

## EDUCATION

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

Applying molecular tools for marine macroalgal species discrimination and discovery. Supervisor: Dr. Gary Saunders. Anticipated completion: May 2010.

**University of New Brunswick, Diploma in University Teaching** **2006**

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

**Simon Fraser University, BSc Biology (Ecology and Evolution)** **2004**

Field and lab experience in phylogenetics, desert gall fly speciation, nematode behavior. Courses in advanced cell biology, microbiology, and molecular biology.

## UNIVERSITY TEACHING EXPERIENCE

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**Sessional Lecturer, BIOL1622, University of New Brunswick** **2009**

- Redesigned curriculum and taught first-year non-majors special topics course entitled “Microbes—The Good, the Bad and the Ugly” for 70 students;
- Incorporated different pedagogical techniques, including: case studies, hands-on activities and student response systems.

**Laboratory Advisor, University of New Brunswick** **2006, 2008**

- Trained and advised two undergraduate students during NSERC-funded independent summer research projects.

**Guest Lecturer, BIOL 3242, University of New Brunswick** **2006, 2007**

- Developed and delivered guest lectures on molecular phylogenetics for third-year undergraduate course entitled “Molecular Evolution”.

**Mentor, Student Accessibility Centre, University of New Brunswick** **2006, 2008**

- Tutored student with special needs for first-year biology course.

**Mentor, Aventis Biotech Challenge, University of New Brunswick** **2004, 2006**

- Mentored, trained and supervised four high school students undertaking laboratory-based biotechnology project.

**Teaching Assistant, BIOL1017, University of New Brunswick** **2005**

- Facilitated first-year laboratory for course entitled “Applications in Biology” consisting of broad overview of biology including animal and plant physiology, ecology and evolution;
- Gave introductory talks for each lab, marked assignments for 16 students.

**Teaching Assistant, Marine Phycology, Bamfield Marine Sciences Centre** **2004**

- Assisted with lab preparation, equipment testing and calibration, field work planning and transportation of students by boat;
- Mentored students: assisted with course work, planning and execution of independent projects, provided feedback; marked student essays.

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## **SERVICE AND OTHER TEACHING EXPERIENCE**

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**Alumni Network Committee Member, Let's Talk Science** **2008–current**

- Advised committee on issues regarding alumni and coordinator affairs;
- Provided editorial advice on website design and content.

**Volunteer, Let's Talk Science Partnership Program** **2003–current**

- Developed and delivered hands-on science activities for approximately 1,500 students in grades K–12.

**Student Representative, NSERC-Atlantic Advisory Committee** **2008–2009**

- Presented student issues and perspectives at meetings of the advisory committee.

**Coordinator, Let's Talk Science Partnership Program** **2004–2008**

- Founded the UNB chapter of the Partnership Program in 2004;
- Recruited, trained and managed 149 volunteers;
- Fundraised and managed an operating budget of \$5,000–10,000/year;
- Wrote advertising and communications documents;
- Developed hands-on activities and lesson plans for K–12 science curriculum;
- Facilitated partnerships and effective communication among volunteers, educators and university administration;
- Organized rural outreach trips and volunteer classroom visits reaching 6,052 youth across New Brunswick.

**Science Instructor, St. Mary's First Nation, Fredericton, NB** **2007**

- Developed and delivered curriculum focused on species at risk, particularly Atlantic salmon;
- Developed hands-on, field based activities with emphasis on benthic macroinvertebrate monitoring for stream quality assessment;
- Fostered a positive learning environment in groups of 5–8 at-risk youth aged 15–19.

**Education Consultant, Museum of Nature, Ontario** **2007**

- Designed Ontario curriculum-based lesson plans, PowerPoint presentations, assessments and teacher resources on biodiversity indices, systematics and classification for students in Grades 9–11.

**Student Representative, Graduate Studies Committee, Department of Biology, University of New Brunswick** 2004

- Represented student interests during committee meetings.

**Science Outreach Volunteer, Worlds UNBound, University of New Brunswick** 2004

- Delivered interactive science presentations to Grade 3–4 girls' science clubs.

**Program Delivery Specialist, Mad Science** 2001–2002

- Presented hands-on educational science workshops for youth in elementary after-school clubs and at private functions.

**Day Camp Coordinator, Wilderness Canoe Trip Leader, Sasamat Outdoor Centre** 2001–2002

- Trained and supervised 22 summer camp counselors and 30 volunteers;
- Scheduled and organized logistics and operations of day camp program for approximately 600 campers per summer;
- Ensured safety and well-being while promoting wilderness and teamwork skills for 10 youth aged 13–17 during week-long backcountry canoe trip.

## PROFESSIONAL DEVELOPMENT

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**Engaging Students with Active Learning Strategies Workshop, Centre for Enhanced Teaching and Learning, UNB** 2008

- Learned about organization of large classes into effective working groups at the tutorial level;
- Discussed strategies for conducting in-class debates in large classes.

**Outdoor Educators' Workshop, Mactaquac Provincial Park** 2007, 2008

- Studied, and practiced storytelling, team building, challenge of choice and First Nations traditional teachings in outdoor education settings.

**Aboriginal Workshop, Let's Talk Science National Conference** 2007

- Learned about culture, communication and traditional healing in First Nations peoples.

**Setting the Margins for Successful Learning Workshop, Let's Talk Science National Conference** 2006

- Learned about cultural sensitivity and teaching in settings that include students of varied cultural and socioeconomic backgrounds.

## SCHOLARSHIPS AND AWARDS

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Volunteer of the Year, Let's Talk Science Partnership Program, University of New Brunswick (2009)	
Graduate Student Award of Merit, Senior Women Academic Administrators of Canada (2008)	\$2500
Post-Graduate Scholarship Doctoral Level (PGS-D), Natural Sciences and Engineering Research Council (NSERC) (2007-2009)	\$42,000
Board of Governors Merit Award, University of New Brunswick (2007)	\$4000
Canadian Barcode of Life Science Symposium Student Poster Award (2007)	\$250
National Site Coordinator Award, Let's Talk Science, Honorable Mention (2006)	
Vaughan Graduate Fellowship in Marine Sciences, University of New Brunswick (2006)	\$1500
Dr. A.R.A. Taylor Graduate Fellowship in Botany, University of New Brunswick (2006)	\$3000
Dr. John S. Little International Study Fellowship, University of New Brunswick (2006)	\$1300
Board of Governors Merit Award, University of New Brunswick (2005)	\$2500
Canadian Graduate Scholarship Masters Level (CGS) Natural Sciences and Engineering Research Council (NSERC) (2004-2006)	\$35000
Open Scholarship, Simon Fraser University (2003)	\$1510
Student Award, Bamfield Marine Sciences Centre (2003)	\$600
Undergraduate Student Research Award, Natural Sciences and Engineering Research Council (NSERC) (2002)	\$5625
Post Secondary Scholarship, Port Moody Police Department (1998)	\$500

## RESEARCH PUBLICATIONS

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**Kucera, H.** & G.W. Saunders (2008) *Assigning morphological variants of Fucus (Fucales, Phaeophyceae) in Canadian waters to recognized species using DNA barcoding*. *Botany* 86:1065–1079.

**Kucera, H.** & G.W. Saunders (in preparation) *A floristic survey of Canadian Porphyra and Bangia (Bangiales, Rhodophyta) species based on multiple molecular markers reveals cryptic diversity*. To be submitted to the *Journal of Phycology*

**Kucera, H.** & G.W. Saunders (in preparation) *A pilot-study evaluation of rbcL, UPA, LSU, and IT as molecular markers for the marine green macroalgae*.

## CONFERENCE AND WORKSHOP PRESENTATIONS

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**Kucera, H.** (2009) *Group Work in Large Classes*. (Presenter and discussion panel member) Centre for Enhanced Teaching and Learning, University of New Brunswick. Fredericton, NB. May 19<sup>th</sup>, 2009.

**Kucera, H.** & G.W. Saunders (2008) *DNA barcoding as a tool for species identification in the red algal genus Porphyra in Canada*. (talk) Northeast Algal Symposium, University of New Hampshire, Durham, NH. April 18–20, 2008.

**Kucera, H.** & G.W. Saunders (2007) *DNA barcoding: an efficient tool to distinguish taxonomically difficult algal species of Porphyra (Rhodophyta), Ulva (Chlorophyta), and Fucus (Phaeophyceae)*. (poster) Centre for Environmental and Molecular Algal Research. Fredericton, NB. September 14–15, 2007.

**Kucera, H.** & G.W. Saunders (2007) *DNA Barcoding: a tool to distinguish species in three taxonomically difficult genera of marine macroalgae*. (poster) Canadian Society for Ecology and Evolution. Toronto, ON. May 17–20, 2007.

**Kucera, H.** & G.W. Saunders (2007) *DNA Barcoding: a tool to distinguish species in three taxonomically difficult genera of marine macroalgae*. (poster) Canadian Barcode of Life Network's Science Symposium, Guelph, ON. May 9–12, 2007. **Student Poster Award — \$250.**

**Kucera, H.** & G.W. Saunders (2007) *DNA barcoding: an efficient tool to distinguish taxonomically difficult algal species of Porphyra (Rhodophyta), Ulva (Chlorophyta), and Fucus (Phaeophyceae)*. (poster) Northeast Algal Symposium, Narragansett, RI. April 20–22, 2007.

**Kucera, H.** (2006) *The UNB Let's Talk Science Partnership Program*. (talk) Kaleidoscope: The Latest in Teaching, Learning and Technology. UNB Centre for Enhanced Teaching and Learning. Fredericton, NB. December 6, 2006.

**Kucera, H.** & G.W. Saunders (2006) *Species limits and phenotypic plasticity*. (talk) Evolution 2006: Joint meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists. State University of New York, Stony Brook, NY. June 23–27, 2006.

**Kucera, H.** & G.W. Saunders (2006) *Molecular analysis of species limits of the brown algal genus Fucus in the Northeast Pacific*. (talk) Northeast Algal Symposium, Marist College, Poughkeepsie, NY. April 21–23, 2006.

**Kucera, H.** & G.W. Saunders (2006) *Molecular analysis of species diversity in the brown algal genus Fucus in Canada*. (talk) Centre for Environmental and Molecular Algal Research. Mount Allison University, Sackville, NS. March 30–31, 2006.

**Kucera, H.** & G.W. Saunders (2005) *Resolving species limits for the brown algal genus Fucus in the Northeast Pacific*. (poster) Northeast Algal Symposium, Rockport, ME. April 27–30, 2005.

**Kucera, H.** & A.Ø. Mooers (2004) *Supertrees v.s. Supermatrices: comparing two methods of building phylogenetic trees with large, heterogeneous molecular datasets; a test case with Sophophora (Drosophila)*. (poster) Evolution-Washington, Idaho, British Columbia, Oregon (Evo-WIBO). Port Townsend, WA. April 16–28, 2004

**Kucera, H.** & A.Ø. Mooers (2003) *A tree for Drosophila, total evidence versus consensus trees: a proposal*. (talk) Pacific Ecology Conference. Bamfield, BC. February 14–16, 2003.

## OTHER CONFERENCES ATTENDED

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Let's Talk Science National Conference, London ON	Jun. 5–8, 2008
Senior Women Academic Administrators of Canada, Halifax, NS	May 1–3, 2008
Let's Talk Science Eastern Regional Conference, Kingston, ON	Jan. 18–20, 2008
Let's Talk Science National Conference, London, ON	Jun. 7–10, 2007
Let's Talk Science Eastern Regional Conference, Halifax, NS	Jan. 19–21, 2007
Let's Talk Science National Conference, London, ON	Jun. 8–11, 2006
Let's Talk Science Eastern Regional Conference, Hamilton, ON	Jan. 13–15, 2006
Let's Talk Science National Conference, London, ON	Jun. 9–12, 2005
Let's Talk Science Eastern Regional Conference, Toronto, ON	Jan. 28–30, 2006
Ecology and Evolution Retreat, Brackendale, BC	2002

# Hana Kucera

PhD Candidate, Biology

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## TECHNICAL SKILLS AND CERTIFICATIONS

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Class V Driver's License	current
Workplace Standard First Aid, Level C CPR	2008 (current)
Workplace Hazardous Materials Information System (WHMIS) at UNB	2005
Pleasure Craft Operator's Card	2003
Canoe Instructor	Certified 2000–2003
Research Skills: DNA extraction, PCR, DNA sequencing, data analysis for DNA barcoding and phylogenetics	

## MEMBERSHIPS

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Northeast Algal Society	2004–2008, 2010
Canadian Society of Ecology and Evolution	2007
Society of Systematic Biologist	