HOW TO MAKE A GOOD SCIENTIFIC POSTER

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A scientific poster is a communication tool which combines a verbal presentation with a visual aid.

Posters are given to a small group of people, are limited in time and range of view, and are informal and interactive.

Posters serve as an advertisement of your hard work.

A scientific poster is a large document that can communicate your research at a scientific meeting.

It’s just an illustrated abstract.
What is a scientific poster?

- A scientific poster is a large document that can communicate your research at a scientific meeting, and is composed of:
  - a short title,
  - an introduction to your burning question,
  - an overview of your trendy experimental approach,
  - your amazing results,
  - some insightful discussion of aforementioned results,
  - a listing of previously published articles that are important to your research, and
  - some brief acknowledgement of the tremendous assistance and financial support conned from others.
- If all text is kept to a minimum, a person could fully read your poster in under 10 minutes.
Presenting a poster allows us to more personally interact with the people who are interested in your research, and can reach people who might not be in your specific field of research.

Posters are more efficient than a talk because they can be viewed even while you are off napping, and especially desirable if you are terrible at giving talks.

Once you have produced a poster, you can easily take it to other conferences.
Poster Pre-planning and Preparation

- An effective poster is ...
  - Focused on a single message.
  - Lets graphs and images tell the story; uses text sparingly.
  - Keeps the sequence well-ordered and obvious.
  - a *visual* communications tool

- Many ineffective posters suffer from problems, including ...
  - objective(s) and main point(s) hard to find
  - text too small
  - poor graphics poor organization
Creating an effective poster requires time and planning.

- **What's my message?**
  - Everything you put on your poster relates to a carefully crafted message.
  - You must be able to state your main point(s) and conclusion(s) clearly and succinctly.
  - *All* visuals and text should relate to those points and conclusions.
How much room do I have?

- Determine specific size requirements - visit conference website or otherwise consult with conference organizers. Area available determines, in part, ...
  - what you can fit,
  - what you'll have to leave out,
  - layout (landscape vs. portrait orientation), and
  - how things will be organized.
How much money do I have?

- Your budget will determine, in part, whether you will ...
  - plot your poster or print it on standard sheets of paper.
  - use glossy or draft quality paper.
  - use cardboard or foam core for mounting (if printing on standard sheets of paper).
  - create the poster yourself or contract it out.
What milestones should I establish?

- Especially important if the poster is multi-authored.
- Start with the due date and work back to create milestones.
- Allow time for peer review and heavy editing.
Stay focused on your message. And keep it simple!!

- Create a mock-up poster focused on your main message.
- Ask yourself which details are absolutely essential for conveying your message.
- The most common problem is too much focus on methods. [An exception is if your poster is about a new method.]
- Omit anything that is not essential.
- Edit text carefully - simplify verbiage, reduce sentence complexity.
A clear visual grammar guides readers through your poster.

- **use a visual grammar** to guide readers to the important parts of your poster.
- **use a column format** to make your poster easier to read in a crowd.
- **use organization cues** to guide readers through your poster.
- **use "reader gravity"** which pulls the eye from top to bottom and left to right (Wheildon 1995).
- **use headings intelligently** to help readers find your main points and key information.
- **balance the placement of text and graphics** to create visual appeal.
- **use white space creatively** to help define the flow of information.
Visual grammar

visual grammar is a graphic hierarchy that helps readers identify the most important parts of your poster.
Columnar format

organize your poster in columns so that it's easy to read when there's a crowd in front of it
Use organizational cues

another way to make sure readers know how to navigate your poster is to use cues - numbers, letters, arrows - to guide them.
Reader gravity

top-to-bottom and left-to-right.

Balance and white space

Balance occurs when images and text are reflected (at least approximately) across a central horizontal, vertical, or diagonal axis. This axis is known as the axis of symmetry.
Use headings to orient readers and convey major points

Can Suburban Greenways Provide High Quality Bird Habitat?

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Birds of Conservation Concern in Decline
- Many bird species of conservation concern – including neotropical migrants, insectivores, and forest-interior specialists – decline with increasing human development
- Greenways might mitigate this effect
- Habitat patch size, vegetation composition & structure, and landscape context are key factors
- Standards are lacking for designing and managing suburban greenways as high-quality habitat

Objective: Greenways for the Birds
- Determine how development-sensitive forest birds are affected by
  - Forested corridor width
  - Mixed development intensity
  - Vegetation composition & structure
- Develop recommendations for greenway designers and planners

Study Design & Independent Variables
- Sampled 24 – 200m corridors in Raleigh & Cary, NC, USA
- Sampled range of
  - Forested corridor widths (20 – 1,200m)
  - Adjacent density (low density residential – office/commercial)
- Additional measures
  - Vegetation composition & structure in corridor
  - Land cover in 300m x 300m adjacent to corridor (context)
- Measured richness & abundance of
  - Breeding birds
  - Neotropical migrant birds during stopovers
  - Nesting nest predators

Breeding Birds of Concern More Common in Wider Greenways with Less Managed Area Surrounded by More Forest Canopy
- Study site: 80, 50m point counts at center of corridor
- Revisited 4 times during breeding season

Nest Predators Less Common in Wider Greenways with Narrower Paths
- Five bailed scent stations along each greenway segment
- Observed for 5 nights each

Current Predictors for Predator Abundance
- Greenways:
  - Adjacent Landscape:
    - Corridor width
    - Building density
    - Trail width
    - Mature forest
    - Ground cover
    - Vine cover

Greenways for Development-Sensitive Forest Birds Might Conflict with Intense Recreational Use
- People & Managers Prefer...
- Forest Birds Prefer...

Spring Neotropical Migrant Stopovers More Common in Wider Greenways with More, Taller Hardwood Trees
- 200m x 20m transects along one side of greenway path
- Revisited sites for two spring seasons and one fall season
- Width not significant, but trend consistent with other findings

Potential Solution: Wide Corridor, Trail Near Edge
- Make corridors at least 50m wide; wider is better
- Don’t split forested corridor
- Keep trails as narrow as possible
- Avoid wide gravel areas along trails within forested corridor
- Locate trails near the edge of forested corridors
Good graphics - graphs, illustrations, photos - are the centerpiece of your poster.
Text should be simple, direct, and large.

- Minimize text - use images and graphs instead.
- Use phrases rather than full sentences.
- Use an active voice.
- Avoid jargon.
- Left-justify text; avoid centering and right-justifying text.
- Use a serif font (e.g., Times) for most text - easier to read.
- Sans-serif font (e.g., Helvetica) OK for titles and headings.
- Text should be at least 24 point in text, 36 for headings.
- Pay attention to text size in figures - it must also be large.
- Title should be at least 5cm tall.
Use color to attract attention, organize, and emphasize - but don't overdo it.

- Use a light color background and dark color letters for contrast.
- Avoid dark backgrounds with light letters - very tiring to read.
- Stick to a theme of 2 or 3 colors - much more will overload and confuse viewers.
- If you use multiple colors, use them in a consistent pattern - otherwise viewers will spend their time wondering what the pattern is rather than reading your poster.
- Overly bright colors will attract attention - and then wear out readers' eyes.
If it doesn't provide critical support for your main message, ELIMINATE IT!

- Edit all text to simplify verbiage, to reduce sentence complexity, and to delete details.
- If it's not relevant to your message, remove it!
- Have colleagues comment on drafts. Print a small version and circulate for comment, or hang a full-size draft with pens and invite them to critique.
- Evaluate your work - try the 60 second evaluation.
- Are your objective and main message obvious?
- Will readers be able to contact you?
Selamat Belajar

TERIMA KASIH