

Tank-Raised Saltwater Tropical Fish

There are some saltwater tropical fish species available that have been bred and raised in captivity.

By Scott W. Michael

Q. I have two 55-gallon saltwater fish aquariums, and have been keeping saltwater fish for much of the last eight years. I love clownfishes, and recently ran into several different species that were "tank-raised." The idea of buying fish that were raised in captivity and not taken from the wild was very appealing to me, so I purchased several. Can you give me any information on tank-raised fishes? Are there any advantages or disadvantages to buying captive-raised over wild-caught fish?

A. There are several hatcheries that are currently offering tank-raised tropical fishes, and I had the good fortune of visiting one of these facilities last month, with Joyce Wilkerson, who breeds clownfishes (anemonefishes) and is writing a book on their care. We went to Puerto Rico to the C-Quest hatchery, which is owned by Bill Addison and his wife Arlene.

Bill and his crack staff have succeeded in breeding and raising the larvae of numerous species of saltwater fish, including 11 anemonefish species, eight species of dottyback (genus *Pseudochromis* and *Ogilbyina* — including all the popular species from the Red Sea), the comet (*Calloplelesops altivelis*), the royal gramma (*Gramma loreto*), the blackcap basslet (*Gramma melacara*), the yellowhead jawfish (*Opistognathus aurifrons*), the mandarin fish (*Synchiropus splendidus*) and five different gobies. He is currently working on raising the larvae of other species as well, including the wrasse bass (*Liopropoma eukrines*) and members of the blenny genus *Ecsenius*. I was extremely impressed and encouraged by what he and his staff had achieved, as well as the research efforts being directed toward breeding and supplying the trade with other species — including some that are not readily available.

So what are the advantages or disadvantages in purchasing a tropical fish hatched and raised at a hatchery like C-Quest versus a wild-caught fish? The most important advantage in buying a captive-raised fish is that fewer individuals have to be taken from their natural environments, thus reducing pressure on wild stocks. Even though there is little quantitative evidence to suggest that collecting for the saltwater fish trade is decimating reef fish populations, any steps that can be taken to help prevent this from happening should be embraced by the saltwater aquarium hobby, and captive breeding is one such step.

Captive-raised tropical fish also tend to be healthier and hardier than wild-caught fish. For example, in anemonefish originating from certain areas in southeast Asia there are numerous individuals that die or suffer physiological damage — because of improper handling before and during their trip to the United States — for every healthy tropical fish that makes it to your local aquarium store. The saltwater fish that are tank-raised are not exposed to the same kind of treatment, and have to travel only short distances to get to U.S. wholesalers. Therefore, most captive-raised anemonefish are in better condition when you buy them than those individuals collected from the wild. This may not necessarily be the case with dottybacks, as both wild and captive-raised tropical fish are durable and tend to fare well in captivity.

Color differences between captive-raised and wild-caught fish have been an issue brought up in the past. The first tank-raised clownfishes available to hobbyists in the late 1970s were not as brilliantly colored as their wild-caught relatives. But now, with more attention being given to diet as the young develop, captive-raised specimens are just as beautiful as wild-caught fish. This holds true for all the species being bred and raised in aquariums, not just anemonefish.

It is true that a few individual anemonefish will display unique color patterns as a result of experiencing unfavorable conditions during development. For example, some species will have broken stripes or spots on their bodies rather than complete stripes — these are known as "mis-barred" individuals. Although their coloration may be different, mis-barred anemonefish still fare well in captivity and are somewhat of a novelty to have.

There are also some indications (which I intend to study in greater detail) that captive-raised dottybacks are less aggressive than individuals collected from the wild. For example, according to Bill Addison, pairing male and female neon dottybacks (*Pseudochromis aldabraensis*) from the first and second generations was much easier than pairing their wild-caught parents. In fact, in the wild pairs, the male would kill the female during the act of spawning! His observations suggest that tank-raised dottybacks are less aggressive toward each other, and possibly toward other fishes. Could you imagine that — a neon dottyback that was less aggressive! What a fantastic aquarium fish that would be.

References

Randall, J. E 1996. Coastal Fishes of Oman. University of Hawaii, Honolulu. Pp. 439.

A side note for those interested in pseudochromoids — the dottyback *Pseudochromis dutoiti* does not occur in the North American aquarium trade! This species and the more northern form, *Pseudochromis aldabraensis*, were once considered to be one and the same, but are now recognized as two distinct species. *Pseudochromis dutoiti* is found from Kenya to southern Africa, while *Pseudochromis aldabraensis* is known from the Arabian Gulf, Gulf of Oman, southern Oman, Pakistan and Sri Lanka (Randall 1996). Only one specimen, the holotype (the individual fish used to describe the species), was taken from Aldabra Atoll — the location for which it was given its scientific name.

What are the disadvantages in purchasing captive-raised fish? There are none. Unfortunately, wholesalers and distributors have been slow in purchasing C-Quest's fish and those of other commercial hatcheries, even though they are competitively priced and of decent size when offered for sale. I find this incredibly disturbing, because the wholesalers could help the hobbyist and possibly the environment by purchasing these captive-raised fish. If you are interested in captive-raised fish and your local store is not carrying them, have them write to me at Aquarium Fish International and I can give them the names of wholesalers that are handling these fish.