Treasure Hunting in the Suburbs: Discovery of the State-Endangered Iowa Darter (*Etheostoma exile*) in DuPage County, Illinois

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Being hardcore fish geeks (and proud of it), every time we travel across a bridge over an unfamiliar stream, we inevitably glance downward, analyze the habitat, and wonder what lotic lovelies lurk below the shimmering surface.* Some streams have beautiful riparian buffer zones of such apparent high quality that you drool at the prospect of taking a seine into those flowing waters. Other streams, however, aren't so tantalizing. In fact, some streams display so much anthropogenic impact that they spark thoughts of futility at the prospect of collecting in such troubled waters. Wading through said waters, you figure you're more likely to catch a disease before you catch a darter. While that rationale might certainly be appropriate for some waterways, other apparently depauperate deserts of flowing water can hold some surprising "buried treasure." One stream that beautifully exemplifies this lies in the Des Plaines River drainage in Illinois.

Salt Creek has endured about as much anthropogenic assault as a watershed can. Over the past century and a half it has been channelized, clogged with numerous dams, and inundated with severe point-source pollution. What may not be surprising is that Salt Creek lies in DuPage and Cook counties, which are in the heart of the intense development and urban sprawl of the Chicago suburbs. While the watershed has endured environmental horror upon horror, the passage of the Clean Water Act and the hard work of many conservation-minded organizations in the Chicago area have resulted in a dramatic improvement in water quality. Case in point, the Forest Preserve District of DuPage County has established numerous preserves along the banks of Salt Creek in an effort to provide important riparian buffer zones.

While the continuing rejuvenation of Salt Creek certainly is an impressive feat, native fish lovers inevitably ask the question: "What could have possibly survived all that?" Being a long-time fish geek myself, I asked the same question. However, I took it a step further. Whether it was my scientific training or my curious nature, I decided to find out what has managed to survive in Salt Creek.

It's hard to search for what survives when you don't know what species were there to begin with. So I did a little research in an effort to furnish myself with some sort of historical reference of biodiversity for Salt Creek. I discovered there are very few species on record for this creek. Of particular interest, I noticed there were no records of darters and a record of *Noturus gyrinus* that was over 100 years old. The genus *Noturus* is personal favorite of mine (with *Etheostoma* a close second), so these records (or lack thereof) produced two more specific questions: Are tadpole madtoms still present in Salt Creek? And, are there any species of darter in Salt Creek? While it's a lot to hope that a madtom or a darter could persist in such a historically hostile environment, I knew if one species of this reputedly sensitive genus could pull it off, it was *N. gyrinus*. There was hope.

*Ed. note: The wife of Alabama NANFA member Stott Noble calls this behavior "rivernecking."

As fortune would have it, I just so happen to work at one of the aforementioned preserves established by the DuPage County Forest Preserve District that provides a valuable riparian buffer zone for Salt Creek. Here at Fullersburg Woods, I am one of the extraordinarily lucky individuals privileged to work as a naturalist. This provides me with the unique opportunity and access to develop an intimate knowledge of an ecosystem in order to share it with others. Fortunately, in November of 2004, Salt Creek and Mother Nature allowed me to do just that. After sampling some calmer areas of the creek in potential *N. gyrinus* habitat with no success, I decided to try some of the faster-moving waters and riffles in search of darters. It wasn't long before I pulled one up in my net. Of course, I was thrilled. I found a species that (to the best of my knowledge) was not known to exist in this creek. Upon close inspection, though, I received an even bigger surprise. The darter was a colored-down male *Etheostoma exile*, the Iowa darter.

The Iowa darter is listed as a state endangered species in Illinois. Again, to the best of my knowledge, it has never been documented in either Salt Creek or DuPage County. However, it is present elsewhere in the Des Plaines River drainage in adjacent counties. Once I stopped my celebratory dancing, the big question emerged: Have Iowa darters been present in Salt Creek all this time but undetected, or has the species recently colonized or re-colonized the creek?

The question lends itself well to a fascinating debate. When considering the extensive degradation from which Salt Creek has recovered, one might be inclined to believe the latter hypothesis. Could Iowa darters have been recently introduced as released baitfish or stowaways in the stocking of sport fish? That is certainly possible. However, is the alternative hypothesis (that they have endured undetected in the creek) so far-fetched? A quick look at the species' natural history implies that it is not. The creek has been dammed for over a century, and there is a dam downstream from where I collected my specimen. So it is safe to assume the occurrence of *E. exile* is not due to a recent immigration from known populations elsewhere in the Des Plaines River drainage. On the flip side, *E. exile* is one of the few darter species that prefers sluggish flowing water, even lentic conditions. Therefore, the reduction of flow in Salt Creek from damming would not have created an unfavorable habitat for the Iowa darter. Furthermore, the dams have created a stream that is very difficult to effectively sample. It is undoubtedly much deeper and muddier than it may have been before the dams were erected. If Iowa darters have indeed remained hidden all of this time in a stream bloated by dams, then how did they survive the period of severe pollution? All I can say is that perhaps they are not unlike their human neighbors that hail from the Chicago area—they're simply tough as nails.

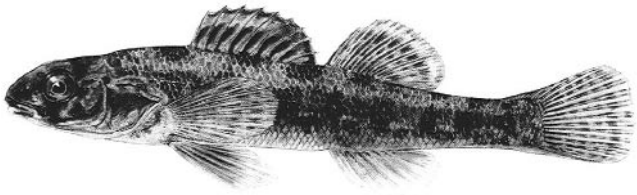

Fig. 1.
Iowa darter, *Etheostoma exile*. Illustration courtesy New York State Department of Environmental Conservation.

Repeated, casual sampling produced a grand total of two male Iowa darters (in addition to three other species not documented to reside in Salt Creek). I have scheduled a more thorough sampling effort for the spring and summer to see if, in fact, a viable population exists in Salt Creek. If a viable population is found, programs can then be developed to give the public the opportunity to observe and learn about this endangered species that the vast majority of local residents have never seen or even heard of. I hope that my sampling effort also answers the other initial question that remains unanswered from this past fall: Are tadpole madtoms still in Salt Creek? I have no reason to doubt that they are still here.

The late Jerry Sullivan, renowned naturalist and gifted writer from the Chicago area, may have described Chicagoland's biodiversity best when he stated that "rarities are commonplace here." Despite immense proliferation of strip malls and clonal subdivisions across the present-day landscape, we still cling to an amazing number of relicts of the region's native biodiversity. It does not surprise me in the least that this endangered species of stream fish was uncovered on DuPage County Forest Preserve property. You see, nature preserves here are oases of diversity in the relative desert of urban sprawl. It goes to show that even the most seemingly homogenized landscape can yield wonderful surprises of nature. Organizations like the Forest Preserve District of DuPage County work tremendously hard to maintain and nurture what's left of our native ecosystems.

I encourage you to support local conservation organizations and inquire at local nature centers for programs that will allow you to see for yourself the diversity of fish species that are hiding in the waters of local nature preserves and beyond. In addition, take a second look at those seemingly ho-hum streams encased in human development. You too may find buried treasure, like the Iowa darters of Salt Creek.