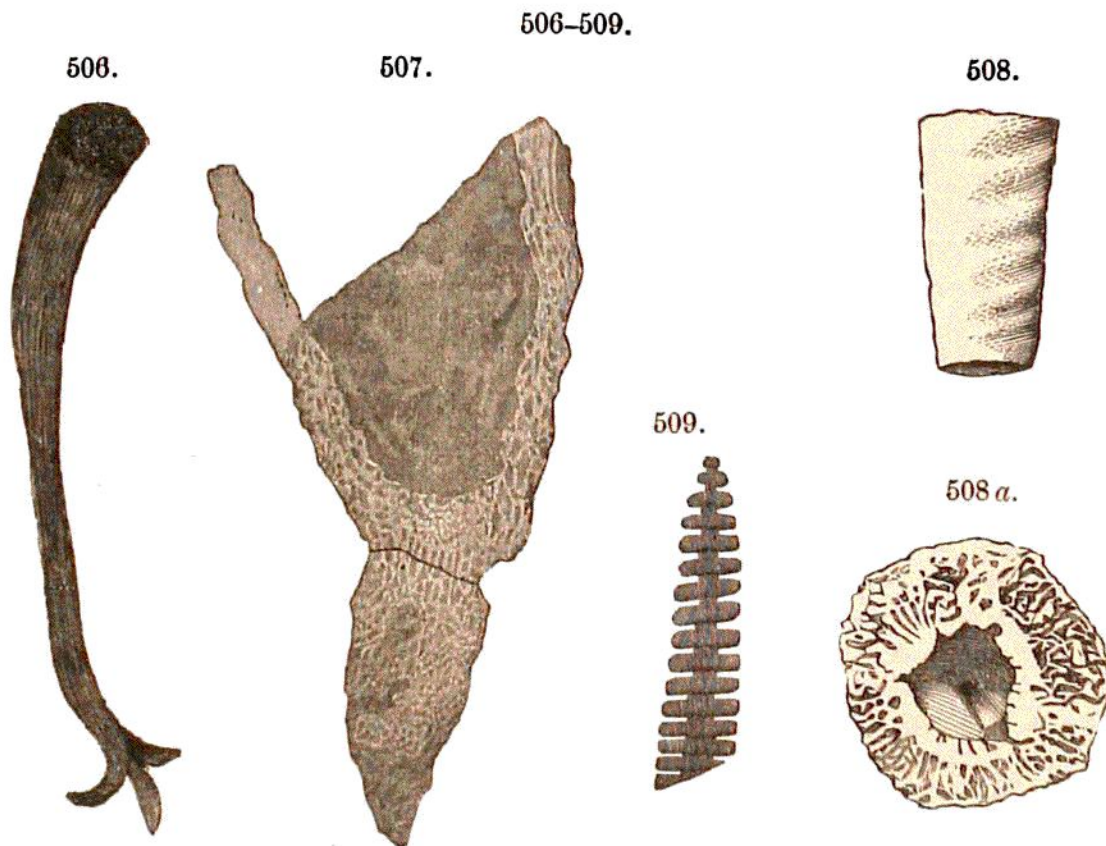


## 1. LOWER CAMBRIAN.

1. **Protozoans.** — No Rhizopod remains have been detected, unless small concretion-like nodules, concentric in structure, occurring crowdedly in a Cambrian limestone in Nevada, are of this nature. They may belong to the genus *Girvanella* (Walcott). See page 501.

2. **Sponges, Corals, Graptolites.** — Fig. 506 represents one of the Lower Cambrian sponges, *Leptomitus Zittelli* of Walcott, from Georgia, Vt.

Figs. 507, 508 are of corals, though supposed, when described, and until investigated microscopically by Hinde, to be Sponges. Fig. 507 represents the *Archæocyathus profundus* of Billings, and 508, 508 *a*, views of *Spirocyathus*



**SPONGE.** — Fig. 506, *Leptomitus Zittelli*. — **CORALS,** 507, *Archæocyathus profundus*; 508, *Spirocyathus Atlanticus* ( $\frac{1}{2}$ ); 508 *a*, transverse section. — **GRAPTOLITE,** 509, *Climacograptus* (?) Emmons. Figs. 506, 509, Walcott; 507, 508, Billings.

*Atlanticus* Billings. One of the early *Graptolites* (so called from the Greek  $\gamma\rho\alpha\phi\omega$ , *write*, because plume-like in form) is represented in Fig. 509, doubtfully placed in the genus *Phyllograptus* by Walcott, under the name *Climacograptus* (?) *Emmonsii*.

3. **Echinoderms.** — Only fragments of Cystoids, related to Middle Cambrian species, have been observed.

4. **Worms.** — Tracks and borings of sea-worms or Annelids are not uncommon. Worm-borings, called *Scolithus* (from the Greek for *worm*), occur in the Lower Cambrian sandstones and through later periods to the present time: no distinction of species or genera can be made out.