Anodonta suborbiculata Say 1831
flat floater

ORIGINAL DESCRIPTION: *Anodonta suborbiculata* Say 1831. Say, T. 1831. New terrestrial and fluviatile shells of North America. (cont.). The Disseminator. [2nd Series]. New Harmony, Indiana 1(29): no pagination, not figured, 15 January 1831.

TYPE LOCALITY: Ponds, near the Wabash [River], [Posey County, Indiana]. Type presumably lost.

SYSTEMATICS: Phylogenetic relationships of the genus examined by Hoeh (1990. Malacological Review 23(1):63-82). Most closely related taxa are *A. couperiana* and *A. heardi* (Gordon and Hoeh 1993. Walkerana 7(17/18):265-273). Specimens from Mississippi and Texas with slightly elevated umbos and a less rounded outline may be an undescribed species (*Anodonta* sp. cf. *suborbiculata*) (Vidrine 1993. The historical distribution of freshwater mussels in Louisiana. Gail Vidrine Collectables, Eunice. xi + 225 pp.; Howells et al., 1996. Freshwater mussels of Texas. Texas Parks and Wildlife Department, Austin. iv + 218 pp.).

KEY CHARACTERISTICS: Adults large, up to 200 mm, shell thin, rounded, broadly curved anteriorly and ventrally, angled posteriorly, usually compressed. Dorsal margin straight, umbos not elevated above hinge line. Surface of shell smooth and shiny, periostracum yellow, tan, brown or olive, darker on posterior slope, straw colored in young. Fine green rays throughout (often absent in old individuals), with one or two broad, bluish green bands from beak to the posterior point. Beak sculpture consists of coarse wavy bars becoming two divergent rows of tubercles appearing as irregular or broken double looped ridges. Beak cavity shallow, nacre white, bluish or coppery, teeth absent. (Utterback 1915-16. American Midland Naturalist 4:245-204; Vidrine 1993; Howells et al. 1996; Parmalee and Bogan 1998. The freshwater mussels of Tennessee. University of Tennessee Press, Knoxville. xii + 328 pp.).

DISTRIBUTION: Interior basin; primary historic range is from Iowa/Illinois to Louisiana/Mississippi and Kansas/Nebraska to Indiana/Kentucky, also Escambia River, Alabama and Florida. Range is expanding in response to river impoundment. Recently established populations in Texas, Alabama, Georgia, Tennessee, Ohio, Wisconsin, and Minnesota.

HABITAT: Found in medium to large rivers in backwaters, sloughs or river edges, oxbows, ponds and lakes. Prefers areas with low flow and soft sediment. Sporadic in occurrence but often abundant where present.

BIOLOGY: Bradytictic (Utterback 1915-16; Barnhart and Roberts 1997. pp. 15-20 *in* Conservation and management of freshwater mussels II: Initiatives for the future. Upper Mississippi River Conservation Committee, Rock Island, Illinois. 293 pp.). Males produce spermatozeugmata (sperm spheres). Early and late embryos are found in from September to December, immature and mature glochidia from December to March. Glochidia are present on host fish from mid-January to mid-April (Utterback 1915-16; Roberts and Barnhart 1999. Journal of the North American Benthological Society 18(4):477-487). Of nine fish species in three families and one amphibian tested as possible hosts, the golden shiner *Notemigonus crysoleucas*, warmouth *Lepomis gulosus*, white crappie *Pomoxis annularis*, and largemouth bass *Micropterus salmoide*s produced juvenile mussels (Barnhart and Roberts 1997). Howells et al. (1996) reported glochidia of *A.* sp. cf. *suborbuculata* (form with raised umbos) from B.A. Steinhagen Reservior metamorphosed on green sunfish *Lepomis cyanellus*, longear sunfish, *Lepomis megalotis*, and channel catfish *Ictalurus punctatus*. Growth is rapid; individuals often attain a length of >100 mm in two years.

CONSERVATION STATUS: Currently Stable (Williams et al. 1993. Fisheries 18(9):6-22).

Compiler: Bernard E. Sietman, Illinois Natural History Survey, Champaign.

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Family Unionidae
Subfamily Anodontinae

Mississippi River, Randolph County, IL. (INHS 7854, 127 mm TL).