

EDUCATION

University of New Brunswick, PhD Biology **2011**

Integrated taxonomy as a method for delimiting species in the red algal family Kallymeniaceae (Rhodophyta).

University of New Brunswick, Diploma in University Teaching **2011**

Comprehensive education diploma focused on adult learning, course design, teaching and learning theory.

University of Victoria, BSc Biology **2005**

Field experience in marine ecology and biology. Courses in genetics, advanced marine biology and ecology, animal behaviour, zoology and plant physiology.

RESEARCH EXPERIENCE

Post-Doctoral Fellow, University of New Brunswick **2011**

- Developing and optimizing protocol for environmental sampling and sequencing of DNA barcode for freshwater cyanobacteria.

Scientific Diver, University of New Brunswick **2005–2011**

- Collected and processed approximately 6300 algal samples during nine collecting trips in Eastern Canada, four trips in British Columbia, and two trips in California and New England.
- For each trip, organized supplies and shipping, transportation, accommodation, diving charters and arranged permits for collecting in provincial and state parks.

Field Assistant, University of New Brunswick **2009**

- Collected and identified algal samples for an upper level undergraduate course.
- Designed and produced six information sheets to common species of marine algae in Atlantic Canada for an upper level undergraduate lab.

Scientific Diver, Polar Barcode of Life Network **2006, 2007**

- Collected subtidal animal and algal samples via SCUBA for scientific researchers in Churchill, Manitoba

TEACHING EXPERIENCE

Stipendiary Instructor, Biol. 1012, University of New Brunswick **2011**

- Taught the second half of an introductory biology class on plants, animals and ecology for 384 students. Topics covered include: animal development, evolution, systematics, behaviour and conservation biology.
- Incorporated different pedagogical techniques, including: student response system (clickers), written assignments and online surveys.

Stipendiary Instructor, Biol. 1001, University of New Brunswick **2010**

- Taught 1/3 of an introductory biology class for 515 students. Topics covered included evolution, systematics, biodiversity of prokaryotes and fungi, and current research on protist biodiversity.
- Incorporated case studies and written assignments into the curriculum.

Stipendiary Instructor, Biol. 1012, University of New Brunswick **2010**

- Redesigned curriculum and taught the second half of an introductory biology class on animal biology for 348 students. Topics covered included: animal development, evolution, systematics, behaviour and conservation biology.
- Incorporated case studies and in-class discussion groups into the curriculum.

Stipendiary Instructor, Biol. 1001, University of New Brunswick **2008**

- Developed lectures and taught 1/3 of an introductory biology class for 425 students. Topics covered included evolution, systematics and biodiversity of protists, prokaryotes and fungi.

Laboratory Advisor, University of New Brunswick **2007, 2009**

- Trained, advised and mentored one university graduate and one undergraduate student during independent research projects in molecular systematics.

Teaching Assistant, Biol. 4221 field course, University of New Brunswick **2008, 2009**

- Assisted 16 upper level undergraduate students during a two-week field course on the diversity, evolution & ecology of marine plants.
- Developed and conducted a long-term algal growth experiment with students.
- Set-up daily lab experiments, planned and supervised field trips and marked student lab books.

Teaching Assistant, Biol. 2105, University of New Brunswick **2007–2008**

- Assisted 20–24 undergraduate students in research foundations in ecology, and marked student's scientific research papers.

Guest Lecturer, Biol. 4221, University of New Brunswick **2007**

- Delivered two lectures on algal diversity and one lecture on physical oceanography to an upper level undergraduate course.

Teaching Assistant, Biol. 4221, University of New Brunswick **2007**

- Set-up labs and marked assignments for upper level undergraduate students in a marine plants course.

Teaching Assistant, Biol. 1006, University of New Brunswick **2005**

- Assisted 20–22 undergraduate students during an introductory biology laboratory, and marked weekly assignments.

Volunteer, Let's Talk Science Partnership Program **2005–2011**

- Developed and presented hands-on science activities for approximately 190 students from grades 3–11.
- Developed, budgeted and produced five hands-on activities for a science kit to complement the New Brunswick grade 8 science curriculum.

PROFESSIONAL EXPERIENCE

Organizer, Symposium on Women Entering Ecology and Evolution Today **2011**

- Chose symposium theme, updated webpage and created online registration page, invited symposium speakers, fundraised \$500 of the \$3000 symposium budget.

Coordinator, National Association of Biology Teachers, OBTA Award **2011**

- Coordinated the Outstanding Biology Teaching Award for k-12 teachers in Eastern Canada. Sent out nomination forms, formed and will chair a search committee to select an award recipient.

Representative, University of New Brunswick Science Faculty **2010–2011**

- Represented part-time instructors at science faculty meetings on issues such as course curricula and faculty budgets.

Coordinator, University of New Brunswick Biology Seminar Series **2007–2009**

- Co-organized 45 seminars by visiting and local research scientists with an annual budget of \$6000. Responsible for selecting and inviting speakers, arranging their travel and accommodation and scheduling meetings with U.N.B. faculty and students.

Charter Member, Local Foodies community outreach group **2009–2011**

- Made and sold reusable produce bags to promote waste reduction while shopping.
- Developed and facilitated three home canning workshops.
- Organized a number of local events including: a community potluck, apple-picking trip and documentary screening and community discussion on urban chicken farming.

Biology Representative, Graduate Student Association **2007–2008**

- Represented biology graduate student on university issues at monthly meetings.

President, U.N.B. Biology Graduate Student Society **2006–2007**

- Presided over monthly Society meetings, planned departmental social events and redesigned the departmental orientation package for new biology graduate students.

PEER-REVIEWED PUBLICATIONS

Clarkston, B.E. and Saunders, G.W. Resolving species diversity in the red algal genus *Callophyllis* (Gigartinales, Florideophyceae) in Canada using an integrated taxonomic method. In preparation.

Clarkston, B.E. and Saunders, G.W. An examination of the red algal genus *Pugetia* (Kallymeniaceae, Gigartinales) with descriptions of *Salishia firma* gen. et comb. nov., *Pugetia cryptica* sp. nov., and *Beringia wynnei* sp. nov. *Phycologia*. In press.

Clarkston, B.E. and Saunders, G.W. 2010. A comparison of two DNA barcode markers for species discrimination in the red algal family Kallymeniaceae (Gigartinales, Florideophyceae), with a description of *Euthora timburtonii* sp.nov. *Botany* 88: 119–131.

ADDITIONAL PUBLICATIONS

Clarkston, B.E. 2004. The impact of irradiance and herbivory by littorine snails (Gastropoda) on frond bleaching of the red algae *Mazzaella parksii* (Rhodophyta). Bamfield Marine Sciences Centre.

Clarkston, B.E. 2003. The effects of current velocities and light regimes on sediment preferences in the Pacific Sand Lance (*Ammodytes hexapterus*). Bamfield Marine Sciences Centre.

CONFERENCE PRESENTATIONS

Clarkston, B.E. and Saunders, G.W. (2011) *Systematics of select members of the Kallymeniaceae (Rhodophyta) in Canada*. (talk) Canadian Society of Ecology and Evolution, Banff Centre, AB. May 12–15, 2011.

Clarkston, B.E. and Saunders, G.W. (2011) *A rose by any other name: taxonomic revisions in Canadian Kallymeniaceae (Rhodophyta)*. (poster) North East Algal Symposium, Woods Hole Oceanographic Institute, Woods Hole, MA, USA. April 15–17, 2011.

Clarkston, B.E. and Saunders, G.W. (2010) *Systematics of select members of the Kallymeniaceae (Gigartinales, Florideophyceae)*. (talk) North East Algal Symposium, University of Rhode Island, Bristol, RI, USA. April 16–18, 2010.

Clarkston, B.E. and Saunders, G.W. (2009) *Comparing COI and UPA as DNA barcode markers for delimiting species of marine red algae*. (talk) Phycological Society of America, University of Hawaii at Manoa, Honolulu, HI, USA. July 17–23, 2009.

Clarkston, B.E. and Saunders, G.W. (2009) *A comparison of DNA barcode markers for species discrimination in marine red algae*. (talk) North East Algal Symposium, University of Massachusetts Amherst, Amherst, MA, USA. April 17–19, 2009. **Student Oral Presentation Award –\$500.**

Clarkston, B.E. and Saunders, G.W. (2008) *The DNA barcode as a tool for species identification in the taxonomically challenging red algal family Kallymeniaceae*. (poster)

Canadian Society of Ecology and Evolution, University of British Columbia, Vancouver, BC. May 11–14, 2008.

Clarkston, B.E. and Saunders, G.W. (2008). *The DNA barcode as a tool for species identification in the taxonomically challenging red algal family Kallymeniaceae.* (poster) Canadian Barcode of Life Network, Royal Ontario Museum, Toronto, ON. April 28–29, 2008.

Clarkston, B.E. and Saunders, G.W. (2008) *Understanding species diversity in the red algal genera Pugetia and Euthora using an integrative taxonomic method.* (talk) North East Algal Symposium, Durham, NH, USA. April 25–27, 2008.

Clarkston, B.E. and Saunders, G.W. (2007) *Utilizing an integrative taxonomic approach of molecular and morphological characters to delimit species in the red algal family Kallymeniaceae (Rhodophyta).* (talk) Phycological Society of America, Warwick, RI, USA. August 5–9 2007.

Clarkston, B.E. and Saunders, G.W. (2007) *Resolving taxonomic confusion within the red algal family Kallymeniaceae (Rhodophyta) in British Columbia.* (poster) Canadian Society of Ecology and Evolution, University of Toronto, ON. May 17–20, 2007.

Clarkston, B.E. and Saunders, G.W. (2007) *Using the DNA barcode as a molecular tool to resolve species limits in the red algal family Kallymeniaceae (Rhodophyta).* (poster) Canadian Barcode of Life Network's Science Symposium, University of Guelph, ON. May 10–11, 2007.

Clarkston, B.E. and Saunders, G.W. (2007) *Utilizing an integrative taxonomic approach of molecular and morphological characters to delimit species in the red algal family Kallymeniaceae (Rhodophyta).* (talk) North East Algal Symposium, Narragansett, RI, USA. April 20–22, 2007.

Clarkston, B.E. and Saunders, G.W. (2007) *Resolving species diversity within the algal genera Callophyllis, Pugetia and Euthora (Kallymeniaceae, Rhodophyta) using molecular tools.* (poster) North East Algal Symposium, Marist College, Poughkeepsie, NY, USA. April 21–23, 2006.

Clarkston, B.E. and Saunders, G.W. (2007) *Resolving species diversity in the red algal genus Callophyllis (Kallymeniaceae) using molecular tools.* (talk) Centre for Environmental and Molecular Algal Research, Mount Allison University, Sackville, NB. March 30–31, 2006.

PROFESSIONAL DEVELOPMENT

Mastering the Syllabus: Creating an Engaging Course Plan workshop 2010

- Learned strategies for effectively communicating course objectives and policies to students and best practices for developing a learner-centered syllabus.

Bridgette Clarkston

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PhD, Biology

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- Fundamentals of Blackboard workshop 2010
- Learned about general features of course design using the Blackboard Learning Management System and how to effectively communicate content to students.
- Blackboard Groups and Assignments workshop 2011
- Learned about using Blackboard to create and manage online assignments for individual and group work and how to create and facilitate online discussion groups.
- Blackboard Assessments workshop 2011
- Learned how to use Blackboard to efficiently assess course progress using online tests, quizzes, surveys and self-tests.

SCHOLARSHIPS AND AWARDS

- 2009:** Northeast Algal Society Robert T. Wilce Award for best oral paper presentation \$500
Phycological Society of America Hoshaw Travel Award \$1000
- 2008:** Nominated for the A.R.A. Taylor Fellowship in Phycology
- 2004:** Bamfield Marine Sciences Centre Student Award \$1000
University of Victoria Student Award \$500
- 2003:** Bamfield Marine Sciences Centre Student Award \$1000
University of Victoria Student Award \$500

TECHNICAL SKILLS AND CERTIFICATIONS

- Workplace Standard First Aid Practical Skills Review 2010 (Current)
- Workplace Standard First Aid, Level C CPR 2008 (Current)
- DAN Oxygen First Aid for SCUBA Diving Injuries 2010 (Current)
- WHMIS safety course 2009
- Class V Driver's License Current
- Advanced SCUBA certification 2005 (Current)
- Pleasure Craft Operator's Card 2003 (Current)
- Open Water SCUBA certification 2002 (Current)
- Research Skills: Specimen collection on a large-scale, DNA extraction, gel electrophoresis, PCR, DNA sequencing, data analysis and management for DNA barcoding and phylogenetics, microscopy, taxonomy.

MEMBERSHIPS

- National Association of Biology Teachers 2010–2011
- Western Society of Naturalists 2010–2011
- Barcode of Life Network 2006–2011
- Centre for Environmental and Molecular Algal Research 2005–2011
- North East Algal Society 2006–2011
- Phycological Society of America 2007, 2009–2011
- Diver's Alert Network 2007–2011

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Canadian Society of Ecology and Evolution

2007–2008, 2011