

What happens after catch and release?

By Ian Cox



Fish cruelty is a hot topic of debate in my family what with the dearly beloved being a veterinarian who treats fish. For the most part I beat off accusations of cruelty with a combination of science and philosophy. I point out on the one hand that fish are not human and to talk of cruelty is another example of unscientific anthropomorphism and on the other to research which shows that fish don't comprehend pain as we understand it. (see - [Do fish feel pain](#)).

You see Vets don't see fish as fish. Fish are patients to them and they are doctors to fish. Good doctors care for their patients, which in my wife's case mean that they get names. You begin to get the drift. Last night she had help in the form of her fellow attendees at a veterinary conference. So there I was facing a barrage of vets (yes two vets is a barrage- more than two is a horde) telling me about the legislation they are promoting enforcing the humane killing of fish farmed for food production. I pointed out that farmed fish were caught the same way as we harvest fish in the wild,

with nets and that they died much the same way - as fish do when they are out of water. I was not popular.

It was just as well that I have never tried to defend fly fishing on the basis that I practice catch and release. Because there I afraid, they had me dead to rights. You see the famed South African aquaculture Vet, Dr hoextemeyer has provided the scientific explanation to what my wife has long complained about and I had often suspected, namely that catch and release condemns about 60% of trout caught in our still waters to a certain death.

Apparently it is all in the muscles. Fish I was told have two types of muscle, the red muscle that is, as one would expect, richly supplied with oxygen and white muscle which is not. Red muscle is what fish use every day. White muscle is the afterburner they deploy in moments of stress. The trouble is that while red muscle recovers quickly, white muscle does not.

Fish are not all equal in this regard. I was told that Marlin, for example has much more red muscle than white muscle, meaning that they recover quickly. Catch and release works very well with Marlin. However it is the other way round with trout. Trout are mostly comprised of white muscle with the result that it takes trout about 3 weeks to recover from what we call a good fight. The fish is vulnerable during this time of recovery to disease and predation with the result that many don't survive the experience of giving a fisherman a good fight.

I was told that the survival rate depends on how quickly the fish is released and the amount of stress it suffered before release. Taking the fish out of water is a huge contributor to the process of depleting white muscle of oxygen. So is a good long fight. Do both especially in warm water conditions and the survival rate drops to about zero in bigger fish.

Now clearly the 60% mortality rate that was mentioned earlier is a generalisation and thus must be treated with caution. The actual survival rate depends on a combination of factors such as the size of the fish, how long it takes to release it once it is caught, the water conditions it was caught in and how it was released. Fish that are release quickly and who swim away strongly are less impacted than those who need to be revived and thus less likely die from the experience of being caught. Fish caught in cold well oxygenated water are going to be less effected than fish caught in the warm still water conditions that is your summer dam. Small fish are easier to bring to net than big ones.

However what does seem to be clear is that must modify how we catch trout if we want them to survive the experience. This is probably less critical when fishing fast flowing rivers where the water is oxygen rich and fish are generally released within seconds of being hooked but it is a very important consideration when fishing still waters.

We really need to strive to achieve a situation where it is unnecessary to revive the fish. This means that if you are serious about catch and release, you should not be fishing in warm water conditions for any fish over 800 grams. Warm water conditions is anything over 19C. You should also not be fishing with light tackle or light tippets.

Perhaps the rule should be that if one must revive the fish then best to kill it. Bag limits will then become important once again encouraging those who fish for the numbers to take care not to overly exert the fish.

Standard still water tackle in this country seems to be a 4 or 5 weight rod and a 4x or lighter tippet. That is way too light if a quick release is your goal. We should be fishing at least 7 weight rods and with stronger leaders. That is what they use elsewhere in the world. The objective if you practise catch and release should not be to have a good fight but to release a caught fish as quickly as possible.

I not that Gary Maas who runs the catch and release fishery Trout Bagger won't allow anything less than a 10lbs tippet on his dams and insists on de-barbed hooks. He makes money out of his trout living to fight another day so he probably knows what he is talking about.

I started using heavier tackle this year after fishing Thrift Dam with Martin Davies late last year. I was stunned by the difference it makes to the fish. Even shifting from a slow action shortish rod to a longer faster rod in the same weight category makes a huge difference. You get the fish to net much quicker, in fact in less than half the time and the need to revive fish becomes less frequent fishing a 10' fast action rod as opposed to a 8'6" slow action one. Trout caught on the former are much more likely to swim away powerfully after being released still full of vim and vigour than on the latter where the need to resuscitate trout is the norm.

I can't say the move to heavier tippets has discouraged fish. My catch rate seems to be about the same but perhaps that is more a case of the rip and strip way way I fish still waters.

It also stands to reason that you must never take a trout out of water. They die incredibly fast. This was confirmed to me by a trout farmer who commenting on the veterinary profession's concern about humanely killing farmed trout said that they would if the trout were not already dead by the time they got to the equipment one needs to do this. We have all have those pictures of our still water monsters held in the most advantageous pose. Don't do it at least not unless you intend killing it because that is what you have probably done anyway.

It is also not a good idea to handle the fish even in the water. I have found that it is not that difficult to remove a hook from a netted fish in the water just by holding the hook. This is much easier if the hook is de-barbed which I confess is something I am less enthusiastic about. I have lost far too many trout to barbless hooks!

So by all means practise catch and release, but don't kid yourself. If you are going to practice catch and release you must also fish within parameters which leaves the fish with a decent chance of survival. If you don't, rather kill the fish and take it home for eating.
