

# Marie Frances Veillard

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## Education:

MSc. Candidate in Conservation Biology, GPA: 3.9  
September 2013- Present      University of Alberta, Edmonton, AB

BSc. Environmental and Conservation Sciences, Major: Conservation Biology, GPA: 3.9  
September 2008-April 2013      University of Alberta, Edmonton, AB

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## Certification:

Standard First Aid and CPR Level C Training  
Electrofishing (Class 2): Crew Leader  
Canada Safety Council Defensive Driving  
UAPWC Institutional Animal User Training Program: Part I and II  
PADI Open Water Diver

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## MSc. Thesis:

### **Dispersal potential and swimming ability of the recently identified Rocky Mountain Sculpin (*Cottus sp.*; SARA Status- Threatened) in southern Alberta**

Fisheries and Oceans Canada, University of Alberta

*MSc. Candidate, Fisheries and Oceans Canada Aquatic Fisheries Biologist II*

- Managed a tracking study on Lee Creek using Passive Integrated Transponder (PIT) and Visible Implant Elastomer (VIE) tags to quantify dispersal abilities of Rocky Mountain Sculpin. Measured associated biotic and abiotic habitat factors to determine which variables affected movement. Data analysis and figures were completed using R Studio.
- Conducted a laboratory study on the swimming ability of Rocky Mountain Sculpin from Lee Creek, St. Mary River and North Milk River to assess their ability to hold position against incremental velocities and recover from intense exercise. To assess behavioural swimming patterns, I studied the sculpins' willingness to move out of refugia areas into flow, both diurnally and at increasing velocities. Data analysis and figures were completed using R Studio.

### **Additional Projects:**

- Led a habitat suitability project to understand selective adaptations of the Rocky Mountain Sculpin to reside in lotic systems with vastly different flow regimes.
- Collected genetic clips of Rocky Mountain Sculpin to determine dispersal potential in southern Alberta and distinguish distinct populations amongst watersheds.

### **Additional Skills**

- Hiring, training and managing field and laboratory staff.

- Operating and repairing field equipment including: Smith Root LR-24 backpack electrofishers, YSIs, turbidity meters, PIT tagging equipment, all-terrain vehicles, 4x4 trucks, and trailering.
- Utilizing software programs such as R, Microsoft Office, EndNote, and ArcGIS.
- Working safely in remote areas around wildlife in various weather conditions.

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### **Additional Fisheries Research Experience:**

#### **Exploring the effects of a major coal mine tailings release on the provincially threatened Athabasca Rainbow Trout (*Oncorhynchus mykiss*)**

University of Alberta

*Field Research Assistant*, July-October 2015

- Led an electrofishing crew and collected fish, benthic and terrestrial invertebrates, aquatic and terrestrial vegetation, and habitat samples. Data quantified food web dynamics at both disturbed and undisturbed sites within the Athabasca River watershed.

#### **Distribution of Arctic Grayling (*Thymallus arcticus*) in the Little Nahanni watershed, NWT:**

Fisheries and Oceans Canada, Parks Canada

*Field Research Assistant*, August 2015

- Electrofished tributaries of the Little Nahanni River in Nahanni National Park Reserve and Nááts'ihch'oh National Park Reserve to gain an understanding of Arctic Grayling occupancy and juvenile habitat use within the watershed.
- Completed helicopter training and applied skills such as hover exits and toe-in landings to access remote sites.

#### **Delineating Westslope Cutthroat Trout (*Onchorhynchus clarkii*) populations in relation to Eastern Brook Trout (*Salvelinus fontinalis*) distribution in a sub-alpine waterbody of Banff National Park**

Parks Canada

*Field Research Assistant*, September 2013

- Assisted in a research project to determine genetic purity of the federally threatened Westslope Cutthroat Trout in an area where the species range overlaps with invasive Eastern Brook Trout in the Bow River watershed.

#### **The effect of hydrologic alteration on capture efficiency of freshwater fishes in a highly modified prairie stream**

Fisheries and Oceans Canada, University of Alberta

*Field Research Assistant*, August-September 2013

- Assisted in a gear efficiency study using seine netting in the highly managed Milk River system of southern Alberta. The project was conducted to verify sampling efforts on capture rates of the federally threatened Western Silvery Minnow (*Hybognathus argyritis*).

## Work Experience:

### **Research Assistant- Applied Conservation Ecology Lab**

University of Alberta

Sept 2012- May 2013

- Compiled a database of the life history traits of the flora of Alberta using online databases to be used to predict plant sensitivity to disturbances.

### **Operations Assistant- Alberta Innovates Bio Solutions**

July 2011-August 2012

- Worked with government, industry and non-governmental organizations to put together a roadmap for implementing a market-based system for managing ecosystem services in Alberta.
- Researched and wrote summary reports on topics of interest for the organization.

### **Soil Science Research Assistant (NSERC Summer Student)**

University of Alberta

June 2010-Aug 2010

- Assisted researchers in designing and carrying out experiments in both lab and field settings.
- Learned the importance of precision when working in a lab setting and being responsible for the quality control of samples.

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## Presented Work:

Veillard, M., Poesch, M., and Watkinson, D. (January 2014). *Impacts of managed streams on the movement of Rocky Mountain Sculpin*. Paper presented at the Canadian Conference for Fisheries Research, Yellowknife, NWT.

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## Volunteer Experience:

### **Science Team Volunteer- Maritimes Recreational Shark Fishery**

Bedford Institute of Oceanography, Fisheries and Oceans Canada

August 2014

Lockeport, Nova Scotia

- Measured and dissected Blue Sharks (*Prionace glauca*) for total length, gape width, weight, sex, maturity, and stomach contents.
- Engaged the public by answering questions regarding shark anatomy and conservation.

### **Junior Treasurer- CONFORWest Conference 2014**

September 2013-April 2014

Edmonton, Alberta

- Involved in setting up the organizational structure of the CONFORWest graduate student conference including finances, fiscal responsibilities of the society, and a board of directors.

### **Conservation Volunteer- White Shark Projects**

February 1- March 1, 2011

Kleinbaai, South Africa

- Collected visual data on free-swimming Great White Sharks (*Carcharodon carcharias*) including sex, external markings and estimated length.
  - Responsible for daily boat maintenance, organizing equipment, and client safety.
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### **Awards:**

#### **Alexander Graham Bell Canada Graduate Scholarship (NSERC CGS-M)**

May 2014- May 2015

Government of Canada

Amount: \$17,500

#### **Walter H. Johns Graduate Fellowship**

May 2014- May 2015

University of Alberta

Amount: \$5428.54

#### **Queen Elizabeth II Graduate Scholarship – Master’s level**

September 2013 – April 2014

Government of Alberta

Amount: \$10,800

#### **Wein Family International Travel Award**

January 2011 – March 2011

University of Alberta

Amount: \$4250

#### **NSERC Undergraduate Student Research Award**

May 2010 – August 2010

Natural Sciences and Engineering Research Council of Canada (NSERC)

Amount: \$8500

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