

Note: This month's commentary is by Dan Isaak, who writes the most impressive, useful blog that I have read. He creatively visualizes concepts that he has synthesized and interpreted from the peer-reviewed literature on climate change and aquatics. Thanks to Dan for contributing to fisheries science in a way that truly benefits other fisheries professionals.

—Donna Parrish

Blogging Fish Science

Dan Isaak

Thank you, Donna, for inviting me into this space to offer a perspective on the role of blogging in science and our Society. I've written the Climate-Aquatics Blog the last several years as a means of rapidly and broadly distributing peer-reviewed research pertaining to climate change and its effects on aquatic ecosystems. My intent in doing so has been to raise awareness, stimulate healthy debates and information exchanges, and engage with those concerned about this global phenomenon across a diversity of backgrounds and aquatic science disciplines. So far, so good, as the blog mailing list continues to grow and I've enjoyed dialogues with people all over the world. Based on the feedback I receive, blogging is easily the most useful thing I do in terms of communicating and disseminating scientific information. And I suspect it will probably remain the most useful thing I ever do in those regards when I reflect someday back on my career.

Wikipedia estimates that more than 250,000,000 distinct blogs currently exist on popular platforms like Tumblr, WordPress, and Blogger. Within that universe of blogs—most properly referred to as the blogosphere—blogs are written on every conceivable topic and science blogs are increasingly popular among individual researchers and scientific societies (Amsen 2006; Fausto et al. 2012). Usually blogs are posted to a website and interested readers go to the website to read the content. But I've found a more active approach that involves sending blogs directly to those on my mailing list to be far more effective. Although it always makes me feel awkward to spam lots of people, I rationalize it based on the importance of a topic like climate change and I also try to be immediately responsive (and apologetic) to anyone who asks to be removed from the email list. I do my best in those inbox invasions to be respectful of people's time by having something useful to say and saying it succinctly, because we all suffer from information overload these days. So as not to wear out my welcome over time, I also try to use humor (with varying degrees of success—or none, based on my wife's assessments), which serves a secondary purpose of leavening the bread a bit when dealing with a topic like climate change.

In my opinion, a good science blog post is a sort of mental widget that connects seemingly disparate things in useful ways, encapsulates sets of related information, stimulates discussion, and forms synapses in a few brains other than that of the writer. The best ones get forwarded by the original recipients to others interested in a topic to create a sort of virtual echo chamber. To maximize efficiency and information content, I've learned to use lots of graphics because pictures really are worth a thousand

words, and I embed hyperlinks to relevant information in the Internet equivalent of citations within a research paper. Although I sometimes forget this, the best ones are usually short. Not as short as a Twitter Tweet, but the most popular blog I've written consisted only

of a few paragraphs. It pertained to the description of a new sculpin species and had a header graphic that conflated depictions of Lewis and Clark, an old map, and a sculpin floating in the sky to resemble a god-like deity in a scene obviously inspired by Ray Troll. (Blogs also provide a bit of a creative outlet for those otherwise constrained by standard scientific formats.) More than 8,000 people around the world were linked to that information for the first time when that blog dropped into their inbox.

I suspect most AFS members are part of the Society because they have been inspired by the natural world, and everyone relishes the new information about that world that AFS is so adept at producing. But it's also the case that we're all busy, and the exponential growth in scientific knowledge relative to an individual's fixed capacity to absorb it means we're all relatively more ignorant each day. It's also true that today's science is often so specialized, technically sophisticated, and competitive that researchers have difficulties communicating new wonders about the natural world back to the rest of us. Blogs, and blogging, help cut through all that. The most rewarding thing about blogging (and often the biggest challenge) is distilling complex scientific knowledge down to its essence, and then sharing that essence with people who appreciate it. If done effectively, this new medium can be a powerful tool for increasing the flow of information, strengthening AFS, and raising the profile of our science and issues we care about as a Society within society. And the more fishy information we can put out there, the more it will affect people's thinking and the actions they take with regards to fisheries.



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