

Giving Presentations

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“The human brain is a wonderful thing. It operates from the moment you are born until the first time you get up to make a speech.”

Howard Goshorn

Overview

- Initial planning
- Organising your talk
- Visual aids
- Preparing yourself
- Posters

Initial Planning

- Start early! - *“It usually takes me more than three weeks to prepare a good impromptu speech.” Mark Twain*
- Know your audience
- How much can you reasonably talk about in allotted time? (1 slide/min)
- Define your take home message
- Talk to colleagues to clarify your thoughts

Organising your talk

- Introduction: What does the audience need to know to understand your results and conclusions? What are key issues?
- State what your objectives are up-front
- Data with clear statement of immediate significance
- Conclusion: tie together the main points with a clear take home message

The Introduction

- What are you studying?
 - Biological system, molecule, model?
- What are its basic characteristics?
- What are the relevant open questions?
- What is the intention of your study?
- At least hint at outcome
- Be kind to your audience ...

... AVOID ACRONYMS!!!!

Presenting your results

- Why this experiment?
- Take time to explain any figures or graphs
- Present a minimum of information per slide
- Use tables sparingly
- What do you conclude from this experiment?
- What further questions does this raise?
- Lead into next data slide

Concluding your talk

- Summarise the aim of the study
- Summarise key results
- Final take-home message
- End with a “thank you”

Visual Aids

- Make it CLEAR
- Keep it SIMPLE
- Be CONSISTENT

Make it CLEAR

- Choose an appropriate font
- Select the right font size
- Settle on a colour scheme

... AND BE CONSISTENT

Make it CLEAR: font style

- Serif fonts like Times Roman are good in long texts but can be more difficult to read on slides
- A sans serif font like Arial or Helvetica is clearer
- AVOID BLOCKS OF UPPER CASE TEXT SINCE THIS IS DIFFICULT TO READ

Make it CLEAR: font size

- Larger text is easier to read from the back of the room...
- ...but less text will fit on each slide (not necessarily a bad thing).

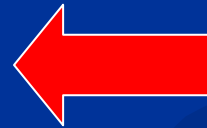
This is arial 12 point (normal text)

This is Arial 18 point

This is Arial 24 point

This is Arial 36 point

This is Arial 48 point



Too small !!!

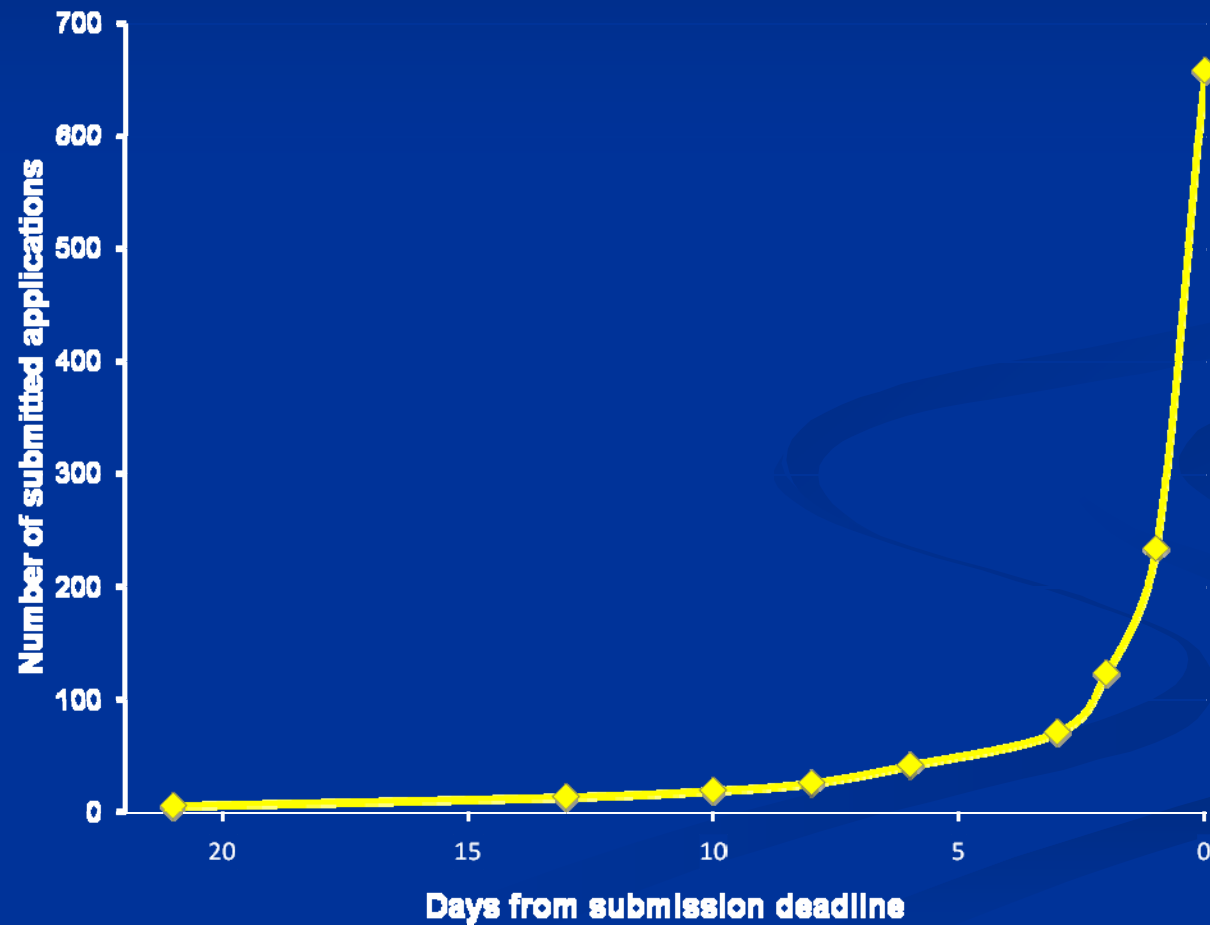
Keep it SIMPLE

- Use visuals (text or graphics) only to introduce essential elements.
- The audience should get the point within about 5 seconds after the visual appears.
- Less is better.



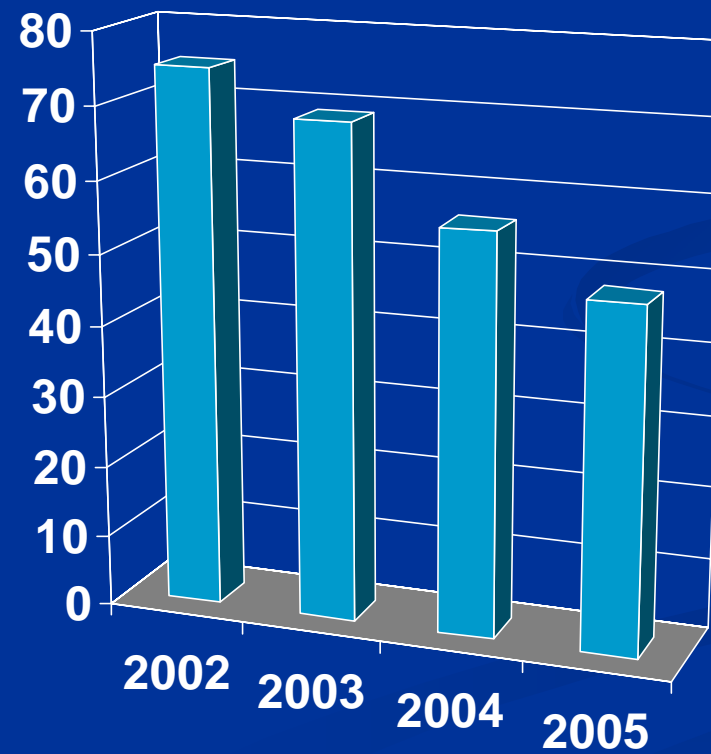
Keep it SIMPLE: graphs

A study of Human Behaviour



Keep it SIMPLE: graphs

**% HFSP Fellowship applicants
wanting US host labs**



Design of Graphs

- Include as little information per graph as possible
- Do not include unnecessary data
- Don't just use Excel's default colours
- Use consistent colours
- Remember that ca. 4% of males are R/G colour blind

Animations

- Flying text
- Building a complex story
- Movies

Preparing yourself

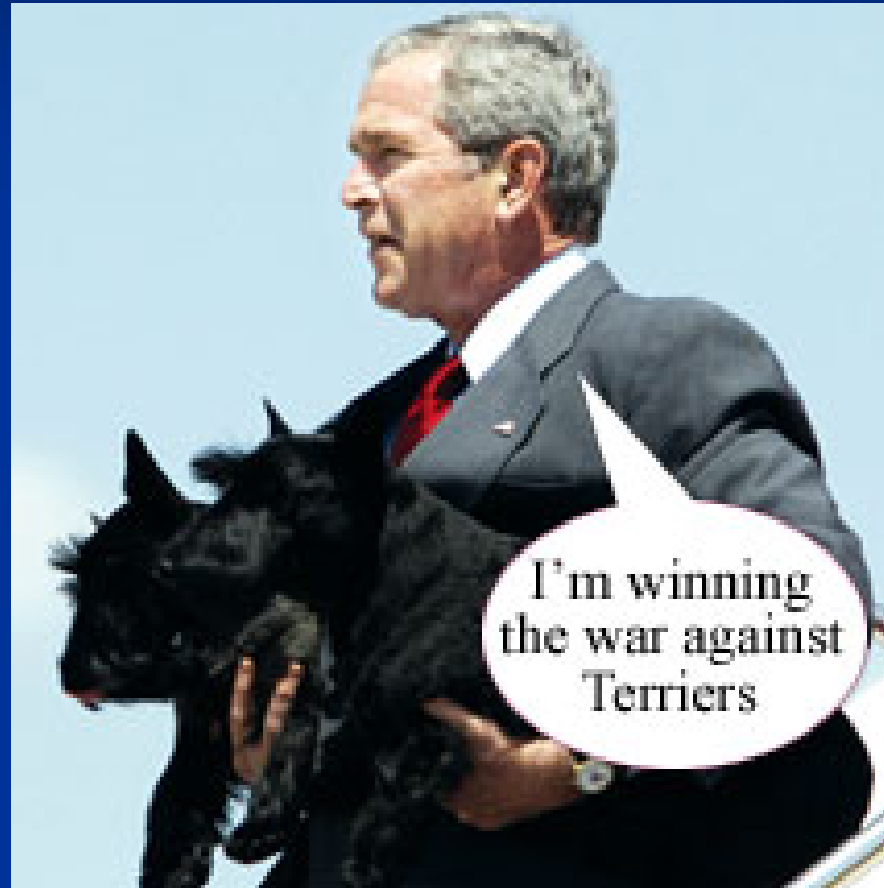
“There are two types of speakers: those that are nervous and those that are liars”

Mark Twain

Prepare yourself

- Start preparing your talk early
- Make sure you are on top of your subject
- Know your slides
- Your practice talks will be 20% shorter than the real thing
- Find out beforehand what equipment will be available (e.g. Mac, PC, USB, CD)
- Is the context informal or formal?
- Practice out loud many times also with friends or colleagues

Practice speaking



On the day

- Don't drink a lot of tea/coffee/beer before your talk!
- Visit the lecture room beforehand and familiarise yourself with the equipment
- It's your show – ask for help
- Meet the Chair
- Don't worry about being nervous
- Take a couple of deep breaths but don't sigh loudly!
- Remember – people want you to succeed!

Delivering your talk

- Learn your opening remarks well – don't expect to improvise
- Don't apologise for being nervous
- Don't read from a manuscript
- Make eye contact with the audience during your talk
- Speak slowly and clearly
- Don't make jokes
- Body language: Don't stand like a statue but don't pace backwards and forwards or grimace

Murphy never sleeps!

- The microphone will fail
- PowerPoint will fail
- The laser pointer's battery will be empty

- Have a "Plan B"
- Think beforehand about how you could continue if your visual media fail
- Don't insult the technician!

Dealing with interruptions

- Prepare to be interrupted – deal immediately with points that need clarifying
- Don't allow yourself to be distracted
- Refer questioner politely to later part of your talk or to question time

Question time

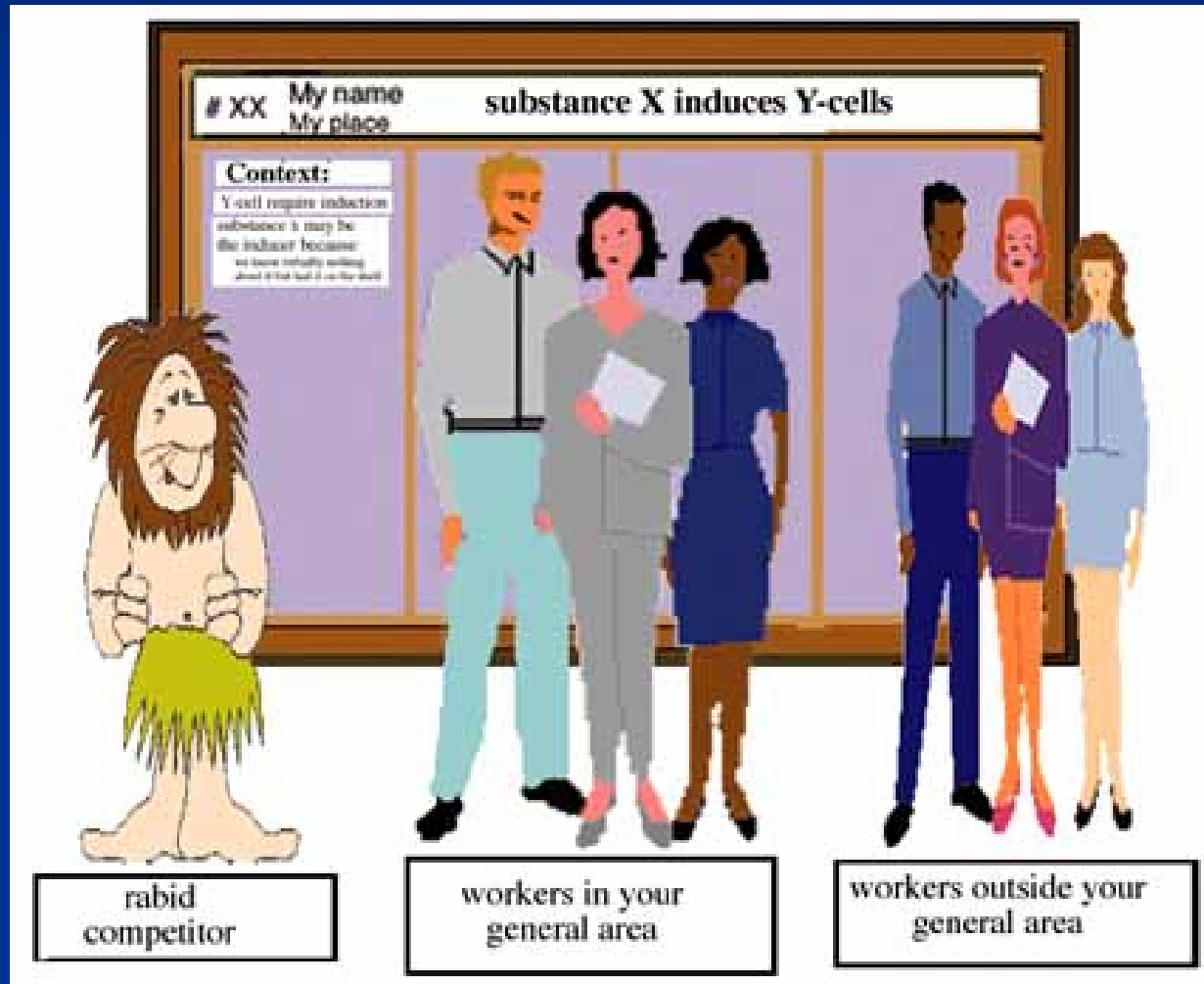
- Anticipate questions
- Don't interrupt questioner – listen politely
- Repeat question if necessary
- Avoid prolonged discussion with one member of audience – refer to private discussion afterwards
- Don't be afraid to admit ignorance – don't apologise, refer to possible sources if possible or offer to look it up later

Poster Presentations

The Minimalist



Design for three groups



Preparing Posters

- Guide the eye through the poster with clear layout
- Use large fonts
- Design the poster to address one central question - use your time to expand upon issues surrounding that central theme.
- Summarise conclusions clearly and using user-friendly language
- Have a clear take-home message
- Acknowledge help, funding source



Southern Flounder Exhibit Temperature-Dependent Sex Determination

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Introduction

Southern flounder (*Paralichthys lethostigma*) support valuable fisheries and show great promise for aquaculture. Female flounder are known to grow faster and reach larger adult sizes than males. Therefore, information on sex determination that might increase the ratio of female flounder is important for aquaculture.

Objective

This study was conducted to determine whether southern flounder exhibit temperature-dependent sex determination (TSD), and if growth is affected by rearing temperature.

Methods

- Southern flounder broodstock were strip spawned to collect eggs and sperm for *in vitro* fertilization.
- Hatched larvae were weaned from a natural diet (rotifers/*Artemia*) to high protein pelleted feed and fed until satiation at least twice daily.
- Upon reaching a mean total length of 40 mm, the juvenile flounder were stocked at equal densities into one of three temperatures 18, 23, or 28°C for 245 days.
- Gonads were preserved and later sectioned at 2-6 microns.
- Sex-distinguishing markers were used to distinguish males (spermatogenesis) from females (oogenesis).

Histological Analysis

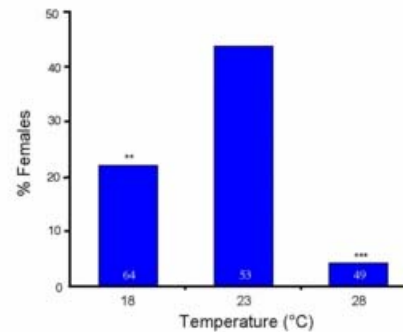


Male Differentiation



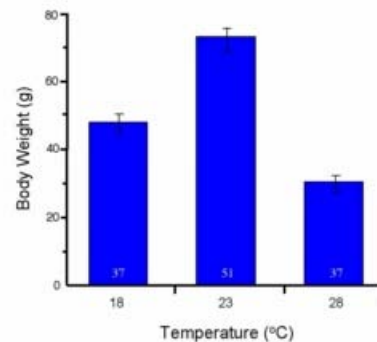
Female Differentiation

Temperature Affects Sex Determination

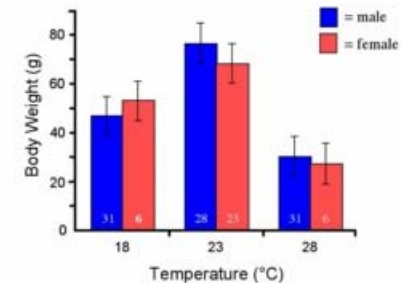


(**P < 0.01 and ***P < 0.001 represent significant deviations from a 1:1 male:female sex ratio)

Rearing Temperature Affects Growth



Growth Does Not Differ by Sex



Results

- Sex was discernible in most fish greater than 120 mm long.
- High (28°C) temperature produced 4% females.
- Low (18°C) temperature produced 22% females.
- Mid-range (23°C) temperature produced 44% females.
- Fish raised at high or low temperatures showed reduced growth compared to those at the mid-range temperature.
- Up to 245 days, no differences in growth existed between sexes.

Conclusions

- These findings indicate that sex determination in southern flounder is temperature-sensitive and temperature has a profound effect on growth.
- A mid-range rearing temperature (23°C) appears to maximize the number of females and promote better growth in young southern flounder.
- Although adult females are known to grow larger than males, no difference in growth between sexes occurred in age-0 (< 1 year) southern flounder.

Acknowledgements

The authors acknowledge the Saltonstall-Kennedy Program of the National Marine Fisheries Service and the University of North Carolina Sea Grant College Program for funding this research. Special thanks to Lea Ware and Beth Shumps for help with the work.

Practical issues

- Don't check in your poster at the airport
- Don't leave it lying around in your hotel room
- Find out beforehand how to affix your poster to the poster board
- Respect the time to attend your poster
- Prepare yourself for a short oral summary
- Do not wander too far away from your poster during the session; be available for discussion!

Giving Presentations

- Plan early
- Practice thoroughly
- Presentation should have logical flow
- Have a clear take-home message
- Prepare yourself for all eventualities
- Go full circle

In other words ...

“Hit the point once. Then come back and hit it again. Then hit it a third time – a tremendous whack!” – Winston Churchill

- Tell them what you're going to tell them
- Tell them
- Then tell them what you told them!

Some web resources

Talks and general tips

- <http://collections.plos.org/ploscompbiol/tensimplerules.php>
- “Making your case”, Jeffrey Perkel, The Scientist, July 2006
- <http://psy.st-andrews.ac.uk/handbooks/modules/ps3000/present.html>
- www.kumc.edu/SAH/OTEd/jradel/Preparing_talks/TalkStrt.html
- <http://www.owl.net.rice.edu/~cainproj//ih.html#2>
- <http://owl.english.purdue.edu/>

Posters

- <http://www.ncsu.edu/project/posters/IndexNews.html>
- <http://www.biology.lsa.umich.edu/research/labs/ktosney/file/PostersHome.html>

Ten Simple Rules Collection

PLoS Computational Biology

Ten Simple Rules Collection



Written by *PLoS Computational Biology* Editor-in-Chief Philip E. Bourne, sometimes with collaborators, the "Ten Simple Rules" provide a quick, concentrated guide for mastering some of the professional challenges research scientists face in their careers.

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[Ten Simple Rules for a Good Poster Presentation](#)

Erren TC, Bourne PE

doi:10.1371/journal.pcbi.0030102



[Ten Simple Rules for Making Good Oral Presentations](#)

Bourne PE

doi:10.1371/journal.pcbi.0030077



[Ten Simple Rules for a Successful Collaboration](#)

Vicens Q, Bourne PE

doi:10.1371/journal.pcbi.0030044



[Ten Simple Rules for Selecting a Postdoctoral Position](#)

Bourne PE, Friedberg I