36-303: Sampling, Surveys and Society

On Posters Brian W. Junker 132E Baker Hall brian@stat.cmu.edu

Handouts & Stuff

Handouts Today

- These Notes
- Poster Evaluation Sheets
- Online Week 14 area
 - Links to poster advice and poster templates
 - Criteria for final presentations
 - Criteria for final papers

Week 14 – This Week

- Today On Posters
- Thu Guest presentation
 - Leah Lang
 - Survey and Market/User Research for EDUCAUSE & Carnegie Mellon University
 - Mathematical Statistician at the US Census Bureau
 - B.S. in Statistics (Penn State) & MS from Joint Program in Survey Methodology (JPSM) at the University of Maryland.

Week 15 – Next Week

Final Presentations (almost random)

- Email me a copy of the slides
- Criteria posted in Week 14 area

Tue

- F: Parking Meters at CMU
- C: How to Improve On-Campus Parking
- D: Political Attitudes and Academic Major
- A: A Political Survey of the CMU Community

Thu

- B: Music/Movie Internet Piracy at CMU
- G: Spatial and Analytic Study of Student Housing
- E: Analysis of Off-Campus Housing Search

Week 15 – Next Week

- Final Items to Turn In
- Friday by 11:59pm Final papers
 - 1 pdf per group
 - Email to me or submit on blackboard
 - Criteria posted in Week 14 area
- Friday by 11:59pm 2nd Peer Evaluations
 - 1 email to me per person
 - Evaluations (one per group member) attached to that email

Posters – Free Printing

- Must fit on poster board 3 ft high x 4 ft wide.
- I need one name from each group, to give the Psychology Department
 - That person should put the poster on a flash drive as a .pdf file
 - Bring to Baker 332V to be printed
- DO NOT WAIT 'till the last minute to print it
 - MoM is Weds May 9
 - Many groups printing posters using this service
 - Print your poster NO LATER THAN Mon May 7
 - Preferably by Fri May 4!

Posters at MoM

- Everyone in your group must participate
 - Stand together by your poster at the scheduled time
 - Each person should have 1-3 minutes of stuff to say about the project – very similar to your powerpoint presentations <u>(practice this – it is different!)</u>
 - Be ready to answer judges' (or other visitors') questions!
- I will try to come to your poster at your scheduled time also
 - Please wait for me, since you can only drop an exam grade if I know you're there!
- All posters eligible for Statistics poster prize(s)

Posters

A poster SHOULD NOT BE

- □ A *complete record* of your project
- A <u>self-contained</u> document that a visitor can read and understand without your help
- □ *Full of text* or cluttered in any way
- Difficult to follow or understand the main ideas

A poster SHOULD BE

- Attractive and interesting from a distance
- <u>An invitation to talk</u> with you (be ready to talk!)
- <u>An invitation to read</u> your final report (bring a couple copies!)

Posters – What is the Goal?

- You want to draw people in from a distance.
 - □ Think of making an ad for the side of a bus.
 - Make a passerby 20 feet away think it would be interesting to come in for a closer look.
- You want people to talk to you.
 - Poster should have <u>a few</u> details, and some things for you to point at when you give your presentation.
 - If you get the person who is looking at the poster to ask you good questions, you are doing good.
- Posters are visual.
 - Lots of tiny text: <u>bad</u>. Tiny figures, tiny labels: <u>bad</u>.
 - Make it big just enough info to suggest main ideas.

Making a Poster*

- Planning
- Focus
- Layout
- Headings
- Graphics
- Text
- Colors
- Editing

*Remainder of lecture taken from http://www.ncsu.edu/project/posters . Go look at it!

Making a Poster – Planning and Focus

Planning

- What is your message?
- You must be able to state your main point and your main conclusion clearly and succinctly
- <u>ALL</u> visuals and text should relate to this main point and conclusion
- Focus
 - Simple messages are more memorable
 - Which details are absolutely essential for conveying your main message? Omit all else
 - Edit carefully simplify verbiage, reduce sentence complexity.

Making a Poster - Layout

- Use a visual grammar (headings big, main idea medium, details smaller [if present])
- A columwise layout helps guide reader's eye
 - 3 or 4 columns is common
 - □ If 3 columns, the middle one is usually double-wide
- Organizational cues (like numbering the sections) help if your poster is not organized column-wise
- Use white space to separate columns and sections within columns
 - Balance whitespace in overall poster

Making a Poster – Headings

Title

- Be interesting draw people in
- Be informative give the bottom line to someone who just glances at your poster from 20 feet, and walks on
- Be bold make the strongest statements your research will allow (but not stronger!)

Section Headings

- Headings help the reader skip to what he/she needs, to follow your main points and conclusions
- Organize and label headings to help reader move through your poster

Figure & Table Captions

Help the reader get at least a superficial idea of the message

Making a Poster - Headings

Boring but effective:

Title Team Members		
Introduction Objective	Selected evidence (preferably visual!) to support Results of study	Results
Methods		Conclusions Acknowledgements

Experiment with Caution!

Making a Poster – Graphics

- Good graphs communicate relationships quickly.
- Graphs should be simple and clean.
- Write explanations directly on figures, instead of referencing from elsewhere.
- Uncluttered 2-dimensional graphs work best
- Photos and clipart can help convey your message, but they can also make a cluttered mess – <u>use sparingly!</u>

Making a Poster – Text

Posters are a VISUAL MEDIUM

- Minimize text use images and graphs instead!
- Keep text elements to 50 words or less
- Use phrases instead of sentences
- Use active voice not passive
 - "We use weights to correct for nonresponse" vs
 "Weights are used to correct for nonresponse"
- JARGON define it or avoid it
- Serif fonts for extended text; san-serif OK for titles
- Don't dumb down content, just make it easy to read quickly.

Making a Poster – Colors

- Use a light color for background, dark or black for text.
- Dark background/light text, or day-glo colors, get very tiring very fast – <u>avoid</u>.
- Use colors in a consistent pattern so they do not distract reader
- Keep in mind red/green color blindness, etc.

Making a Poster - Editing

If it doesn't provide critical support for your main message, ELIMINATE IT!

- Edit! Edit! Edit ruthlessly! to reduce text.
- Edit all text to simplify verbiage, to reduce sentence complexity, and to delete details.
- If it's not relevant to your message, remove it!
- Print your poster on 1 8.5x11" sheet
 - If you can't read the text, the font size is too small
 - Can you get the whole idea in a 1-minute scan?
 - Show it to a friend do they agree? Why?
- A "60 second checklist" is posted under Week 14!

Example I

Southern Flounder Exhibit Temperature-Dependent Sex Determination

 A dam Luckenbach*, John Godwin and Russell Boeski Department of Zoology, Box 7517, North Carolina State University, Baleigh, NC 27695.

Temperature Affects Sex Determination



Introduction

Souther a floatable of analy fully addressing out support valuable fraheness and stow goard premises for suparations. Frende floatable are known to grow faster and rouch larger adult rises than makes. Therefore, an emarking on our delet adradies that might increase the table of forsale floatable at supportant for aquachtable.

Objective

This study size conducted to determine whether southean floatides exhibit temperature dependent sex determination (TSUA and if growth a affected by relating temperature

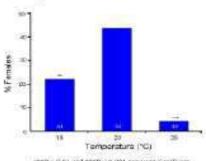
Methods

- Southern floansky broadstack serve strip spreased to collect eggs and sperm for a rare furnitization
- Hatched larvae were record from a natural diet coefferwariewan wolkigh protein perfessed and and anti-initiation at lease were chilly.
- Upon concluing a mean motel length of 40 mm. the parenthe fluoretict were stocked at equal deportion ratio one of three temperatures 1.8 23, or 28°C for 245 days.
- Outads over gosserved and later sectioned at 2-0 microsis
- Sex-data paidoing markers were used to distagand, makes (spermatogenesis) (new females (cogenesis)

Histological Analysis

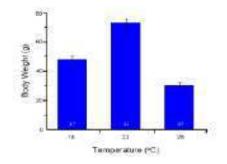


Male Differentiation

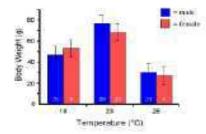


 $c^{*+p} \in G(n)$ and ${}^{*+e}P \ll n$ 001 expresses is pullicase deviations from a 1-1 materianois set rules).

Rearing Temperature Affects Growth



Growth Does Not Differ by Sex



Results

- Sex was discernible in nost fish greater than 120 mm tona
- High (28%) unsperature produced #3- females.
- Loss (1835) temperature produced 22% formales.
- Mid-maps (23%) sumperature produced 44% females.
 Sich migel (1) both on him temperature during the set.
- Fish need at high or low temperatures showed reduced growth compared to those at the mid-range temperature.
- Up to 245 days, no difference in growth existed between acces

Conclusions

- These findings indicate that see determination in contiern flounder is temperature scuvitive and temperature bas a protoand effect on growth.
- A mid-merge reasing scorporation (2PC) appears to maximize the number of tensoles and promote better growth in young southern flourider.
- Although adult females continuewn to griwt larger than malen, no difference in growth between abues occurred in age-01< 1 (mar) searborn floander.

Acknowledgements

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Example II



Can Suburban Greenways Provide High Quality Bird Habitat?

George R. Hess :: NC State University :: Department of Forestry & Environmental Resources :: Raleigh NC 27695-8002 USA :: george_hess@ncsu.edu Christopher E. Moorman, Jamie H. Mason, Kristen E. Sinclair, Salina K. Kohut :: NC State University :: Department of Forestry & Environmental Resources www4.ncsu.edu/~grhess/GreenwaysForWildlife

Breeding Birds of Concern More Common

in Wider Greenways with Less Managed

Area Surrounded by More Forest Canopy



Birds of Conservation Concern in Decline

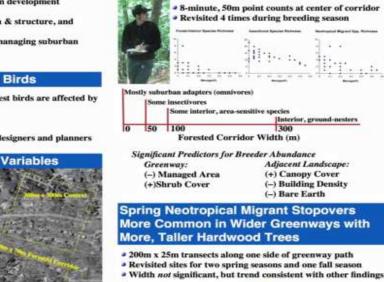
- Many bird species of conservation concern including neotropical migrants, insectivores, and forest-interior specialists - decline with increasing human development
- Greenways might mitigate this effect
- Habitat patch size, vegetation composition & structure, and landscape context are key factors
- 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
- adjacent development intensity
- vegetation composition & structure
- Develop recommendations for greenway designers and planners

Study Design & Independent Variables

- Sampled 34 300m 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 Mammal nest predators





Econstart Corridor Width



Interior, ground-nesters

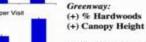
Adjacent Landscape:

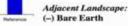
(-) Building Density

(+) Canopy Cover

(-) Bare Earth

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Five baited scent stations along each greenway segment Observed for 5 nights each



Significant Predictors for Predator Abundance Greenway: 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 ...



Good for walking, running,

with higher intensity use

cycling, strollers, wheelchairs

Easier to maintain, especially



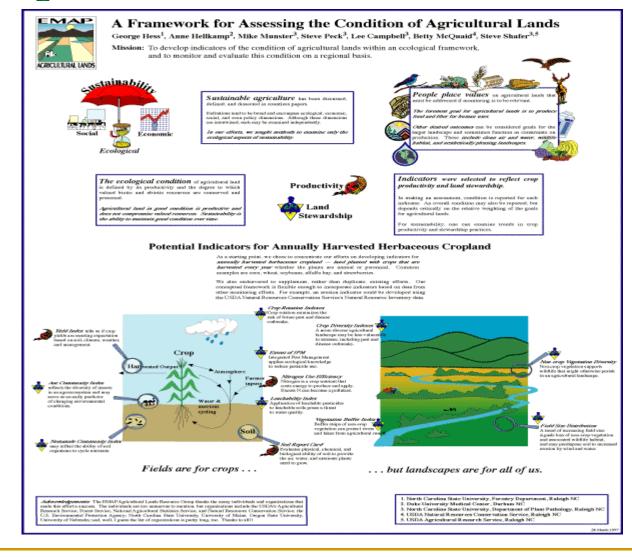


- Narrow path avoids splitting forested corridor
- Discourages heavy human use
- Fewer nest predators

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 grassy areas along trails within forested corridor
 - Locate trails near the edge of forested corridors

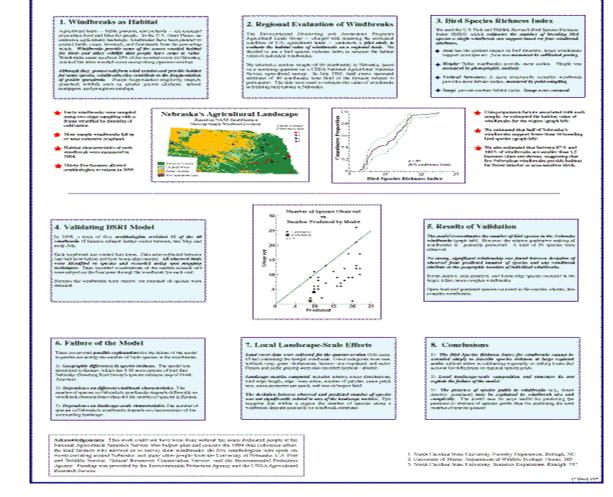
Example III



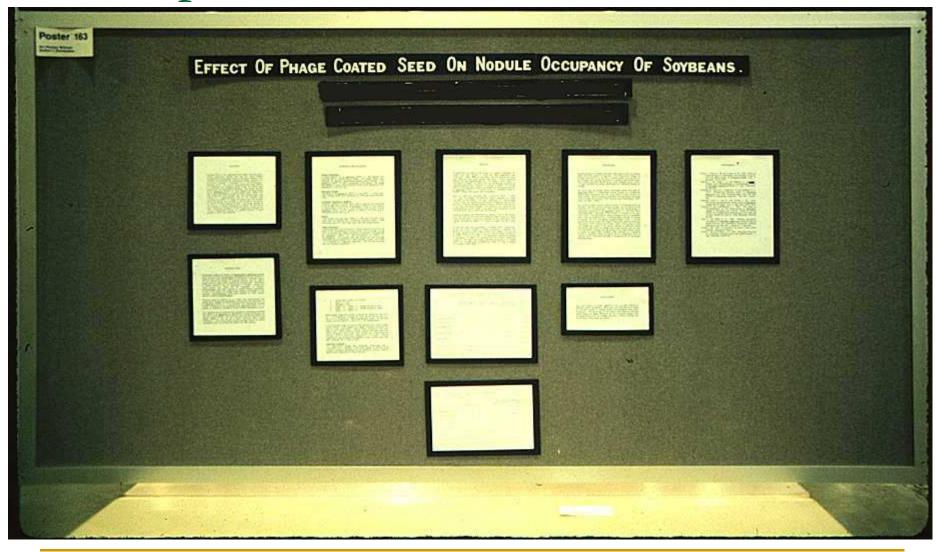
Example IV

Using a Windbreak Habitat Model Across Broad Landscapes: The Effect of Local Landscape Composition and Geographic Location

George Hess¹, John Poulsen², Raymond O'Connor², Jeff Bay³



Example V



Summary/Review

- This week: Posters and Leah Lang
- Next week: Final presentations, final papers, peer review
- Meeting of the Minds, May 9
 - One person from each group can get poster printed for free Print early!!
 - Posters <u>http://www.ncsu.edu/project/posters</u>
 - Ppt poster templates online