

NOTES ON KEEPING COLOR IN DARTERS

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I. CAPTURE & TRANSPORT

Steps to keep darters healthy and colorful should begin as soon as the fish is captured. Up until the time the fish was removed from the water, it was living and eating under its natural conditions. As soon as it is removed from those conditions and placed into an alien one, it begins to experience stress. It is scared. It begins to defecate and/or regurgitate the contents of its stomach, polluting the water. It is breathing rapidly, converting oxygen to carbon dioxide quickly, further lowering the quality of the water. These effects are multiplied each time another fish is added to the bucket. The whole situation worsens as the temperature rises.

As a result of these conditions, it is important not to overload the bucket and to make frequent water changes. There should be a complete water change just before moving the fish to the car.

The same conditions that exist in the bucket exist in the car, perhaps even more severely. The containers used in the car should be as large as practical. Wide, shallow containers have a greater surface area than narrow, deep ones do; therefore, they are able to dissolve more oxygen per unit of water. There is also some indication that dark-colored buckets and transport containers help to keep the fish calm, reducing overall stress.

As with the bucket, do not overcrowd the containers and make partial water changes whenever possible. Keeping the water cool is essential, not only in preserving the colors of the fish, but also in keeping them alive. It is better to maintain the temperature of the original stream than to try and bring it back down after it has overheated. Perhaps the only practical way of doing this is with bagged ice. Place a quantity of ice in a plastic bag and float it in the transport container. Check the temperature often and add only enough ice to maintain it at, or a little below, the original stream temperature.

The capture and transport of the fish should be done as quickly as possible. The less time the fish spend in the buckets and transport containers, the less stress they will experience, and the better the shape they will be in when they go into the aquarium.

II. ACCLIMATION

The acclimation process should begin as soon as the fish arrive home. Equalize the temperatures and other water

factors in the transport container and the aquarium by adding water from the aquarium to the container. Add the water in small amounts over a period of time until the temperatures are equal. Once acclimation is complete, net the fish out of the transport container and place them in the aquarium.

III. THE AQUARIUM

The aquascaping of the aquarium should reproduce, as accurately as possible, the fishes' natural environment. The tanks should be set up with a few fish well in advance of the collecting trip; this will give it time to mature. Newly captured darters will adjust much more quickly in a well matured tank, and thus will experience less stress.

As darters are primarily bottom-dwellers, take special care in setting up the tank bottom. Use dark-colored natural gravel and sculpt it into hills and valleys. Set numerous flat stones into and on top of the gravel to create a number of caves. Darters need caves to feel secure, and will not maintain good color or behave normally without them.

Strong currents may offer some benefit, but they are impractical to set up in a whole tank. Usually a good outside power filter is enough to do the job. If the tank is longer than wide, it is best to place the filter on the end of the tank rather than on the back. An airstone placed at the end of the tank opposite the filter helps to circulate the water completely, and guards against a disaster should the power filter fail.

The type of lighting used will determine how the fish will look in the tank. Fluorescent tubes come in many different types: cool white, soft white, "grow lights," aquarium lights, full-spectrum, and many others. Each type produces a different effect; some highlight reds, some blues, and so on. Logically, it would seem that full-spectrum light, the kind that is supposed to be most like the sun, would be the best choice.

Temperature is very important. While many species of darters survive at higher temperatures, generally the colder the water, the better the color. The best color emerges when the temperature is kept close to the darters' natural spawning temperature.

IV. FEEDING

Proper diet plays a major role in keeping the darters colorful. Darters will eagerly take good food. It should consist of pieces small enough for them to eat easily. Chopped earthworms, frozen or freeze-dried plankton, and blood worms are all good choices. Live food such as baby guppies, baby crayfish, fly larvae, and others are excellent and should be given whenever possible. Feed the darters two or three

small meals a day rather than one large one, and vary the diet to insure proper nutrition.

V. MAINTENANCE

Every tropical-fishkeeper knows the importance of regular partial water changes. In this respect, the darters are no different from the tropicals. Changing one-quarter of the water once a week with a gravel-cleaning siphon helps maintain high water quality by removing debris from the gravel that would otherwise decay and pollute the water.

Clean the filter whenever it needs it to maintain a high rate of flow. Keep the algae off the front glass, but let it grow everywhere else; it is good for the fish.

Darters' ability to maintain their color in captivity varies not only from species to species, but also from individual to individual. Also, some fish simply adapt better to captivity than do others. For these reasons and others, taking the above steps does not guarantee colorful fish. These steps do, however, provide the conditions necessary to maintain healthy darters, and that is a prerequisite to maintaining colorful darters.