



# Careers in the 21<sup>st</sup> Century Environmental sciences and marine mammals

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# Why do you want to be a scientist?

- Earn a living
- Get rich
- Have fun
- Contribute
- Learn
- 'It just happened' (coincidence)
- Curiosity
- Other?

# Develop your toolbox

- Technical capability;
- Scientifically relevant;
- Contributes something new;
- Not restricted to marine mammals;
- Builds on the basics;
- Sets you apart from the competition;
- Satisfies your need for great career with getting a job that supports you.

# Don't forget the basics

- Statistics
- Chemistry
- Physics
- Biology
- Ecology
- Physiology

# Design, esthetics and verbal communications

- Few undergraduate or graduate course/programmes prepare you for your communications side;
- You will have to create your own learning programme;
- Slide shows: Photographs, graphs, tables, text... a balance of visual esthetics and content;
- Tell a story: little detail, high-level summary, does not replace a manuscript.
- The one minute rule for slide.

# Publish, publish, publish

- Number of publications is important;
- Quality of publications should not be forgotten;
- 'tell a story' that is engaging, interesting to more than just your discipline;
- Learn from edits/comments of co authors;
- Grow to love critical peer reviews.

# Writing peer-reviewed articles

- Know the journal, know the literature;
- Start with draft title + abstract + Figures + Tables before you start writing your paper;
- Draft 3-4 bullets that illustrate depth, breadth and novelty of your study (re-write these multiple times; some journals require such 'highlights');
- Start writing Intro, Methods, Results & Discussion;
- Return to revise title, abstract, bullets.

# Networking

- At university and in courses;
- By going to conferences;
- By presenting (talks or posters);
- By visiting laboratories;
- Think of your 'next steps';
- Ask advice / be open-minded when talking to prospective mentors, supervisors or employers.



# Build your curriculum vitae

- Name, address but not birthdate;
- Education;
- Scholarships & awards;
- Publications:
  - peer-reviewed articles;
  - Review articles;
  - Book chapters;
  - Technical and data reports;
  - Magazine or popular articles.
- Memberships/affiliations;
- Training certificates (first aid, boating, WHMIS).

# Volunteer

- To give seminars (courses, departments, laboratories, public);
- To help out with certain projects where they help you acquire certain skills or make you known to someone;
- To assist scientific societies & professional organizations at conferences (booth or AV or other);
- To organize social and educational opportunities for your group.

# Current career concepts in marine mammal sciences

- Protection, conservation
- Regulations and guidelines
- Endangered species
- Critical habitats
- Ecotourism
- Environmental impacts
- Industrial development
- Best practices



# Hot topics in marine mammal sciences

- Climate change
- Ocean productivity
- Fisheries interactions
- Conservation of endangered species
- Critical habitat definition
- Habitat loss
- Recovery or conservation planning
- Pollution
- Underwater noise
- Guidelines, regulations, best practices
- Other?

# What do you want to be when you grow up?

- PhD:
  - Research scientist (government);
  - Professor;
  - Private sector;
  - Educator.
- MSc or equivalent:
  - Technician;
  - Sales rep;
  - Habitat biologist;
  - Consultant;
  - Naturalist.

# Where will the jobs be?

- Few opportunities in government and universities;
- Governments continue to cut back;
- University positions rewarding;
- Industry is looking for science staff to 'enable' development, technological application, solve problems;
- Environmental consulting in support of projects, activities, governments, industry, aboriginal, conservation.

# What an employer is looking for (if this is not already obvious)

- A candidate who is:
  - Smart;
  - Positive;
  - Enthusiastic;
  - Able to work independently as well as part of a team;
  - Able to listen and take criticism;
  - Adaptable;
  - A problem solver;
  - Goal-oriented.

# Be a student of life

- Never, ever stop learning;
- Recognize that everyone you work with has something to teach you;
- Seek to improve your understanding on weak points;
- Google & Wikipedia are tempting but be careful... they do not replace good old-fashioned journals;
- If you lose your curiosity.. Ask yourself why...



Thank you

Good luck and don't look back

