



Fish

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Importance

Habitats for fish in the American Southwest include springs, seeps, perennial and ephemeral streams, rivers, playa lakes, and reservoirs. Freshwater fish are the most imperiled of the vertebrate groups in the U.S., and in the southwest the causes of imperilment include the construction of dams, loss and degradation of habitat, pollution, over-exploitation, and introduction of non-indigenous species. Most Great Plains fish species are generalists that use habitats and consume food in proportion to what is available. They are also well-adapted to dealing with flood and drought conditions.

Status and Trends

The Fort Larned National Historic Site (FOLS) is located in central Pawnee County, Kansas, along the banks of the Pawnee River. The site is comprised of developed areas, grassland, and the Pawnee River lined by a wooded riparian corridor. No inventories of the fish at FOLS had been conducted prior to 2001, although the Kansas Department of Wildlife and Parks has conducted fish surveys at several sites along the river (as close as one mile south). In September, 2001, the Kansas Natural Heritage Inventory (KSNHI) surveyed for fish by seining at two locations along the river within the boundaries of FOLS. Prior to the field work, a list of fish was compiled

RESOURCE BRIEF



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White crappie

based on the best available resources (e.g., KSNHI databases, museum specimens, books/guides, and knowledgeable staff). The results of the inventory provide valuable baseline information for future inventory and monitoring.

Six species of fish were documented in the Pawnee River within the boundaries of FOLS: the common carp (*Cyprinus carpio*), fathead minnow (*Pimephales promelas*), red shiner (*Cyprinella lutrensis*), Channel catfish (*Ictalurus punctatus*), black bullhead (*Ameiurus melas*), and white crappie (*Pomoxis annularis*). The two sites where fish were sampled were the only sections of river that contained water at the time the inventory. Fish were concentrated in a few isolated pools and much of the river channel was dry. The depth of the water was at most 0.5 m and the substrate consisted of a deep layer of muck.

Discussion

Six of the 17 species (35%) originally expected to occur at FOLS have been documented. The species observed are tolerant of poor water quality, including high turbidity and low oxygen. Historically, the Pawnee River was a sand-bottom stream with clear water and permanent flow. With agricultural development of the area, including increased use of surface and groundwater, river flow has decreased. Complete drying of the streambed in summer has become more frequent in recent years. Additional surveys are recommended for fish to determine whether more species on the list are present.



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Fathead minnow

