


Evolution of Animal Form & Function

Dr Alex Badyaev

Office hours:
Tue 11-12noon
BSW 424

Lecture 6
2009



Proposals (50pts) are due by 9:30AM, October 13

Have topics ready for scheduling by 1 October 2009

Research proposal **20 points (1/3 writing)**

The research proposal will be no more than one page long (but no less than 1/2 page long) and should contain the following:

- 1) Briefly identify your project and the question to be investigated
What is your question? (5)
- 2) Tell us why you think this question is interesting and worth pursuing
Why is it interesting? Why do we care? (5)
- 3) Explicitly state the hypotheses and predictions that you plan to examine
What do you plan to do to address the question and why? (5)
- 4) Tell us how you plan to evaluate these hypotheses and what kind of data or information you plan to gather
How do you plan to test the hypotheses? (5)
- 5) Tell us briefly about what is being done in this area – this is to be based on the literature survey summarized in the reference list.

Reference list: **20 points total**
SEPARATE PAGE!

- 1) Reference lists should be at least 10 (ten) original scientific articles on the topic, listed in the alphabetical order of the authors and in format similar to the list of papers in your syllabus. (10)

References can only be to the published scientific work (e.g., no references to the on-line publications, web pages, CDs, etc will be allowed unless justified).

- 2) In parentheses state what the paper is about : (10)

E.g.,:

Simmons, R. E., and L. Scheepers. 1996. Winning by a neck: sexual selection in the evolution of giraffe. *American Naturalist* 148 :771-786. (the authors present an alternative hypothesis that male-male competition and female choice favored evolution of long necks in giraffes)

Oral presentation **10 points**

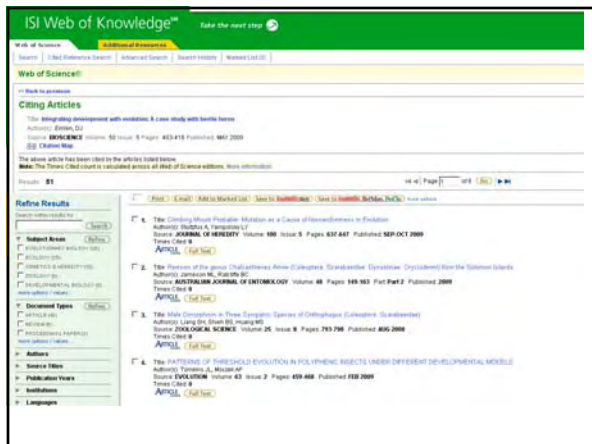
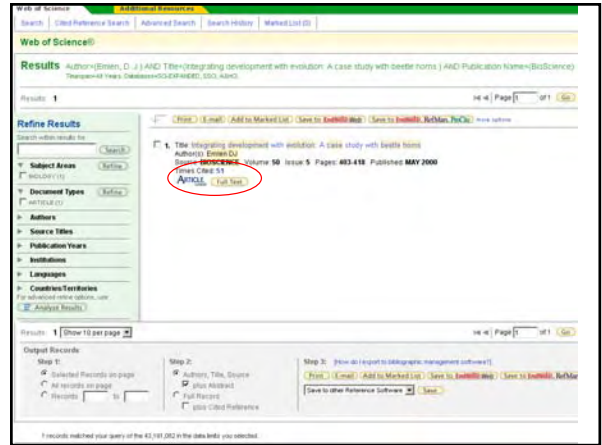
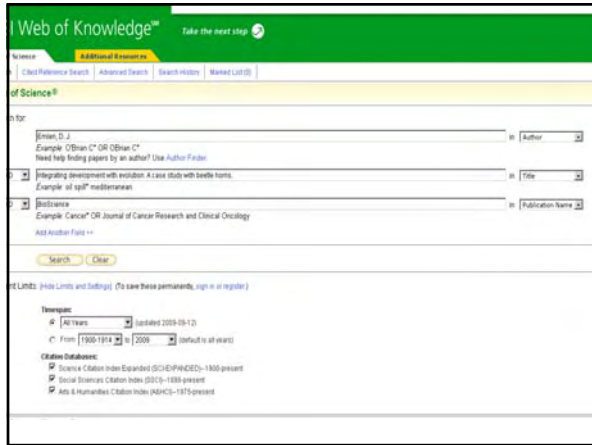
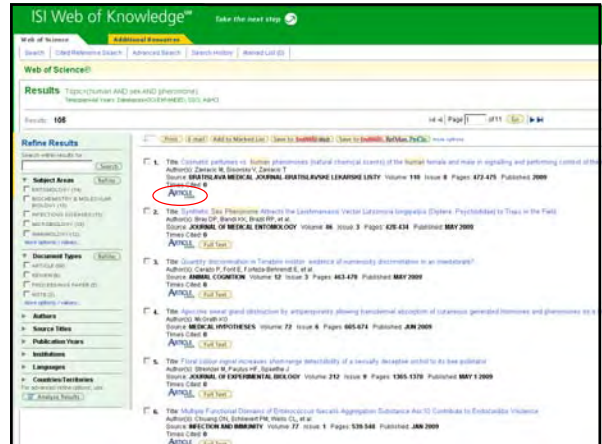
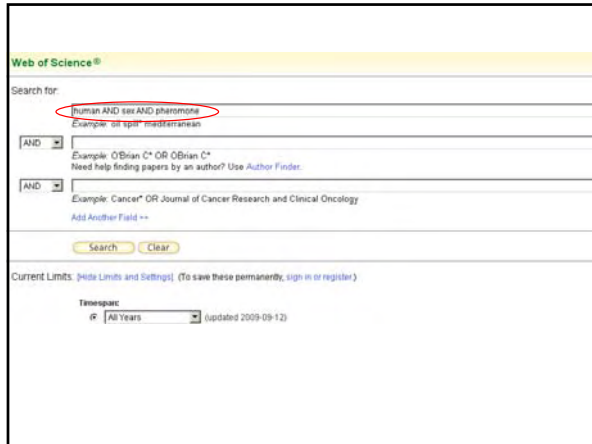
3-5 minutes presentation introducing your question and approach (proposal). You may use dry-erase board or overhead transparencies, or PowerPoint slides (will need those a day before).

Important – the proposal will not be graded without this!

Co-authorship statement. On the title page of your project paper please write the following:

“We agree that the following members have contributed equally to the preparation of this report”.

Both members of the group should sign their names under this statement.



Library Research Skills:
ECOL 330 – Evolution of Animal Form & Function
 Elizabeth Kline
klinee@email.arizona.edu
 Science-Engineering Library RM 208
 621-6375
<http://www.library.arizona.edu/help/tutorials/courses/ecol/330/index.html>

Web of Science

Finding Articles

- Follow a topic both forwards and backwards in time via linking technology
- Find a previously cited paper

Access Web Of Science*

- UA Libraries home page:
<http://www.library.arizona.edu>
- Under "Search and Find"
 - Select Article & Database Searching
 - Select "W"
 - Find Web Of Science

*Resource is also known as Science Citation Index and can be found under "S"

Build a Search Strategy

- What are the key concepts?
 - snakes AND newts
- Are there synonyms, similar terms, or specific terms?
 - poisonous OR venomous
 - dog OR Canis familiaris
- Combined search
 - (poison OR venomous) AND snakes AND newts

Build a Search Strategy (con't)

- Use truncation (* or asterisk) to get at variations of a word
 - toxi* will find toxic, toxin, toxins, toxicology
- Don't run search terms together unless you want them as an exact phrase
 - poisonous newts and poison-resistant snakes that eat them (NO!)
 - poisonous venomous snakes (NO!)
 - predator-prey interactions (YES!)

Build a Search Strategy (con't)

- Take advantage of the articles that are in your syllabus. What search terms do they use?
Brodie, E. D., Jr., B. J. Ridenhour, and E. D. Brodie, III. 2002. The evolutionary response of predators to dangerous prey: hotspots and coldspots in the geographic mosaic of coevolution between garter snakes and newts. *Evolution* 56(10):2067-2082.

Build Your Library Database

- Run your search in a Library database
- Mark references
- Open up your RefWorks account
- Import references*
- Organize your citations in folders

* Refer to the RefWorks Guide, FAQ #8:
<http://www.library.arizona.edu/help/tutorials/refworks/index.html>

Writing and Formatting

- Easily create citations in a Word document with the RefWorks plug-in, Write-N-Cite
- If you are not using a Library computer, download the program from the RefWorks menu
- Launch Write-N-Cite by opening up Word or by clicking it from your desktop or programs
- Open your document or save it prior to opening RefWorks
- When you finish writing, choose a citation style, and watch RefWorks format your entire paper within seconds

Other Library Databases

- Academic Search Premier- Covers a broad range of disciplines including general academic, business, social sciences, humanities, general sciences, education, and multi-cultural. Offers **full text coverage for 1,000 journals and indexing for 3,000 journals.** (Full text 1992-present). (Index 1980-present)
- BIOSIS Previews- Comprehensive coverage of biological and biomedical literature from journal articles, technical notes and letters. Includes abstracts (1969-present)
- PsycINFO - Covers all areas of psychology and cognitive sciences, including animal behavior (1887-present)

Other Library Databases

- Wildlife & Ecology Studies Worldwide – Provides 400,000+ records to worldwide literature on all wild vertebrates, excluding fish. Indexes journal articles, conference proceedings, government reports, field studies, books, and theses and dissertations. Permits taxonomic and geographic search approaches as well as traditional keyword/subject searching (1935–present)
- Zoological Record - An index to the world's publications in zoology, with a focus on systematic zoology (1978-present)

Remote Access

- UA students, faculty and staff may connect from off-campus by using the VPN software
<https://sitelicense.arizona.edu/vpn/>
- Alternatively UA students, faculty and staff who are off-campus will need to input their last name and CatCard number in order to use resources licensed by the Library (see next slide).

Accessing Article

Article Linker:

- Intermediate step to connect you to article. It follows the following process:
 1. If full-text is available, links automatically. Or some manual manipulation necessary.
 2. Links to the catalog (Sabio) to check for availability of print.
 3. If neither full-text or print are available, select the Interlibrary Loan option.

The University of Arizona Library

SEARCH & FIND SERVICES ABOUT THE LIBRARY HELP

The article you want:

Article: Skull, processes musculature and preorbital gland in the saga antelope and Quentner's Ovis (Mammalia, Artiodactyla, Bovidae)

Author: Frey, Roland

Journal: Zoologischer Anzeiger

ISSN: 0044-5231 Date: 1987

Volume: 235 Issue: 3-4 Page: 183

Sorry, this article was not found online

Please see additional options below for finding this article

Step 1 - Search the Library Catalog

Main Library [by ISSN/ISSNp/ISSNj](#) [by Journal Title](#)

AHGL Library [by ISSN/ISSNp/ISSNj](#) [by Journal Title](#)

Step 2 - Ask the Library to get the article for you:

Main Library [Submit a request for the article if you cannot find it in our catalog and article](#)

AHGL Library [Submit a request for the article if you cannot find it in our catalog and article](#)

Questions?

Main Library [Ask a Librarian - Online](#) [Ask a Librarian - Email](#)

AHGL Library [Ask a Health Librarian](#)

Questions?

- Call 621-6375 or email me klinee@email.arizona.edu
- Use Ask A Librarian at: <http://www.library.arizona.edu/help/ask/index.html>
 - Chat/Instant Messaging
 - Available anytime the Library is open

Library Resources to Aid in Your Research

- Manage citations with an online bibliographic citation manager - RefWorks
- Search for references using a citation database – Web of Science
- Write and format your paper using the citations in your RefWorks account

Manage Your Citations

RefWorks: Bibliographic Citation Manager

- Create your own personal online database of citations
- Share your bibliography with others
- Import references from your institution's databases
- Automatically format your papers and bibliographies in seconds

Access RefWorks

- UA Libraries home page: <http://www.library.arizona.edu>
- Under "Search and Find"
 - Select Article & Database Searching
 - Select "R"
 - Find RefWorks

To Begin Using RefWorks

- Sign Up for an **Individual Account**
- Enter the appropriate information (a user creates their own personal login and password)
- Click on Register to open the program
- You are now ready to use the RefWorks* program!

*Online help available from RefWorks Menu:

<http://www.refworks.com/Refworks/help/Refworks.htm#>

Important exam information in class