In 1997 the following species were represented by 5 – 20 individuals: *Lampsilis siliquoidea* (Fatmucket), *Amblesa plicata* (Threeridge), *Ligumia nasuta* (Eastern pondmussel), *Potamilus alatus* (Pink heelsplitter), *Pyganodon grandis* (Giant floater), and *Fusconaia flava* (Wabash pigtoe). By 2000, the most abundant species were *Leptodea fragilis* (Fragile papershell), *Fusconaia flava*, *Ligumia nasuta*, and *Potamilus alatus*. In 2001, *Pyganodon grandis* was the most abundant species.

The site where the native unionoids are located has the following characteristics: silty sandy sediments, relatively little aquatic vegetation, shallow water depth (< 1m), and at times completely dry during the winter (Feb 2000). Sediment composition at the Beaver House site was 91% sand, 9% pebbles, and 1% silt and clay. The sediment composition of Wellington Cove was 95% sand and 5% silt and clay. The pH in these shallow water areas was 6.8 and 7.2, respectively. Dissolved oxygen values in the same areas were 8.7 and 7.4 mg/l, respectively (water chemistry from Aug 2000). A distinct current flow is present at times due to fluctuating Lake Erie water levels. It is theorized that zebra mussels may be restricted from colonizing unionoids in these areas due to the following local conditions: fluctuating water levels, relatively high summer water temperature, and open, exposed conditions in the winter (with ice).

In a similar study, Nicholas, S. J. and Wilcox, D.A., reported on the coexistence of zebra mussels and native clams in Metzger Marsh (a Lake Erie Coastal Wetland located just west of Toledo, Ohio). They theorized that specific sediment type (soft, silty) and high water temperatures (mid-day temperatures near 30°C) were the prime factors that allowed the unionid mussels to survive. Similar sediment characteristics and high mid-day temperatures were found at Thompson Bay.

**Masteller, E.C., Maleski, K.R. & Schloesser, D.W.**


**Nichols, S.J. & Wilcox, D.A.** 1996. GLSC Fact Sh. 96-8.