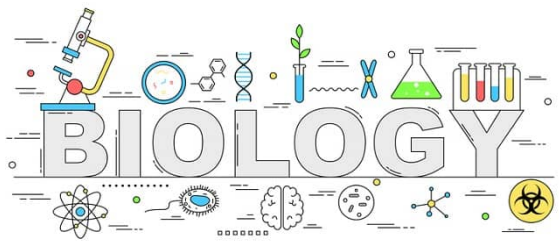
FRSC/BIOL 4002: Wildlife Forensics

Tim Frasier
Saint Mary's University

Introductions

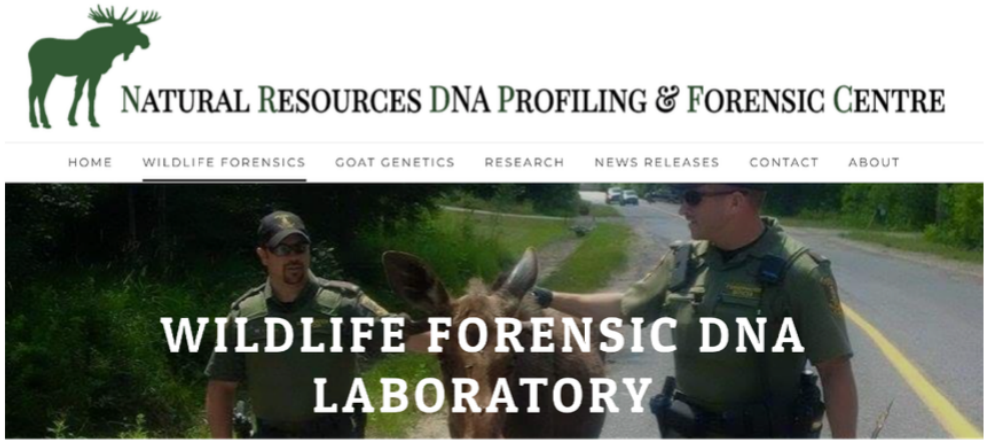
Dr. Tim Frasier



Research

Conservation genetics of endangered whale species

Forensics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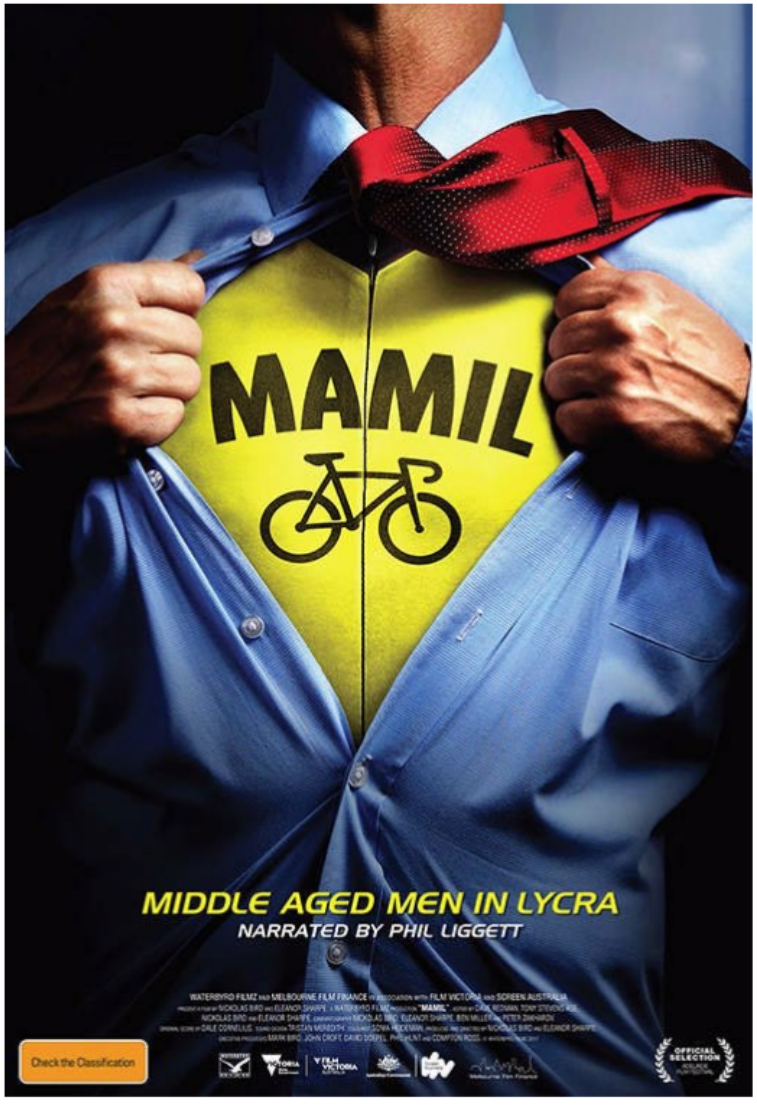
MAMIL
MIDDLE AGED MEN IN LYCRA
NARRATED BY PHIL LIGGETT
Check the Classification
OFFICIAL SELECTION

Contact Information

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Tel:	902-491-6382
E-mail:	timothy.frasier@smu.ca *Please put FRSC/BIOL 4002 in subject line*
Office Hours:	TR 1:00–4:00 *or via E-mail!*

Your Turn

- Name?
- Are you a BIOL or FRSC (or both) student?
- What year are you in?
- Why did you take this course?
- What do you hope to get out of it?

Course Information

Lectures:	MW	1:00–2:15	S345
Labs:	W	2:30–5:29	S106

Textbook: None, but required readings will be posted online.

Course material will be available on **Brightspace**

- Syllabus
- Readings
- Lecture notes
- etc.

Grades

Component	**% of Final Grade**
Case study presentation & discussion	20%
Lab books (2 @ 12.5% each)	25%
Midterm Exam	25%
Final Exam	30%
Total	**100%**

Lectures

Goals are to understand:

1. Major drivers of wildlife forensic issues, nationally & internationally
2. Major species/organisms involved
3. The legal parties, laws, and regulations involved
4. The conservation, environmental, and ethical issues involved

Approach

Combine lectures with case studies

Day	Topic
1. Wednesday, Sep. 4	Lecture: Introduction to course Lab: None
2. Monday, Sep. 9	Overview of major international issues
3. Wednesday, Sep. 11	Lecture: Case study #1 Lab: Sample collection
4. Monday, Sep. 16	International law and regulations
5. Wednesday, Sep. 18	Lecture: Case study #2 Lab: DNA extraction
6. Monday, Sep. 23	NO CLASS, I'm away
7. Wednesday, Sep. 25	Lecture: Case study #3 Lab: DNA quantity & quality

Case Studies

Structure

1. Pick a case study—I have preliminary readings
2. Conduct in-depth research:
   - What are the main drivers?
   - What are the implications for the species/people/environments involved?
   - What are the major legal issues?
   - Who is/should be responsible for enforcing them?
3. Teach the class about this case study
   - Presentation, discussion, and/or activity (can't just be a presentation)
   - Should have some required reading for the class!

Case Studies

Will work in teams of 2–3

Will have full class time for this

Component	**% of grade**
Thoroughness of research	40%
Clarity and effectiveness of presentation/discussion/activity	40%
Peer evaluations	20%
Total	**100%**

Lab

Goal:
Learn the theory and techniques associated with molecular species identification

Apply this to food purchased at local restaurants

Contributed Paper

Using DNA barcoding to track seafood mislabeling in Los Angeles restaurants

Demian A. Willette,[1,2]* Sara E. Simmonds,[1] † Samantha H. Cheng,[1] ‡ Sofia Esteves,[2] Tonya L. Kane,[1] Hayley Nuetzel,[1] § Nicholas Pilaud,[2] Rita Rachmawati,[1] and Paul H. Barber[1]

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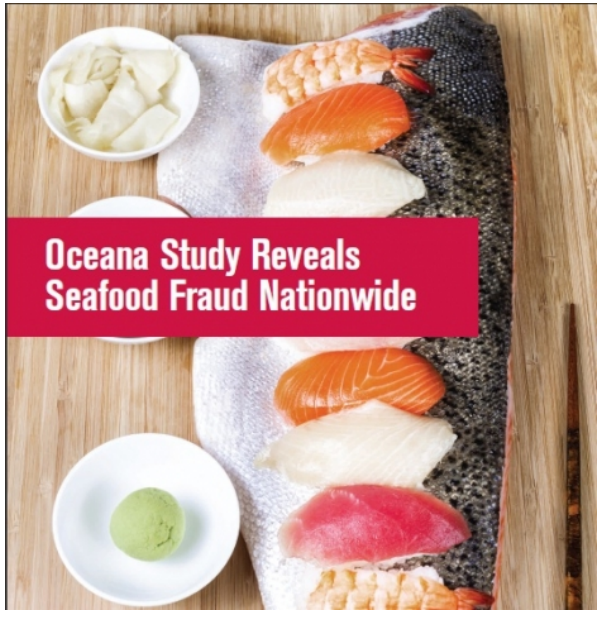

J Food Sci Technol (April 2015) 52(4):2479–2484
DOI 10.1007/s13197-014-1552-y

SHORT COMMUNICATION

Occurrence of mislabeling in meat products using DNA-based assay

Angela Di Pinto · Marilisa Bottaro · Elisabetta Bonerba · Giancarlo Bozzo · Edmondo Ceci · Patrizia Marchetti · Anna Mottola · Giuseppina Tantillo

Case Study Assignment

Case Study #1: Sep. 11, Elephant ivory

Case Study #2: Sep. 18, Rhino horn

Case Study #3: Sep. 25, Pangolins

Case Study #4: Oct. 2, Bear bile

Case Study #5: Oct. 9, Caviar

Case Study #6: Oct. 16, Timber

Case Study #7: Oct. 30, Shark fins

Case Study #8: Nov. 6, Tigers

Case Study #9: Nov. 20, Plant/herbal ingredients

Case Study #10: Nov. 27, Birds