



United States Department of Agriculture

Forest Service

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Hoosier NF Highlights

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What's in your Backyard Stream?



By Len Kring, Fish Biologist

Most people who fish and enjoy our local aquatic resources are familiar with fish species such as bluegill, channel catfish, largemouth bass and black crappie. Now what if I said we have fantail darters, southern redbelly dace, pirate perch or creek chubsuckers? If you saw pictures of those last 4 species, many people may say those look like minnows. From a scientific standpoint that would be correct for only one of the species; the southern redbelly dace. The fantail darter is more closely related to yellow perch and walleye than it is to minnows. The pirate perch is the only species in the Family *Aphredoderidae* in North America.

We have many other native fishes in our local streams that also have peculiar names and belong to many different families, all having different characteristics and importance to our streams. Anyone ever heard of a northern hogsucker, longear sunfish or a central stoneroller? What about golden redhorse?

So why are these lesser known species of fish important? None of them are considered game or sport fish. They are important because they help us determine the ecological health of our local streams. Based on their presence or absence and the total number of species and individuals, we can determine if our streams are meeting state water quality standards. The Hoosier National Forest stream survey team samples stream segments to collect community information on fish populations. Each segment sampled is fifteen times the width of the stream in length. The survey team uses electrofishing equipment to collect the

samples. This equipment emits an electric pulse into the water that stuns the fish long enough for the team to net them and place them in buckets. After the entire segment is sampled, the collection is sorted by species in separate buckets. A maximum and minimum length is obtained, each species is counted individually and then are weighed as a group. The fish are then released back into the stream. A voucher specimen may be retained for verification purposes.

So what do we do with the data collected from the streams? The Forest fish biologist uses the IBI (IBI) to assess the local fish communities. The IBI was developed in 1981 and is most useful in deciphering complex fish community data into a more comprehensible format for non-biologists. In simplest terms, the IBI acts as a biological indicator much like the DOW Industrial Average acts as an economic indicator. It provides a method to track trends in fish community composition over time. The IBI has three broad categories (species composition, trophic composition, and fish condition) which are broken down into 12 smaller categories known as metrics to assess fish communities. These metrics are given a score based on their similarity to least impacted (reference) sites; 1 (not similar), 3 (somewhat similar), or 5 (very similar). The total score for a site will range from 12 to 60 (0 if no fish are present). These scores can then be graphed and placed into one of five classifications (very poor, poor, fair, good, or excellent), which describes the overall condition of the fish community being monitored.

Many of our native, non-game fish species are residents of small streams. These aquatic resources are more heavily impacted by pollution and erosion than larger rivers. By monitoring fish communities in these small streams, we can begin to understand the health of these streams and start to pin point problem areas that could affect larger watersheds.

For more information on fish and stream biology on the Hoosier National Forest contact Len Kring at 812-547-9234 or lenmkring@fs.fed.us.

Photos:



Creek Chubsucker



Longear Sunfish



Pirate Perch



Golden Redhorse



Northern Hogsucker



Southern Redbelly Dace



Fantail Darter