

thin, inflated, oblong, brownish species, obscurely radiated, and tinged with yellow posteriorly. A darker and less elongated form from Meech's Creek is said to be "identical with shells determined by Dr. Lea as his *A. Footiana*," which are now in Mr. Gray's cabinet.

*Anodonta lacustris*, Lea, inhabits lakes in the County of Ottawa. It is brown when aged, but young shells are greenish yellow. The tuberoses on the beaks are arranged in close, concentric waves. Every specimen found in September, 1881, in Kidder's Lake, in Masham, was infested by hundreds of small mites, which moved freely over the surface of the gills. The same lake, which is about thirty miles from Ottawa, contains a plant, *Eriocaulon septangulare*, not recorded in the "Flora Ottawensis" of Mr. Fletcher.

*Anodonta fragilis*, Lamarck, is common in Meech's Lake, near the outlet. It is an elongated, thin, depressed shell of a yellowish colour, with a straight dorsal margin, and pearly iridescent nacre. That the form regarded as *lacustris* is distinct from this appears to me somewhat doubtful. *U. cariosus* is the only other shell which may not be correctly determined.

Its form found in the gills of *A. fragilis* in Meech's Lake, is as large as a pellet of buck-shot, and differs vastly from any species I have ever seen. Mr. Tyrrell will doubtless soon publish a description of it.

*Anodonta fluviatilis*, Dillwyn, occurs in great numbers in McKay's Lake, New Edinburgh, and in the Rideau Canal; but is rare in the Ottawa, where it is found only in bays in which there is little or no current. In color it ranges from a bright grass green to an olive-brown, with concentric yellow bands, and innumerable narrow, obscure rays. Sometimes it attains a length of six inches, but is generally about a third smaller. Its large size and brilliant coloring conspire to make it the finest *Anodonta* we have. Toward the end of April, when the ice has melted, and before the water has been let into the Canal, very fine specimens may be collected at St. Louis Dam. Still finer, though smaller shells are to be obtained—but only by dredging—in McKay's Lake.

Repeated microscopic examinations of the young of this shell lead me to believe that the only observations which I find published on the young of the *Unionidae* are not altogether correct. In his "Descriptions of the embryonic forms of thirty-eight species of the *Unionidae*," Dr. Lea says: "The base in all the species always presented the anterior and the posterior margins equal, which is not the case with any of the species when fully grown. That is, if a perpendicular line be raised from the middle of the basal margin to the middle of the dorsal line, the right and the left divisions will be exactly symmetrical." Now, I thought that precisely the contrary was evident when the young of *A. fluviatilis* were observed under a high power; and Mr. Tyrrell and Mr. Fletcher, whose attention was called to the matter, thought so too. Dr. Lea, however, to whom I sent some of the young, wrote that on carefully examining them, he failed to notice the asymmetrical difference which I described. Here was observation opposed to observation. To ascertain the truth with regard to the point at issue, I made use of the fine solar microscope of the College of Ottawa, which gives a magnification of two thousand diameters. As the outline of shell after shell was cast upon the screen, each was observed to be decidedly asymmetrical and unequally curved on the sides. The young of *U. luteolus* and *U. borealis* proved also to be inequilateral; and I have little doubt that the same want of symmetry obtains in the young of almost all other species. It seems, therefore, that Dr. Lea was mistaken in describing and figuring as symmetrical the embryonic forms of many species of the *Unionidae*.

With *A. fluviatilis* closes the record of the species so far observed here. Extended as it is, for a place so distant from the metropolis of the *Unionidae* in the Ohio Valley, it certainly does not include all the forms that occur in this vicinity. *A. plana*, Lea, and *A. Ferrissiana*, Lea, a shell which is found at Montreal and at Toronto, probably occur here; and when the numerous lakes and streams around our city are more diligently searched, they will, I feel confident, furnish very material additions to the present list of the Ottawa *Unionidae*.