

*priscus* Cl., Conodonts, *Echinocaris Whitfieldi* Cl., *E. ? Beecheri* Cl., *Spathiocaris Emersoni* Cl., species of *Eutomis*, *Goniatites intumescens* Beyrich, and many other species of the genus, *Orthoceras pacator* Hall, and other species of *O.*, species of *Bactrites*, *Bactrites ? acicula*, *Hyolithes*, *Tentaculites gracilistriatus*, *Styliolina fissurella* Hall, species of *Macrocheilus*, *Platystoma*, *Pleurotomaria*, *Loxonema*, *Bellerophon*, *Leptodesma*, *Leiopteria*, *Grammysia*, *Macrodon*, *Nucula*, *Ungulina*, *Lunulicardium*, *Cardiola* (*Cardiola retrostriata* abundant), *Pholadella*, *Lingula*, *Chonetes*, *Aulopora*, *Melocrinus Clarki* Williams, also species of fossil wood. The *Styliolina* limestone, in the Genesee shale below, contains the first representatives of the Naples, or *G. intumescens*, fauna; in it, Dawson has identified *Dadoxylon* (*Cordaites*) *Clarki*, *Cladoxylon mirabile* Unger. The fauna and flora are related to that associated with *Goniatites intumescens* in Europe. (J. M. Clarke.)

*Chemung beds of New York and Pennsylvania.* — *Dictyophyton tuberosum*; *Orthis Tioga*, *O. impressa*, *Stropheodonta Cayuta*, *Productella lachrymosa*, *P. hirsuta*, *Rhynchonella contracta*, *Leiorhynchus sinuatum*, *L. mesacostale*, *Spirifer disjunctus*, *Ambocoelia umbonata* var. *gregaria*, *Athyris Angelica*; *Aviculopecten duplicatus*, *Pterinea Chemungensis*, *Ptychopteria Sao*, *P. falcata*, *Leptodesma spinigerum*, *Goniophora Chemungensis*, *Schizodus Chemungensis*, *Grammysia subarcuata*, *G. communis*, *Sphenotus contractus*, *Prorhynchus nasutum*; *Tropidocaris bicarinata*, *Echinocaris socialis*. For descriptions of Chemung fossils see *Pal. N. Y.*, vols. iv., v., vii., viii. (C. E. Beecher.)

*Lamellibranchs of the Middle and Upper Devonian.* — The total number of species of Lamellibranchs described and figured by Hall in vol. v. of the *Palaeontology of New York* is 458; and of these 195 occur in the Hamilton beds, and 263 in the Chemung. The principal genera to which they are referred, and the number of species in each, are as follows — H. signifying Hamilton, and C., Chemung: —

*Actinopteria* (H. 7, C. 10), *Aviculopecten* (H. 13, C. 16), *Conocardium* (H. 4, C. 2), *Cypricardina* (H. 2, C. 1), *Edmondia* (H. 0, C. 7), *Glossites* (H. 1, C. 7), *Goniophora* (H. 7, C. 4), *Grammysia* (H. 15, C. 9), *Leda* (H. 4, C. 0), *Leiopteria* (H. 12, C. 3), *Leptodesma* (H. 2, C. 55), *Lunulicardium* (H. 7, C. 6), *Microdon* (H. 4, C. 2), *Modiomorpha* (H. 10, C. 7), *Mytilarca* (H. 2, C. 8), *Nucula* (H. 9, C. 5), *Nuculites* (H. 5, C. 0), *Ortho-nota* (H. 4, C. 1), *Palawanatina* (H. 0, C. 4), *Palwoneilo* (H. 10, C. 10), *Panenka* (H. 12, C. 3), *Paracyclas* (H. 4, C. 5), *Prorhynchus* (H. 0, C. 3), *Pterinea* (H. 1, C. 10), *Ptychopteria* (H. 0, C. 22), *Schizodus* (H. 3, C. 8), *Sphenotus* (H. 5, C. 5).

E. D. Cope has announced (1892), from the bed containing Fish remains, of Chemung age, in Mansfield, Tioga County, Pa., besides *Holoptychius Americanus*, the species *Bothriolepis nitida* Leidy, *Holonema rugosum* Clapp., *Ganorhynchus oblongum* Cope, *Holoptychius giganteus* Ag.; in Leroy, Bradford County, Pa., the bed probably Chemung, *H. rugosus*, *H. horridus* Cope, *H. filiosus* Cope; at a neighboring locality, *Bothriolepis minor* Newb., *Coccosteus macromus* Cope, and fragments of *Osteolepis* or *Megalichthys*. *Phaneropleuron curtum* of Whiteaves (Fig. 969) has been made by Traquair into a new genus, named *Scaumenacia*, on the basis of a slight difference, in the dorsal or dorso-caudal fin, between it and the original *Phaneropleuron* of Huxley. Plates of the large pterichthyoid fish, *Holonema rugosum*, have been found in the red sandstones of the Oneonta group, near Oxford, N.Y. (See *Proc. A. A. A. S.*, vol. 39, 1890, page 337. Also, *Am. Geol.*, vol. vi., page 226.)

The minute teeth, long of doubtful ownership, called *Conodonts*, now regarded as the teeth of Annelids, occur of several species in the Genesee shales of Erie County, N.Y., at North Evans, including the following described by Hinde (*Q. J. G. Soc.*, 1877): *Prioniodus angulatus*, *P. acicularis*, *P. armatus*, *P. spicatus*, *P. erraticus*, *Polygnathus dubius*, *P. nasutus*, *P. princeps*, *P. palmatus*, *P. punctatus*. A plate is devoted to figures of *Conodonts* (Pl. 57), in *Ohio Pal.*, ii., 1875.

*Additional Devonian plants.* — The following are some of the species of St. John, New Brunswick; those that occur also at Gaspé are marked with an asterisk, and those also in New York or farther West, with a dagger.