

Part 15

Fact vs opinion

By Ian Cox

Trout have not been listed as invasive in South Africa, nor is it likely that they will be if the rule of law survives in this country. This has not, however, stopped the Department of Environmental Affairs (DEA) from calling trout invasive at every opportunity it gets. This is extraordinary given that officials are meant to uphold the law rather than abuse their power in the pursuit of private passions.

It was only a couple of weeks ago that the [Chief Justice delivered a unanimous Judgement of the Constitutional Court](#) which reminded officials that: “The powers and resources assigned to each of these arms do not belong to the public office-bearers who occupy positions of high authority therein. These servants are supposed to exercise the power and control these enormous resources at the beck and call of the people”.

It seems that there is little or no understanding of this important principle at DEA. So we can expect DEA and its satellites to continue ignoring the law in order to misrepresent a species as invasive when this is not in fact the case.

And therein one finds half of the problem and the focus of this article. You see DEA often claims that what it does is science based when in truth it is not. The rest of the problem can be found in something which I have dealt with in an earlier article, namely that definitions used by science are not always the same as those that apply in law. Thus, for example, what scientist say is invasive is very different to the test for determining invasiveness in law.

One finds, on closer examination that the “science” on which DEA often relies is not fact based. It is frequently based on a consensus of opinion rather than facts. This is because some scientists lacking facts to support their theories argue that they are nonetheless correct because their views are supported by the opinions of other scientists.

The claim that trout are invasive is a case in point. DEA frequently parrots the old trope much loved by invasion ecologists that says that trout are one of the 100 most invasive species in the world. But when you examine this statement you find that it has no basis in fact.

The truth is there is no internationally accepted standard for judging degrees of invasiveness. There is not even an internationally accepted scientific definition of what invasive means.

This idea that trout constitute a serious invasion threat was reached by comparing how many journal articles say that trout are invasive compared to other species. A closer examination of those underlying articles reveals confusion around what invasive means as well as a lack of hard evidence justifying that trout are truly invasive. Sadly one finds time and again that such research bemoans the lack of data but then goes to conclude that trout are nonetheless invasive despite the lack of sufficient evidence justifying this claim. It is often a case of grasping at straws to justify a preconceived opinion.

The legal system has been aware for millennia of this natural inclination we all have to be partial in our opinions. Law therefore treats opinion with a great deal of suspicion. Opinion is only admissible

in our courts when it is delivered by a witness who the court recognises as an expert. Expert opinion is admissible as evidence but even then very strict rules apply. An expert opinion is only admissible insofar it speaks to proven facts. The expert must also be able to persuade the court of the merits of the opinion through the transparent and logical application of established principles to those proven facts. This process must be able to survive a robust process of testing through cross examination. It is only then that the opinion is accepted as evidence.

My experience has been that DEA and our scientific community do not yet understand this. They believe that opinion becomes fact if that opinion is supported by other scientists. It seems that scientists believe that the greater the consensus of opinion the more factual the opinion becomes. Hence the tendency in some branches of science to seek to validate scientific opinion by means of a consensus seeking beauty parade.

This is completely wrong. Law and lawyers are programmed to be innately suspicious of such processes. Hard won experience gained over millennia has taught us how easily such processes are corrupted and how wrong herd based reasoning can be.

Scientists and government officials who think that courts will accept this sort of reasoning as fact are in for a very unpleasant surprise.
