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Some basic notes for students on writing a paper.

When I began writing papers for publication, I sometimes found it hard to get rolling, even though I felt like the analysis was complete and ready. Here is a sequence that seems to work pretty well when the writing does not flow easily:

1. Make a detailed outline of the points that you want to establish in the introduction. What prior studies motivate the question that you are asking? What do we already know? What important holes exist in our understanding of the focal issues? Why does this species/location/etc provide a good test-bed to address the focal questions?
2. Organize the major results. Pick and complete the exact set of figures and tables that you will present, and the sequence in which you will present them. This makes it very easy to write the text of the results section, because the text is primarily a 'tour-guide' that leads the reader through the results presented in figures and tables (and provides some additional results that don't warrant an independent fig/table).
3. If you are having a hard time with the writing itself, start with the methods section. This is the simplest and most direct part of any paper. Writing the methods doesn't require a lot of thought about what you are trying to say, so you can focus on the writing itself. Just clearly explain what you did, how you did it, what sampling design you used, and the sample sizes that you obtained. Particularly if the methods section is long, it sometimes helps to remind the reader **why** you gathered each type of data. For example: "To test whether the presence of lions affected the likelihood that prey would form mixed-species groups, we needed data on mixed-species herding in the absence of lions. We obtained these data by..."
4. Consider writing the results before writing the introduction. In this way, you already see clearly what the introduction will eventually lead to. I usually start with the introduction now, but I found this sequence easier for my first few papers. Of course, they might have been lousy papers...
5. Regardless of what order you write the other sections, always write the discussion next to last, and the abstract last of all. End your discussion by coming full circle and relating your main results to the central questions that you established in the introduction.
6. If you are having difficulty writing a sentence, paragraph, or transition, it probably means that you aren't really sure what you are trying to say. Walk away from your computer and think it over until the logical flow of the argument is clear in your mind. It will then be easy to write.
7. Use a reference manager program for citations. This saves a surprising amount of time with formatting. Particularly with journals that use numeric citations in the text, adding citations can be time-consuming and error-prone. And in the course of writing a paper, it occasionally becomes clear that your initial choice of target journal might not have been the best choice. Reference software makes it easy to reformat.