

# Making and Presenting Technical Posters

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# Pre-Planning

- An effective poster operates on many levels...
  - Source of information
  - Conversation starter
  - Advertisement of the research
  - Summary of the research

# Pre-Planning

- Poor posters generally suffer from some easily solved problems...
  - Objective(s) and main point(s) hard to find
  - Text too small
  - Poor graphics
  - Poor organization

# Audience

- Poster sessions have diverse audience members, to appeal to them all...
  - Provide context
  - Use plain language
  - Avoid jargon and acronyms
  - Interpret your findings

# Choosing Fonts

- Headlines = Sans Serif
  - Arial
  - Century Gothic
  - Tahoma
- Text = Serif
  - Times New Roman
  - Palatino
  - Garamond

# Font Sizes

- Your poster should be “readable” from 8 feet.
- Headline size  $\geq$  36 pts
- Text size  $\geq$  24 pts
- Actual size will vary depending on font.
- Text size in figures must also be large.

# Words – Less is More

- The entire poster should have less than 1000 words, less than 800 is better.
- Avoid blocks of text longer than 10 sentences.
- Lists of sentences are better than blocks of text.
- Text boxes should be at least 40 characters wide.

# Using Color

- Vibrant colors attract attention...and then wear out a readers eyes.
- Light backgrounds and dark letters are your best combination.
- Stick to a small palette of colors.
- Use multiple colors in a theme, not randomly assigned.



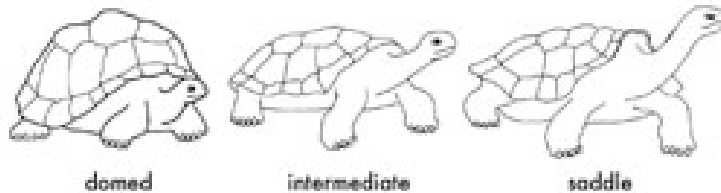
# Formatting

- In text, use *italics* instead of underlining.
- Subheads should be the same size as text, **bolding** will draw enough attention.
- Do not use the auto-tab. Set your own smaller tabs or manually space your tabs.
- Using a single space between sentences will save room.

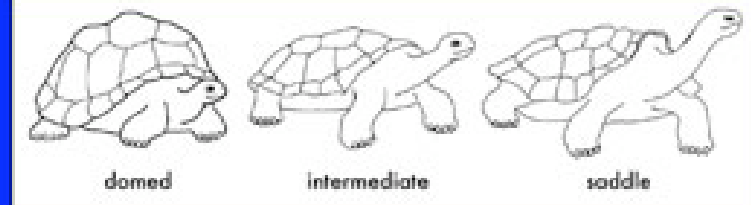
# Graphics – Backgrounds

Avoid using dark backgrounds whenever possible.

**dark text,  
light background**



**light text,  
dark background**



# Graphics – Frames

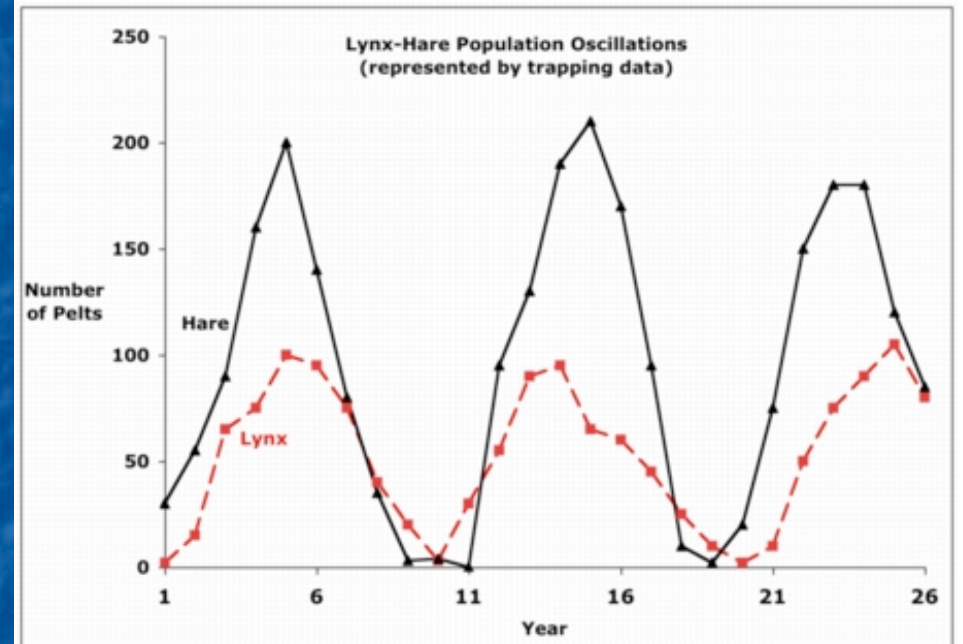
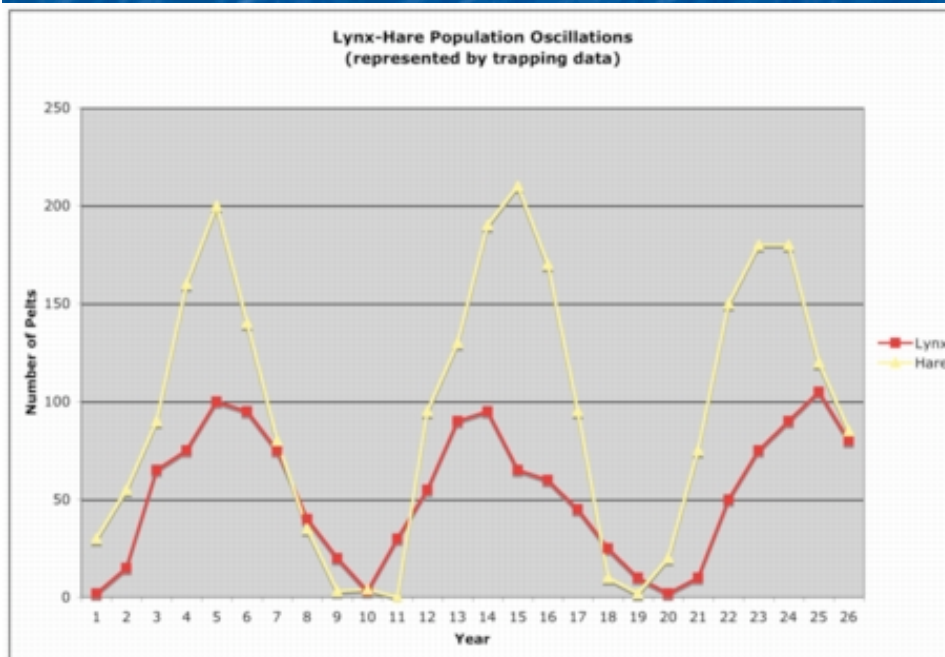


- Use a thin black or grey line around photos to add visual appeal. It should be almost imperceptible.

# Graphics – Graphs

- Graph titles should be in “Sentence case” not “Title Case.”
- Label the Y-axis horizontally whenever possible.
- Do not include dark backgrounds. If they are automatically generated cut them out.
- All info here should be readable from 6 feet...most people *only* read graphs.

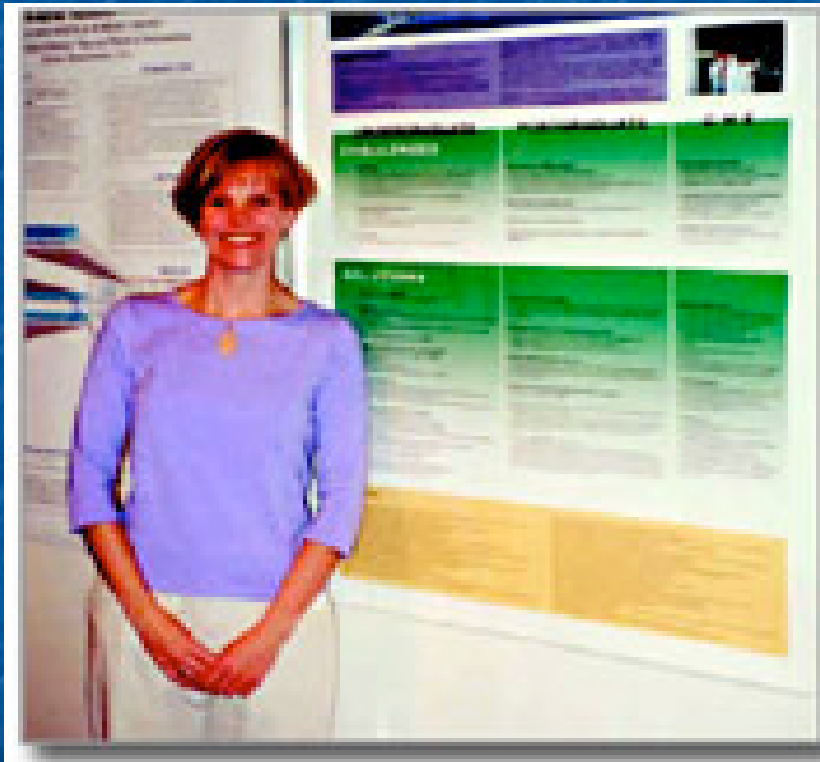
# Graphics – Sample Graphs



# Presenting Tips

- Develop a 1-sentence overview.
- Make a clear team plan regarding who will stay at the poster when (read: don't leave the poster unattended).
- Have your faculty members business cards on hand.
- Carry a black marker and white-out.

# Wardrobe Coordination



Good



Bad

# Wardrobe Coordination

**Determining functional linkages between virulent genes of *Porphyromonas gingivalis***  
Cameron Crawford and Gabriel Moreno-Hagelsieb  
Department of Biology, Wilfrid Laurier University, Waterloo, ON

**Introduction**  
The virulence of *P. gingivalis* is determined by a set of virulence genes (VGs) that are located on a 2.3 Mb virulence plasmid (VP). The VP is a large, circular DNA molecule that is essential for the pathogenicity of *P. gingivalis*. The VP is composed of several genes, including those that encode for the protease, hemagglutinin, and other virulence factors. The VP is also responsible for the production of the protease, which is a key virulence factor of *P. gingivalis*.

**Virulence Genes**  
The VP is composed of several genes, including those that encode for the protease, hemagglutinin, and other virulence factors. The VP is also responsible for the production of the protease, which is a key virulence factor of *P. gingivalis*.

**Open Genes**  
The VP is also responsible for the production of the protease, which is a key virulence factor of *P. gingivalis*.

Gene	# of Clones in the Database	Clones in the Database	Clones in the Database	Clones in the Database	Clones in the Database
Protease	13	2	1	1	1
Hemagglutinin	6	17	3.2±4.2	6	14.8±11.4
Protease	47	286	10.9±4.9	61	14.9±8.8
Protease	16	180	12.9±11.1	8	21.1±8.2
Protease	1	3	2.8±1.1	1	4
Protease	41	298	8.7±4.2	23	10.8±7.8
Protease	18	127	6.0±4.1	16	8.3±4.8

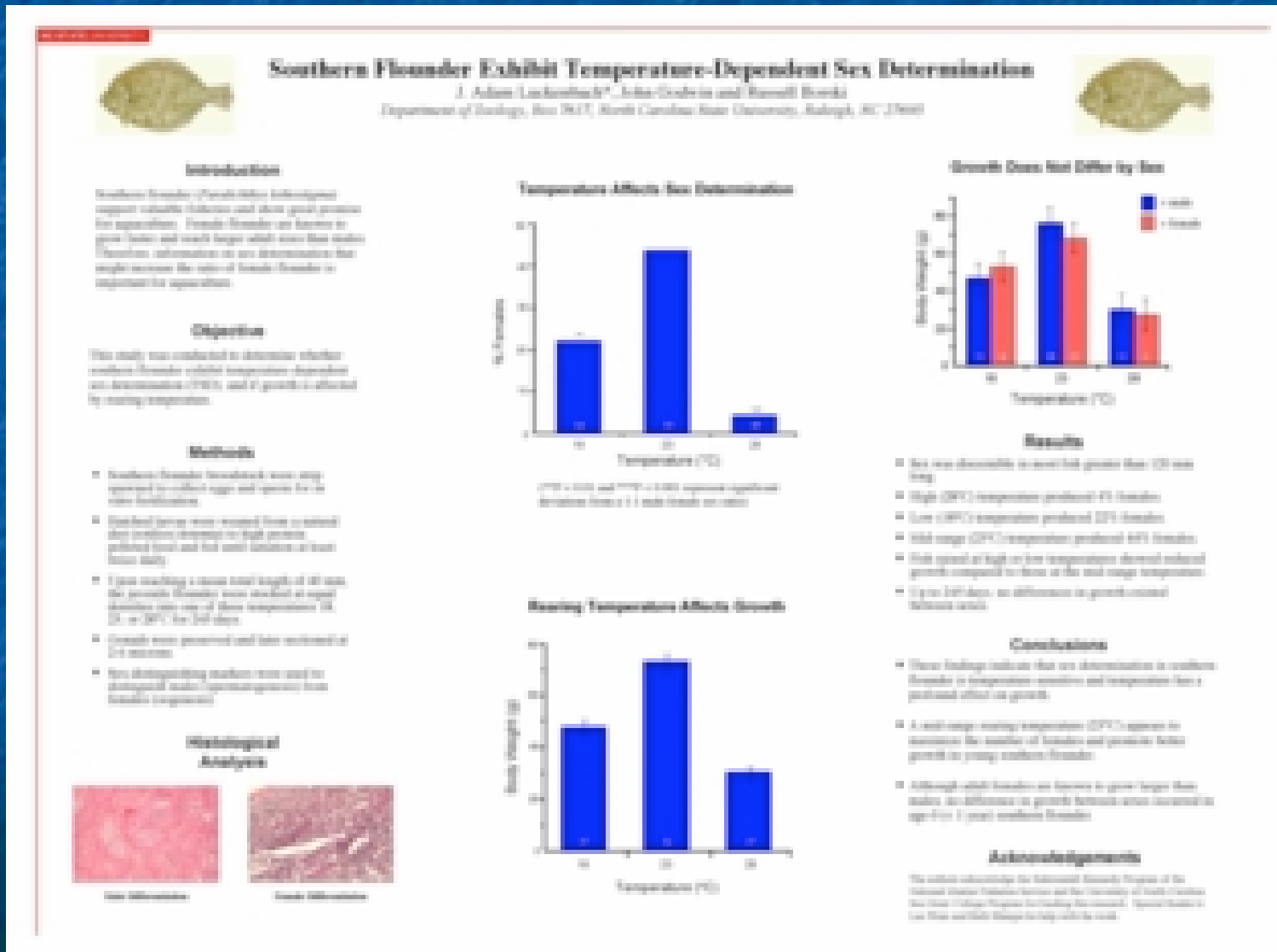
**Discussion**  
There are many more virulent functioning genes than originally thought.  
The invasion network involves the linkage of many of the original known virulent genes.

**References**  
Moreno-Hagelsieb, G., et al. (2000). The virulence plasmid of *Porphyromonas gingivalis*. *Journal of Bacteriology*, 182, 3021-3027.

**Acknowledgements**  
Dr. Gabriel Moreno-Hagelsieb  
M.C. Ehrlich  
Andrew Marks



# Sample Posters



# Sample Posters



## Can Suburban Greenways Provide High Quality Bird Habitat?

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 Christopher E. Moorman, Jamie E. Moosa, Kristina E. Neelke, Talisa R. Kubat  $\square$  NC State University  $\square$  Department of Forestry & Environmental Resources  
[www.karen.ohio-state.edu/GreenwaysForWildlife](http://www.karen.ohio-state.edu/GreenwaysForWildlife)



### Birds of Conservation Concern in Decline

- Many bird species of conservation concern – including neotropical migrants, woodpeckers, and forest interior specialists – decline with increasing human development
- Greenways might mitigate this effect
- Sublot patch size, vegetation composition & structure, and landscape context are key factors
- Standards are lacking for designing and managing whether greenways are high quality habitat

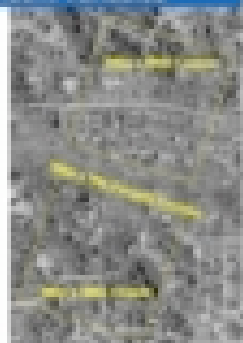
### Objective: Greenways for the Birds

- Determine how development-related forest birds are affected by
  - forested corridor width
  - adjacent 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 (see density gradient – effectiveness)



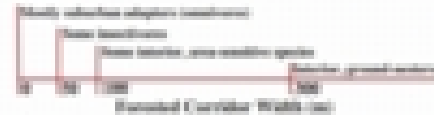
- Additional measures
  - vegetation composition & structure in corridor
  - land cover in 200m x 200m adjacent to corridor (context)

- Measured relative abundance of
  - breeding birds
  - neotropical migrant birds during stopovers
  - nest predation

### Breeding Birds of Concern More Common in Wider Greenways with Less Managed Area Surrounded by More Forest Canopy



- 8 species, the point counts at center of corridor
- Restricted to trees during breeding season



- Significant Predictors for Breeder Abundance
- | Greenway         | Adjacent Landscape   |
|------------------|----------------------|
| (+) Managed Area | (+) Canopy Cover     |
| (+) Forest Cover | (+) Building Density |
| (+) Bare Earth   | (+) Bare Earth       |

### Spring Neotropical Migrant Stopovers More Common in Wider Greenways with More, Taller Hardwood Trees

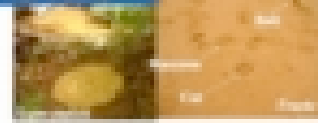
- 200m x 20m transects along one side of greenway path
- Restricted sites for two spring seasons and one fall season
- Width was significant, but forest context with other findings



- Significant Predictors for Spring Migrant Abundance
- | Greenway        | Adjacent Landscape |
|-----------------|--------------------|
| (+) % Hardwoods | (+) Canopy Height  |
| (+) Bare Earth  | (+) Bare Earth     |

### Nest Predators Less Common in Wider Greenways with Narrower Paths

- Five tallied nest stations along each greenway segment
- Observed for 17 nights each



- Significant Predictors for Predator Abundance
- | Greenway           | Adjacent Landscape   |
|--------------------|----------------------|
| (+) Corridor width | (+) Building Density |
| (+) Trail width    | (+) Mature forest    |
| (+) Ground cover   | (+) Bare earth       |

### Greenways for Development-Sensitive Forest Birds Might Conflict with Intense Recreational Use

#### People & Managers Prefer ...



- Good for walking, jogging, cycling, strollers, wheelchairs
- Easier to maintain, especially with higher intensity use

#### Forest Birds Prefer ...



- Narrow paths provide lighting, forested corridor
- Discourages heavy human use
- Forest and predators

### Potential Solution: Wide Corridor, Trail Near Edge

- Wide corridors at least 100m wide, wider is better
- Don't split forested corridor
  - Keep trails as narrow as possible
  - Avoid wide grassy areas along trails within forested corridor
  - Locate trails near the edge of forested corridors

# Helpful Links

- **Advice on Designing Scientific Posters**

<http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm>

- **Creating Effective Poster Presentations**

<http://www.ncsu.edu/project/posters/NewSite/DefineMessage.html#Note0>

- **Flickr: The Poster Sessions Pool**

<http://www.flickr.com/groups/368476@N21/pool/>