Trochoceras of Barrande by Foord, and named *T. Halli* Emm.; Fig. 688, *Trocholites Ammonius* Hall, from the Trenton, at Middleville, N.Y. Whiteaves has described and figured several species of the Orthoceras family from Manitoba, from the vicinity of Winnipeg Lake and elsewhere (1891).

7. **Worms.** — *Serpulites dissolutus* B., Trenton, Canada; *Salterella Billingsi* Saff., Tennessee.

8. **Crustaceans.** — Fig. 689, *Asaphus platycephalus* DeKay; Fig. 690, *Calymene callicephala* Green; *Dalmanites* (*Phacops*) *callicephalus* H.; Fig. 691, *Lichas Trentonensis* Con.; *L. cucullus* M. & W., Illinois; Fig. 692, *Trinucleus concentricus* Eaton; *Ceraurus pleurexanthemus* Green; *Illænus crassicauda* Wahl., New York and Illinois; *I. Taurus* H. Other genera are *Bathyurus*, *Triarthrus*, *Acidaspis*, *Encrinurus*, *Harpes*, *Proetus*.

Fig. 693, *Leperditia fabulites* Con., New York, Canada, and Tennessee; *L. armata* Walc.; *L. Canadensis* Jones; *Beyrichia bella* Walc., Trenton Falls.

9. **Vertebrates.** — For Walcott's account of the discovery of the remains of Fishes in the Trenton of Colorado see *Bull. Geol. Soc.*, iii., 153, March 15, 1892. It was announced to the Biological Society of Washington, at a meeting, February 7, 1891. The remains were first found in the Harding sandstone, near Harding quarry, within a mile of Cañon City. They also occur in Helena Cañon, 18 miles to the north-northeast. The section at the latter place, above the Archæan gneiss, consists of 22½′ of arenaceous limestone with thin layers of chert, containing Upper Cambrian fossils; 51′ of a similar rock, with Calciferous species, of the genera *Ophileta*, *Straparollus*, etc.; 101′ of sandstone — the Harding sandstone — containing the plates of Placoderms and Lower Trenton fossils; 110′ of massive arenaceous limestone; a thin band of Carboniferous limestone. The section is repeated many times in the cañons, removing all doubt, says Walcott, as to the stratigraphic position of the Harding sandstone. There are no strata of the Upper Silurian or Devonian series at either of the localities.

The characteristic species of the Galena limestone include *Receptaculites Oweni* H., *Halysites catenulatus*, *Lingulela Iowensis* Owen, *Clitambonites Americanus* Whitf., *Murchisonia major* H., *Fusispira ventricosa* H., *F. elongata* H., *Maclurea cuneata* Whitf., *M. subrotunda* Whitf.

2. Utica and Hudson Epochs.

Figures representing the supposed terrestrial plants described by Lesquereux from the rocks of the Cincinnati group near Cincinnati, O., and Covington, Ky., are contained on page 198 of the last edition of this work. Dr. Newberry, after an examination of the specimens, published the same year his opinion against them.

1. **Spongiozoans.** — *Cyathophycus reticulatus* Walc. and *C. subsphericus* Walc. from the Utica slate, Oneida County, N.Y. *Trans. Albany Inst.*, x., 18, 1879. Species of *Pasceolus*, *Astylospongia*, *Microspongia*, *Receptaculites*, *Brachiospongia*.

2. **Actinozoans.** — In the Hudson beds, *Favistella stellata* H., Fig. 704; several species of *Columnaria*; Cyathophylloids of the genus *Petraia*, as in the Trenton; also of the genus *Zaphrentis*, *Z. Canadensis* B.; *Halysites gracilis* H., Fig. 705, from Green Bay, Wis.; *Sarcinula*? *obsoleta* H., Fig. 706; *Tetradium fibratum* Saff., from Tennessee, etc., Figs. 707, 707 *a*; *T. cellulosum*, the Birdseye species from Kentucky.

3. **Hydrozoans.** — The species of Graptolites figured on page 510 are a few from the large numbers afforded by the Utica and Hudson shales. The specimens for figures 699, *Cœnograptus gracilis*, and 702, *Dicranograptus ramosus*, besides others, were from the Normanskill shales near Albany. The age of these shales has been questioned by Lapworth on paleontological grounds (*Trans. Roy. Soc. Canada*, iv., pages 167–172). The New York State geologists have considered the beds to be equivalent to the Hudson River, or the Utica shales, or to both. Lapworth refers the Graptolites to his "Cœnograptus zone" of Llandeilo age, equivalent to the Black River and Trenton limestones. The same beds