Introduction to the Darters

By Robert J. Goldstein, Ph.D.

Toward the latter part of 1977 I became interested in native darters (the only kind!), and have been actively collecting fishes, literature and photographs of as many species as possible. As a new member of NANFA, I understand that it is my responsibility to share my information with the club in the most active possible way. That is the tradition with any good aquarium club.

Darters are members of the perch family *(Percidae)*, and make up over 95% of all perches. The non-darter perches include the yellow perch, walleye, sauger and a number of related species in Europe and Eurasia. The darters themselves number about 140 species, of which about 35 or 40 are either not yet described or are very poorly described and in need of additional work. On top of this number, many of the species exist as distinct (or not so distinct) subspecies, in some cases as many as five subspecies to the species. All darters occur naturally in the eastern half of the country, a few extending in to Canada and Mexico. Texas has several kinds, as do nearby states to the immediate north. However, most darters occur in drainages of the Mississippi, Ohio and Appalachian states as well as in drainages of the great lakes. In short, if you live in Texas or anywhere to the north and east, the odds are that there are darters not too far from your home. And, you have probably never seen them.

There are three principal groups of darters. The first and least interesting group is the sand darters, usually included in the genus *Ammocrypta*. Typically, they occur in quiet, sandy bottom waters such as lake shores where they tend to bury in the sand with only their heads exposed. This is a small group. The second group is much larger and contains the species of the genus *Percina*. Some of the largest darters (including the logperch) are in this group. Several are colorful, others not, and species in this group occur from sand darter habitat to fast-running riffles, depending on the species. The third group is the largest and typically, the most colorful, and consists of the genus *Etheostoma*. However, some species of this genus can be duller than sand darters, so keep in mind that all three groups have both dandies and dullards. And all three groups should be considered as aquarium fishes on the merits of individual species.

Typically, sand darters are extremely elongate; *Etheostoma* species have normal scales covering everything down below; *Percina* species tend to have bare spots or rows of, or individual, modified scales, located along the lower midline between the vent and the pelvic fins. But you can't do more taxonomically than make a guess on the basis of these generalizations. To identify darters is serious business and takes time and experience. Color and markings are often not very useful except at the subspecies level or where the precise species composition of a particular collecting locality are already known very well, and you can eliminate or make a good guess based on color and pattern.

Many darters have very precise distributions, and if you are interested in those that occur in any specific area then your first job (and I mean FIRST) is to get the appropriate book that covers your region. If you don't know what book to get or where to get it, drop me a stamped, self-addressed envelope and I'll help you out.

In general, you can catch the greatest variety of colorful darters in shallow, moving water and that means riffles of brooks or some of the slight holes (2-3 feet or less) of creeks and small rivers, typically in hilly or mountainous regions where the flow is pretty good. Some darters occur over slow-moving, silt-bottomed creeks, but most species occur where the water is clean and the bottom is rocky or gravelly, free of silt and even sand. Don't try to eyeball them before setting your nets. The odds are that their secretive habits (under rocks, etc.) will make them invisible to you. Instead, pick an area that is easy to wade (ankle deep or up to knee-deep), set your seine across the stream, and then walk a distance of about 20 feet in a downstream direction toward your seine, kicking over rocks, trash, rubble, logs, shoreline brambles, etc., all the way to the seine. Lift the seine and you will likely have your darters. Yes, it's that easy. If you don't get any fish in two tries, go somewhere else. Where darters occur, they are often abundant.

Once you have your collection, the next step is precisely identifying your collection locality. Often, you won't know the drainage basin you are working, particularly if you're lost in the Appalachian highlands. Identify the locality by the name of the road, the distance in tenths of a mile from an intersection that is marked on a road map (don't forget direction!!), and indicate also the date, the depth of water, whether vegetation was present, and the county. From this kind of information, one can often precisely locate the map coordinates later and identify the drainage basin and the river arm.

Knowing the precise locality is a tremendous help in finally identifying your species and subspecies of darter. Don't omit this. Often, I can identify a darter from a letter, knowing the locality. On the other hand, if I get a color slide with no locality I will often as not just give up.

You can keep darters in anything from a two-gallon drum bowl to a large tank. The important thing is to give them lots of bottom room according to their size and aggression. The water should be cool, clean, with a gravel bottom and undergravel filter. Additional filtration or aeration is up to you. A few rocks or plants enhance the aquarium decor. The best water is well-aerated, hard and clear.

I have found the following foods acceptable to most darters I have

handled: frozen bloodworms, frozen daphnia, small earthworms or chopped large earthworms, thawed and thoroughly washed (to remove salt) adult brine shrimp. My darters don't like dry food or freeze-dried tubifex. White worms are reported to be good. in general, give them a very varied diet to maintain color.

Some darters breed like dwarf cichlids, in a cave (usually on the roof), but most breed in gravel or sand. A few breed on tank walls or in plants. I'll have more to say in future articles. For now, go out there and get 'em.