#### **Nicolas Blouin**

120 Flagg Rd University of Rhode Island, Department of Biological Sciences Kingston, Rhode Island 02881 (207) 951-3842 nblouin@uri.edu

#### WORK EXPERIENCE

- 2013- Present **Postdoctoral Fellow.** Life-History adaption and co-evolution. University of Rhode Island, Department of Biological Sciences. Kingston, RI. Supervisor: Christopher E. Lane
- 2010- Fall '12 **Postdoctoral Fellow.** Life-History Evolution. University of Rhode Island, Department of Biological Sciences. Kingston, RI.

#### **OTHER WORK EXPERIENCE**

- 2015-Present **Partner in BioDataTraining**. BioDataTraining conducts workshops in Linux, Python coding, and next generation sequencing for organismal biologists. Weeklong workshops in 2015: Raleigh, NC & University of Glasgow, Scotland.
- 2014- Present Marine Ecological and Evolutionary Genomics Course Steering Committee. This is a 11 year-old course set in Brittany, France is designed to improve ecological investigations through genomics training of graduates and post-docs. The course is sponsored by EMBRC-France, the French node of the European Marine Bioresources Center.
- 2013 Present Graduate Faculty. University of Rhode Island, Department of Biological Sciences Kingston, RI.
- 1993-2003 **Freelance Photographer**. Specializing in portraits and location photography. Clients included: Boston Magazine, Fast Company, Inc. Magazine, Men's Health Magazine, National Geographic Adventurer, Sony Music, U.S. News & World Reports, and Vanity Fair.

#### **EDUCATION**

2010	Ph.D. Marine Biology
	University of Maine, School of Marine Sciences. Orono, ME.
	Thesis title: "Asexual reproduction in Porphyra umbilicalis Kützing
	(Rhodophyta) and its development for use in mariculture."
2005	M.Sc. Marine Biology
	University of Maine, School of Marine Sciences. Orono, ME.
	Thesis title: "Asexual reproduction in Porphyra umbilicalis Kützing and
	assessment of its use in integrated multi-trophic aquaculture (IMTA)."
1993	<b>B.F.A. Professional Photographic Illustration</b>
	Rochester Institute of Technology. Rochester, NY.

# **Fellowships**

2012	Sitka Sound Science Center Scientist in Residency Fellowship
	(NSF-funded, \$5,500).
	NSF EPSCoR Academy Travel Award (\$1,000).
2009-2010	Chase Distinguished Research Assistantship Award (\$16,000).
2004-2006	U.S Environmental Protection Agency STAR Fellowship (\$77,000).

# **RESEARCH AND TRAVEL GRANTS**

- 2010 University of Maine, College of Natural Sciences and Forestry Ph.D. Research Excellence Award (\$1,000).
- 2009 NSF Research Coordination Network, Travel Award (\$1,000).
   Phycological Society of America, Hoshaw Award (\$1,000).
   University of Maine Graduate Student Government, Travel Grant (\$637).
   Phycological Society of America, Grant in Aid of Research (\$1,000).
- 2008 Clayton Totman Graduate Award (\$2,000). Cold Spring Harbor, Short Course Research Stipend (\$1,500). University of Maine Graduate School, Award for Short Course.
- 2007 Phycological Society of America, Hoshaw Award (\$850).
- 2005 University of Maine Association of Graduate Students, Grant in Aid of Research (\$600).
- 2004 Nancy Dysart Memorial Fund Travel Award (\$750).

# **PEER-REVIEWED PUBLICATIONS**

**Blouin, N.**, Lane CE. 2015. Red algae provide fertile ground for exploring parasite evolution. *Perspectives in* Phycology doi:10.1127/pip/2015/0027.

Misner I, **Blouin**, **N**, Leonard G, Richards T, Lane CE. 2015. The secreted proteins of *Achlya hypogyna* and *Thraustotheca clavata* identify the ancestral oomycete secretome and reveal gene acquisitions by horizontal gene transfer. *Genome Biology and Evolution* 7: 120-135.

Pombert J-F, **Blouin NA**, Lane C, Boucias D, Keeling PJ. 2014. A lack of parasitic reduction in the obligate parasitic green alga *Helicosporidium*. *PLoS Genetics* 10(5): e1004355. doi:10.1371/journal.pgen.1004355.

**Blouin N**, Brawley SH. An AFLP-based test of clonality in widespread asexual populations of *Porphyra umbilicalis* (Rhodophyta) with a sensitivity analysis for bacterial contamination, 2012. *Marine Biology* 159: 2723-2729.

#### **PEER-REVIEWED PUBLICATIONS (CONTINUED)**

Chan CX, **Blouin N**, Zhuang Y, Zäuner S, Prochnik SE, Lindquist E, Lin S, Benning C, Lohr M, Yarish C, Gantt E, Grossman AR, Lu S, Müller K, Stiller J, Brawley SH, Bhattacharya D. 2012. *Porphyra* (Bangiophyceae) transcriptomes provide insights into red algal development and metabolism. *Journal of Phycology* 48: 1328-1342.

Stiller JW, Perry J, Rymarquis LA, Green PJ, Prochnik S, Lindquist E, Chan CX, Yarish C, Lin S, Zhuang Y, **Blouin N**, Brawley SH. 2012. Major developmental regulators and their expression in two closely related species of *Porphyra* (Rhodophyta). *Journal of Phycology* 48: 883-896.

Price DC, Chan CX, Yoon HS, Yang EC, Qiu H, Weber APM, Schwacke R, Gross J, **Blouin N**, Lane CE, Reyes-Prieto A, Durnford D, Neilson JAD, Lang BF, Burger G, Steiner JM, Löffelhardt W, Meuser JE, Posewitz MC, Ball S, Arias MC, Henrissat B, Coutinho PM, Rensing SA, Symeonidi A, Doddapaneni H, Green BR, Rajah VD, Boore J, Bhattacharya D. 2012. *Cyanophora paradoxa* genome elucidates origin of photosynthesis in algae and plants. *Science* 335: 843-847.

**Blouin N,** Lane CE. 2012. Red algal parasites: Models for a life history evolution that leaves photosynthesis behind again and again. *BioEssays* 34: 226-235.

Chan CX, Zäuner S, Wheeler G, Grossman AR, Prochnik SE, **Blouin N**, Zhuang Y, Benning C, Berg M, Yarish C, Eriksen R, Klein A, Lin S, Levine I, Brawley SH, Bhattacharya D. 2012. Analysis of *Porphyra* membrane transporters demonstrates gene transfer among photosynthetic eukaryotes and numerous sodium-coupled transport systems. *Plant Physiology* 158: 2001-2012.

**Blouin N**, Brodie J, Grossman AC, Xu P. Brawley SH. 2011. *Porphyra*: The organism and the crop. *Trends in Plant Science* 16: 29-37.

**Blouin N**, Fei XG, Peng J, Yarish C, Brawley SH. 2007. Seeding nets with neutral spores of the red alga *Porphyra umbilicalis* (L.) Kützing for use in integrated multi-trophic aquaculture (IMTA) *Aquaculture* 270: 77-91.

**Blouin N**, Calder B, Perkins L, Brawley SH. 2006. Sensory and fatty acid analysis of two Atlantic species of *Porphyra. Journal of Applied Phycology* 18: 79-85.

#### **BOOK CHAPTERS**

Gantt E, Berg GM, Bhatacharya D, **Blouin N**, Brodie J, Chan CX, Collen J, Cunningham FX, Gross J, Grossman AR, Karpowicz S, Kitade Y, Klein AS, Levine IA, Lin S, Lu S, Lynch M, Minchoa SC, Muller K, Neefus CD, deOliviera MC, Rymarquis L, Smith A, Stiller JW, Wu W-K, Yarish C, Zhuang Y, Brawley SH. 2010. *Porphyra*: Complex life histories in a harsh environment. In: J. Seckbach and D. Chapman (eds.) *Red Algae in the Genomic Age*. Volume 13 of Cellular Origins, Life in Extreme Habitats and Astrobiology. Springer, 410p.

## **PUBLICATIONS (NON- PEER REVIEWED)**

Vadas RL, Beal B, **Blouin N**, Brawley SH, Wright W. 2010. Rockweed harvesting: a recipe for sustainability. *Bangor Daily News*.

# TEACHING EXPERIENCE

**Co-Instructor**, *Bioinformatics for geneticists and biologists*, Scottish Centre for Ecology and the Natural Environment Loch Lamond, Scotland (2015).

**Invited lecturer**, University of New Brunswick, Single nucleotide polymorphism (*SNP*) *discovery, from NGS data to validation* (2015).

**Co-Instructor, short course**, Eagle Hill Institute, Steuben, Maine, *Introduction to Maine Seaweeds: Identification, Ecology, & Ethnobotany* (2015, 2016).

**Co-Instructor**, BioDataTraining workshop. *Practical Computing Tools* Raleigh, NC, (weeklong workshop).

Instructor, University of New Brunswick, CEMAR Next Generation Workshop (2015).

**Instructor,** University of Rhode Island Department of Biological Sciences. *Science and Society* (BIO 396, Spring Semester 2012).

**Invited lecturer,** University of Rhode Island, "Glaucophytes and the Red Algae" (*Diversity of Plants* BIO 321, Spring Semester 2012).

**Invited lecturer,** University of Rhode Island, "Transcriptome analysis without a reference genome" (*Practical Tools for Molecular Sequence Analysis* MIC/BPS 450, Fall Semester 2011). **Co-Instructor,** RITES (Rhode Island Technology Enhanced Science Program). *Reproduction & Inheritance*. Course centered around providing educators with information, tools, and activities to run a student-centered genetics module in their science curriculum to meet learning outcome expectations for public school students in Rhode Island (2011).

**Teaching Assistant**, University of Maine, *Algae in the Ecosystem: Phytoplankton and Seaweeds* (SMS 373, SMS 473, 2008).

# **MENTORING (UNDERGRADUATES)**

\* Students who have gone on to pursue higher degrees in science.

2012 Melissa Curran (Providence College, EPSCoR Fellow). Bridging the gap between free-

living taxa and parasites using comparative evolutionary genomics Alyssa Rogers (URI, EPSCoR Fellow). Molecular taxonomy of the Bermuda marine brown macroalgae.

Elizabeth Sullivan (URI, INBRE Fellow). The plastid genome sequence of the red macroalga *Gracilariopsis andersonii* (through 2013).

2011 Thomas Shamp (URI). DNA barcoding of Bermuda red algae (through 2012).
 Brooke Kunkle (URI). Parasite isolation from field collections, algal culturing.
 Tiffany Lewis (URI). Intern, trained in basic molecular techniques including DNA extraction, PCR, & cesium chloride DNA fractionation.

#### MENTORING (UNDERGRADUATES) CONTINUED

- 2010 Wesley Culver (U. Maine). Laboratory study into the affects of nutrients on phycobilin depletion and recovery in cultured red algae.
- 2009 Mike Goede (U. Maine). Laboratory study into the antibiotic resistance of juvenile *Porphyra umbilicalis*.
- 2007 Sarah Tepler\* (U. Maine). Laboratory training in the use of taxonomic keys to identify field specimens of algae as well as DNA extraction and manipulation techniques.
- 2006 Joseph Stachelek\* (U. Maine). Floristic study of the algae of Acadia National Park. Project involved collection, identification, and preservation of algal species native to the park.
- 2005 Matt Houston (U. Maine). Differential algal spore recruitment on calcareous substrates (Shells) based on tidal height, Schoodic Point, Acadia National Park.
  - Missy Wells (U. Maine). Seasonal floristic comparison of *Porphyra umbilicalis* growth And reproduction, Schoodic Point, Acadia National Park.

## **MENTORING (GRADUATES)**

- 2013 Eric Salomaki (PhD expected 2016) Population structure of host/parasite communities. Chris Paight (PhD expected 2017) Marine apicomplexan symbionts and their bacterial Symbionts.
- 2010- Megan O'Brien (MSc 8/12) De novo assembly and annotation of 2 oomycete
- 2012 mitochondrial genomes.

Ian Misner (PhD 8/12). The genome sequences of *Achlya hypogyna* and *Thraustotheca clavata*: insights on oomycete parasite evolution.

Thea Popolizio (PhD expected 2015) Red algal biodiversity study in Bermuda using molecular assisted alpha taxonomy.

#### **OUTREACH & SERVICE**

- 2016-2021 Associate Editor, Cryptogamie.
- 2015-present Schoodic Institute Art/Science Steering Committee. The Schoodic Institute, Acadia National Park Gouldsboro, Maine.
- 2012 **Outreach Instructor**. Mt. Edgecumbe High School. Sitka, AK. "Molecular Naturalism: Using phylogenetics and phenology to understand ecologically important and food-producing seaweeds in Southeast Alaska".

Educational Outreach, Dr Jorge Alvarez High School. Providence, RI.

- 2012 **Textbook Review.** Mechanisms of Life History Evolution: The Genetics and Physiology of Life History Traits and Trade-Offs. Flatt T & Heyland A. 504 pp. Oxford University Press. New York City. For the *Journal of Human Biology*. **Communications Committee**, Phycological Society of America.
- 2011 Nominations Committee, Phycological Society of America (through 2013). Grants Committee, Phycological Society of America (through 2013).

# OUTREACH & SERVICE (CONTINUED)

2011-present	<b>Peer Reviewer</b> (number of reviews in parentheses), Genome Biology & Evolution (1), Molecular Biology & Evolution (1), Molecular Phylogenetics & Evolution, Evolutionary Ecology (1), Journal of Experimental Marine Biology and Ecology (1), Journal of Phycology (4), New Phytologist (1), Phycologia (1), Planta (1),
	Protist (2), American Journal of Human Biology (1), Insects (1), Algal Research (1).
2011-2012	Chair Nominations Committee, Northeast Algal Society.
2010	Expert Panelist, Maine Sea Grant "Rockweed Research Priorities Symposium."
	Outreach Instructor, 4-H "GET WET!" (well water educational program)
	weekend.
2009-2012	Webmaster, National Science Foundation-funded Porphyra Research
	Coordination Network ( <u>www.porphyra.org</u> ).
2009 & 2010	Outreach Instructor, "Introduction to the Marine Environment." University of
	Maine Cooperative Extension 4-H youth development program entitled: "Connecting Kids to Campus."
2008-2014	Webmaster, Northeast Algal Society ( <u>www.e-neas.org</u> ).
2008-2010	Coordinator, NSF-funded Porphyra Research Coordination Network.
2006-2010	Fundraiser for cancer research as part of "The Mad Scientists."
2006	Outreach Instructor, Orono Middle School Science Day. Orono, ME.
2005-2006	Grants Officer, University of Maine Association of Graduate Students.
	Functioned as an NSF-styled program officer for three peer-reviewed competitive grant categories. \$50k in disbursements.
2005	Outreach Instructor, National Parks Service Employee Training. "Intertidal
	ecology in Maine with a special emphasis on community structure."
2005	Maine State Legislature Bus Tour, Travelled with Maine legislators on a bus
	tour of the state to introduce legislators to research the University of Maine
	conducts in coastal waters.
2004-2006	Outreach Instructor. Instructional talks to local school and visiting groups at
	the University of Maine's Center for Cooperative Aquaculture Research.
2003-2006	Publications Committee, Northeastern Algal Society.
2005	Outreach Instructor, National Parks Service Employee Training. "Intertidal
	ecology in Maine with a special emphasis on community structure."
2005	Maine State Legislature Bus Tour, Travelled with Maine legislators on a bus
	tour of the state to introduce legislators to research the University of Maine
	conducts in coastal waters.
2004-2006	Outreach Instructor. Instructional talks to local school and visiting groups at
	the University of Maine's Center for Cooperative Aquaculture Research.
2003-2006	Publications Committee, Northeastern Algal Society.

# **INVITED PRESENTATIONS**

- Blouin, N. Keynote address: The *Porphyra umbilicalis* genome: Studies on the path from genome to grocery store. *Sixth European Phycological Congress*. London, UK.
   Blouin, N. Bioinformatics tools for ecological & evolutionary exploration.
   Department of Biology, University of New Brunswick. New Brunswick, Canada.
- 2014 **Blouin, N.** How do I get to stay here?: Life history adaptations in the algae. Department of Biology, University of Oregon.
- 2013 **Blouin N.** Comparative evolution of parasitic algae and their free-living relatives. School of Biology and Ecology, University of Maine. Orono, ME.
- 2012 Blouin N. Genomic adventures in life history evolution with parasitic algae.
   Joint Genome Institute (U.S. Department of Energy). Walnut Creek, CA.
   Blouin N. Gene expression workshop. NSF *Porphyra* RCN Meeting. Charleston, SC.
- 2011 Blouin N. From Paris to Parasites. Maine Maritime Academy. Castine, Maine.
- Brawley SH, Blouin N, Zhang Y, Yarish C, Lin S, Stiller JW, Chan CX, Bhattacharya D, Grossman AC. *Porphyra*: Crop to Model System. *XXth International Seaweed Symposium*. Ensenada, Mexico.
  Blouin N. Nucleic acid preparation for the DOE Joint Genome Institute's community-sequencing project: 99175 *Porphyra umbilicalis*. NSF *Porphyra* RCN user's meeting. University of Connecticut.
- 2008 **Blouin N**, Brawley SH, Bartlett C. The use of molecular tools to develop *P*. *umbilicalis* for mariculture through asexual reproduction. , Orono, ME.
- 2006 **Blouin N**. Development of native seaweed (*Porphyra umbilicalis*) for integrated polyculture in the Gulf of Maine and other stories. Carnegie Institution of Washington. Stanford, CA.

**Blouin N.** Progress in the Development of native seaweed species *Porphyra* spp. for use in Integrated Multi-trophic Aquaculture (IMTA) and future directions. *5-year National Sea Grant Review Board*. Orono, ME.

**Blouin, N.** Intertidal ecology in mid-coast Maine, with special emphasis on community structure. *National Park Service Training Workshop*. Bar Harbor, ME.

**Blouin N.** Use of Native Seaweeds for Bioremediation of Coastal Waters in the Gulf of Maine. *EPA Graduate Fellowship Conference*. Washington, D.C. (Presentation selected for presentation to U.S. Congressional event on graduate science funded by the EPA).

# SELECTED CONTRIBUTED CONFERENCE PRESENTATIONS

- 2016 **Blouin, N,** Salomaki E, Lane CE. My brother's keeper: Adelphoparasitism in red seaweeds. *Society for Integrative and Comparative Biology annual meeting*. Portland OR.
- 2015 **Blouin, N,** Lane CE. *Gracilariopsis andersonii* genome encodes several clues to maintaining a permissive parasite environment. Sixth European Phycological Congress. London, UK.

#### **SELECTED CONTRIBUTED CONFERENCE PRESENTATIONS (CONTINUED)**

Brawley SH, Redmond S, Quigley CC, York G, Brown NP, Eddy S, **Blouin, N.** Developing Sea Vegetable Aquaculture in Maine. *Japanese Society of Phycology 39<sup>th</sup> Annual* Meeting. Fukuoka, Japan.

- 2014 **Blouin N,** Lane. CE Organellar proteomes are early players in red algal parasite evolution. *Society for Molecular Biology and Evolution Annual Meeting*. San Juan, Puerto Rico.
- 2013 **Blouin N,** Sullivan E, Lane CE. The *Gracilariopsis andersonii* plastid: conservation in red algal plastid evolution. *52<sup>nd</sup> Northeast Algal Symposium*. Mystic, CT
- 2012 Blouin N, Lane CE. Organellar interactions in red algal host/parasite heterokaryon cells.

Protist 2012: Joint meeting of the International Society of Protistologists and The International Society for Evolutionary Protistology. Oslo, Norway.
Blouin N, Lane CE. Red algal parasite contributions to heterokaryon organellar proteomes. Annual Phycological Society of America Meeting. Charleston, SC.

- 2012 **Blouin N,** Lane CE. Red algal host/parasite differences in nuclear contribution to organellar proteomes. *51<sup>th</sup> Northeast Algal Symposium*. Schoodic Environmental Research Center, Acadia National Park, ME.
- 2011 **Blouin N,** Lane CE. Photosynthetic genes: early casualties in an evolving parasite? *Gordon Research conference: Ecological & Evolutionary Genomics.* Biddeford, ME.
- 2011 **Blouin N,** Lane CE. Have red algal parasites lost their nuclear-encoded plastid genes? 50<sup>th</sup> Northeast Algal Symposium. Woods Hole, MA.
- 2009 **Blouin N**, Brawley SH. Culture techniques & reproduction in *Porphyra umbilicalis* Kützing (P.um1, JGI sequencing project). *International Phycological Congress 9*. Tokyo, Japan.

**Blouin N**, Brawley SH. Reproduction in *Porphyra umbilicalis* Kützing: Insights from amplified fragment length polymorphisms (AFLPs). *Joint American Society of Plant Biology/ Phycological Society of America* meeting. Honolulu, HI.

- 2007 **Blouin N**, Brawley SH, Grossman AR. The use of cDNA libraries to investigate asexual reproduction in *Porphyra umbilicalis*. *International Seaweed Symposium*. Kobe, Japan.
- Blouin N, Brawley SH, Yarish C. Seasonality and environmental effects on *Porphyra umbilicalis* from Maine, USA. 45<sup>th</sup> Northeast Algal Symposium. Rockland, ME.
   Blouin N, Calder B, Perkins L, Brawley SH. Taste preference and fatty acid content in *Porphyra* spp. 45<sup>th</sup> Northeast Algal Symposium. Rockland, ME.
- Blouin N, Brawley SH. Use of native seaweeds (*Porphyra* spp.) in integrated polyculture in Cobscook Bay, Maine, USA. *New England Fisheries Health 13*. Eastport, ME.
   Blouin N. Asexual spore production in *Porphyra umbilicalis*. *International Seaweed Symposium*, Bergen, Norway.

**Blouin N**, Brawley SH. Sensory taste test of *Porphyra* spp. *Northeast Aquaculture Conference and Exposition.* 

## **Synergistic Activities**

2013	Short course. "Marine Ecological & Evolutionary Genomics", Station
	Biologique Roscoff, Roscoff, France

- 2011-2013 **Fellow.** NSF-funded fellow in the FIRST IV (Faculty Institutes for Reforming Science Teaching). Competitive program designed to help postdoctoral fellows develop student-centered, inquiry-based undergraduate biology courses. Co-PIs: Diane Ebert-May & Terry Derting.
- 2011 **Professional Development**. COSEE Ocean Systems (Centers for Ocean Science Education Excellence) and NEOSEC (New England Ocean Science Education Collaborative) Workshop: "Strategies for Engaging in Broader Impact Programs".
- 2008- present **Collaborator** NSF Research Coordination Network The *Porphyra* genome: Resource development and integrative research in algal genomics."
- 2008 **Short course.** "Programming for Biology." Cold Spring Harbor Laboratory, Cold Spring Harbor, New York.
- 2006 **Training.** RNA and phage library preparation. Carnegie Institution of Washington, Stanford, California.
- 2004 **Survey of nori mariculture practices in China**. This involved collaboration with the Ocean University of Qingdao to visit nori farms, processing plants, and distribution in eastern China to develop a model for mariculture in the U.S. using native nori species.

## **RESEARCH PROJECTS (NOT PI OR CO-PI)**

- 2013-Present National Science Foundation Award, "Red Algae: A New Model For the Evolution of Parasitism."
- 2008-2014 National Science Foundation Research Coordination Network, "The *Porphyra* genome: Resource development and integrative research in algal genomics."
- 2007- present Department of Energy's Joint Genome Institute Community Sequencing Project, "The genome of *Porphyra umbilicalis* (a marine red alga)."
- 2006-2009 NOAA/Maine Sea Grant, "Integrated mariculture with *Porphyra* ("nori") to achieve sustainable aquaculture and new food products."
- 2005 Maine Technology Institute Seed Grant, "Pilot integrated mariculture with native *Porphyra*."
- 2003-2005 NOAA/Maine Sea Grant, "Enhanced spore production for net-seeding of native New England *Porphyra* in integrated finfish/seaweed aquaculture."

## **OTHER RESEARCH EXPERIENCE**

**Data collection**. Survey of intertidal zone during peak visitor months to determine level of intertidal usage by visitors to ANP as part of Dept. of Interior (USA) grant, "Characterize rocky intertidal shorelines at newly acquired Navy base lands, Acadia National Park." (2007-2008). **Data collection**. Collection of fucoid eggs (brown seaweed) from intertidal zone on Schoodic Point, Acadia National Park in support of NSF grant, "Hydrodynamic regulation of reproduction in fucoid algae: A regional model and consequences for population structure." (2003-2004). **Livestock care**. Feeding and care of Atlantic cod and halibut stocks at the University of Maine's Center for Cooperative Aquaculture Research. Responsibilities included: feeding and systems maintenance (*e.g.* dissolved oxygen measurements, pH and temperature regulation, pump maintenance, and water testing). (2004-2005).

# **PROFESSIONAL MEMBERSHIP**

Maine Seaweed Council, Northeast Algal Society, Phycological Society of America, Society for Integrative and Comparative Biology, Society of Molecular Biology and Evolution.

## ADDITIONAL SKILLS

Extensive knowledge of experimental design, algal culture techniques, and molecular techniques; proficient in various phylogenetic, molecular, statistical analysis, and office/lab software packages; laser capture microdissection (LCM); SCUBA certified; comfortable operating small boats (field work experience); competent with carpentry, plumbing, and electrical work; instrument repair; beekeeper; mushroom forager.