

Cichlid Fish Information

Complete information about cichlids.

By Wayne Leibel

Cichlids Fight Constantly

Well, yes, they can be belligerent, and usually this has to do with their normal territorial behavior. With any luck, you've already made an accommodation for this behavior by choosing a larger tank with a big footprint so there is room for a group to coexist. Nevertheless, a pecking order will become established, with dominant fish — usually males — running the show. Also, ripe males can spell death for females not yet ready to spawn, so shelter must be offered.

In the wild, subordinate fish (smaller males, females) simply swim away from the belligerent territorial fish. In the confines of the aquarium, particularly smaller aquariums, they may not be able to avoid the dominant fish, so they need some shelter to duck into as needed. This shelter can take many forms. As mentioned, live or plastic plants can be a helpful, as well as an aesthetic, solution. Driftwood or bog wood is also effective — and equally aesthetic by providing a focal-point for the aquarium — and when large or numerous enough, offers hiding space. Bog wood (and driftwood) has the additional advantage of leaching various natural organic chemicals (humic and tannic acids) that slowly turn the aquarium water a tea color, which is actually favorable for "blackwater" species from South America.

Other possibilities include rocks (slate, shale, quartz are all good, but no limestone unless you are keeping Central American or African rift lake cichlids), hollowed-out coconut shells, clay flowerpots (either upended or on their sides), commercial ceramic shelters (e.g., hollow "logs," etc.) or plastic PVC piping. The latter is simply lengths (4 to 8 inches) of appropriate diameter (3/4 to 8 inches) cut from the standard pipe lengths available at little cost from your local home improvement store. Strewn throughout the tank to create cichlid condos, PVC piping looks horrible, but it gets the job done. And that job is to provide hiding places as needed for subordinate fish.

The use of shelter cuts both ways. On the one hand, it provides subordinate fish hiding places to escape the aggression of dominant fish. On the other hand, it can also encourage such aggression by providing physical markers for territories. In certain circumstances, bare tanks can be used to rear a group of normally highly aggressive fish together with minimal conflict.

Recommended Specialty Texts to Get You Started

Goldstein, R. 1971. *Introduction To Cichlids*. T.F.H. Press. Neptune City, NJ. Pp. 128.

Leibel, W. S. 1993. *A Fishkeeper's Guide To South American Cichlids*. Tetra Press, Blacksburg, Virginia. Pp. 70.

Leibel, W. S. 1995. *Cichlids Of The Americas*. Bowtie Press, Mission Viejo, CA. Pp. 97. (Beginners Guide)

Loiselle, P. V. 1988. *A Fishkeeper's Guide To African Cichlids*. Tetra Press, Blacksburg, Virginia. Pp. 118.

Loiselle, P. V. 1985. *The Cichlid Aquarium*. Tetra Press, Blacksburg, Virginia. Pp. 287. (More advanced but excellent overview; expanded second edition.)

Sands, D. 1985. *A Fishkeeper's Guide To Central American Cichlids*. Tetra Press, Blacksburg, Virginia. Pp. 77.

Sands, D., P. V. Loiselle and W. S. Leibel. 1994. *A Popular Guide To Tropical Cichlids*. Tetra Press, Blacksburg, Virginia. Pp. 240. (An edited anthology of the three Fishkeeper's Guides to cichlids.)

Walker, B. 1978. *All About Cichlids*. T.F.H. Press. Neptune City, NJ. Pp. 96.

Raising groups of similar-size fish in bare tanks devoid of any territorial markers (i.e., shelter) does curb aggression. The reasoning is — and it works — that in a large crowd of fish, no one fish will suffer the repeated and directed aggression of the most dominant individual. Nor will that individual be able to establish and hold a territory, both because of the crowding and because there are no physical territorial markers over which to fight. The downside of this strategy is that particular care must be taken to make sure that water quality does not deteriorate in a crowded tank. However, this can be overcome by strict attention to maintenance.

Cichlids Can't Be Kept in the Community Tank

Despite their reputation for aggression, there are many cichlids that can — and sometimes should — be kept in mixed community situations. These include the various dwarf cichlids, medium-size acaras and eartheaters, and some of the smaller cichlasomines, as well as most African rift lake species.

For smaller species, the community tank is the antidote to natural shyness. The strategy is known as "dither," and is simple in conception and execution. By providing peaceful, schooling species, such as tetras, that are rarely intimidated, cichlids will become less shy. Dither fish species should be selected with an eye to the size of the cichlids they will live with and the conditions being offered.

For South American cichlids, typically kept at high temperatures (78 to 86 degrees Fahrenheit) in soft, acid-neutral water, larger tetras, silver dollars (*Metynnis* or *Myleus* species), elongate hatchetfish (*Triportheus* species) and other peaceful characoids fit the bill. For medium-size Central American or African rift lake cichlids kept in harder, more alkaline water, various Australian rainbowfish (*Melanotaenia* species) work well. All of these suggested dither fish are quick, top- to mid-water swimmers, and can usually dodge the cichlids that occupy the lower level of the tank. Obviously, it is important to use dither fish of a size that cannot be swallowed by the resident cichlids. This can be a problem for some of the "monsters" that are typically kept only with other cichlids.

Catfish certainly have their place in the cichlid aquarium. For South American cichlids, these include armored "cory" cats (*Corydoras* and *Brochis* species), their larger relatives (e.g., porthole cats, *Dianema* species), and the "hoplo" cats (*Hoplosternum* and *Callichthys* species). All of these are social fish that live in large schools in the wild — please keep groups rather than single fish! One caveat with respect to *Corydoras* species is that they are sometimes intolerant of higher temperatures (greater than 80 degrees).

Other choices include various small "talking" catfish like Raphael cats and their relatives (*Doradidae*) and smaller "pleco"-type suckermouth cats of the family *Loricariidae*, particularly clown (*Peckoltia* species) or bristlenose plecos (*Ancistrus* species). Many of the larger "pleco" species, while beautiful, can become somewhat aggressive and damage the cichlids! Always provide plecos with driftwood, which they require for proper digestion, and feed them directly with romaine lettuce, parboiled zucchini and *Spirulina*-based sinking pellets or disks. Catfish are "scavengers" in a sense, but they don't live on fish waste! For African rift lake cichlids, many of the African *Synodontis* species (upside-down types) work well, and I have even seen pleco-types prosper in a tank of these cichlids.

Of course, there are other possibilities. Experiment, but do so intelligently. For instance, other fish that look like cichlids in body shape and that occupy the bottom of the tank will probably run into trouble given the territoriality of cichlids. Also, fish from colder water, such as the various minnows (*Cyprinidae*) like barbs or danios (not really "tropical" species), probably won't do well in the warmer cichlid tank. Take the time to read about the intended community residents before you buy on impulse. And remember, for the cichlid community the emphasis is on "cichlids" and their requirements — the rest of the community should be selected based on this reference point.

The "All-Cichlids" Community Tank

Some people are attracted to cichlids by the sheer majesty of their size, and many species do get big, with an attitude to match! They can be territorial with a vengeance, and spend their days digging and rearranging the tank when they are not threatening the fish next door. I must admit that there is a certain charm to these giants, and for them, an "all-cichlids" community is the way to go.

Obviously, if you are going to keep "monster" cichlids that grow to a foot or more, you're going to need a large tank with both adequate gallonage and bottom area. I'd probably try this in a tank of at least 100 gallons, preferably larger, with a footprint of at least 6 feet by 18 inches. The tank will probably do better if the occupants are somewhat crowded, and if the tank is kept more-or-less bare (so there are not many potential territorial markers available). Also, be prepared to filter it heavily and to do regular, massive water changes — it can be a challenge to maintain water quality for a gaggle of heavy, sloppy eaters!

It also is not a bad idea to keep only single males. You should, of course, choose species with similar requirements and with similar temperament so they can "give" as good as they "get." The idea is not to encourage fighting, but to discourage it — or rather, to limit the interactions to ritualized aggression without causing the scales to fly! If it sounds like an art, it is! It will take some experience to get the right mix of fish species, but a community of "tank busters" is truly a sight to behold! It is the essence of "cichlid."

For many African rift lake cichlids, particular the rock-dwelling mbuna from Lake Malawi, cichlid community tanks are the

preferable way to go! Lots of rocks (shelter) and lots of fish, with attention paid to the eventual adult size of the residents. Other considerations include not stocking with similar species (e.g., various peacock, *Aulonocara* species, or zebra, *Pseudotropheus zebra*, types) so as to avoid indiscriminate hybridizations, which will readily occur in the confines of the aquarium.

Also, as is true for New World cichlids, some species are more aggressive than others and should not be added to the rift lake community. Again, reading one or more of the many excellent specialty texts on these fish (see bibliography) should go a long way toward narrowing your selection. This is a learning experience — experiment, but do so carefully.

Cichlids Are Difficult to Keep

This is another myth. In general, cichlids need warm, clean, well-oxygenated water. Water chemistry is less of a requirement. Although many beginning "general" aquarium guides and some of the classical texts recommend water temperatures around 75 degrees Fahrenheit, in fact, most cichlids prefer their water to be warmer — 78 to 84 degrees.

Community tanks usually consist of a mixed bag of geographically unrelated fish species with varying temperature requirements. Most danios, for instance, live in cooler, fast-moving streams and prefer temperatures in the mid to high 60s, whereas tetras, like cichlids, come from more tropical waters with sustained temperatures in the 80s. Put them together and some compromise must be struck! It's better, if you're determined to keep cichlids, to give them what they need and select community tankmates accordingly.

At higher temperatures the amount of dissolved oxygen in the water decreases. This means that fish stocking densities must be lighter as the aquarium water temperature increases. It also means that heavy aeration — bubbling air through the water — is essential. Aeration is most simply provided through airstones or "airwands" driven by air pumps. This can be coupled to filtration by using submersible box filters instead of, or in addition to, airstones. Cichlids need lots of aeration.

Because cichlids have a wide distribution in nature, it follows that they have wide variation in water chemistry. What do we mean by water "chemistry?" Although there are many parameters of water chemistry, practically speaking for the aquarist, there are only two that matter: pH (acidity) and hardness. Some cichlids come from lakes and streams that are soft and acid, others from hard, alkaline waters.

In general, South American cichlids do better in neutral to mildly acid water (pH 6.5 to 7.2) of low to moderate hardness. Central American cichlids prefer neutral to mildly alkaline water (pH 7.0 to 8.2) of moderate hardness, and African rift lake cichlids flourish in decidedly hard, alkaline water (pH 8.0 to 9.0). Many captive-bred species of either provenance are more tolerant of pH than are their wild counterparts and will do well in "average" water (pH 7.0, moderate hardness). Optimally, you should provide water of a pH appropriate to the species you intend to keep.

It is a good idea to invest in pH and hardness test kits and to "know" your water and tailor your species choices accordingly. However, constant tinkering with the chemistry of your water with commercial products sold for that reason is ill-advised and ultimately will stress your fish. Better to simply choose inhabitants based on their particular water chemistry requirements as they match your own personal situation.

More important than water chemistry is water quality. By water quality I mean, principally, the "cleanliness" of the water, and I don't mean optical clarity. I am referring to the amount of dissolved nitrogenous wastes — ammonia and nitrites — in the water. Fish excrete ammonia waste that is highly toxic and can build up to unacceptable levels in your tank. In the wild, "dirty" water simply flows downstream. Most water biotopes are open systems in which water is continually replaced. Aquariums are most definitely closed systems, and so it is up to the aquarist to somehow deal with the buildup of poisonous compounds.

There are two ways to deal with them — removal or conversion to less toxic substances — and there are two ways to do this: filtration and water changes. Suffice it to say that cichlids are hearty and messy eaters, and good filtration is a must in the cichlid aquarium. There are innumerable filter systems available, some better than others, but whatever you choose, make sure your water is kept clean.

The best and most effective solution to maintaining water quality is to mimic nature — change that water! Regular partial water changes are a must for cichlids. This involves simply siphoning off 20 to 40 percent of the water from your tank and replacing it with fresh water of the same temperature. Use proprietary water conditioners if you are concerned about chloramines in your tap water. Given adequate water hygiene, cichlids are quite hardy.

As for the rest of their husbandry, most cichlids are non-finicky, opportunistic feeders. They eat virtually everything, so they are relatively easy to maintain in the aquarium even on a diet that is principally dry, commercial foods. Occasional frozen

foods are welcome (e.g., adult brine shrimp, bloodworms), as are live foods (earthworms), particularly if your aim is to breed your cichlids. As well it should be — that's why you're keeping them in the first place, remember?

In terms of diseases, again, cichlids are quite hardy. They do experience the occasional bout of "ich" (Ichthyophthirius multifiliis), a protozoan parasite that typically attacks after temperature shock. The best preventive medicine is to avoid any such shock. There are several proprietary drugs on the market for treating this problem, and cichlids usually recover quickly. Velvet (Oodinium) is much less of a problem, and maladies like "fin rot" or "cloudy eyes" bacterial infections usually result from lax water quality and polluted environments. Usually, water changes — without antibiotics — will reverse the situation. Other cichlid "diseases" like "head-hole" (neuromast erosion) — particularly in oscars or angelfish — or "bloat" — in African rift lake cichlids — will sometimes occur. Beginning cichlid aquarists are advised to consult relevant specialty texts for more information on treatment.

As always, an ounce of prevention is worth a pound of cure. The best strategy is to minimize the potential for disease by keeping the water clean with good filtration and water changes. Don't experiment with medications, and certainly don't combine them. Use them knowledgeably and sparingly, if at all. Cichlids usually don't need "doctoring."

Cichlids Are Just Not Right for My Tank

Given the incredible diversity of cichlids in nature and their current availability in the hobby, there are cichlids appropriate to virtually every tank size, situation, community mix and water chemistry! So, how do you choose which cichlid is right for you? First, evaluate your own situation — tank size, your goals with that tank (i.e., peaceful planted community), the mix of other fish, available water chemistry and so on. This will dictate which species you should be considering.

If you have hard, alkaline water you should probably stick to African rift lake or possibly Central American cichlids. If you are buying cichlids to round out your planted community tank, make sure they stay relatively small and are inoffensive. If you're adding one more specimen to your "battle of the Titans" cichlid community, make sure the fish has the "stuff" to make it in that belligerent collection. If you can only feed prepared flake foods, then make sure the fish you are getting do not depend on live or frozen foods. You get the picture. Select cichlid species based on what you can and want to provide for that fish. Anything else is just not fair to it.

Having done that, one selects fish based on the "match" between what they need and what you, the aquarist, can offer. Narrow down the hit list and then read about the group of cichlids you are considering. Identify some specific species of interest. What are their requirements in the aquarium and can they be provided in your particular setup or situation? What do they eat? How big will they get? What is their reputed temperament? Will they wreck my already happy (cichlid) community?

Probably the best advice I might give a novice cichlidophile (or any aquarist for that matter) is: read before you buy. These days, there is a wealth of information available to hobbyists in the form of books and magazines. Always read first! Any of the sources in the bibliography will give you a good start toward learning about cichlids and fill in some of the gaps left in this admittedly short essay.

Breeding Cichlids

Finally, we're at the real reason for keeping these interesting fish in the first place: the opportunity to witness, firsthand, the unique parental behaviors of breeding cichlids. It is precisely the repertory of behaviors associated with courtship, spawning and fry-rearing that makes cichlids so fascinating and so satisfying as aquarium fishes. And, ultimately, it is one of the things that makes them cichlids! So, I encourage you to get all you can out of your fish by breeding them and finding out for yourself why cichlids are so unique in the fish world.

Despite any preconceived notions you may have, it is not difficult to spawn cichlids in the aquarium. They are among the easiest of aquarium fish to captively propagate. Remember, people don't spawn cichlids, cichlids spawn cichlids. And, if you provide the conditions they need to prosper in your home aquarium they will spawn as a natural matter of course. You can't stop a healthy fish from realizing its biological imperative!

If you've never spawned and reared any fish before in the aquarium, the opportunity to breed cichlids is still open to you. There are several "beginner's" species that are quite easy to handle in the aquarium and provide a wonderful introduction to the joys of cichlid breeding and of fish breeding in general. These include the convict cichlid ("Cichlasoma" nigrofasciatum) — either pink or wild barred-form, the Brazilian pearl eartheater ("Geophagus" brasiliensis), and the golden-eye dwarf cichlid (Nannacara anomala) — all typical biparental substrate spawners, and the red-hump eartheater ("Geophagus" steindachneri) — an "easy" mouthbrooder.

All of these fish have the advantage of being readily and regularly available in the pet trade at relatively modest prices. All

are small to medium-size fish (1 to 5 inches in length), with the exception of the pearl eartheater. This latter cichlid can grow to a length of 8 inches, but it will spawn at a much smaller size (around 3 to 4 inches).

On the African side of the hobby, any of the more commonly available mbuna (e.g., *Pseudotropheus zebra*, *Labeotropheus fuelleborni* and so on) are easily and preferably bred in community tank situations. For these fish, courtship and mating is brief, with the females scooping up the eggs immediately upon laying. Usually spawnings are not witnessed, but rather, egg-carrying females become conspicuous for what they do and don't do — they don't eat and their distended jaws indicate that they are "gargling" their eggs.

The female can be easily and carefully removed to another tank where the aquarist can witness her wonderful mouthbrooding behavior. When threatened, youngsters will swim into their mother's mouth and stay there until danger is passed and they are released! (See a specialty text for more information on spawning and rearing these wonderful fish.)