

GOODEID CLEANUP CREW

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Pair of Black Prince Goodeids, male above, threatened for extinction

THE PROBLEM

Goodeids are live-bearing fishes that are mostly endemic to Mexico. There are around 45 species, many of which are threatened for extinction or on the IUCN Red List. Many aquarists in the hobby wish to help maintain some of these species by participating in the C.A.R.E.S. Species Preservation Program. However, many of these species are sensitive to pollution, providing some difficulty in maintaining them. One problem is that most are best suited for a species-only tank because they can be nasty and pick on other fish. They are especially known for their unrelenting torture of Corydoras catfish and other slow-moving fish. On top of that, they can have heavy appetites and be somewhat messy in their eating. This can result in a need for frequent tank cleaning and water changes due to the lack of cleaning fish, especially catfish, being in the tank. The extra work can discourage aquarists from keeping goodeids, or their fish simply die due to toxic buildup.

THE CLEANUP CREW

Not long ago, to experiment, I put a young bristlenose pleco in a tank with 6 adult Black Prince Goodeids (*Characodon audax*), which are known to be especially nasty. The 10 gallon tank was about $\frac{1}{4}$ full of *Anubias nana*, which gave some refuge to the small pleco. After observing him for a while, I was surprised that the goodeids were at first interested in the pleco, but later backed off and now don't bother him at all. At feeding time he comes out in the open and feeds right alongside the goodeids! To build on the "Cleaning Crew", I next added a Pygmy Leopard Catfish (*Synodontis lucipinnis*) about $\frac{1}{2}$ the size of the Black Prince Goodeids and he seemed to get along also. To be sure, these catfish have tough skin and will not back off of a fight, but it surprised me that they would be ignored as much as they were, and the Black Prince Goodeids were still as nasty to each other as before. It seems that this tank of goodeids is cleaner and healthier than before the catfish were added with the pleco keeping down the biofilm forming in the tank and the Pygmy catfish reducing loose debris. I have been using an undergravel filter on $\frac{1}{2}$ of the tank bottom because it seems that it is the most efficient method of filtration to keep the water clear.

The above setup has been repeated with the cleaning crew in a 20-gallon tank containing 2 pair of *Allodontichthys polylepis*, a rare Mexican goodeid that is extinct in the wild. They have been doing well also. My observations are only related to a few species of fish, but I suspect that some other goodeids as well as catfish might be used in a similar symbiotic relationship if they were first carefully observed. If you are interested in breeding tropical fish, check out my new website at: www.chasesfishes.net.

Chase Klinesteker



Allodontichthys polylepis pair, male on right, extinct in the wild

THE CLEANING CREW



Longfin Bristlenose Catfish, male, biofilm scavenger



Pygmy Leopard Catfish, male on right, particle scavenger