

Guest Editorial

Writing About Conservation

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The goal of *JCMS* is to communicate advances in conservation and museum studies – and that form of communication is, of course, in writing. This past summer, when I heard that *JCMS* was being revived, I was delighted, and immediately agreed to join the new editorial board. It is a homecoming, of sorts, since I founded *JCMS* in 1996 while earning a certificate in archaeological conservation from UCL. Currently, I am an instructor at the Sweetland Center for Writing at the University of Michigan, as well as a writer and editor. I specialize in writing in the sciences, working every day helping students and researchers write and publish their findings. It's important work, because research that isn't written up and published is, for all intents and purposes, lost.

Sometimes that research isn't published because, I believe, most people find writing to be difficult. I certainly agree – I am always happier “having written” something, than I am actually “writing” the piece. Fortunately, in the sciences – and conservation is one of those wonderful disciplines that works at the border between the sciences and the humanities – there's a basic structure that most peer-reviewed articles follow. It's called IMRAD: Introduction, Methods, Results, and Discussion.

The sections of conservation papers aren't always labeled with those words (though a quick search shows many are), but the papers' content reflects them. The “Introduction” might not be named, but it always comes first. It tells readers why the research is important, what is currently known about the topic, and which hypothesis is being tested or which research question is being asked. It lets the readers in on what they need to know to understand the rest of the paper.

Sometimes the “Methods” section is called “analysis” or “experimental” or “design,” depending on the research presented. Sometimes it's simply labeled by the method or methods used. But this is the cookbook part of the paper – this is how the research was done. It's there to convince readers that the researchers used appropriate techniques, and to give details so future researchers can replicate or advance the work done.

Results might, in some cases, be more accurately named “observations” or grouped with the conclusion. But if they stand alone, they should, as you would expect, describe

the basic information learned, but without (yet) explaining the implications of what was learned.

Explanation is what happens in the conclusion. If the introduction is positioning the research in the context of what was known before, the conclusion is meant to position the work in the context of what will come next. How does this work agree with or disagree with what has been previously researched? What new questions have been raised? What new directions have been suggested? How has our thinking been changed by this research?

Of course, this may well be obvious to you. After all, you've likely read hundreds of peer-reviewed articles in conservation. But please remember to explain this structure to the students you work with. Every week I work with aspiring scientists who are surprised that there is an underlying structure to writing in the sciences. These students don't have the advantage of having read as many papers as you have. They don't realize that you don't always read papers front to back. They haven't internalized the idea that they can skip to the end to find the main conclusion, or focus on the methods to learn about how they might approach their new project.

A confusing paper isn't usually confusing because the material is too complicated. It's confusing because it isn't written clearly enough. When you write, think of yourself as a guide for the reader. You're writing up your research because you learned something important, and you think others will also find it important. Do everything you can to help the reader do less work. As an expert, why not make it easier for your readers to understand your advances in conservation and museum studies?

PS: There are two papers that I find valuable for my own writing, and in teaching writing. They are:

Gopen G and Swan J 1990 The science of scientific writing. *American Scientist* 78: 550–558.

Plaxco, K W 2010 The art of writing science. *Protein Science* 19: 2261–2266, DOI: <http://dx.doi.org/10.1002/pro.514>.

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