

ANIMALS. 1. **Hydrozoans.** — Fig. 750, *Graptolithus Clintonensis* H.

2. **Actinozoans.** — Figs. 746, 747, *Zaphrentis bilateralis* H.; *Favosites favosus*, *Favistella favosidea* H., *Palæocyclus rotuloides* H., *Cannapora junciformis* H., *Halysites escharoides* Lamk., *H. catenulatus*, species of *Cyathophyllum*, *Streptelasma*, *Aulopora*, *Diphyphyllum*.

3. **Echinoderms.** — *Caryocrinus*, but rare.

4. **Molluscoids.** — (a) *Bryozoans.* — Fig. 751, *Fenestella prisca* Lonsdale; *Ptilodictya*, *Stictopora*, many species.

(b) *Brachiopods.* — Species of *Lingula*, *Orthis*, *Plectambonites*, *Rhynchonella*, *Spirifer*, *Chonetes*, and *Pentamerus*; Fig. 752, *Pentamerus oblongus* Sow.; some specimens are twice the size of the figure; the interior of the shell is shown in Figs. 753, 753 a; Figs. 754, a, *Atrypa reticularis* Linn.; Figs. 755, a, *Hyattella congesta* Con. (= *Camarrella congesta*); Fig. 756, *Chonetes cornutus*.

5. **Mollusks.** — (a) *Lamellibranchs.* — Fig. 757, *Avicula rhomboidea* H.; *A. emacerata* Con., *Tellinomya machæriiformis* H., abundant.

(b) *Gastropods.* — Fig. 758, *Cyclonema cancellatum* H.; *Bucania trilobata* of the Medina also occurs here, besides other *Gastropods*.

6. **Crustaceans.** — *Homalonotus delphinocephalus*, *Calymene Clintoni* Van., *C. Niagarensis*, *Ceraurus Niagarensis* H., *Phacops trisulcata* H.

(a) *Ostracoids*, or *Bivalve Crustaceans.* — Fig. 789, *Beyrichia symmetrica* H., showing one of the valves; 789 a, same, natural size; *B. spinosa* H., Lockport. (b) *Ceratiocarids.* — *Ceratiocaris Deweyi* H., specimens of the caudal spine, formerly supposed to belong to a Fish, and named *Onchus Deweyi*. *Onchus Clintoni* of Claypole is from the Iron Sandstone stratum of Perry County, Pa. (1884, 1885); that it belonged to a Fish is not certain.

7. **Eurypterids** (*Limuloids*). — *Eurypterus prominens* H.

Among the Clinton species are the following from the Lower Silurian: *Orthis* (*Platystrophia*) *biforata*, *Leptaena* (*Plectambonites*) *sericea*, *Bellerophon bilobatus*, *Calymene callicephala*. The following are known in Europe: *Orthis biforata*, *Atrypa reticularis*, *Cælospira* (*Atrypa*) *hemisphærica* Murch., *Spirifer radiatus* Sow., *Pentamerus oblongus*.

3. Niagara Epoch.

1. **Spongiozoans.** — *Astræospongia*, *Astylospongia*, *Palæomanon* of Rømer in Tennessee, in the upper part of the Niagara (or Meniscus) limestone; *Astræospongia meniscus* is the most abundant. (*Sil. Faun. W. Tenn.*, 1870.)

2. **Hydrozoans.** — *Dictyonema*, common; Fig. 766, *Stromatopora concentrica* Goldf.

3. **Actinozoans.** — Fig. 761, *Chonophyllum Niagarensis* H.; *Streptelasma calyculus* H., *Astrocerium venustum* H., masses often 2 or 3 feet in diameter; *Strombodes gracilis* Bill.; 762, *Favosites Niagarensis* H.; *F. Gothlandicus* Lamk., *F. venustus* H.; 763, *Halysites catenulatus* Linn., *H. escharoides* Lamk., *H. agglomeratus* H.; 764, *Heliolites spiniporus* H.; 765, an enlarged view, showing the 12-rayed cells, and the interval of a cellular character separating them, both of which are distinguishing characteristics of the genus *Heliolites*; *H. interstinctus* Linn., *H. pyriformis* Guettard, *Syringopora retiformis* Bill., *S. multicaulis* H., *Aulopora precisa* H., *A. repens*.

4. **Echinoderms.** — Fig. 767, *Ichthyocrinus lavis* Con., Lockport, sometimes twice as large as the figure; 768, *Caryocrinus ornatus* Say, New York, Wisconsin, and Tennessee, named from *Carya*, the hickory-nut; 769, *Stephanocrinus angulatus* Con., Lockport; a, part of the stem, enlarged; b, joint; c, base of the body, showing the 3 pieces of which it consists; species of *Melocrinus*, *Eucalyptocrinus decorus* Phillips, New York, Kentucky, Tennessee; *Camarocrinus Saffordi* H., Tennessee; *Lecanocrinus*, etc. Also Fig. 444 (page 429), the Cystoid, *Callocystites Jewetti* H.; *Aplocystites elegans* H., *A. Canadensis*, and *A. Huronensis* of Billings, from Anticosti. *Troostocrinus subcylindricus* H. and