necesssary to resort to the more varied polypidom for the basis of a method to arrange it into families and genera. Many such methods have been proposed, but in general so little are they in harmony with the structure of the ani­mated tenants that they are of little value. Of the more recent ones none appears to us so good, as no one is so comprehensive, as that of the celebrated Ehrenberg, an outline of which is exhibited in the following table. We have only to remark, that the microscopic polythalamous shells which Ehrenberg arranges in the class for the first time, have been usually referred to the cephalopodous mollusca, where evidently they had no claim to be placed ; and very lately Dujardin has contended, in opposition to Ehrenberg, that the animalcules inhabiting them are not of higher organization than the homogeneous and gelatinous Infusoria.@@1

Bryozoa.

Animalia asphvcta, tubo cibario simplici, sacciformi aut tubuliformi, vera corporis articulatione nulla aut sensim numerosinre, corporis forma gemmis aut novis articulis accedentibus sensim aucta, hinc indefinita, nunquam sponte dividua, omnia et sin­gula verisimiliter periodice ovipara, ideoque hermaphrodita.

Ordo I.—Polthalamia.

Libere vagantia et loricata. *Monosomatia.*

Familia I. Miliolina.

Genera 2. ? Miliola, ? Gromia.

Familia II. Nodosarina.

Gen. 11. Glandulina, Mucronina, Nodosaria, Orthocerina, Dentalina, Lingulina, Frondicularia, Rimulina, Vaginulina, Planularia, Marginulina.

Familia III. Textularina.

Gen. 6. Bigenerina, ? Dimorρhina, Textularia, Grammostomum *(Vulvularia),* Polymorphina, Virgulina.

Familia IV. Uvellina.

Gen. 11. Guttulina (et *Globulina),* Uvigerina, Bulimina, Valvulina, Rosalina, Clavulina, Globigerina, Pyrulina, Sphæroidina. Familia V. Rotalina.

Gen. 22. Operculina, Soldania, Planorbulina, Rotalia, Trochu- lina, ? Spirulina, Calcarina, Pleurotrema, Planulina, Discorbis, Omphalophacus, ? Gyroidina, Truncatulina, Lenticulina, Nonioniua, Cristellaria, Siderolina, Dendritina, Robulina, Anomalina, Saracenaria, Cassidulina.

Familia VI. Plicatilia.

Gen. 6. Biloculina, Spiroloculina, Triloculina, Articulina, Quinqueloculina, Adelosina.

*Polysomatia.*

Familia VII. Asterodiscina.

Gen. 6. Asterodiscus, Lunulites, Orbitulites, Cupularia, Flustrella.

Familia VIII. Soritina.

Gen. 2. Sorites, Amphisorus.

Familia IX. Frumentarina.

Gen. 3. ? Dactylopora, ? Ovulites, ? Polytripe. Familia X. Helicosorina.

Gen. 5. Peneroplis, Pavonine, Vertebralina, Orbiculina, ? Heterostegina.

Familia XI. Helicotrochina.

Gen. 3. Polystomella, ? Amphistegina, ? Geoponus.

Familia XII. Alveolinea.

Gen. 2. Melonia, Alveolina. Familia XIII. Fλbularixa.

Gen. 2. Fabularia, Coscinospira.

Onno II Gymnocoræ.

Libere vagantes, nudæ.

Familia I. Cristatellina.

Gen. 2. Cristatella, Zoobotryon.

Ordo III—Thallofodia.

Stolonibus thallove membranaceo affixa, incrustantia nec adnata, sed loricata.

Familia I. Halcyoxellea.

Gen. 8. Halcyonella, Vesicularia, Bowerbankia, Farrella (= *Lagenella),* Valkeria, Stephanidium, n. G. Dynamene, Halodac­tylus (= *Alcyonidium).*

Familia II. Cornularina. Gen. 1. ? Cornularia.

Familia III. Escharina.

Gen. 5. Eschara, Melicertina (= *Afelicerita),* Crisis, Acamarchis, Notamia.

Familia IV. Celleporina.

Gen. 5. Cellepora, Flustra, Membranipora, Briolophus, n. G. Apsendesia.

Familia V. Auloforina.

Gen. 1. Tubulipora. Ordo IV.—Scleropodia.

Stolonibus destitute, excreto fulcro axique anorganicis firmiter affixa eisque fruticulosa.

Familia I. Myrioforina.

Gen. 9. Hornera, Idmonea, Retipora, Distichopora, Myriopora, Tilesia, Cricopora, Ceriopora, Spiropora.

Familia II. ? Antipathina.

Gen. 1. Antipathes.

This extensive class contains few or perhaps no species that contribute directly to the use of man, or interest him by their applications to the arts on which he prides him­self. Their instincts and habits are obscure ; and although the beauty and variety of their polypidoms is singularly great, the pattern is on too minute a scale to have ever engaged vulgar attention. Their influence on the earth’s surface is however not inferior to that of any class of ani­mals whatever. Large formations of limestone, of chalk and chalk-marl, and extensive banks of sand, have been the result of their active life, and prodigious multiplications, continued over untold ages. “ Many, and probably all, white-chalk rocks,” says Ehrenberg, “ are the produce of microscopic coral-animalcules, which are mostly quite in­visible to the naked eye, possessing calcareous shells of 1/24 to 1/288 line in magnitude, and of which much more than one million are well preserved in each cubic inch ; that is, much more than ten millions in one pound of chalk.”@@8

The Radiated Polypes, or Anthozoa of Ehrenberg, present us with a greater diversity of structures than the molluscans. In all, the body is perforated superiorly with the larger circular opening into the digestive cavity, and surmounted with a coronet of tentacula ; but the structure of the stomach, and the disposition of the tentacula, vary so much, that if our classification would follow and reflect a representation of the principal modifications of this va­riety, we are constrained to subdivide the class into three sections as follows :

I. Helianthoida. *Polypes* single or aggregate, free or permanently attached, fleshy, naked, or encrusted with a calcareous *polypidom,* the upper surface of which is crossed with radiating lamellæ ; mouth encircled with tubulous ten­tacula ; stomach membranous, plaited ; intestine 0, anus 0 ; oviparous, the ovaries internal.

II. Asteroida. *Polypes* compound, the mouth encir­cled with eight fringed tentacula; stomach membranous, with dependent vasculiform appendages; intestine 0, anus 0 ; reproductive gemmules produced interiorly. *Po­lype-mass* variable in form, free or permanently attached, carnose, generally strengthened with a horny or calcareous *axis,* enveloped with the gelatinous or creto-gelatinous crust in which the polype-cells are immersed, and which open on the surface in a starred fashion with eight rays.

III. Hydroida. *Polypes* compound, rarely single and naked, the mouth encircled with roughish filiform tenta­cula ; stomach without proper parietes ; intestine 0, anus 0 ; reproductive gemmules pullulating from the body, and naked, or contained in external vesicles. *Polypidoms* homy, fistular, more or less phytoidal, fixed, external.

@@@1 “ Recherches sur les Organismes inférieurs, par F. Dujardin,” in the 4th and following volumes of the *Annales des Sciences Naturelles,* seconde série.

*@@@3 Annals of Natural History* for June 1841.