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Preparing an Effective Poster Presentation

Greetings GPNSS members! By the time you read this editorial, many of you have been experiencing the fury unleashed by 'Old Man Winter' and may find yourself counting the days until warmer spring temperatures return once again to the Great Plains. Until then, just a couple more months of bitter cold temperatures, strong winds, and blowing and drifting snow. But not to worry, winter also provides the cold weather enthusiasts among us a chance to enjoy a range of outdoor recreational opportunities, a chance to reflect on the previous year in review, exciting professional and personal opportunities ushered in by the New Year, and spending time with friends and family. For me, I write this editorial with just a week to go before the start of the 2019 annual conference of the Midwest Fish and Wildlife Conference. Though my preparation for professional conferences varies annually, a common denominator in any meeting I attend includes preparing poster presentations, the subject of this editorial.

As active GPNSS members, we have all looked at thousands of posters over our careers, among which those that were well prepared stood out from those that essentially presented a thesis or entire manuscript into the allotted space. The tendency to cram as much information as possible into a poster is complicated by the fact that poster displays often occur in large, noisy venues competing with others to be read; thus, they must have visual appeal to attract attention (Krausman and Cox 2018). Posters that appear to be prepared in haste with little consideration given to the presentation of information often are not well received (Krausman and Cox 2018). Developing a quality poster that effectively presents the primary results of your research is not a trivial matter. Thus, the objective of this editorial is to summarize the key components for quality posters that will attract attention and enable researchers to effectively display results of their work (Krausman and Cox 2018).

There is a lot more that goes into developing a quality poster. My objective is to outline the key components for quality posters that will attract attention and allow you to effectively present the results of your work. Information presented below was obtained from Scientific Poster Design, Cornell Center for Materials Research, Cornell University, Ithaca, New York, USA (available at <http://hsp.berkeley.edu/sites/default/files/ScientificPosters.pdf>, accessed 20 January 2019) unless otherwise cited.

WHAT A SCIENTIFIC POSTER IS AND IS NOT

In many ways, a scientific poster can be thought of as a dihybrid cross between an oral presentation and a published paper (Miller 2006) and thus, should be given as much thought as alternative forms of scientific communication and not be constructed last minute or as an afterthought (Krausman and Cox 2018). This is especially important because posters are visual media meant to elicit interaction between the reader and the author. Posters highlight your research and should not be considered second rate. An effectively prepared poster can allow you to make professional contacts, provide for the exchange of information, and promote your research and your organization (Jacobson 2012). Posters provide more personal dialogue with people interested in your topic (Beilenson 2004) and allow you to reach out to others not in your field. They should be understood by all types of researchers, managers, and policy makers.

Posters often provide advantages over oral presentations because your work can be examined in your absence, displayed in your office or more broadly across your department or college after the conference, or posted on a variety of social media venues to reach folks in other fields (Krausman and Cox 2018). In addition, they can present aspects of proposed study designs, preliminary results, or observations from a multi-year study that encourage feedback from experts in the field on how to proceed in future years. Developing a poster provides you with experience in preparing a "boiler plate" summary of why your project is interesting and potential utility of your findings to others in the field, a valuable skill for students and early professionals (Krausman and Cox 2018). Establishing direct links between data analyses, conclusions, and study objectives rather than making readers translate statistics and interpret findings will ensure that your poster is read, understood, and remembered (Nelson et al. 2002, Krausman and Cox 2018).

POSTER DEVELOPMENT

Like oral and written presentations, posters contain much of the same information as oral talks and written documents, though differ in presentation. For one thing, you'll need to hook the reader with a "catchy" title, and a couple of sentences to get them hooked to read the rest (Krausman and Cox 2018). Do your best to develop creative illustrative hooks (e.g., photos, bold statements) by explaining why your research is needed and how it can be used to advance scientific knowledge or aid in future conservation and management.

Think of your poster as a graphical abstract that conveys to readers 1) why was the study conducted (i.e., justification), 2) what procedures were used to assess the problem (i.e., methods), 3) what were the main results, and 4) what are the management implications or recommendations derived from your results (Krausman and Cox 2018). Focus on the “who cares” question by concisely and clearly explaining how your research advances science, aid in future management, or directs policy. A poster is a short story that should describe the major parts of research and pique interest in readers with the “less is best” philosophy (i.e., strive to keep it to no more than 750 words; Krausman and Cox 2018). Tell your story in a clear, concise manner with 1–3 take home messages that the methods and results will support (Krausman and Cox 2018). In short, simplify, simplify, and simplify some more! Your poster should sell your research in a matter of seconds, which is most easily accomplished by considering the following guidelines (Krausman and Cox 2018).

1. The ideal poster design consists of 3 columns across with 3 sections per column from left to right and top to bottom. Each section should be left aligned. Make it easy to read going from top to bottom and left to right in logical order. Flow is important, and often is aided by using bulleted or numbers text in each section rather than large blocks of narrative in paragraph form (Krausman and Cox 2018).

2. Construct your poster using the same major sections that you do when preparing a scientific manuscript (i.e., introduction, study area, methods, results, discussion, and management implications). The introduction should justify need for your study (i.e., brief statement of why study is important), the organism/system under study, and how data derived from your work will add to the literature (Krausman and Cox 2018). The objectives should be clearly enumerated or bulleted as a separate section following the introduction. Methods should provide a concise summary of how, where, and by whom data were collected and analyzed. Primary results should be compelling, clearly conveyed using figures, and limited to simple statements of what was found (Krausman and Cox 2018). The Discussion should briefly synthesize the 2 or 3 most important results, and how they inform future management or conservation programs or policies related to the issue (Miller 2006, Jacobson 2012). A Management Implications section can be included if you have specific recommendations derived from your results (Krausman and Cox 2018). In the case where proposed research is being presented, consider using this space to briefly describe the expected benefits and next steps of the project (Krausman and Cox 2018).

3. Use the same type font style throughout the poster. As a general rule of thumb, readers should be able to read

your poster from 3 m away. Avoid the use of fancy fonts when constructing posters. Instead, choose simple typefaces (i.e., Aerial) and bold type on illustrations. Large type (~85 point) and capitalization of important words should be used for the title. In addition, use 40 to 48-point font for authors' names and addresses, 56 point font for subheadings, 36 to 40-point font for the text, and approximately 18 to 24-point font for captions. Of course these may vary depending on the poster content, so feel free to experiment with different sizes for maximize visual appeal of your presentation.

4. Keep aspects of your study design (i.e., descriptive data and field/laboratory methods brief; Briscoe 1996, Beilenson 2004). Added technical detail should be provided during conversations with viewers. Nevertheless, be sure to provide enough information on the poster to facilitate comprehension of your story line by viewers. Try to let your figures do most of the talking and avoid the use of abbreviations, technical detail, and colloquial terms and jargon (Beilenson 2004).

ADDITIONAL CONSIDERATIONS

These guidelines should help you to design a poster that is visibly appealing, technically correct, and of interest to readers. In addition, the following considerations will aid in helping attract the attention of readers among the hundreds of posters hanging at the poster session.

1. Because posters are visual, tables, figures and pictures should dominate, but make sure they are concise and clear.

2. Be sure to use appropriate and compatible colors for font type and backgrounds. Color combinations with visibly pleasing contrasts are preferable to white or exotic backgrounds (i.e., use dark type on light backgrounds). Try to limit backgrounds to no more than 2–3 colors and be mindful that busy backgrounds sever only to distract from your message (Krausman and Cox 2018). Examples of suggested combinations are yellow type on a blue background, and white type on a dark green background. Clear and intriguing images of the study subject (i.e., action photos), clean lines, and white space to tell your story are preferable to the use of dark illustrations, dark backgrounds, and colors you have not tested before (Powell 2012). In short, keep your presentation visual!

3. Simplify the visual display. Convey only 1 idea per table, figure, or other illustration. Simply copying and pasting figures or tables from publications (i.e., journal articles, dissertations, theses) into a poster often contain too much detail and detracts from the primary message, and thus do not make good graphical illustrations for posters (Krausman and Cox 2018).

4. Text, appealing graphics, and empty space should be used in approximately equal proportions throughout the poster. Don't be afraid to leave empty space or make use of white space, as both increase readability and make posters look inviting (Jacobson 2012).

5. All illustrations should effectively depict what you want your audience to see, which may be aided by including poster elements that show relative size of organisms or spatial extent of study area (i.e., scale bars for maps).

6. Resolution of photos (saved as jpg or png) and line art (saved as png) should be from 150–300 dpi.

7. Last but not least....edit, edit, revise, and edit some more! Try to prepare your poster a few weeks in advance of when it will be presented. This will provide you with time to edit for content. Following initial edits, let your poster sit for a couple of weeks before editing again with "fresh eyes." Then have your poster reviewed by authors and outside referees, edit some more, and revise again.

POSTER DELIVERY ETIQUETTE

Be sure you or a coauthor are present at the poster during the appointed time. Also, prepare for the event by rehearsing a short (i.e., 2–3 minute) verbal explanation of your work (i.e., "sales pitch) ahead of time. Strive to keep conversations friendly and interactive (2-way) with viewers and consider providing your business cards or summary materials (i.e., printed abstracts, mini-posters) for interested viewers to demonstrate that you are well organized and value their time spent discussing your research (Krausman and Cox 2018). Until next time, I hope these guidelines will help you design the most effective poster possible for presenting your research!

—Christopher N. Jacques
Editor-in-Chief

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