

MUSSEL DISTRIBUTION IN RELATION TO STREAM CONFLUENCE  
IN NORTHERN MICHIGAN. Henry van der Schalie, University of  
Michigan. Read by George M. Davis.

(Abstract)

The presence of certain southern Michigan freshwater mussels, such as *Alasmidonta marginata* (Say), *Elliptio dilatatus* (Raf.) and *Lasmigona costata* (Raf.), in northern Michigan rivers (the Millecoquin, Carp and Oqueoc) indicates that these rivers formerly must have been connected in a continuous dendritic river pattern. At present these species have a *discontinuous pattern of distribution*. The extension of their ranges and their present distribution can be accounted for best by evidence adduced by glacial geologists who indicated a former Mackinac River occupied the bed of northern Lake Michigan during a low water stage in postglacial (Chippewa-Stanley) time—approximately 8,500 years ago. While the above three Mississippi species traveled north and eastward along this route, an Atlantic species, *Elliptio complanatus* (Dillwyn), apparently reached the Oqueoc River in northern Lower Michigan moving westward when these confluences existed. The information bearing on these extensions of ranges also substantiates confluences indicated previously for the region of the Fox River of Wisconsin and Green Bay.

(Discussion)

Jacobson: "Herb Athearn and I found *Elliptio complanatus* on the East Coast only in ocean-emptying streams, never in those of the Mississippi drainage." Morrison: "True; *complanatus* is an Atlantic species with a peculiar northern distribution, limited to certain parts of the Great Lakes. *Elliptio dilatatus* is predominant in the Fox River because in glacial times this river was the outlet of Green Bay into the Wisconsin and the Mississippi. Also, in 1934 I took mussels of Mississippi Drainage species in Jackson Park, Chicago; *Actinonaias ligamentina* was large and fine there. I'll hazard a guess that it still lives in Lake Michigan."