



Ouachita Rock Pocketbook

Oklahoma Ecological Service Field Office

Ouachita Rock Pocketbook

Arkansia wheeleri

Description

The Ouachita Rock Pocketbook occurs in the Kiamichi River in southeastern Oklahoma, the Little River in southeastern Oklahoma and southwestern Arkansas, and the Ouachita River in central Arkansas. Shells of the species also have been recovered from Pine and Sanders creeks in northeast Texas. Its shell reaches a maximum length of about 4.5 inches, is subovate in outline, and moderately inflated. The outer shell layer is chestnut-brown to black with a silky luster. It is distinguished from other, similar appearing species by distinctive details of its shell.

Distribution

The Ouachita rock pocketbook lives in pools, backwaters, and side channels of certain rivers and large creeks in or near the southern slope of the Ouachita Mountains. The species inhabits stable stream bottoms containing gravel, sand, and other substrate materials. The Ouachita rock pocketbook always occurs within large mussel beds containing a diversity of mussel species.

Life History

Adults feed by filtering algae, other protists, microscopic animals, bacteria, and detritus from their surroundings. As with most freshwater mussels, the life cycle includes sexual reproduction and a required parasitic stage. During spawning, males release sperm into the water column, some of which are taken into females of the species, which carry eggs in their gills. The resulting larvae (known as glochidia) are released from the females into the water column and must attach to a suitable fish host to continue development. Once metamorphosis is complete, juvenile mussels drop off the fish host and continue life in the stream bottom. Known fish hosts for this species include the golden shiner (*Notemigonus crysoleucas*), dusky stripe shiner (*Luciilus pilsbryi*), and freshwater drum (*Aplodinotus grunniens*).



Ouachita rock pocketbook. Patricia Mehlhop / USFWS

Conservation

The Ouachita rock pocketbook was federally listed as an endangered species on October 23, 1991. This species has experienced losses in range and abundance due to human degradation of its habitat. Specific factors involved in this degradation include construction and operation of large impoundments, channelization, water quality degradation from point sources and nonpoint sources of pollution, gravel excavation, and operation of land vehicles in streams. Many of these factors are expected to continue and may increase, posing future threats to the Ouachita rock pocketbook. Additional potential threats include impacts from invasive aquatic species and extreme conditions associated with human-caused climate change.

What You Can Do To Help

If you have property within a watershed inhabited by the Ouachita rock pocketbook, maintain an ample buffer of natural vegetation alongside any stream channels. Treat eroding roads, slopes, and other sources contributing sediments to streams. Reduce or eliminate use of lawn-care/agricultural chemicals, and install fencing to prevent livestock from entering streams. Take other steps to

protect water quality, restore and protect natural watershed conditions, conserve instream flows, and prevent the spread of aquatic invasive species. Learn more about the Ouachita rock pocketbook, the threats to its existence, and its identified conservation needs by consulting the species' recovery plan.

References

Harris, J.L. and others. 2009. *Unionoida (Mollusca: Margaritiferidae, Unionidae) in Arkansas, third status review*. Journal of the Arkansas Academy of Science. 63:50-86.

U.S. Fish and Wildlife Service. 2004. *Ouachita Rock Pocketbook (Arkansia wheeleri) Ortmann and Walker, 1912) Recovery Plan*. Albuquerque, New Mexico.

For Further Information

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