Population studies reveal critically low numbers of this "new" species in Illinois.

The Redspotted Sunfish

Photos By Trent Thomas

Most people have never heard of the redspotted sunfish (*Lepomis miniatus*)—and for good reason. Until 1992 when researchers at Southern Illinois University determined this fish to be a separate species, it was known as the spotted sunfish (*Lepomis punctatus*). The redspotted sunfish is found as far south as Florida and Texas, and Illinois is at the northern edge of its distribution.

Although never abundant in Illinois, when the first collections of Illinois fish were made 100 years ago, the redspotted sunfish was more widespread than it is today. Historically, the redspotted sunfish was found along the Illinois and Ohio rivers, and in the Mississippi and the Iroquois rivers. Currently, this species appears to be much less abundant along the Illinois and Ohio rivers, and has disappeared from the other two rivers.

The habitat of this sunfish is larger river backwater lakes with aquatic plants—habitats that have been lost through draining, filling or construction of extensive levee systems. While many of the backwater lakes still exist, siltation and introduced species (grass carp) have diminished the aquatic vegetation, leading to the demise of the redspotted sunfish except in small, slow-moving, vegetated streams—habitats that are quite vulnerable to disturbance.

With the help of a federal grant, the Department of Natural Resources' Division of Fisheries has begun a statewide survey to determine the population status of the redspotted sunfish. Small fin-clips are being taken from fish collected in Illinois and neighboring states for use in genetic studies. Results from these surveys and studies will guide efforts to reintroduce this species into restored habitats throughout their historic Illinois range.

Redspotted sunfish habitat

Preliminary results of the population surveys show the redspotted sunfish is quite rare in Illinois. An adult population is yet to be found along the Illinois River (a few juvenile fish were found in a single, small stream in the lower Sangamon River basin), which was once the heart of its existence in the state.

The news is better along the Ohio River as the occasional redspotted sunfish is found in a few backwater lakes despite the lack of necessary aquatic vegetation and presence of exotic silver carp. Several adults have been collected from a remnant population in a small stream in the lower Saline River basin.

Plans for the Illinois population of this sunfish include continuation of population surveys and genetic analyses to determine if genetic variation exists among the isolated populations, allowing for identification of the most appropriate source of fish for stocking into restored habitats. Adult redspotted sunfish will be collected and spawned in rearing ponds, producing the number of fish needed for stocking efforts.

—**Trent Thomas**, Region 3 Streams Biologist, DNR Division of Fisheries