

Conservation and Procrastination - A National Register of Endangered Fish Species

by Andrew Boyd

There has been a lot of discussion lately on one of the Internet mailing lists I subscribe to (ACN-L - the Aquatic Conservation Network List) about the role of aquarists in conservation. I would like to share some of the issues raised with you in the hope of provoking thought on this matter. I would cover the following topics: What is the problem and how will this affect the average aquarist? What should aquarium hobbyist organisations be doing? Is there a need for a national registration scheme for endangered fish species?

The Aquarists

I believe that the new quarantine regime will raise prices of aquarium fish, and lead to fewer being imported. What this will mean is that unless someone breeds more fish in Australia there will be fewer fish available. The short answer is that unless aquarists learn to breed their own fish, they will get quite expensive, although granted this may lead to raised demand and a more efficient Australian commercial fishbreeding industry. But from a purely selfish point of view, Australian aquarists need to start breeding more of their own fish to stock their own tanks, to ensure an adequate supply.

What has this to do with conservation? To over-simplify: the fewer fishes taken from the wild to satisfy the needs of aquarists - the better. This applies equally to the one-tank fishkeeper's Cardinal Tetras and the native fish specialist's "sticky" Rainbowfish.

One of the traditional arguments used by the scientific community against the "amateurs" is that captive breeding (a) changes the fish; and (b) may introduce disease into the wild with re-release. How are the fish changed? I have been involved in several discussions over the years with members of the native fish fraternity about this question. There is the question as to what colour the tail of the wild *Melanotaenia herbertaxelrodi* is - it seems to vary with who you talk to, and more importantly what side of the Atlantic they live on. Generally speaking aquarists tend to keep the more appealing specimens of a particular species to breed with, and over several generations these "improvements" become quite noticeable. Other species tend to lose a lot of colour intensity. Colour is important to some species in recognition of potential mates.

Then there are the changes that can occur in a single generation - loss of predator avoidance behaviour and obesity amongst others. To anthropomorphise, the fish may become "complacent".

The disease angle has not yet been fully explored - but there is some evidence to suggest that the virus which has decimated certain Queensland frog populations may have been introduced via imported aquarium fish.

Then there's the problem of the fishes themselves - exotic species are a potential threat to native species, if introduced, and even native fishes from one part of Sahul could be a pest in another. On the plus side, aquarists have a much greater keeping capacity than all the "zoos" in the world, if this can be utilised effectively. There are untold millions of litres of tank water available in our homes.

The Organisations

So what can be done about these concerns, and liaison between "amateur" and "boffin"? I believe that the best bet is with hobbyists being represented by effective organisations.

They exist on two levels, local and national. Local organisations would do well to encourage members to breed fish, whatever the species, to build a knowledge base so that when specimens of an endangered species come their way they are able to do something about it.... Too often I have seen lovely fish disappear from the local scene because they ended up in the hands of inexperienced aquarists who killed them, or at least lacked the nous to breed them, which is effectively the same thing in the long run. Local branches of national organisations that are concerned with the keeping of particular brands of fishes such as Cichlids or Australian/New Guinean natives have a particularly important task - that of coordination with similar branches interstate/internationally.

Why is this coordination important? I am of the opinion that much effort

is wasted because of a lack of a "big picture". Species that may be of concern, such as the Lake Eacham Rainbowfish *Melanotaenia eachamensis*, are now common enough that their continued care seems to have been given over to the commercial sector, which is never a good idea. The aquarium trade, as a whole, is in the business of making money. They will sell what the market demands. What will happen to *M. eachamensis* when the current Rainbowfish fad passes? They may be gone forever with a comment of "Oh, well, their DNA is the same as other fishes in the area, so there's no loss". Many species have vanished from Australian fishkeeping for the crime of being "common". That is why a management program needs to be implemented for them and other species of concern. Rob Wager proposed something along these lines at the 1994 ANGFA Conference in Brisbane, and while many thought it was a good idea at the time, nothing has come of it yet, as far as I know.

The Register

My argument - and it is by no means mine by origin or exclusivity - is that a National Register of Endangered Fish Species held in captivity would identify which species are in danger of disappearing from our tanks forever. This is something that hobbyist organisations could do themselves - leaving field studies of the situation in the wild to a coordinated effort with the "pros" - with enough will and a little cooperation. I know the Cichlid folks tried this a few years back, but it failed from what I understand was inter-state rivalry. This Register is especially important in the case of the New Guinea fishes and the Cichlids - they have traditionally been difficult to bring into Australia. Equally important are Australian species that cannot be exported overseas, and I think it a good idea that regional groups give priority to local species.

There are several natural human tendencies that need to be overcome before this Register could eventuate. The first being greed. If someone has the last male whatever and someone else the last female (extreme example - by the time it got to the last pair it would be way too late for that species) then one of them is going to have to be willing to part with their precious beast for the good of the species. Then there is the other sort of greed, that of wanting what you don't have, even if you don't have the tankspace or expertise to accommodate it. These two facets explain why many are unwilling to disclose exactly what species they keep for even a local breeding registration scheme. There's pride - the willingness

on the part of someone who has been keeping fish for thirty or more years to listen to a national body who may have a request to make of them which conflicts with their own view of themselves as a fish-breeding guru. Personality conflicts between different state branches will get in the way of any national effort, as they have always done. And it's only human nature to keep the fishes that you like, and if they happen to be what everyone else likes, then no-one will be looking out for the grubby little colourless fishes - such as some of the Gobies - which are a lot rarer in captivity now than they have been in many years, which I think is a shame. If the job of looking after the less popular species was spread in an organised fashion, I am sure it would be a less onerous task!

So what is this Register for? As mentioned above, it is the only way we can gauge a true picture of the captive stocks of Australian aquarists' fishes. What follows is a coordinated series of breeding programs for identified species, and a watching role on all the others. It will be a big job, of that I have little doubt. My guess, and it is only a guess, is that a higher percentage of dedicated native fish keepers are members of organisations such as NFA, ANGFA, SANFA etc. than is the situation with Cichlid or Killifish keepers in their respective bodies, but I stand ready to be corrected. But any sort of breeding or habitat surveying program possibly in conjunction with appropriate boffins would be better than nothing.

I would urge all who read this to have a think about what I, and many others before me, have said. Because in the end, it will be ourselves who suffer, because we are denying ourselves and our children the opportunity to keep a wide range of fishes. It is a bit hard on the fishes we are watching disappear as well!

It may well be, for the reasons outlined above, that the captive bred fishes can never be returned to the wild, or in some cases there is no "wild" left to return them to, and all we can hope for is to preserve or "archive" the fishes we choose to save. In the long run I fear that it will be a matter of our choice as aquarists which species survive and which do not. We have reached a critical juncture in Australian fishkeeping - habitat is being lost both here and overseas, fewer fishes will be coming in, governments are looking at what species can and cannot be kept - it is up to us what we do about it.