered with a greenish periostracum, the shell of a chalky consistency, the outer lip thin and simple instead of internally thickened and lirate as in *Pl. gemmata*. These differences seem to be of at least sectional value and the group may be named *Cryptogemma* with *Gemmula benthina* Dall, 1908, as type. The aspect of these shells suggests relationship with *Antiplanes*, but these features may be due to similar influences of the deep-water environment. The universal erosion, even in the youngest living specimens, prevents us from knowing the nuclear characters.

**Genus BELA (Leach MS.) Gray, 1847.**

Iredale reviewed this genus in 1915 in the Proceedings of the Malacological Society of London, and as the type of *Bela* selected by Gray himself is the same species as the type of *Mangelia* Risso, there is no question but that the name must be abandoned.

The next name in order is *Lora* Gistel, 1848, type *Tritonium viridulum* O. Fabricius (probably=*Bela exarata* Möller). This is followed by *Oenopota* of Mörch, 1852, who designated no type. *Oenopota*, H. and A. Adams, 1858, is synonymous.



## Genus BATHYTOMA Harris and Burrows, 1891.

*Dolichotoma* Bellardi, 1875 (*Doligotoma* Weinkauff, 1876), is pre-occupied by *Dolichotoma* Hope, 1839. The type is *Pleurotoma cataphracta* Brocchi, which automatically becomes the type of *Bathytoma*. This species is more or less sculptured. Casey proposed in 1904 the name of *Megasurcula* for the smoother West American species. But von Koenen in 1867<sup>1</sup> proposed for the *Pleurotoma filosa* of Lamarck the name *Cryptoconus*; and a comparison of it with the smaller Californian species (*stearnsiana* Raymond) shows only specific differences between them. *Cryptoconus* thus supersedes *Bathytoma* for the West American forms, whether it be accepted for the more emphatically sculptured European and West Indian species or not, and I can see no important characters to separate them.

## Genus AFORIA Dall, 1889.

This name was applied by me to *Pleurotoma circinata* Dall, on the mistaken statement of Jeffreys that it possessed no operculum. Better material enabled the diagnosis to be corrected and the species would have been referred to *Leucosyrinx* were it not for the fact that a portion of the shells (males?) show in the adult a deep notch or sinus in the anterior part of the outer lip between the canal and the periphery, somewhat analogous to the sinus for the eye pedicels in *Strombus*. Whether this is a sexual character remains to be determined, but it occurs in so many specimens that it can not be regarded as abnormal.

## Genus BORSONELLA Dall, 1908.

It seems entirely probable that true *Borsonia* and *Cordieria* do not exist on the Pacific coast, and that the relations between *Antiplanes* and *Borsonella* are more intimate than those with any of the European forms, notwithstanding the plait on the pillar in *Borsonella*. With Casey I think that this is a feature which may occur sporadically in a portion of any large group of Turritidae.

## Genus CYTHARA Schumacher, 1817.

Cossmann states (Essais, vol. 2, p. 121) that this name was used before Schumacher, but he gives no reference and a careful search has not revealed any binomial use of it, so I am obliged to regard the statement as a mistake. *Eucythara* Fischer is a synonym. Schumacher's type, *C. striata* Schumacher, is said by several authors to be identical with *Cancellaria citharella* Lamarck, 1822. Both authors refer to the same figure of Chemnitz (1330), which represents a shell corresponding to the generally accepted type of *Cythara*.

<sup>1</sup> Zittel, *Traité, de Pal.*, vol. 2, p. 284 (Barrois translation), gives 1840 the date of von Koenen's name, but I have not been able to verify this.

Some authors have confounded with this figure two adjacent figures of immature Strombi and concluded that *Cythara* was a synonym of *Strombus*, but this conclusion has no valid basis.

The typical *Cythara* is a relatively large tropical shell with short spire and narrow, elongated aperture, plentifully supplied in adults with denticulations or striated callus on both body, pillar, and outer lip. It appears to be entirely distinct from the relatively small shells, mostly with unarmed apertures, from the temperate faunas, which authors, including the writer, have been accustomed to refer to this genus. The name which we shall adopt for the small forms referred to is difficult to determine, since some of them were included in Risso's *Mangelia*, and Reeve included all he knew in his monograph of the Mangeliids along with *Cythara* proper. Other authors, ignoring the real type of *Mangelia*, have applied the latter name to these species, while still others have proposed a considerable number of new names for the various species of this group. True *Cythara* appears to bear much such a conchological relation to these shells as *Glyphostoma* does to the small shells we have been accustomed to call *Clathurella*.

Cossmann in 1889 calls them *Mangilia*, following Reeve; Bellardi in 1875 had called them *Ditoma*, but this name was preoccupied by Illiger in 1807. Bellardi's type species was *Pleurotoma angusta* Jan. This is a form with a thickened outer lip, spiral striation, and conspicuous short anal sinus. Cossmann in 1889 substituted *Agathotoma*, the type, of course, remaining automatically the same; but in 1875 Monterosato had proposed for *Pleurotoma bertrandi* Payraudeau the name *Cytharella*. This covers the smooth group exactly. *Hædropleura* Monterosato, 1882, type *Murex septangularis* Montagu, would provide for the more elevated forms with few axial ribs, but the type is said to be operculate, which the true *Cytharellae* are not. The forms with shouldered whorls and numerous axial ribs like *angusta* Jan must take Cossmann's name, unless some anterior designation can be found. *Zetekia* is a small form recalling *Mitromorpha*, with predominantly spiral sculpture and coarse lirations on both sides of the aperture and the anal sulcus inconspicuous. The type (U. S. Nat. Mus., No. 274109) is about six millimeters long, with a smooth nucleus of about three whorls and four subsequent whorls, with the suture obscure and the color purplish brown. It was collected at Panama and I have called it *Z. denticulata*.

#### Genus CLATHURELLA Carpenter, 1857.

This was a new name for *Defrancia* Millet, not Bronn, 1825. In 1908<sup>1</sup> I discussed the synonymy of *Clathurella*, for which a species

<sup>1</sup> Bull. Mus. Comp. Zool., vol. 43, No. 6, p. 250. On p. 261, under *Bellardiella*, the statement as to the nucleus is inaccurate and should be eliminated. The correct description is given on p. 260, line 7 *et seq.*



not included in Millet's original list has been usually but erroneously taken as the type. As neither Millet nor Carpenter named a type, and Carpenter's name automatically takes as type the designated species of *Defrancia* Millet (*D. pagoda*, selected by the writer in 1908), *Clathurella* must be reserved for species having the character of *D. pagoda* Millet. However, Iredale has shown that Bronn in 1831 proposed the name *Pleurotomoides* for the preoccupied *Defrancia* of Millet, which must take precedence of *Clathurella* with the same typical species. Beck proposed *Pleurotomina* as a substitute for *Defrancia* in 1847, but it had been used by Gray in 1838 as a sub-family name. This leaves the species placed in *Clathurella* by Cossmann, 1896, type *C. rava* Hinds, without a name, and among the numerous names for small Turritidae one must be sought. The earliest which seems available appears to be *Philbertia* Monterosato, 1884. The curious succession of synonyms is as follows, noting first that Bellardi did not (as has been erroneously stated) propose a name *Heterotoma*, and if he had it was preoccupied by Hartmann in 1844. Then follows *Bellardia* Bucquoy, Dautzenberg, and Dollfus, 1882, not of Mayer, 1870; *Bellardiella* Fischer, 1883 (new name for *Bellardia*), not of Tapparone Canefri earlier in 1883; *Philbertia* Monterosato (p. 132, 1884); *Cormarmondia* Monterosato (p. 135, 1884) (new name for *Bellardiella*); *Otitoma* Jousseau, 1898; and lastly *Clathurina* Melvill (April, 1917) (new name for *Clathurella*).

As far as the data are accessible to me *Philbertia* (from which the later *Comarmondia* does not materially differ) is the earliest available name for the group included by *Clathurella* Cossmann not Carpenter, and typified by *Pleurotoma bicolor* Risso=*P. purpurea* (Montagu), variety *bicolor* Bucquoy, Dautzenberg, and Dollfus+*P. philberti* Michelotti, fide Monterosato. *Philbertia* has the outer lip thickened or varicose, lirate or dentate within when adult, the pillar usually smooth, the nucleus acute, smooth, and rather elevated; the species are small and the sculpture more or less clathrate or sculptured both axially and spirally.

The nearest group to it is *Glyphostoma*, which is large, with a more brilliant surface, a more fusiform profile, more contracted and emphatically armed aperture and different nucleus. *Philbertia* abounds in shallow temperate waters, while *Glyphostoma*, receding to the Eocene in time, apparently prefers tropical waters and even considerable depths.

#### Genus CALLIOTECTUM Dall, 1889.

A dissection of a better preserved specimen of *C. vernicosum*, the type of this genus, has revealed a minute radula with teeth of the Volutoid type, and the long esophageal caecum characteristic of the

Volutidae, to which family it must be referred as one of the degenerate abyssal forms which have lost their columellar plaits. A magnificent species related to *Calliotectum*, named *Prodallia dalli* and figured by Bartsch in 1915, was dredged in very deep water among the Philippines.

The other named groups among the Turritidae of the Pacific coast are not involved in synonymic difficulties and therefore need not be discussed here.

*Preliminary list of names heretofore applied to divisions of the Turritidae with references and notes.*

*Acamptogenotia* ROVERETO, 1899, see *Pseudotoma* Bellardi not Stephens.

*Aforia* DALL, 1889, Bull. Mus. Comp. Zool., vol. 18, p. 99. Type, *Pl. circinata* Dall.

*Agathotoma* COSSMANN, Rev. Crit. Pal., 3me Année, p. 1, 1889. New name for *Ditoma* Bellardi 1875, not Illiger, 1807. See Essais, vol. 3, p. 192, 1899.

? *Aliceia* DAUTZENBERG and FISCHER, Mém. Soc. Zool. de France, vol. 10, p. 182, 1897. Type, *A. aenigmatica* Dautzenberg and Fischer, Mém. Soc. Zool. de France, vol. 10, p. 182, 1897, Azores. Nepionic shell, perhaps the young of a *Clavatula*.

*Amblyacrum* COSSMANN, 1889, Cat. Ill., p. 295. Essais, vol. 2, p. 137. Type, *Pl. rugosa* Deshayes. This is a *Surcula* with short canal, moderate anal sulcus and Drillia-like sculpture. No varix behind outer lip.

*Ancistrosyrinx* DALL, 1881, Bull. Mus. Comp. Zool., vol. 9, p. 53. Type, *A. elegans* Dall. ?=*Cochlespira* Conrad, 1865, Amer. Journ. Conch., vol. 1, p. 20.

*Anna* RISSO, 1826, Eur. MÉR., p. 214, fig. 68. Type, *A. massena* Risso, Eur. MÉR., p. 214=*Buccinum scacchianum* Philippi. Referred to Pleurotomidae by various authors but really a *Cantharus*.

*Antiplanes* DALL, Proc. U. S. Nat. Mus., vol. 24, No. 1264, p. 513, 1902. Type, *Surcula perversa* Gabb, 1865.

*Aphanitoma* BELLARDI, Mon. Pl., 1875, p. 241. Type, *Turbinella labellum* (Bonelli), Bellardi and Michaud. Fischer, Man., p. 594, 1883, names as example *A. pecchiolii* Bellardi. Resembles a small *Genota* with two plications on the pillar. Zittel, Man. (French ed.), p. 286, 1887, accepts the type as *Pl. labellum*. Not *Aphanitoma* Cossmann. 1883.

*Apiotoma* COSSMANN, 1889, Cat. Illustr., p. 263. Essais Pal., vol. 2, p. 73, 1896. Type, *Pl. pirulata* Deshayes. Eocene. Slender *Genota*-like shell.

*Asthenotoma* HARRIS and BURROWS, Eocene and Olig. Paris, 1891, p. 113. New name for *Oligotoma* Bellardi, 1875, not of Westwood, 1836. Type, *Pl. basterotii* Desmoulins, 1842. Shell small, like small *Drillia* without varices, lirate outer lip, simple sinuate pillar. Sculpture of spiral cords. Miocene.

*Atoma* BELLARDI, Mon. Pl., 1875, p. 324. Type, *A. hypothetica* Bellardi, Mon. Pl., 1875, p. 324 (1847). Not of Latreille 1796 (Arachn.)=*Enatoma* Rovereto, Syn. 1899, p. 3.

*Awateria* SUTER, New Zealand Geol. Surv., Pal. Bull. No. 5, pt. 1, p. 57, 1917. Type, *A. streptophora* Suter; Pliocene, New Zealand.

*Bathybela* KOBELT, Icon. Eur., vol. 3, p. 276, 1905. Type, *Thesbia nudator* Locard.

*Bathyclionella* KOBELT, Icon. Eur., vol. 3, p. 279. Type, *Pl. quadruplex* Watson; abyssal. Apparently not related to *Clionella*.

*Bathytoma* HARRIS and BURROWS, Eocene and Olig. Paris, 1891, p. 113, new name for *Dolichotoma* Bellardi, not Hope, 1839. Cf. *Megasurcula* Casey, and *Cryptoconus* v. Koenen.

**Beisselia** HOLTZAPFEL, 1889. (Not seen.) Type, *Koenenia speciosa* Holtzapfel, Senonian; new name for *Koenenia* Holtzapfel, 1888, not of Beushausen; nor of Grassi, 1885. This is a pleurotomoid resembling a very large coarse *Fusinus*.

**Bela** GRAY, 1847. Ann. Mag. Nat. Hist., vol. 20, p. 276. No type selected, includes *Pl. nebula*, Proc. Zool. Soc., 1847, p. 134, *nebula* selected by Gray as type. H. and A. Adams, 1853, cite *Ishnula* Clark MS. as a synonym of *Bela*, but Gray, Ann. Mag. Nat. Hist., vol. 20, p. 134, had already referred it to *Mangilia* Risso as synonym. *Bela* equals *Ocnopota* Mörch, Yoldi Cat., pt. 1, p. 73, 1852, and *Lora*, Gistel, 1848.

**Bellardia**  
**Bellardiella** } see *Philbertia*.

**Bellaspira** CONRAD, 1867. Amer. Journ. Conch., vol. 3, p. 261. Type, *Mangilia virginiana* Conrad, Yorktown Miocene.

**Belomitra** FISCHER, 1882. Man., p. 592. Journ. de Conchyl., vol. 30, p. 275. Type, *B. paradoxa* Fischer. Abyssal. Resembles *Bela* but has plicate pillar.

**Borsonella** DALL., 1908. Mus. Comp. Zool. Bull., vol. 43, p. 258. Type, *Borsonia dalli* Arnold.

**Borsonia** BELLARDI, 1838. Bull. Soc. Géol. de France, p. 30, vol. 10.

2nd sect. Type, *B. prima* Bell. (2 plaits).

1st sect. Type, *B. bicoronata* Bell. (1 plait).

3rd sect. Type, *B. uniplicata* Nyst. (1 plait).

**Brachytoma** SWAINSON, Man., 1840, p. 314. Types, *Pl. stromboides* Sowerby, Man., fig. 381, and *B. castanea* Swainson, after Chemnitz. Both these species are *Drillia* Auct. and both are probably *Clavatulus*. *B. castanea* is, perhaps, identical with Gray's type (*umbilicata*) of *Drillia*.

**Buchozia** BAYAN. (Not seen.) Type, *Auricula citharella* Lamarck. Eocene. + *Etallonia* Deshayes, 1862, not Oppel, 1861, + *Zafra* Cossmann, 1892, not of A. Adams, 1860. Very like *Bela* but somewhat heavier.

**Calvatula** PRESTON, Zool. Record, vol. 49, 1912, Moll., p. 61. Err. typogr. for *Clavatula*.

**Candelabrum** DALL, 1878, Bull. Mus. Comp. Zool., vol. 5, p. 61, not of Blainville, 1830. See *Ancistrogyrinx* Dall, 1881.

**Catenotoma** COSSMANN and PISSARO, Bull. Soc. Géol. Normand., vol. 19, p. 39, 1900. Type, *Surcula catenata* Lamarck. Eocene.

**Chauvetia** MONTEROSATO, Nom. Conch. Medit., 1884, p. 137, new name for *Nesaca* Risso, 1826, not Lamarck. 1812-16. Type is stated to be *Buccinum candidissimum* Philippi. This species appears to be a cancellate *Anachis*. Cossmann refers it to *Donovania* but the type is not of that genus. In 1890 Monterosato refers it to the group of *Raphitoma vulpecula*.

**Cirillia** MONTEROSATO, 1884. Nom. Conch. Medit., p. 133. Type, *Pl. linearis* Montagu; + *Leufroyia* Monterosato, p. 134 (type, *Pl. leufroyi* Michaud). ?=*Anna* Risso, Eur. MÉR., p. 126 (*A. massena* Risso). *Anna* equals *Cantharus* sp. Nucleus short, the last whorl unicarinate; the surface roughly sculptured, outer lip thickened, not lirate, pillar simple.

**Citharopsis** PEASE, Amer. Journ. Conch., vol. 4, p. 97, 1868, 1st sp. *Cithara ornata* Pease, Amer. Journ. Conch., vol. 4, p. 97, 1868. Small Indopacific *Anachis*; not *Cytharopsis* A. Adams, 1865.

**Clathrodrillia** DALL, 1918. Type, *Pl. gibbosa* Reeve.

**Clathromangilia** MONTEROSATO, Nom. Conch. Medit., p. 131, 1884. Monotype *Pl. granum* Philippi, 1844. Coarsely clathrate, small; varicose outer lip.

**Clathurella** CARPENTER, Maz. Cat., 1857, p. 399. New name for *Defrancia* Millet, 1827, not Bronn (1825). Type, *Defrancia pagoda* Millet, selected by Dall, Mus. Comp. Zool. Bull., vol. 43, p. 259, 1908, no type having previously been designated. For species commonly referred to *Clathurella*, see under *Philbertia* Monterosato. Not *Clathurella* Cossmann, 1896 (*C. rava* Hinds) nor of Bucquoy,



Dautzenberg and Dollfus, 1882. Type, *C. purpurca* Montagu (= *philberti* + *purpurca* + *corbis* Monterosato, 1884.)

*Clathurina* MELVILL, Apr., 1917, Trans. Mal. Soc., p. 185. Type, *Pl. foraminata* Reeve. See *Philbertia*.

*Clavatula* LAMARCK, Syst., 1801, p. 84. Type, *C. coronata* Lamarck, Syst., 1801, p. 84, not of Swainson, Man., 1840, p. 314 (*sulcata* Swainson, Man., 1840, p. 314). < *Pleurotoma* Lamarck, 1822. + *Clavicantha* Swainson, 1840, Man., p. 314. ? + *Drillia* Gray, 1838, Ann., vol. 1, p. 28. Type, *D. umbilicata* Gray. Not *Drillia* Auct. + *Brachytoma* Swainson, 1840, Man., p. 314; (*castanea* Swainson).

*Clavatula* SWAINSON, 1840, Man., p. 314. Type, *C. sulcata* Swainson, Man., p. 314, 1840, = *Murex gibbosus* Born, Index, 1778; Test. Mus. Vind., 1780, p. 321; + *Pl. flavidula* Lamarck var., Kiener, Icon., p. 31, 1839; = *Drillia* Auct., not *Clavatula* Lamarck, 1801.

*Clavicantha* SWAINSON, 1840, Man., p. 314; = *Clavatula* Lamarck, 1801, not Swainson, 1840.

*Clavosurecula* SCHEPMAN, *Siboga* Exp., livr. 64, Mon. 49' e, p. 429, 1913. Type, *C. sibogae* Schepman. Resembles *Steiraxis*.

*Clavus* MONTFORT, Conch., p. 434, 1810. Type, *C. flammulatus* Montfort. Conch., vol. 2, p. 434, 1810, not *Clava* Martyn et al. < *Drillia* Auct. A smooth species with depressed anal fasciole and tubercles on the shoulder, spire slender, last whorl short, with subsutural callus, sharp outer lip and plain columella.

*Clinura* BELLAARDI, Mon. Pl., 1875, p. 204. Type, 1st sect. *Pl. calliope* Brocchi, 1814. (short spire.) 2nd sect. *Pl. elegantissima* Forbes. (long spire.)

*Clionella* GRAY, Proc. Zool. Soc., 1847, p. 153. Type, *Buccinum sinuatum* Born, 1778; = *Melotoma* Swainson, 1840, not Anthony, 1847.

*Cochlespira* CONRAD, 1865, Amer. Journ. Conch., vol. 1, p. 20. Type, *Pl. cristata* Conrad. Oligocene.

*Cochlespirella* CASEY, Proc. Acad. Nat. Sci. Phila., 1903, p. 279. Type, *Fusus nanus* Lea, Eocene, and includes *Pl. insignifica* Heilprin. Cossmann, Essais, p. 221, 1906, on the basis of *insignifica* refers this to *Peratotoma*.

*Cochlespiropsis* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 143, 1st sp. *Pl. engonata* Conrad, Eocene. Cossmann, Essais, p. 221, 1906, unites this with *Rouaultia*.

*Columbarium* v. MARTENS, Conch. Mitt., vol. 2, p. 105, 1881. Type, *Pleurotoma* (*Col.*) *spinicincta* v. Martens, Conch., Mitt., vol. 2, p. 105, 1881.

*Comarmondia* see *Philbertia*.

*Conopleura* HINDS, Voy. Sulph., Moll., 1844, p. 24. Type, *C. striata* Hinds, Voy. Sulph., Moll., p. 24.

*Cordieria* ROUAULT, 1848, Bull. Soc. Géol. de France, sér. 2, vol. 5, p. 207. Type not indicated. Tryon, Struct. Conch., 1883, cites *Pl. pyrenaica* Rouault. Cossmann, Essais, vol. 2, p. 98, 1906, names *C. iberica* Rouault. Not *Cordieria* Monterosato, 1884. Two plaits on the pillar as restricted.

*Cordieria* MONTEROSATO, Nom. Conch. Medit., 1884, p. 131. 1st sp. *Pl. reticulata* (Renieri) Brocchi; 2nd *Pl. cordieri* Payraudeau, the latter cited as type in Moll. Roussillon, vol. 2, p. 767, 1908. Not *Cordieria* Rouault, 1848. Close to *Philbertia* Monterosato.

*Coronia* GREGORIO, Mon. Claib., 1890, p. 23. 1st sp. *Pl. acutirostra* Conrad; = *Gemmula* Weinkauff, 1875, not *Coronia* Ehrenberg, 1840.

*Crassispira* SWAINSON, Man., 1840, p. 313. Type, *Pleurotoma bottae* Valenciennes in Kiener, 1839 + *fasciata* Swainson, Man., 1840, p. 313.

*Crassopleura* MONTEROSATO, Nom. Conch. Medit., 1884, p. 127; monotype *Pl. maravignae* Bivona, 1888, + *P. incisa* Reeve, 1843.

*Crossopleura* MONTEROSATO, Journ. de Conchyl., 1879, p. 117, 1890. Monotype, *Pl. maravignae* Bivona.

**Cryptoconus** v. KOENEN, 1867. Type, *Pl. filosa* Lamarek. Ueber *Conorbis* und *Cryptoconus* v. Koenen, 1867, p. 11, fig. 8 (not seen); cf. Arch. Naturg., vol. 2, p. 211, 1880. +*Megasurcula* Casey, 1904.

**Cryptogemma** DALL, 1918. Type, *Gemmula benthina* Dall.

**Cymatosyrinx** DALL, 1889, Bull. Mus. Comp. Zool., vol. 18, p. 95. Type, *Pl. lunata* Lea.

**Cythara** SCHUMACHER, Essais, p. 245, 1817. Type, *C. striata* Schumacher = *Cancellaria citharella* Lamarek 1822. This includes the species with short spire, denticulate outer lip and striated pillar, the aperture narrow. Cossmann states this name was used before Schumacher binomially (Essais, p. 121), but this appears to be erroneous.

**Cytharella** MONTEROSATO, Bull. Mal. Ital., 1875, p. 6. Type, *Pleurotoma brandi* Payraudeau. Cf. *Ditoma* Bellardi, 1875. = *Mangilia* Cossmann, not Risso. These are the small species with thickened but not lirate or denticulate outer lip and pillar; the spire usually shorter than the aperture, the surface longitudinally ribbed, smooth, or spirally minutely sculptured; nucleus small, smooth. Not *Cytherella* Rupert Jones, 1849, Crustacea, from *Cythere*.

**Cytharopsis** A. ADAMS, 1865, Ann. Mag. Nat. Hist., vol. 15, p. 323. Type, *Mangilia cancellata* A. Adams. Not *Citharopsis* Pease, Oct., 1868.

**Daphnella** HINDS, Voy. Sulph., Moll., 1844, p. 25. Type, *D. limnaeiformis* Kiener.

**Daphnellopsis** SCHEPMAN, *Siboga* Exp. livr. 64, Mon. 49' e., p. 449, 1913. Type, *D. lamellosa* Schepman, *Siboga* Exp. livr. 64, p. 449, 1913. Like *Daphnella* but with heavily callous lips.

**Daphnobela** COSSMANN, 1896, Essais, p. 93. Type, *Buccinum junceum* Sowerby. Eocene. Shell extremely like *Aesopus*.

**Defrancia** MILLET, see *Clathrella* Carpenter.

**Diagasma** MELVILL, Proc. Mal. Soc. London, 1917, p. 141. Type, *Daphnella epicharta* Melvill and Standen.

**Diploconus** SANDBERGER. (Not seen.) Not *Diploconus* Haeckel (Protista), 1860; nor of Candèze (Coleoptera) 1860, nor of Zittel, Cephalopoda, 1868 (not seen).

**Ditoma** BELLARDI, 1875, Mon. Pleur., p. 295. Not *Ditoma* Illiger, 1807, Coleoptera. Type, *Mangilia angusta* Jan. ? + *Cytharella* Monterosato, q. v. = *Agathotoma* Cossmann, Rev. Crit. Pal., 1889, vol. 3, p. 45. Also Essais, vol. 3, p. 192.

**Dolichotoma** BELLARDI, Mon. terz. Piem., p. 229, 1875. Monotype, *Pl. cataphracta* Brocchi. Not *Dolichotoma* Hope, 1839. = *Bathytoma* Harris and Burrows, 1891, new name (not needed). = *Cryptoconus* v. Koenen (1840, *vide* Zittel). 1867 *vide* Fischer. + *Megasurcula* Casey, 1904; = *Dotigotoma* Weinkauff, 1876, Jahrb. Mal. Ges., p. 8.

**Dotigotoma** WEINKAUFF, 1876, Jahrb. Mal. Ges., p. 8, = *Dolichotoma* Bellardi not Hope.

**Donovania** BUCQUOY, DAUTZENBERG, and DOLLFUS, 1882, Moll. Roussillon, vol. 1, p. 112. Type, *D. minima* Montagu = *brunneum* Donovan, 1804. *Buccinum minimum* Montagu, 1803, is preoccupied by *B. minimum* Turton, 1802, *vide* Iredale, 1915. + *Lachesis* Risso, 1826, not Daudin, 1804; + *Nesaea* Risso, 1826, not Lamarek, 1816.

**Drillia** GRAY, see *Clavatula* Lamarek and *Clavus* Montfort. Also *Crassispira* Swainson, and *Clavatula* Swainson not Lamarek. *Drillia* Gray, Ann. Nat. Hist., vol. 1, 1838, p. 28. Type, *D. umbilicata* Gray. *Brachytoma* Swainson, 1840 (*eastanea*), is synonymous. *Brachitoma* (*strombiformis* Sowerby) is also a *Drillia*.

**Drilliola** (MONTEROSATO, MS.) COSSMANN, 1903, Essais, vol. 5, p. 188. Type, *D. emendata* Monterosato, Medit. Cossmann states that it goes between (his)

*Ecithara* and *Clathurella* and has a flattened later spirally sculptured protoconch.

*Elaeocyma* DALL, 1918. Type, *Drillia empyrosia* Dall.

*Enatoma* ROVERETO, 1899, see *Atoma*.

*Endiatoma* COSSMANN, 1896, Essais, p. 106. Type, *Oligotoma quadricincta* Cossmann; = *Aphanitoma* Cossmann, 1883, not Bellardi, 1875. Eocene.

*Eoclathurella* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 166, 1st sp. *E. jacksonica* Casey, Trans. St. Louis Acad., vol. 14, 1904, p. 166. Eocene. He also refers to this group *Mangilia meridionalis* O. Meyer. Upper Claibornian. Cossmann, 1906, Essais, p. 223, suspends judgment on account of unfigured type.

*Eodrillia* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 159, "Among the typical species" are *depygis* Conrad, *lonsdalii* Lea, *surculopsis* Gregorio, and *teana* Conrad (Casey). Cossmann, 1906, Essais, p. 223, unites this with *Eopleurotoma*.

*Eopleurotoma* COSSMANN, 1889, Cat. Illustr., p. 269. Type, *Pl. multicostata* Deshayes. Eocene. Casey refers *Pl. nupera* Conrad, *gemmata* Conrad, *hoeninghausi* Lea, and *properugosa* Gregorio to this group (1904). Cossmann, 1906, Essais, p. 223, refers *Eodrillia* Casey, to this section.

*Eosurcula* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 145, 1st sp. *Pl. moorei* Gabb. Eocene. Cossmann, Essais, p. 222, 1906, admits this as section of *Surcula* s. s. on the ground of a narrower protoconch.

*Epalxis* COSSMANN, 1889, Cat. Ill., p. 254. 1896, Essais, vol. 2, p. 103, type named *Pleur. crenulata* Lamarek. Eocene. Small, obscure plait on pillar, shell in general recalling some of the *Mangilias*.

*Etallonia* DESHAYES, 1862. Paris basin, vol. 2, p. 605. Type, *E. prisca* Deshayes. Eocene. Of the two species one is an *Acteon* or related Opisthobranch, the second a pleurotomoid recalling *Gymnobela*. = *Buchozia* Bayan, 1873, new name. Not *Etallonia* Oppel, 1861.

*Eubela* DALL, 1889, Bull. Mus. Comp. Zool., vol. 18, pp. 102-6. Type, *Daphnella limacina* Dall.

*Euchelodon* GABB, Journ. Acad. Nat. Sci. Phila., vol. 4, 1860, p. 379. Type, *E. reticulata* Gabb, Journ. Acad. Nat. Sci. Phila., vol. 4, pl. 667, fig. 18. Shell much like *Glyphostoma* but attenuated in front, outer lip not expanded, the aperture narrow and columella denticulate in the adult. Cossmann spells this *Euchilodon*, ascribes the genus to Heilprin, cites *E. crenocarinatus* Heilprin, 1880, as type! Essais, vol. 3, p. 189, Apr., 1889.

*Ecithara* FISCHER, 1883, Man., p. 593. New name for *Cythara* Schumacher, 1817, not Klein! Klein being nonbinomial this name is useless. The type-mentioned by Fischer is *Mangilia stromboides* Reeve.

*Eucyclotoma* BOETTGER, 1895, Nachrbl. d. Mal. Ges., p. 55. Type, *Clathurella bicarinata* Reeve, *file* Cossmann. (Should be Pease, not Reeve.) Indopacific. Shell with two very prominent carinae, beaded, with Clathurelloid aperture. Cossmann names *bicarinata* as type. Boettger gives (1) *tricarinata* Reeve, and (2) *bicarinata* Pease, but does not designate either as type.

*Exilia* CONRAD, Journ. Acad. Nat. Sci. Phila., ser. 2, vol. 4, p. 291, pl. 47, fig. 34, 1860. Type, *E. pergracilis* Conrad. Referred by Conrad to Pleurotomidae but really Chrysodomoid.

*Folineaea* MONTEROSATO, Nom. Conch. Medit., 1884, p. 136. Type, *Buccinum tefebvrii* Maravigna, 1840, + *B. folineaea* Philippi, Moll. Sic., vol. 2, pl. 27, fig. 10. Hardly differs from *Clathromangilia* and is placed as a synonym of *Donovania* by Cossmann. In 1890 Monterosato spells it *Folinia*. Not *Folinia* Crosse, 1868.

*Fusitoma* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 163. Type, *F. siphon* Casey (ex Aldrich), Trans. St. Louis Acad., vol. 14, 1904, p. 163. Cossmann, 1906, Essais, p. 223, suspends judgment for want of data.

*Gemmula* WEINKAUFF, 1875, Jahrb. d. Deutsche Mal. Ges., vol. 2, p. 287. Type, *Pl. gemmata* Hinds. No type selected in 1875. Cossmann, 1896, selects *gem-*



*mata*. +*Hemipleurotoma* Cossmann, *vide* Casey, 1904. Cossmann, 1906, holds to the division. Not *Gemmula* Deshayes (in Dall) 1902.

**Genota** H. and A. ADAMS, Gen. vol. 1, p. 89, 1853. +*Genotia* Tryon, Fischer, etc. em. Type, *Pl. mitriformis* Wood, first of two species.

**Ginnania** MONTEROSATO, Nom. Conch. Medit., 1884, p. 127, 1st sp. *Pl. fuscata* Philippi; 2nd *Pl. laevigatum* Philippi. The last is selected as type in Moll. Roussillon, vol. 2, p. 766, 1908. =*Mangilia* (*nebula* type) s. s.

**Glyphostoma** GABB, Proc. Acad. Nat. Sci. Phila., 1872, p. 270; type, *G. dentifera* Gabb. *Mangiliinae*. ?+*Lienardia* Jousseau, 1884, *Cl. rubida* Hinds. For relations see *Philbertia* and *Clathurella* Cossmann not Carpenter.

**Glyptotoma** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 140, 1st sp. *Pl. crassiplicata* Gabb. Eocene. Two or three plaits on the pillar, median sinus with nodulous fasciole.

**Gosavia** STOLICZKA, 1865. Volutoid placed with Pleurotomidae by Cossmann.

**Gynobela** VERRILL, 1884, Trans. Conn. Acad., vol. 6, p. 157. Type, *G. engonia* Verrill, fixed by Cossmann, 1896. No type selected by Verrill. Inoperculate, *Bela*-form, or swollen; nucleus cancellate; abyssal. Verrill's first species is *G. engonia*, his second and figured species is *curta*.

**Haedropleura** (MONTEROSATO) Bucquoy, Dautzenberg, and Dollfus, Moll. Roussillon, 1882, p. 110. Type, *Murex septangularis* Montagu, 1808. Resembles a *Cythereella* with elevated spire. Operculate.

**Helenella** CASEY, Trans. St. Louis Acad., vol. 4, 1904, p. 167. Type (1st of two sp.) *Pl. multigranosa* E. A. Smith, St. Helena. Two plaits on the pillar. Recalls *Mitronorpha*; very small shells.

**Hemilienardia** BOETTGER, Nachrbl. d. Deutsche Mal. Ges., 1895, p. 52. Type, *Clathurella malleti* Recluz. Very short, stumpy, inflated, strongly cross-sculptured, bright-colored, small shells.

**Hemipleurotoma** COSSMANN, 1889, Cat. Ill., p. 264. Type, *Pl. archimedis* Bellardi. In *Essais Pal.*, 1896, p. 78, Cossmann proposes another type, *Pl. dentacula* Basterot. He regards *Coronia* Gregorio as synonymous.

**Hemisureula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 150. Type, *Pl. silicata* Aldrich. Gregg's Landing Eocene. Cossmann, 1906, *Essais*, p. 222, rejects this on the ground of insufficient characters.

**Heterotoma** Auct. after *Heterotomatae* of Bellardi, Moll. Piem. Mon. Pleur., 1847, p. 7. Not *Heterotoma* Latreille, 1829. Bellardi did not propose a genus *Heterotoma* but named a group in the plural number. In any case, the name was more than once preoccupied.

**Homotoma** BELLARDI, 1875, Mon. Pl., p. 296. No type selected. Fischer, Man., p. 593, 1883, selects *H. textilis* Brocchi. Bellardi's species are heterogeneous. *Textilis* resembles very much a small *Fusinus*. Equals *Peratotoma* Harris and Burrows, 1891. Not *Homotoma* Guerin-Ménéville, 1829. In his preliminary synopsis, 1875, Bellardi divides *Homotoma* into Sect. I, Type, *H. reticulata* Renieri, and Sect. II, Type, *H. semicostata* Bellardi.

**Irenosyrinx** DALL, 1908, Mus. Comp. Zool. Bull., vol. 43, p. 257. Type, *Pleurotomella goodii* Dall.

**Ishnula** (Clark MS.), GRAY, Proc. Zool. Soc., 1847, p. 134. Not *Ischnula* Mörch, Mem. Soc. Mal. Belg., vol. 4, 1869, p. 21, type *Pl. impressa* Mörch (= *Bela*).

? **Kenyonia** BRAZIER, Proc. Linn. Soc. N. S. Wales, vol. 21, p. 346, 1896 (not seen). Type, *K. pulcherrima* Brazier, Proc. Linn. Soc., N. S. Wales, vol. 21, 1896, p. 347. New Hebrides.

**Koenenia** HOLTZAPFEL 1888, Paleontographica, vol. 34, Moll. der Sachsener Kreide, 1st abth., p. 91. Type, *K. speciosa* Holtzapfel. Cretaceous. Not *Koenenia* Grassi, 1885. Equals *Beisselia* Holtzapfel, 1889.

**Kylix** DALL, 1918. Type, *K. alcyone* Dall.

**Leptosurcula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 157. Type, *Pl. beadata* Harris. Eocene. Cossmann, 1906, Essais, p. 223, judgment suspended.

**Leucosyrinx** DALL, 1889, Mus. Comp. Zool. Bull., vol. 18, p. 75. Type, *Pl. verrilli* Dall.

**Leufroyia** MONTEROSATO, 1884. Nom. Conch. Medit., p. 134. Type, *Pl. leufroyi* Michaud.

**Lienardia** JOUSSEAUME, Bull. Soc. Zool. de France, vol. 8, p. xl, 1884. Type, *Clathurella rubida* Hinds, Indopacific. Also, Bull. Soc. Zool. de France, vol. 9, p. 184, 1884. Cf. *Glyphostoma* Gabb.

**Lophiotoma** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 130. 1st sp. *Pl. tigrina* Lamarek. Recent. Cossmann, Essais, 1906, p. 220, refers this to *Pleurotoma* s. s.

**Lora** GISTEL, Naturg., 1848, p. ix, sole example *Tritonium viridulum* Fabricius, which is a *Bela*, probably *B. exarata* Möller, according to the type-specimen.

**Lymangilia** MONTEROSATO, 1917, Bull. Soc. Zool. Ital., ser. 3, vol. 4, (separate copies, p. 25). Type, *Pl. taeniata* Deshayes, Mediterranean.

**Lyrosurcula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 156. 1st sp. *L. elegans* Casey, Claibornian. Cossmann, 1906, Essais, p. 222, expresses no opinion as type is not figured.

**Mangelia** RISSO, Eur. MÉR., 1826, vol. 4, p. 219; no type mentioned. 1st sp. *M. costulata* Risso, equals *nebula* Montagu, taken as type by Bellardi, 1847; Kobelt, 1905; Dall, 1908; etc. + *Raphitoma* Weinkauff, Conch. Cab., 1876, types *nebula* Montagu and *harpula* Brocchi, not *Raphitoma* Bellardi, 1847, but Bellardi, in 1875, p. 323, states that *M. vulpecula* Brocchi is typical *Mangilia*. Shell elevated, spire longer than the aperture, longitudinally ribbed, spirally minutely sculptured; pillar smooth, outer lip thin, simple, notch at the suture, nucleus smooth, short, last turn finely cancellate, no operculum. Cossmann substitutes a new type (Essais, p. 114, 1896) *Pl. vauquelinii* Payraudeau for *Mangilia* and unites with it *Clathromangilia* Monterosato, 1884; *Cytharella* Monterosato, 1875; *Pseudoraphitoma* Boettger, 1895; and *Paraclathurella* Boettger, 1895. Thus Cossmann's group = *Cytharella*. *Bela* (Leach) Gray, 1847, is a synonym of *Mangilia* with the same type.

**Mangiliella** BUCQUOY, DAUTZENBERG, and DOLLFUS, Moll. Roussillon, p. 108, 1882. Type, *Mangilia multilineolata* Deshayes. Like *Haedropleura* but more slender and not operculate.

**Megasureula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 147. Founded on the recent *Surcula carpenteriana* and *tryoni* of Gabb. No type designated. Recent, California. + *Megalosurcula* Cossmann, 1906, Essais, p. 222. = *Cryptotoconus* v. Koenen, 1867. Cossmann, Essais, p. 222, refers it to *Bathytoma*.

**Melatoma** SWAINSON, Mal., 1840, p. 342. Type, *M. costata* Swainson, Mal., 1840, p. 342, fig. 104. + *Clionella* Gray, Proc. Zool. Soc., 1847, p. 153. Not *Melatoma* Anthony, 1847.

**Mesochilotoma** SEELEY, Ann. Mag. Nat. Hist., ser. 3, vol. 7, p. 284, 1861. Monotype *M. striata* Seeley, Ann. Mag. Nat. Hist., ser. 3, vol. 7, p. 284, 1861. Cretaceous. Equals *Surculites* Conrad, 1865, q. v.

**Microdrillia** CASEY, Proc. Acad. Nat. Sci. Phila., 1903, p. 276. 1st sp. *Pl. cossmanni* O. Meyer (= *meyeri* Cossmann) Eocene. Cossmann, 1906, Essais, pp. 223-4, admits this as a section of *Asthenotoma*.

**Microsurcula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 154. Type, *M. nucleola* Casey. Includes *Pl. georgei* Harris. (Woods Bluff.) Cossmann, Essais, p. 222, 1906, expresses no opinion as the type is unfigured.

**Mitromorpha** A. ADAMS, Ann. Mag. Nat. Hist., ser. 3, 1865, vol. 15, pp. 182 and 322. Type, *M. filosa* Carpenter, Ann. Mag. Nat. Hist., ser. 3, vol. 15, 1865, p. 182. Position doubtful, usually classed near the *Mitras*. See Iredale, Proc. Mal. Soc., vol. 12, p. 328, 1917.

**Moniliopsis** CONRAD, 1865, Amer. Journ. Conch., vol. 1, p. 143. Type, *Pl. elaborata* Conrad, 1832, Fos. Sh. Tert. form. 1, p. 52, pl. 17, fig. 19. Recalls *Surcula incermis* Carpenter but has a sutural band and much more emphatic and elegant sculpture. Conrad's figure is very inadequate.

**Nannodiella** DALL, 1918. Type, *N. nana* Dall.

**Nicolia** GREGORIO (not seen). Not *Nicolia* Malmgren, Verm. 1865.

**Oenopota** MÖRCH, Yoldi Cat., vol. 1, p. 78, 1852. 1st sp. *Pl. pleurotomaria* Couthouy. + *Onopota* H. and A. Adams, 1858, Gen., p. 654. + *Beta* auct. not (Leach MS.) Gray, 1847. = *Lora* Gistel, 1848.

**Oligotoma** BELLARDI, 1875, p. 235. Type, *O. meneghinii* Mayer. ? = *Pl. baseteroti* Desmoulin, 1842. Not *Oligotoma* Westwood, 1836. See *Asthenotoma* Harris and Burrows, Eoc. and Olig. Paris, 1897, p. 48, new name for *Oligotoma* Bellardi preoccupied.

**Onopota**. See *Oenopota* Mörch.

**Orthosurcula** CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 151. Types named are *Pl. longiforma* Aldrich (Red Bluff) and *Surcula transversaria* Lamarck. Cossmann, 1906, Essais, p. 222, refers this to *Surcula* s. s.

? **Otitoma** JOUSSEAUME, 1898, Le Naturaliste, p. 106. Type, *O. otitoma* Jousseaume, Le Naturaliste, 1898, p. 106. Red Sea (not seen). ? = *Philbertia* Monterosato, 1884.

**Otocheilus** CONRAD, Amer. Journ. Conch., vol. 1, 1865, p. 24. Type, *Fulgoraria mississippiensis* Conrad, 1848. Eocene. Cited by Tryon Man., p. 159. This is placed by Tryon in Pleurotomidae but is really a synonym or section of *Lyria* in the Volutidae where Conrad placed it.

**Oxyacrum** COSSMANN, 1889, Cat. Illustr., p. 274; 1896, Essais Pal., p. 82. Type *Pl. obliterated* Deshayes. Eocene.

**Paraclathurella** BOETTGER, 1895, Nachrbl. d. Deutsche Mal. Ges., pp. 52, 56. Type, *Pl. gracilentia* Reeve, + *Pl. fusoides* Reeve. Philippines. Small slender Indopacific Clathurellas in the usually accepted sense.

**Peratotoma** HARRIS and BURROWS, 1891, Eoc. and Olig. Paris, p. 113, new name for *Homotoma* Bellardi, 1875, not Guerin-Ménéville, 1829-38.

**Perrona** SCHIUMACHER, Essai, p. 218, 1817. Type, *Murex perron* Chemnitz, Conch. Cab., vol. 10, figs. 1573-4, + *Perronia* Gray, Syn., 1842. + *Perronium* Blainville, Dict. Sci., 1825, vol. 38, p. 528. The type equals *P. tritonum* Schumacher, Essai, p. 218, 1817, + *Pleurotoma perronii* Reeve, 1843, + *Murex perron* Gmelin, 1792.

**Phandella** CASEY, Proc. Acad. Nat. Sci. Phila., 1903, p. 272. Monotype, *P. nepionia* Casey, Proc. Acad. Nat. Sci. Phila., 1903, p. 272. Upper Vicksburgian. Cossmann, 1906, Essais, p. 223, suspends judgment for want of data.

**Philbertia** MONTEROSATO, Sin. Medit. 1884, p. 132. Type, *Pleurotoma bicolor* Risso, + *philberti* Michaud, + *purpurea* (Montagu) Bucquoy, Dautzenberg, and Dollfus, var. *bicolor*. *Heterotomatae* Bellardi, 1847, not *Heterotoma* Hartmann, 1844; + *Bellardia* Bucquoy, Dautzenberg, and Dollfus, 1882, not of Mayer, 1870; + *Bellardiella* Fischer, Man., Dec. 1883 (n. n. for *Bellardia*), not Tapp. Canefri, July, 1883, type, *Pl. gracilis*; + *Comarmondia* Monterosato, 1884, n. n. (p. 135) for *Bellardiella*; + *Clathurina* Melvill, Apr. 1917, type, *Pleurotoma foraminata* Reeve; + *Heterostoma* Cossmann, 1896, not of Bellardi, 1847. Group equivalent to *Clathurella* Auct. not DeFrance. Mangiliinae. *Philbertia* has the outer lip thickened, irate or dentate within when adult, pillar smooth, nucleus smooth, rather elevated and acute. Differs from *Glyphostoma* by smaller size, less brilliant surface, less fusiform profile, less contracted mouth and different nucleus.

**Phlyctaenia** COSSMANN, Cat. Illustr., 1889, p. 245. Type indicated *Borsonia nodularis* Deshayes. Eocene of Paris. Not *Phlyctaenia* Hübner, 1816. Lepidop-



tera. +*Phlyctis* Harris and Burrows, 1881, new name. Equals *Cordieria* Rouault, 1849.

*Phlyctis* HARRIS and BURROWS, 1881, Eoc. & Olig. Paris, p. 113. New name for *Phlyctaenia* Cossmann, 1889, not Hübner, 1816. Equals *Cordieria* Rouault, 1849.

*Pholidotoma* COSSMANN, 1896, Essais, pt. 2, p. 111. Type, *Fusus subheptagonus* Orbigny. This belongs to the Volutidae, near *Volutoderma* et al., though placed in Pleurotomidae by Cossmann.

*Phymorhynchus* DALL, 1908, Mus. Comp. Zool. Bull., vol. 43, p. 258. Type, *Pleurotomella castanea* Dall.

*Pleurobela* KOBELT, 1904, Icon. Eur., vol. 3, p. 301. Sect. of *Belomitra* for *B. spelta* (Monterosato) Locard. = *Pleurobela* Monterosato MS.

*Pleurofusua* GREGORIO, Mon. Claib., p. 33, 1890. Type, *Pl. longirostropis* Gregorio, Mon. Claib., p. 33, 1890, a variety of *Pl. servata* Conrad. Species resemble a coarsely spirally sculptured *Fusinus*. Cossmann makes it a synonym of *Surcula* (*javana* type).

*Pleuroliria* GREGORIO, Mon. Claib., p. 38, 1890. Type, *Pl. supramirifica* Gregorio, Mon. Claib., p. 38, 1890, = *Pl. cochlearis* Conrad, var. A *Pleurotoma*, type of *albida* Perry, but smaller, the nucleus multispiral and acute (Casey).

*Pleurotoma* LAMARCK, Prodrôme, 1799, p. 73. Monotype, *Murex babylonius* Linnaeus, Amboyna. +*Pleurotome* Link, Rostock Samml., 1807, p. 118. Same type.

*Pleurotomella* VERRILL, 1873, Amer. Journ. Sci., ser. 3, vol. 5, p. 15. Type, *P. packardi* Verrill.

*Pleurotomina* BECK, Amtl. Ber. Nat., Kiel, 1846 (1847), p. 115; new name for *Defrancia* Millet not Bronn. *Bela impressa* Mörch, sole species.

*Pleurotomoides* BRONN, Ital. Tert. Geb., 1831; *Lethaea* Geogn., vol. 2, 1838, pp. 1062, 1064; new name for *Defrancia* Millet not Bronn.

*Pontiothauma* E. A. SMITH, Ann. Mag. Nat. Hist., vol. 16, p. 2, 1894. 1st species, *P. mirabile* Smith. Malabar coast, 1,250 fathoms. Report on anatomy see S. Pace, Journ. Linn. Soc., Zool., vol. 28, p. 455, 1903.

*Protosurcula* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 144. Type, *Pl. gabbi* Conrad. Eocene, Texas. Cossmann, Essais, p. 221, 1906, unites this with *Surcula* (*javana*) s. s.

*Pseudodaphnella* BOETTGER, 1895, Nachrbl. d. Deutsche Mal. Ges., p. 58. Type, *Clathurella philippinensis* Reeve. Shell a good deal like an *Amphissa*.

*Pseudomata* v. MARTENS, Sitzb. d. Ges. für Naturf. Freunde zu Berlin, p. 19, 1901. Type, *Pl. chuni* v. Martens.

*Pseudomelatoma* DALL, 1918. Type, *Pl. penicillata* Carpenter.

*Pseudoraphitoma* BOETTGER, 1895, Nachrbl. d. Deutsche Mal. Ges., p. 56. Sole type, *Clathurella fairbanki* Nevill. A *Clathurella* with *Gemmula* sculpture and *Drillia*-like outer lip.

*Pseudotoma* BELLARDI, Mém. Pl. 1875, p. 209. No type selected. 1st sp. *P. laevis* Bellardi, which is mentioned by Fischer, Man., 1883, p. 589. Dall, 1908, adopted *Pleurotoma intorta* Brocchi as type. In Bellardi's preliminary synopsis of Pleurotomidae, 1875, he mentions *Pl. intorta* as the type and it is the sole species given. Not *Pseudotomia* Stephens, 1852. Lepidoptera. Equals *Acamp-togenotia* Rovereto, 1899, Syn., p. 3.

*Pusionella* GRAY, Proc. Zool. Soc., 1847, p. 137. Type, *Murex pusio* Born, 1778. +*Netrum* Philippi, Abb., 1850, p. 118. *Fusus nifat* Adanson.

*Raphitoma* BELLARDI (1847) Mon. Pleur., pp. 10, 84 (1875) no type fixed. Not *Raphitoma* Bellardi, 1878, Mon. Pleur., p. 323, where *vulpecula* Brocchi, which is a typical *Mangilia*, is cited by Bellardi as the type of the genus making it a synonym of *Mangilia*. *Raphitoma*, as first established, was very hetero-

geneous. In his preliminary synopsis Bellardi (1875) divides this group into two sections, I, type *R. vulpecula* Brocchi, and II, type *R. harpula* Brocchi. G. O. Sars, Norv., 1878, p. 218, tries to restrict *Raphitoma* (Bellardi) to spirally sculptured species. Type, *R. anceps* (Eichwald), = *Pl. boreale* Lovèn + *Defrancia ieres* Forbes. The cancellate species he would leave in *Clathurella*. Cf. *Teres* Bucquoy, Dautzenberg, and Dollfus, also with *R. anceps* as type.

*Rissomangilia* MONTEROSATO, 1917, Bull. Soc. Zool. Ital., ser. 3, vol. 4, (separate copies, p. 24). Type, *Pl. bertrandii* Payraudeau. Mediterranean. = *Cythereella* Monterosato, 1875.

*Rouaultia* BELLARDI, 1877, Mon. Pl., pt. 2, p. 223. Type *Pl. subterebalis* Bellardi and Sismonda. 1 feeble plait on pillar, otherwise resembling *Gemmula*. This is *Cochlespira* Cossmann, 1896, not of Conrad. Cossmann, 1906, Essais, p. 221, unites *Cochlespiropsis* Casey (*engonata* Conrad) with *Rouaultia*.

*Ruscula* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 161. 1st sp. *Pl. plicata* Lea, Claibornian. Cossmann, 1906, Essais, p. 223, suspends judgment in default of data.

*Savatieria* ROCHBRUNE and MABILLE, 1885, Bull. Soc. Phil. Paris, ser. 7, vol. 9, p. 101. Type, *S. frigida*, Rochbrune and Mabille; also Moll. Cap Horn., page II, 65, pl. 2, fig. 5, 1889. This, though referred to Pleurotinidae (sic), is obviously an *Anachis*. Not all the species referred to this genus by Strehel, Zool. Jahrb., 1905, are congeneric with the original type.

*Scobinella* CONRAD, Journ. Acad. Nat. Sci. Phila., ser. 2, vol. 1, p. 120, Aug., 1848. Type, *S. coelata* Conrad, pl. 12, figs. 8, 9. Vicksburg. + *Zelia* Gregorio, 1890, not Desvoidy, 1830. Shell with four or five plaits, more like a slender *Mitra* than a *Pleurotoma*.

*Sinistrella* O. MEYER, 1887, Senckenb. Ber., p. 18. Cossmann, Essais, pt. 2, p. 110. Type, "*Triforis*" *americanus* Aldrich. Eocene. Small, sinistral; spirally beaded. Cossmann (Essais, vol. 5, p. 120) regards it as a sinistral form of his *Trypanotoma*, 1893.

*Sistenope* COSSMANN, 1889, Cat. Illustr., p. 293. Essais, vol. 2, p. 133, 1896. Type, *Raphitoma polycopa* Cossmann. Equals *Pleurotomella* Verrill, 1873, *vide* Cossmann, 1896.

*Smithia*, MONTEROSATO, Nom. Conch. Medit., 1884, p. 128. Monotype, *Pl. smithii* Forbes, = *striolata* Scacchi. + *Smithiella* Monterosato, 1890, = *Beta* s. s. Not *Smithia* Maltzan, 1883, nor of Edwards and Haime, 1851.

*Smithiella* MONTEROSATO in Moll. Roussillon, vol. 2, p. 766, (1890?) 1908. New name for *Smithia* Monterosato, not Maltzan, 1883. Spelled *Smithiella* in Kobelt, Icon, Eur., vol. 3, p. 381, 1905.

*Spergo* DALL, Proc. U. S. Nat. Mus., vol. 17, p. 680, 1895. Type, *S. glandini-formis* Dall. Hawaii.

*Spirotropis* G. O. SARS, 1878, Moll. Reg. Arct. Norv., p. 242. Type, *S. carinata* Philippi.

*Steiraxis* DALL, 1895, Proc. U. S. Nat. Mus., 1895, p. 15. Type, *Pl. (St.) aulaca* Dall. Paucispiral operculum.

*Strombina* GREGORIO, 1890 (not of Bronn, 1849). Mon. Cl. Ib., p. 25. 1st sp. *Pl. stromboides* Lamarck. Equals *Gemmula* Weinkauff.

*Suavodrellia* DALL, 1918; type, *Drillia kenicottii* Dall. Alaska.

*Subulata* VON MARTENS, Sitzb. Ges. Naturf. Freunde zu Berlin, 1901, p. 17. *Pl. bisinuata* v. Martens. Off East Africa. Martens refers this to Anton, 1839, but Anton did not use the word in a nomenclatorial sense.

*Surcula*, see *Turricula*.

*Surculina* DALL, 1908, Mus. Comp. Zool., Bull., vol. 43, p. 260. Type, *S. blanda* Dall.

*Sureulites* CONRAD, Amer. Journ. Conch., vol. 1, p. 213, 1865. Type, *S. annosa* Conrad, Amer. Journ. Conch., vol. 1, 1865, pl. 20, fig. 9, Shark River, N. J. Eocene. Doubtful shell; aperture characters not known, sharp angle at shoulder, sutural band, sculpture feeble.

*Suruloma* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 153. Type, *Pl. tabulata* Conrad (+*coelata* Lea). Claibornian. Cossmann, Essais, p. 222, 1906, makes this a section of *Amblyacrum* with wider sinus, bent canal and siphonal fasciole with umbilical chink.

*Taranis* JEFFREYS, 1870, Ann. Mag. Nat. Hist., 4th ser., vol. 5, p. 447. Type, *T. mörchi* Malm.

*Teleochilus* HARRIS, Austr. Tert. Moll., 1897, p. 64. Type, *Daphnella gracilima* Tenison Woods, 1876. Tertiary of Australia. No sulcus. Shell somewhat like a thin *Dibaplia*.

*Terebritoma* COSSMANN, 1892, Annuaire Géologique. Type, *Mangelia solitaria* Whitfield. Cretaceous of Syria. Small, short canal, spirally corded.

*Teres* BUCQUOY, DAUTZENBERG, and DOLLFUS, Moll. Roussillou, vol. 1, p. 86, 1882. Type, *Pl. anceps* Eichwald. +*Teretia* Norman, new name, 1888. ?+*Tomopleura* Casey, 1904.

*Thesbia* JEFFREYS, 1867, Brit. Conch., vol. 4, p. 359. Type, *T. nana* Jeffreys ex Lovén. *Tritonium* ? *nanum* Lovén, Ind. Moll. Scand., p. 12. *Mangelia nana* Forbes and Hanley, vol. 3, p. 461, pl. 112, fig. 8. Shell columbelloid, resembling *C. rosacea* Gould, radula pleurotomoid.

*Thetidos* HEDLEY, Funafuti Moll. Mem. Austr. Mus., vol. 3, pt. 7, p. 473, 1899. Type, *T. morsura* Hedley, Funafuti Island.

*Tomella* SWAINSON, Man., p. 314, 1840. Type, *Pl. lineata* Lamarck.

*Tomopleura* CASEY, St. Louis Acad., 1904, p. 138. Type, *Pl. nivea* Philippi, 1851. =*Teres* Bucquoy, Dautzenberg, and Dollfus, 1882, p. 86, *Pl. anceps* Eichwald. +*Teretia* Norman, 1888, as emendation. *P. nivea* is unfigured, from the description it should resemble *albida* Perry, *virgo* Lamarck and similar species in sculpture but with a shorter canal, smaller size and more posterior notch. Cossmann, 1906, Essais, p. 220, refers this to *Drillia* s. s.

*Trachelochetus* COSSMANN, Cat. Illustr., p. 254 (1890 *vide* Zool. Record). Essais Pal., vol. 2, 1896. Type, *Pl. desmia* Edwards. Eocene. Equals *Gemmula* Weinkauff, 1875.

*Tripia* GREGORIO, Mon. Claib., p. 37, 1890. Type, *Pl. anteatripla* Gregorio, Mon. Claib., 1890, p. 38. Type, a small *Surcula*, feebly sculptured. In 1896, Cossmann refers it to *Crassispira* Swainson as synonym. Cossmann restores it to good standing, Essais, vol. 5, p. 188, 1903.

*Tritonimangilia* K. MARTIN, 1914, Leiden Samml. Geol. Reichmus., vol. 2, p. 126. Type, ———, Upper Oligocene, Java. (Not seen.)

*Tropisurcula* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 153. 1st sp. *Drillia caseyi* Aldrich. (Red Bluff.) +*Tropidosurcula* Cossmann, em. Essais, 1906, p. 222. Cossmann expresses no opinion for want of data.

*Trypanotoma* COSSMANN (1893?) Essais, p. 109, 1896. Type, *Pl. terebriformis* O. Meyer, Eocene. Differs from *Oligotoma* (equals *Asthenotoma*) only by faint axial sculpture.

*Turricula* SCHUMACHER, Essai, p. 217, 1817. Type, *T. flammea* Schumacher. +*tornatus* Dillwyn, 1817, not of Bolten, 1798. (Not *Clavatula flammea* Hinds, 1844.) +*Surcula* H. & A. Adams. Gen., 1853, vol. 1, p. 88. Type, *Murex javanus* Linnaeus. +*Surgula* Weinkauff, Conch. Cab., p. 7, 1875.

*Turris* BOLTEN, 1798, Mus. Bolt., p. 123. Type, *T. babylonius* Linnaeus. Not *Turris* Montfort, Conch., 1810. +*Pleurotoma* Lamarck, 1799, Prodr., p. 73. same type. +*Lophiotoma* Casey, 1904, p. 130, no type selected; 1st sp. *Pl. tigrina* Lamarck. +*Tomopleura* Casey, Trans. St. Louis Acad., 1904, p. 138, *P. nivea* Philippi.



*Tylotia* MELVILL, Proc. Mal. Soc., vol. 12, p. 160, 1917; type, *Pleurotoma auriculifera* Lamarck; new name for *Clavus* Auct., not of Montfort.

*Typhlomangelia* (M. Sars MS.) G. O. SARS. Moll. Norv., p. 241, 1878. Type, *Pl. nivalis* Lovèn. Pleurotominae.

*Varicobela* CASEY, Trans. St. Louis Acad., vol. 14, 1904, p. 162. Type, *Strombus smithi* Aldrich. (Red Bluff.) Cossmann, 1906, Essais, p. 223, suspends judgment for want of data.

*Veprecula* MELVILL, Proc. Mal. Soc., vol. 12, p. 141, 1917. No type mentioned; p. 188, type cited, *V. sykesii* Melvill and Standen.

*Vielliersia* MONTEROSATO, Nom. Conch., Medit., 1884, p. 128. Type, *Murex attenuata* Montagu, *Pl. vielliersi* Michaud, 1829. (Typographical error for *Villiersia*.) Equals *Villiersiella* Monterosato in Journ. de Conchyl., 1879, p. 117, 1890. Hardly differs from typical *Mangilia*. Not *Villiersia* Orbigny, 1837.

*Villiersiella* MONTEROSATO in Kobelt, Icon. Eur., vol. 3, p. 380, 1905. New name for *Villiersia* Monterosato, 1884, not of Orbigny, 1837. (*Villiersia*.)

*Zafra* A. ADAMS, 1860, Ann. Mag. Nat. Hist., vol. 6, p. 331. Not *Zafra* Cossmann, 1892. Type, *Z. mitraeformis* A. Adams. Columbella-like small forms. Cf. also *Teleochilus* Harris. The *Zafrae* seem to be ribbed, the *Teleochili* smooth or nearly so, recalling *Bela laevigata*.

*Zelia* GREGORIO, Mon. Claib., p. 44, 1890. Type, *Borsonia* (*Zelia*) *sativa* Gregorio. Pillar triplicate, outer lip internally lirate, exterior elegantly sculptured. Not *Zelia* Desvoidy, 1830.

*Zetekia* DALL, 1918; type, *Z. denticulata* Dall. Panama.

The following changes of names have been found necessary:

*Pleurotoma sello* new name for *biseriata* E. A. Smith, 1882, not of Conrad, 1834.

*Pleurotoma aesara* new name for *asperulata* E. A. Smith, 1882, not of Lamarck, 1822.

*Pleurotoma aglaia* new name for *crassa* E. A. Smith, 1888, not of Edwards, 1856.

*Pleurotoma agatho* new name for *flexuosa* E. A. Smith, 1882, not of Munster, 1835.

*Pleurotoma alcippe* new name for *parilis* E. A. Smith, 1888, not of Edwards, 1860.

*Pleurotoma amymone* new name for *parva* E. A. Smith, 1888, not of Conrad, 1830.

*Pleurotoma antiopc* new name for *recta* E. A. Smith, 1888, not of Anton, 1839.

*Pleurotoma arethusa* new name for *reticulosa* E. A. Smith, 1882, not of Edwards, 1860.

*Pleurotoma roseotincta* new name for *rosobasis* Pilsbry, 1902, not of E. A. Smith, 1888.

*Pleurotoma berenice* new name for *spinosa* E. A. Smith, 1882, not of DeFrance, 1826.

*Pleurotoma clymene* new name for *tenella* E. A. Smith, 1882, not of Mayer, 1858.

*Pleurotoma enna* new name for *unifasciata* E. A. Smith, 1888, not of Deshayes, 1833.

*Pleurotoma glauce* new name for *ventricosa* E. A. Smith, 1888, not of Deshayes, 1833.