Presenting a Poster

Ecology in English
Master EBE, Orsay
Franck Courchamp
The first key rule

- Take all the advices and then do it as you see fit
Why do a poster?

- There are a lot of people with data to present, but time does not permit everyone to give a 10-15 minutes talk.
- There are sometimes several hundreds of posters in a conference, there is thus competition of time and attention.
- Presenting a good poster is essential to grab and maintain the readers’ attention.
A Poster Is...

....More than Presenting Data

- Enables your contribution to a meeting
- A significant part of professional education
- Provides information
- Develops your experience
- Builds networks and contacts
- Tremendous source of feedback
Posters vs. Papers

- Papers are designed to appeal to readers of a scholarly journal, and to meet the *formal* organizational and informational requirements of publication.

- Posters are designed to appeal to peers and colleagues at conferences and/or public displays, and to meet the organizational and informational requirements of conferences and/or public displays.
Posters vs. Papers (2)

- The audience of a paper is a *person*; the audience of a poster is *people*.

- A poster presentation allows for question-and-answer sessions, and the exchange of ideas and information regarding your research.

- A paper presents *all* the information; a poster presents the *most important* information.
The message

- Get right to the heart of the matter, and remember: *Keep It Simple!* In clear, jargon-free terms, your poster must explain
  - 1) the scientific problem in mind (*what’s the question?*),
  - 2) its significance (*why should we care?*),
  - 3) how your particular experiment addresses the problem (*what's your strategy?*),
  - 4) the experiments performed (*what did you actually do?*),
  - 5) the results obtained (*what did you actually find?*),
  - 6) the conclusions (*what did you think it all means?*), and, optionally,
  - 7) caveats (and reservations) and/or
  - 8) future prospects (*where do you go from here?).
- Be brief, and always stay on point
Before starting the poster

- Prepare and submit your abstract
- Determine the one essential concept you would like to get across to the audience.
- Learn about your audience
Starting the poster

- First . . . READ THE INSTRUCTIONS supplied by the meeting organizers!
  Having an idea about these details before you begin will make the whole process much easier.
Elements of Your Poster

- Title
- Abstract
- Introduction
- Methods
- Data/Results
- Conclusions
- Acknowledgments
- References
Organization and Layout

A general guide to poster layout:

- Banner
- Abstract
- Graphics
- Body of Paper (Introduction, Methods)
- Graphics
- Body of Paper (Introduction, Methods)
- Conclusion
- Acknowledgments
- References
Title that hints at the underlying issue or question and is formatted in “sentence case” (i.e., not in “Title Case” and not in “ALL CAPS”)

Your name(s) here

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Introduction

This is a Microsoft PowerPoint template that has column widths fixed at 11.5 in. to provide enough space for placing text and figures. The columns are spaced to provide enough space for placing text and figures. The title should be bold, centered, and not in all caps. The introduction should be brief, not exceeding 1 to 2 pages.

Materials and methods

The materials and methods section should be concise and clear. It should include all the materials and methods used in the experiment, including the chemicals, reagents, and equipment. The methods section should be organized in a logical manner, and the results should be presented in a clear and concise manner.

Results

The results section should be brief and to the point. It should include all the results obtained from the experiment, including the data and graphs. The results should be presented in a clear and concise manner, and the discussion should be limited to the interpretation of the results.

Conclusions

The conclusions section should be brief and to the point. It should summarize the main findings of the experiment, and the conclusions should be based on the results obtained.

Literature cited

The literature cited section should be organized alphabetically by author, and each reference should be complete and accurate. The references should be cited in the text, and the bibliography should be included at the end of the presentation.

Acknowledgments

The acknowledgments section should be brief and to the point. It should acknowledge any individuals or organizations who provided support or assistance for the experiment.

For further information

If you need more information or help, please contact the author or the presenter.
Sequencing the document

- The poster should use photos, figures, and tables to tell the story of the study. For clarity, it is important to present the information in a sequence which is easy to follow:
  - Determine a logical sequence for the material you will be presenting.
  - Organize that material into sections (Methods, Data/Results, Implications, Conclusions, etc.).
  - Use numbers (Helvetica boldface, 36 - 48 points) to help sequence sections of the poster.
  - Arrange the material into columns.
  - The poster should not rely upon your verbal explanation to link together the various portions.
Organization and Layout

- Logistics:
  - Find out the size regulations before you begin
  - The standard is usually A0 but it may differ from meeting to meeting.
Organization and Layout

- Make it easy on your information-saturated audience.
- Remember the competition for attention
- Be concise and clear
Organization and Layout

- Fonts:
  - Use the same font style throughout the poster.
  - Remember to adjust the size according to the importance of the sections, and that people will be standing 2 meters away or more while reading your poster.
  - Use fonts that are simple and easy to read.
  - Add emphasis with bold, underline or color--italics are harder to read.
Fonts

- Don’t pick a font that's a pain to read. Don’t get too creative: no one wants to struggle through a poster in *Brush Script* or *Portagol* or *Herculanum* or similar.

- Don’t vary the type sizes and/or typefaces excessively throughout the poster. For example, don’t use something different for every bit of text and graphics. Use different size for different headings.
Layout

- Don’t make your reader jump all over the poster area to follow your presentation. Be consistent and help with numbers, arrows and logics

- Organize materials in either a columnar or counterclockwise fashion starting in the upper left corner

- Make section headings distinct from the body of your writing
Layout

- Lay out the poster segments in a logical order, so that reading proceeds in some kind of linear fashion from one segment to the next, moving sequentially in a raster pattern.

- The best way to set up this pattern is columnar format, so the reader proceeds *vertically first*, from top to bottom, then left to right.

- This has the advantage that several people can be all reading your poster at the same time, walking through it from left to right, without having to exchange places.

- Consider numbering your individual poster pieces (1, 2, 3,... ) so that the reading sequence is obvious to all.

- And always make sure that all figure legends are located immediately adjacent to the relevant figures.
Readability

- Don’t use too small a typesize for your poster. *This is the single most common error*. Never ever, use 10- or 12-point type. Don't use it in your text, *anywhere*. Don't use it for captions. Don’t use it for figure legends, and annotations, footnotes, subscripts, or anything else. Don't ever use small type on a poster. Remember, no one ever complained that someone's poster was too easy to read. Got it?! Good!

- Use a typesize that can be read easily at a distance of ~2 meters or better. You do want a large crowd to develop around your poster, don't you? Think of 14-point type as being suitable only for the fine print and work your way up, (never down) from there. For text, 20-point type is about right. Not enough space to fit all your text? Then shorten your text!
Colours

- In addition to the background, use colors in your poster, and always try to use them in a way that helps to convey additional meaning.
- Select colors that draw attention but don't overwhelm. Make sure that the colors actually mean something and serve to make useful distinctions. Make sure that the color scale being used is tasteful, sensible, and above all, intuitive.
- Also, be mindful of color contrast when choosing colors; *never place isoluminous colors in close proximity* (dark red on navy blue, etc.), and remember that a lot of people out there happen to be red/green colorblind. Please remember this advice when you create color slides and transparencies as well.
Elements of Your Poster

- Title
- Abstract
- Introduction
- Methods
- Data/Results
- Conclusions
- Acknowledgments
- References
Title banner

- Title
  - Catching, simple, able to be seen from 6 meters away. This is supposed to attract, so it needs to been seen from afar.

- Author(s)
  - The authors names may be printed smaller, at 72 points

- Institution
  - Affiliations can be even smaller, at about 36 - 48 points
Think BIG!

- Make it descriptive: the reader should be able to decide quickly whether to read more or not. In case of doubt, he/she may walk to the next poster. Consider using a title that suggests some of your conclusions.
Title sizes

- The most important parts of the title banner, the title itself, should be readable from about 6-7 meters away. Your title will lure viewers closer to see your imaginative and exciting study.

- The size of letters in the title itself should be a 96 point size.

- The rest of the poster, should be readable from about 3 feet away. A good way to check that is to print an A4 paper and see if you can read everything at arm length.
Title

- It should never occupy more than two lines. If things don't fit, shorten the title; don't reduce the typesize.

- Titles in all capital letters are harder to read.

- Some people put a photo of them next to the title. Either an ID photo, or a photo in working situation. Or a funny photo. It is very practical for the audience to find the author of the poster.
Names and affiliations

- Put the names of all authors and institutional affiliations just below your title.
- Don't use the same large type size as you did for the title; use something smaller and more discreet. This is not the cult of personality.

Author(s)
- It's a nice touch to supply first names rather than initials
- Drop titles (PhD) and middle initials

Institution
- Institution and department.
- City names and state names can be dropped.
Abstract

- Not always needed. A poster is short already, so if you really think you need one, may it ultra-short.
- Identify what is being studied, how you are studying it, and what your variables are.
- Identify your hypothesis.
- State your findings.
Introduction

- Avoid to put a huge chunk of text. One or two short paragraphs
- Less *in-depth* than an introduction for a paper. Bring the reader up to date on your topic and establish the importance of your own research
- Highlight and focus on:
  - Questions raised and answered by previous research.
  - The question you are asking and why you are asking it.
Methods

- Prefer figures and diagrams to text.
- Present only the basics--your audience isn't trying to replicate your study at this moment, they just want to know basic experimental design.
Data/Results

- Again, be concise
- Use graphic/visual elements:
  - Tables
  - Charts
  - Pictures
  - Graphs
Data/Results

- Include a descriptive label for each graphic.
- Below each graphic include a brief written description of what the graphic is and the interpretation of its data.
Conclusion

- Be concise and clear.

- Highlight:
  - What you found, and its importance.
  - Parallels and discrepancies with previous research and theory.
  - The direction of future research.
Acknowledgments

- Acknowledge those professionals and research assistants that contributed to your study, and the funding if any.
- Be brief.
- This section is not a requirement.
References

- Here again, not required but helpful
- Use the same references as in your original research paper.
Before you go any further...

- Save & back up your work!
- Don't say I didn't warn you . . .
Aesthetic Issues

- Color:
  - Used effectively, color is an effective method of attracting people to your poster.
  - If you use color, stick to using a set number of colors in a consistent pattern.
  - Limit your color use to 2-3 colors.
Aesthetic Issues

- Use contrasting colors for readability and a professional look.
- Sometimes a photo (light version) is used as a background. This is really nice, but make sure it is 1/ light enough so that the text can be read easily 2/ of high quality so that it can be enlarged without being pixelised.

(it is not the case here!)
Aesthetic Issues

- **Layout:**
  - Limited space doesn’t mean you can cram things together.
  - Use a consistent spacing rule between each element of your poster.
  - Try to align corners along vertical and horizontal lines.
  - Use graphics, but only those that are necessary.
Don’t ever expect anyone to spend more than 3-5 min at your poster. If you can't clearly convey your message pictorially in less time than this, chances are you haven't done the job properly.

There ALWAYS is too much text in a poster.
Posters primarily are visual presentations; the text materials serve to support the graphic materials.

Look critically at the layout. If there is about 20% text, 40% graphics and 40% empty space, you are doing well.

When in doubt, rephrase that text or delete it. (Keep chanting this mantra: There always is too much text. Always too much text.)

Use active voice when writing the text; It can be demonstrated becomes The data demonstrate.

Delete all redundant references and filler phrases, such as see Figure ...
Edit Ruthlessly!

- Remove all material extraneous to the focal point of the poster.
- Since the abstract is usually published, there is no need to repeat it in the poster. The brief introduction should be sufficient to identify the purpose of the study.
- Same for References and Acknowledgments: you can often do without.
- Since graphs & figures will have explanatory captions, there is no need to label the graphic with *Figure 1, Table 2*, etc.
- The poster is not a publication of record, so excessive detail about methods, or vast tables of data are not necessary. This material can be discussed with interested persons individually during or after the session, or presented in a handout.
Visual impression

- Restrained use of large type and/or colored text are the most effective means of emphasizing particular points.
- Use short sentences, simple words, and bullets to illustrate discrete points.
- Justify the paragraphs. This makes reading the poster less difficult.
- Avoid using jargon, acronyms, or unusual abbreviations.
Visual impression (2)

- Remove all non-essential information from graphs and tables (data curves not discussed by the poster; excess grid lines in tables)
- Label data lines in graphs directly, using large type & color. Eliminate legends and keys.
- Artful illustrations, luminous colors, or exquisite computer-rendered drawings do not substitute for CONTENT.
- Lines in illustrations should be larger than normal. Use contrast and colors for emphasis.
- Use colors to distinguish different data groups in graphs. Avoid using patterns or open bars in histograms.
- Use borders around each figures. Border colors can be used to link related presentations of data.
Personal touch

- Use some original/personal points
- A poster is a 2D presentation, but you can use the third dimension (flaps, wheels, moving arrows, etc...).
- For example, colored transparency overlays are useful in comparing/contrasting graphic results
- Make sure that it doesn’t detract from the science or trivialize your work in some way. Use good judgment here.
Don’t ever

- Don't ever supply long tables; no one has the time or inclination to wade through these.
- Don't ever lift long sections of text directly from some manuscript and use these as a part of your poster. A poster is not a worked-over manuscript.
- Don’t forget typos and spelling errors, use a spell checker (it works on Powerpoint!)
Oh, and don’t Forget…

- You will be talking to others, and talking with others, about your poster. Prepare how to explain things.
- Bring a copy of your original paper for reference.
- Bring A4 copies of your poster and prepare a display so that people can take them.
- Put your email address on your poster, as well as a website if you have one.
Plan ahead!

- You have probably heard this again and again. That is because it is *IMPORTANT!*
Plan ahead! (2)

- With an increasing reliance placed upon poster presentations for information transfer at meetings, there comes an increased impatience with poorly presented materials.
- Although the poster preparation will expand to fill whatever time you allow it, don't be caught with an unfinished poster!
- Planning ahead is particularly important if you want to have the poster printed in one piece (highly recommended, and assumed in the following)
Plan ahead! (3)

- Preparing a poster will take as much time as you let it. Allocate your time wisely.
- There are always things that go wrong, so do not wait until the last minute to do even a simple task.
- This is a public presentation; by planning carefully, striving to be clear in what you say and how you say it, and assuming a professional attitude you will avoid making it a public spectacle.
- If you have little experience making posters, it will take longer (estimate 1 week at the minimum).
- Too much lead time, however, encourages endless fussing about. Do the poster to the best of your ability, then go do something else.
The poster session

- There is always one (or several) session reserved to view the posters and discuss with their authors.
- It is important to optimize this time: your poster is essential, but the PRESENTATION of your poster is at least as much so.
The poster session (2)

- Don’t stand directly in front of your poster at the session, or get too close to it. Don't become so engrossed in conversation with any single individual that you (or they) accidentally prevent others from viewing your poster.

- Try to stay close by, but off to the side just a bit, so that passers-by can see things also so that you don't block the vision of people already gathered 'round.
The poster session (3)

- Don’t be an eager beaver and badger the nice people who come to read your poster.
- Give them some space. Allow them to drink it all in. If they engage you with a question, then that is your opening to offer to take them through the poster or discuss matters of mutual scientific interest. Conversely, don't ignore people who look as though they may have questions, especially by becoming engrossed in talking to all your buddies.
The poster session (4)

- Stick around. It's your poster, your work. Your boss paid you the trip to whatever so that you could present it. It’s not the time for you to go for a beer. Try to hang around for as long as you can.
The poster session (5)

- Be a good scout, and come prepared to your poster, armed with reprints of any of your own relevant papers that you might have, plus extra copies of any material you may wish to share. Have ready some cards, or slips of paper you can use to provide colleagues with your address (e-mail address). Posters are a terrific way to get scientific suggestions and meet like-minded individuals. And postdoc propositions. Don’t oversell these though.

- Knowing who will be there (so as to recognize names and remember a bit about the names and research of the big cheeses) can be quite helpful and avoid embarrassment
Evaluation

- based on five criteria:
  - visual attractiveness,
  - quality of information,
  - relevance,
  - originality,
  - balance of text, graphics, and illustrations.
Examples

(don’t know the authors, found them on the Internet)
Examples

A good example …

…of a bad poster
Examples

- A little better
Examples (much better)

Endangering the endangered: how the value we place in rarity can trigger extinction

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1. Context
Humans associate value with rare items (eg. diamonds). Rare species are also disproportionately valued.

Economic theory predicts that human exploitation should not lead to species extinction, due to the high costs of finding the last individual.

However, if a species’ value increases with its rarity, exploitation is sustained even at low population levels. This may result in species extinction.

2. The Anthropogenic Allee Effect (AAE)
Key idea: A positive feedback between species rarity and economic value can drive species into an extinction vortex.

VALUE (demand) $$$

RARITY (catch data, conservation reports, media)

EXPLOITATION direct (e.g. hunting) +
indirect (disturbance)

3. A simple model for poaching predicts the conditions for extinction
The Gordon-Schaeffer model for open-access exploitation was used to test the effect of a rarity-dependent market price on the equilibrium population size (where the cost per unit harvest equals the price per unit harvest).

When price is independent of rarity, hunting does not result in extinction.

When price increases faster than exploitation costs at low population levels, extinction occurs (AAE).

4. Data suggests value and rarity are linked

Military Macaw

Illegal trade peaks when species is "officially" declared rare (red line indicates change in CITES status).

White Abalone

Decrease in commercial catch leads to a corresponding increase in price.

5. Activities which could lead to an AAE
Trophy hunting
Hobby collections
Exotic pet trade
Wildlife-watching

6. Conclusions
Rarity itself can trigger overexploitation and species extinctions. Prevention strategies must focus on the three components of the feedback loop:

RARITY - Regulate how much information on species abundance is available in the public domain.

VALUE - Change the perception that owning goods derived from rare species conveys wealth and social standing.

EXPLOITATION - Increase fines and jail sentences for illegal hunting and disturbance.
Using Stable Isotopes to Characterise Trophic Relationships

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Inter-specific interactions are often difficult to elucidate, when diet breadth is important. Recent advances in analysis of stable isotope have demonstrated the utility of this technique for studying trophic interactions. We are interested in characterising the impact of rats introduced into an island (i.e. closed) ecosystem. In this regard, we combined studies based on isotopic and classical diet analysis.

We selected the study site so that the characterisation of the entire ecosystem was feasible. We chose to work on Surprise Island, a 24 ha island, off New Caledonia, where we conducted classical diet analysis of the introduced rats.

On Surprise Island, introduced rats prey mainly on seabirds and plants. When combined with conventional techniques for quantifying diet and detailed investigation of predator-prey interactions, stable isotope analysis can be a powerful tool for identifying potential impact of invasive species on native communities. However, this method needs to be complemented by classical diet analysis.

We then sampled each species for isotope analysis. Carbon (\(^{13}C\)) and nitrogen (\(^{15}N\)) are the most widely used isotope ratios for identifying diet sources.

But the isotope analysis must be complemented by conventional techniques (dietary analysis based on stomach contents, feces, eating habits or direct observations) to select actually eaten resources.

Direct observations of rat’s consumption:
- Coconut
- Brown Spectacled egg
- Anoa root

We then sampled each species for isotope analysis. Carbon (\(^{13}C\)) and nitrogen (\(^{15}N\)) are the most widely used isotope ratios for identifying diet sources.

- Carbon isotope parent distinction between the consumption of marine vs. terrestrial prey
- Nitrogen isotope are used to determine diet source and also trophic position (\(^{15}N\) increased by 3-4‰ per trophic level)
Now your turn: good luck!

- Optional work:
- You will use the article that you present tomorrow to make a poster
- You will make it in Powerpoint and email it directly to me
- You have until next year (send it to me the day after the holidays, at the latest)
- Remember to print an A4 version to get a visual impression
- It will not be marked, but I will send you some comments
Presentation partly based on documents by:

- Casey Flinn
  - George Mason University, Writing Center
- Steven M. Block
  - Department of Molecular Biology, Princeton University, USA
- Joan M. Lakoski, Ph.D.
  - Department of Pharmacology, Office of Academic Career Development, University of Pittsburgh
- And other untraceable sources…