

**Erik John Suring**  
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I am interested in working in management or research on projects working towards the conservation and sustainable use of marine and aquatic resources, particularly the development and consequences of marine protected areas.

**WORK EXPERIENCE:**

**US Forest Service**  
**Rocky Mountain Research Station**  
**Boise, ID 83702**

**Dates Employed: 09/2003**  
**Hours per Week: 24**

Stream Survey Volunteer

I conducted independent, end-of-season chinook salmon redd surveys on streams in the Middle Fork Salmon River drainage. I used GPS receivers to mark redd locations and drew maps of redd positions. (Supervisor: Dan Isaak, Phone: 208-373-4385.)

**University of Otago**  
**Department of Marine Science**  
**Dunedin, New Zealand**

**Dates Employed: 03/2002-07/2003**  
**Hours per Week: 30**

MS Graduate Research Assistantship

I conducted a thorough literature review on the applications of stable isotope analysis in marine ecology. I developed a protocol to determine the rate of change in isotopic ratios of carbon and nitrogen after a diet shift in multiple tissue types in laboratory animals. I developed a method for determining the origin and timing of animal movements between isotopic regimes. I studied a crustacean (red rock lobster) and a fish (blue cod). I also studied the differences in isotope fractionation between different tissues of the same animal. I determined the isotopic turnover half-lives and isotope fractionation of several different tissues. I supervised the collection and care of the laboratory animals. (Supervisor: Stephen Wing, Phone: 64-3-479-9038)

**Japanese Exchange and Teaching Program**  
**Niikappu, Hokkaido, Japan**

**Dates Employed: 07/1999-07/2000**  
**Hours per Week: 40**

Assistant English Teacher

Working in a foreign country developed my ability to successfully deal with unexpected situations, cultural differences, and living in a different environment.

**University of Alaska Museum  
Fairbanks, AK 99775**

**Dates Employed: 01/1999-04/1999  
Hours per Week: 15**

Student Assistant II

Cytochrome-b sequence variation in northwestern ermine populations. I developed a restriction enzyme protocol to identify genetic groupings based on known sequence variation. I purified DNA from mammal tissues, used thermal cyclers for PCR and restriction enzyme reactions, and ran and interpreted restriction products on gels. The restriction enzyme protocol identified the genetic group of an individual animal faster and less expensively than single nucleotide pair sequencing. (Supervisor: Melissa Fleming.)

**University of Alaska Museum  
Fairbanks, AK 99775**

**Dates Employed: 09/1998-01/1999  
Hours per Week: 15**

Student Assistant II

Molecular phylogeny of the plant genus *Primula* L. I extracted and sequenced nuclear and mitochondrial DNA from frozen plant samples. I analyzed and aligned sequence data and used PAUP to infer phylogenies. The genetic results supported morphological systematics and provided preliminary evidence for identifying the origins of post ice-age hybridizations. I also cataloged and organized the collection of frozen *Primula* samples. I participated in fieldwork during the summer of 1999 collecting plant specimens near Nome, AK. (Supervisor: Elena Conti, Phone: 41-1-634-8424.)

**USGS-BRD  
Alaska Science Center  
Anchorage, AK 99503**

**Dates Employed: 07/1996-08/1998  
Grade Level: GS-4  
Hours per Week: 40**

Fisheries Science Technician, 0404

Yukon River chum salmon freshwater ecology. I worked with a team to measure stream habitat (e.g., water velocity, substrate composition) and map stream channels using GPS. We operated weirs to quantify returning salmon. We took several measurements from returning salmon and tagged them with Peterson disk tags. Otolith and vertebrae samples were taken from carcasses within the study area. Tagging allowed us to track female movements and redd locations were mapped with a digital theodolite. We used a hydraulic redd pump to estimate intergravel egg density and survival. Winged fyke and funnel nets were used to quantify emigrating smolts. This work was done at remote field camps spending ten days at a time in the field. High water events and sub-freezing temperatures presented challenges. I entered and analyzed data using MS Excel and ACCESS. I operated jet boats, four wheelers, and snowmobiles and helped plan and set up remote camps. During school sessions I worked approximately 10 hours per week. (Supervisor: James Finn. Phone: 907-786-3450.)

**University of Alaska Fairbanks  
Institute of Marine Science  
Fairbanks, AK 99775**

**Dates Employed: 05/1996-07/1996  
Hours per Week: 56**

Student Assistant II

As a team of two we collected daily water samples with a Niskin bottle and CTD casts deployed

from a small boat in Prince William Sound, Alaska. I performed zooplankton tows and measured Secchi depths and took temperature and oxygen measurements using a lowered probe and YSI bottle methods. I collected samples for nutrient, HPLC, and C/N analysis and preserved phytoplankton. I performed fluorometric chlorophyll measurements and digital titration for oxygen measurement. CTD data were downloaded using SeaSoft and I used Excel to enter, manipulate and compare data. I performed phytoplankton size fractionation and prepared epifluorescence samples. I also participated in research cruises in Prince William Sound and the Bering Sea. (Supervisor: Peter McRoy. Phone: 907-474-7783.)

**University of Alaska Fairbanks  
Fairbanks, AK 99775**

**Dates Employed: 10/1995-04/1996  
Hours per Week: 4**

Volunteer Lab Assistant

I cultured and preserved bacteria. I purified and extracted plasmid DNA from bacteria. I performed DNA restrictions and ran DNA fragments on an electrophoretic gel. I also assisted with protein gels and DNA sequencing. I used the World Wide Web to analyze DNA sequences and measured DNA purity with a spectrophotometer. I kept records of results and procedures. (Supervisor: Gerry Plumley, Phone: 907-474-6786.)

**National Biological Service  
Alaska Science Center  
Anchorage, AK 99503**

**Dates Employed: 06/1995-07/1995  
Hours per Week: 40**

Volunteer Field Assistant

I performed surveys on Lake Tustumena, Alaska area streams as part of a team of four. I measured stream width, depth, and flow and did Wolman pebble counts and gradient measurements. I also assisted with comprehensive river mapping. (Supervisor: Carol Woody, Phone: 907-786-3314.)

**National Biological Survey  
Alaska Science Center  
Anchorage, AK 99503**

**Dates Employed: 10/1994-05/1995  
Hours per Week: 2**

Anchorage School District Mentorship Program

I cleaned and measured sea otter skulls, entered and analyzed data using SigmaPlot and Microsoft Excel. I examined sea otter tooth cross-sections to determine age. I performed a literature search on alternative methods for aging fish. I compiled sources using ProCite and wrote a report detailing the findings of the search. I took fin rays and scales from live rainbow trout and chinook salmon for aging. I prepared and analyzed fin rays and scales using a scale reader and dissecting microscope. I collected otoliths from salmon fry. (Supervisor: Mary Whalen, Phone 907-786-3496.)

## **EDUCATION:**

University of Otago, Dunedin, New Zealand. M.S. Marine Science. Thesis currently under peer review. Thesis: Isotopic fractionation and turnover rate in red rock lobster, *Jasus edwardsii*, and blue cod, *Parapercis colias*: implications for tracing migrations with stable isotopes.

University of Otago, Dunedin, New Zealand. 2001. Postgraduate Diploma of Science in Marine Science, with distinction. Thesis: Population genetics of *Liothyrella neozelanica* in Breaksea Sound.

University of Alaska Fairbanks (UAF), Fairbanks, Alaska 99775. 1999. B.S. Biological Sciences, Honors, Magna cum laude. Honors Thesis: Phylogeny of the plant genus *Primula* L.: Implications for sectional circumscription, relationships and evolution of breeding systems in Alaskan sections of the genus.

Chugiak High School, Eagle River, Alaska 99577. High School Diploma, 1995

## **JOB-RELATED TRAINING COURSES:**

PADI Advanced Open Water SCUBA certification 2003

USFWS Small Boat Safety 1998

USFWS Firearms Safety 1998

USFWS Bear Safety 1998

## **HONORS, AWARDS, AND SCHOLARSHIPS**

2002-2003 University of Otago Postgraduate Scholarship

2001 Rotary International Ambassadorial Scholarship

1999 UAF Joel Wiegert Award – Outstanding Graduating Male

1999 UAF Brina Kessel Medal for Excellence in Science

1999 UAF Department of Biology and Wildlife Outstanding Student

1996 UAF Donald R. Theophilus Award – Top freshman in UAF Honors Program

1995-1999 UAF Four year National Merit Scholarship

1995 National Merit Scholar

1995 Lions Club International Student Exchange (Japan)

## **PUBLICATIONS, REPORTS, AND PRESENTATIONS**

Suring, E., S. Wing. In Prep. Isotopic fractionation and turnover rate in multiple tissues of red rock lobster, *Jasus edwardsii*, and blue cod, *Parapercis colias*: implications for tracing migrations with stable isotopes.

Suring, E. 2003. Isotopic fractionation and turnover rate in red rock lobster, *Jasus edwardsii*, and blue cod, *Parapercis colias*: implications for tracing migrations with stable isotopes. Unpublished Masters thesis. University of Otago, Department of Marine Science, Dunedin, New Zealand.

- Suring, E. 2001. Population genetics of the brachiopod *Liothyrella neozelanica* in Breaksea Sound. Oral Presentation. University of Otago, Department of Marine Science, Dunedin, New Zealand.
- Suring E. 2001. Population genetics of *Liothyrella neozelanica* in Breaksea Sound. Unpublished Postgraduate Diploma of Science thesis. University of Otago, Department of Marine Science, Dunedin, New Zealand.
- Conti, E., E. Suring, D. Boyd, J. Jorgensen, J. Grant, and S. Kelso. 2000. Phylogenetic relationships and character evolution in *Primula* L.: the usefulness of ITS sequence data. *Plant Biosystems*, 134(3) 385-392.
- Conti, E., E. Suring, and S. Kelso. 1999. Phylogeny and evolution of breeding systems in *Primula* L.: a pilot study. XVI International Botanical Congress, Saint Louis, Missouri.
- Fleming, M. A., E. Suring, and J. A. Cook. 1999. Phylogeography of ermine, *Mustela erminea*, in Southeast Alaska. American Society of Mammalogists 79th annual meeting, Seattle, Washington.
- Suring, E., E. Conti, and S. Kelso. 1999. Phylogeny of the plant genus *Primula* L.: implications for sectional circumscription, relationships and evolution of breeding systems. Poster presentation at Evolution '99, Madison, Wisconsin.
- Suring, E. 1999. Phylogeny of the plant genus *Primula* L.: implications for the evolution of polyploidy and homostyly in Alaskan sections. Oral presentation. University of Alaska Fairbanks Honors Program, Fairbanks, Alaska.

## REFERENCES

Dr. Stephen Wing, MS Supervisor

Department of Marine Science, University of Otago, New Zealand

Phone: 64-3-479-9038 Email: [steve.wing@stonebow.otago.ac.nz](mailto:steve.wing@stonebow.otago.ac.nz)

Dr. Elena Conti, BS Honors Supervisor

Institute for Systematic Botany, University of Zuerich, Switzerland

Phone: 41-1-634-8424 Email: [contielena@access.unizh.ch](mailto:contielena@access.unizh.ch)

Dr. Gerald Shields, James J. Manion Endowed Chair of Biology

Department of Natural Sciences, Carroll College, Helena, Montana, 59601

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