

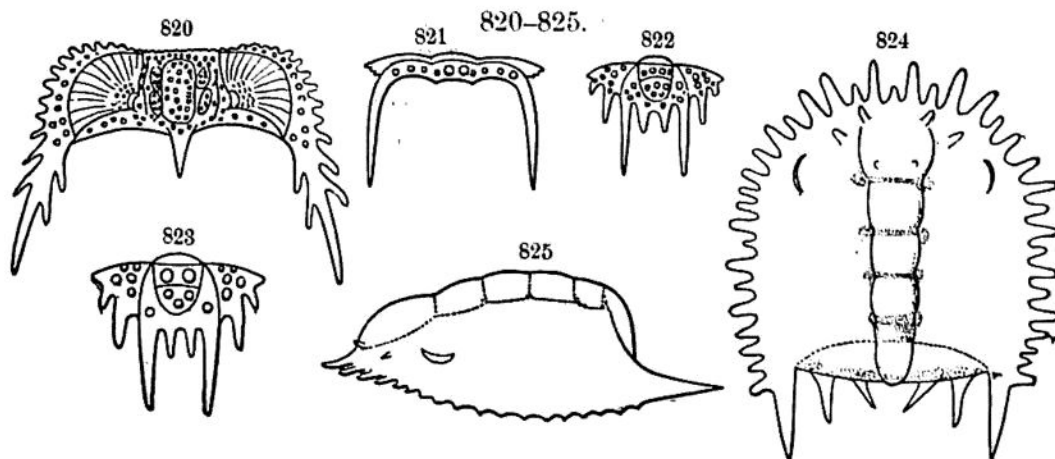
Characteristic Species.

Some of the species of the subdivisions from eastern New York are : —

1. LOWER PENTAMERUS. — *Lepadocrinus Gebhardi*, *Rhynchonella semiplicata*, *Pentamerus galeatus*, *Meristella laevis* (also in the Shaly), *Favosites Helderbergiae*.

2. SHALY LIMESTONE. — *Hemipronites radiatus*, *H. punctuliferus*, *Orthis oblata*, *O. planoconvexa*, *O. varica*, *Eatonia singularis*, *Spirifer macropleurus*, *Sp. perlamellosus*, *Sp. cyclopterus*, *Platyceras ventricosum*, *Dalmanites pleuropteryx*.

3. UPPER PENTAMERUS. — *Pentamerus pseudogaleatus*, *Rhynchonella ventricosa*, *R. nobilis* H.



Acidaspis tuberculata, Fig. 820, upper view of head of an adult ($1\frac{1}{2}$); 821, segment of thorax ($1\frac{1}{2}$); 822, pygidium of adult ($\times \frac{3}{2}$); 823, pygidium of young ($\times 3\frac{3}{4}$); 824, dorsal view of larva ($\times 30$); 825, profile view of same ($\times 30$). Beecher.

Atrypa reticularis and *Leptaena rhomboidalis* of the Niagara are supposed to be the only species that are continued into the Lower Helderberg.

Some of the genera are as follows : —

1. **Spongiozoans.** — *Stromatopora*, very common in the Lower Pentamerus, constituting in some places a bed 3 or 4 feet thick. Also *Ischadites*, *Hindia*, *Receptaculites infundibuliformis*.

2. **Actinozoans.** — *Streptelasma*, *Zaphrentis*, *Michelinia* (begins), *Favosites* (of which *F. Helderbergiae* is often a foot across), *Aulopora*.

3. **Echinoderms.** — *Lepadocrinus*, *Anomalocystites*, *Sphaerocystites*, *Melocrinus*, *Corylocrinus*, *Edriocrinus*, *Homocrinus*, *Coronocrinus*, *Protaster* (*P. Forbesii* H.).

4. **Brachiopods.** — *Orthis* (many species), *Strophomena* (*Leptaena* of Hall, 1892), *Stropheodonta*, *Chonetes* (2), *Rhynchonella* (numerous species), *Pentamerus*, *Eatonia*, *Anastrophia*, *Spirifer* (very many, some with dichotomizing ribs, a feature especially of later time), *Cyrtina*, *Trematospira* (several species), *Meristella*, *Atrypa*, *Rensselaeria*.

5. **Mollusks.** — *Lamellibranchs.* — *Aviculopecten*, *Mytilarca*, *Megambonia*, *Cypricardina*, *Conocardium*.

Gastropods. — *Platyceras*, *Platystoma*, *Holopea*, *Loxonema*, *Murchisonia*, *Pleurotomaria*, *Strophostylus*, *Euomphalus*, *Bucania*.

Cephalopods. — *Orthoceras* of several species, *Oncoceras ovoides* H., *Cyrtoceras*.

Pteropods. — *Conularia*, *Tentaculites*, and *Hyolithes*.

6. **Crustaceans.** — Besides those mentioned, *Bronteus*, *Homalonotus*, *Cyphaspsis*, *Proetus*. The Ostracoid genera, *Leperditia*, *Beyrichia*, *Aechmina*.

The Lower Helderberg beds, near Eastport, southeastern Maine, include *Favosites cervicornis*, *Leptaena rhomboidalis*, *Chonetes Novascoticus*, *Rhynchonella Wilsoni*, *Atrypa reticularis*, *Orbiculioidea tenuilamellata*, *Spirifer sulcatus*, *Orthis elegantula*, *Avicula naviformis*, *Calymene Blumenbachii*, *Homalonotus Dawsoni*, *Conulites flexuosus*, *Tentaculites distans*, *Beyrichia lata*, and others (W. A. Rogers).