BISC 102
Library Research Workshop
Have you had an SFU Library research session before?

(A) Yes
(B) No
(C) Don’t remember
BiSc 102 (@ Surrey) research guide

Instructor:
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This web page is intended to help you with your Biological Sciences 102 assignment. Also refer to the main Biological Sciences Subject Research Guide for general information. Start early so you can get the information and assistance you need.

Coming soon: Slides from the Library Research session.

If you need help, please contact Shane Plante, Liaison Librarian at 778.782.7588 or shane_plante@sfu.ca or Ask a Librarian.

CONTENTS OF THIS GUIDE:
- IUCN Red List
- Research process
- Background information
- Popular vs. scholarly sources
- Finding scholarly articles
- Citing sources
You have two different research assignments to choose from.

We will be focusing on the endangered species assignment today, but the research process for both assignments is very similar.
{ agenda }

1) The IUCN Red List of Threatened Species
2) Researching your topic
3) Evaluating your sources
4) Finding scholarly articles
5) Citing sources
6) Getting help
{ agenda }

1) The IUCN Red List of Threatened Species
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IUCN Red List

http://www.iucnredlist.org/
We will be using this following species as our sample topic:

*Trichechus manatus*
(West Indian Manatee)

**Status:** Vulnerable  C1  ver 3.1

**Pop. trend:** decreasing
If you click on the link for *Trichechus manatus* on the previous page, you should see the following entry for this species:

**Table of contents:**
- Taxonomy
- Assessment Information
- Geographic Range
- Population
- Habitat and Ecology
- Threats
- Conservation Actions
Note: It will be easier to find information on your species if you choose an organism that has been studied by researchers extensively.

– This may seem obvious, but it’s worth considering before you commit to creating a poster on the Ochre-rumped antbird.

agenda

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Identify your research topic:

Endangered or vulnerable species: The West Indian Manatee (*Trichechus manatus*)

Retrieved from
http://www.flickr.com/photos/usfwsendsp/5105566100/
research process

Some aspects of your species:

- Ecology
- Habitat
- Conservation
What are some **synonyms** and **related concepts** for **conservation** that you could use to search for information on your species?
Identify related terms:

- West Indian manatee: *Trichechus manatus*

- Conservation: conserve, preserve, protect

*Use the scientific name of your organism for searching and for your scientific poster*
research process

journal articles

books summarize recent research

textbooks, reference books, encyclopedias
The BISC 102 research guide includes tips on finding background information (including encyclopedia entries and books) on your topic:

Background information

You should begin your research by looking for background information on your species. This information is often found in reference books (e.g., encyclopedias). After you have found the necessary background information on your species, you can search for scholarly articles. (With some basic knowledge on your species, scholarly articles might be unnecessarily confusing.)

Here are a few online encyclopedias that might include some background information on your species:

- Grimmell’s animal life encyclopedia
- Danese’s fishes, an encyclopedia of ichthyology, ecology, and evolution
- McGregor’s encyclopedia of science: plant life

There are many other good resources (online and in print) listed in the Background Information section of the Biological Sciences research guide.

For background information on your species, the following websites may also be useful:

- Species at Risk Public Registry (Government of Canada)
- B.C. Conservation Data Centre (Ministry of Environment, B.C. Government)
- Royal Botanical Gardens, Kew

To find other relevant information on your topic in books, use the SFU Library catalogue. Try searching for your species, but don’t be too surprised if there are no results. You might not find any books dedicated to your particular organism. But there will be other books that may include a section on or a chapter on your topic. I’ll explain how to find these books in the next paragraph. A keyword search in the library catalogue with names of species in several hits, including a book titled Conservation and management of marine mammals. This book has the following three subject headings: Marine mammals, Endangered species, and Wildlife conservation. Books about these topics might include some information on your species. If you click on one of these SUBJECT HEADINGS, you can find more books on marine mammals, endangered species, or wildlife conservation.

In general, to find information on your species in books, you may need to search for books on a broader topic (e.g., books with the SUBJECT HEADING Endangered species). In these books, you will likely need to look at the tables of contents (at the front of the book) and the indexes (at the back) to see if they have any useful information on your topic.

To search by subject heading, go to the library catalogue and use the dropdown menu to the left of the search box (choose SUBJECT).

Here are just a few examples of SUBJECT HEADINGS that may be useful for your topic:

- Endangered species
- Wildlife conservation
- Rare animals
- Endangered plants

Note: You can always get help from a librarian if you’re running into difficulties getting what you need.
These are the 3 search options on the Library’s homepage:
SFU Library’s Russian dolls

Fast Search
Library Search
Catalogue

http://www.flickr.com/photos/aussiegall/288377539/
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You need to find **scholarly sources** relevant to your topic.

Are either of the article described on your sheet **scholarly articles**?

a) How can you tell?

b) **BONUS:** What does “peer reviewed” mean?
<table>
<thead>
<tr>
<th></th>
<th>Popular</th>
<th>Scholarly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>No affiliation provided</td>
<td>Affiliated with an academic / research institution</td>
</tr>
<tr>
<td>Abstract</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Length</td>
<td>Short</td>
<td>Long</td>
</tr>
<tr>
<td>Images</td>
<td>For aesthetic appeal</td>
<td>Research findings displayed as graphs, charts, etc.</td>
</tr>
<tr>
<td>Language</td>
<td>Easy to understand</td>
<td>Elevated, specialized</td>
</tr>
<tr>
<td>Citations</td>
<td>None at all, or very few</td>
<td>Yes, many</td>
</tr>
<tr>
<td>Review</td>
<td>Editor</td>
<td>Peer-reviewed</td>
</tr>
</tbody>
</table>

Note: There is also a link on your handout to the online guide “Internet Research: Finding and Evaluating Resources”
Here are a few other good places to search besides Library Search that are listed on the BISC 102 research guide:

- **BIOSIS Citation Index**
  - Contains citations with abstracts to the world's biological and biomedical literature dealing with research in the life sciences including: agriculture, biochemistry, biotechnology, botany, ecology, the environment, microbiology, neurology, pharmacology, pre-clinical and experimental medicine, toxicology and zoology.

- **Web of Science**
  - Allows keyword searching plus the ability to find out who cited a particular journal article and who was cited in a particular journal article.

- **Zoological Record**
  - Comprehensive index to animal research, covering a wide range of subjects including biodiversity, conservation, environmental science, marine and freshwater biology, parasitology, and new laboratory and field techniques.

- **Biological & Agricultural Index**
  - Covers core literature in biology and agriculture.
  - Indexes scholarly, professional and popular journals plus some conference proceedings, many of which are available at the SFU Library.

- **Google Scholar**
  - Allows you to search for scholarly literature from broad areas of research though mostly in the science and technology fields. Searching is not as focused as in the other article databases.

**Note:** Always search Google Scholar through SFU Library. Otherwise, you’ll be asked to pay for articles. Never pay for articles; we have everything you need.
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   • Yes, this is actually part of “the research process”
5) Citing sources
6) Getting help
finding scholarly articles

1. Find the full-text copy of a scholarly article related to conservation of the endangered species *Trichechus manatus*

2. Email an APA citation of the article to yourself
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• What information do you need to cite?
• What information don’t you need to cite?
You need to cite each source in two places:

- In the body of the paper
  - Called an in-text citation
- At the back of the paper
  - In the list of References

The BISC 102 research guide includes links to:

- an APA style guide
- a guide on citing images in APA style
{ agenda }

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getting help

The library provides many ways to get help:

- In-person at the reference desk
- Telephone
- Email
- IM
- Text message
- Student Learning Commons