CURRICULUM VITAE

NAME: Susan H. Brawley

BIRTH DATE: October 6, 1951

BIRTH PLACE: Charlotte, North Carolina

EDUCATION:

2012	Strategies for analysis of microbial population structures, Marine Biological Laboratory, Woods Hole, MA.
2012	Molecular evolution course, Marine Biological Laboratory, Woods Hole, MA
1978	Ph.D. (Botany), University of California, Berkeley, CA.
1974	O.T.S. Coral reef ecosystem course, Discovery Bay, Jamaica.
1973	Marine botany course, Marine Biological Laboratory, Woods Hole, MA.
1973	B.A. (Honors) in Biological Sciences, Wellesley College, Wellesley, MA.

POSITIONS:

2006	Visiting Scholar, Duke University (Dept. of Biological Sciences)
1998	Honorary Senior Research Fellow, University of Birmingham (England)
1994-	Professor (tenured), University of Maine
1991-94	Associate Professor, University of Maine
1990-91	Associate Professor (tenured), Vanderbilt University
1983-90	Assistant Professor, Dept. of Biology, Vanderbilt University. (Member, Center for Reproductive Biology Research 1986-91).
1981-83	Research Associate, Physiology Department, University of Connecticut Health Center, Farmington, CT.
1978-81	Fellow (1978) and Research Associate (1980), Smithsonian Institution.
1978	Teaching Assistant for Phycology, University of California.
1975-76	Research Assistant for ecological/taxonomic study of the Florida Middlegrounds (S.U.S.I.O.-B.L.M.).

HONORS, FELLOWSHIPS, GRANTS, AND PROFESSIONAL ACTIVITIES:

2016-17	Organizing Committee, International Phycological Congress (August 12-18, Szczecin, Poland)
2016	PI, RRF Award, "Advancing Sea Vegetable and Invertebrate Aquaculture", $72,635.
2016	National Sea Grant Association "Research to Application Award" to Maine Sea Grant (and Connecticut and New Hampshire Sea Grant) for the region's successful seaweed

	research and outreach portfolio (N. Brown, S. Brawley, D. Morse, S. Redmond named in citation to Maine Sea Grant.
2015-2016	PI, MTI, "Field Trials of Sea Vegetables in Maine", $25,000.
2014-2019	Co-PI, Maine EPSCoR: The nexus of coastal marine social-environmental systems (SEANET), $4,000,000.
2014-2017	PI, NSF Dimensions: The Macroalgal Microbiome in Space and Time ($986,515)
2014	ADVANCE Career Award, UMaine Rising Tide Center
2014-17	PI, Maine Sea Grant (NOAA): Supporting sea vegetable aquaculture in Maine ($149,884)
2012	Elected Fellow, American Association for the Advancement of Science (AAAS)
2011	Elected: Board Member, Council of Scientific Society Presidents
2011	Algal Biomass Platform Reviewer, Dept. of Energy
2010	NSF Climate Change Panel Member
2010-12	PI, NSF: The *Porphyra* model system and the need for transformation ($273,184).
2010-12	VP (2010), President (2011), Past-President (2012), Phycological Society of America
2008	NSF Cell Regulation Panel Member
2008-13	P.I., NSF RCN: The *Porphyra* genome: Resource development and integrative research in algal genomics ($498, 925).
2008-13	Participant (Nick Brown, PI), MTI "Building capacity and excellence in Maine's Aquaculture R & D infrastructure" ($2,619,808).
2007	NSF Biological Oceanography Panel Member
2007-17.	The genome of *Porphyra umbilicalis* (a marine red alga). Joint Genome Institute, Dept. of Energy. (Brawley, P.I.; Approved 6/6/07 by JGI/DOE, ~ $5,000,000 spent by DoE to date on project).
2006-07.	NSF (SGER) grant for "Pictou Harbour (N.S.) as a focus of species invasions into the North American intertidal zone from Europe in the 19th Century: an ecological and molecular analysis". ($46,105).
2006-09	NOAA/ Maine Sea Grant ($170,475). "Integrated mariculture with *Porphyra* ("nori") to achieve sustainable mariculture and new food products."
2006-08	Dept. of Interior (USA) grant, "Characterize rocky intertidal shorelines at newly acquired Navy base lands, Acadia National Park" ($115, 357)
2005-07	National Geographic Society Research Grant for "Interactions of the exotic fucoid alga *Fucus serratus* with native low-zone fucoids in the Canadian Maritimes" ($26,802)
2005	Arranged "Sea Vegetable Celebration Day" in Maine Marketplace (University of Maine) in collaboration with UM Dining Services; UM Dining Services submitted this day and its activities

	(development of native sea vegetable markets) to The National Association of College and University Dining Services competition for a Special Theme Dinner (Loyal E. Horton Award Competition). They won the 2006 Gold Medal (1st place) for medium-sized universities in the U.S.
2005	M.T.I. Seed Grant ($10,000), "Pilot integrated mariculture with native *Porphyra*", supported by an additional Program Development Award of $3,000 from Maine Sea Grant.
2005	Geddes Simpson Memorial Lectureship (University of Maine)
2005	New England Board of Higher Education 2005 Award for Excellence in Project Achievement
2004	Supplement to NSF GK-12 Award ($93,817).
2003-06	N.S.F. Graduate Teaching Fellows in K-12: Renewal ($1,600,000).
2003-05	Sea Grant ($158,519), "Enhanced spore production for net-seeding of native New England *Porphyra* in integrated finfish/seaweed aquaculture".
2002-2007	Steering Committee, CORONA (The North Atlantic Project, NSF)
2001	Career Panel, NSF, Biological Oceanography
2001-2005	N.S.F. Grant ($390,000) Hydrodynamic regulation of reproduction in fucoid algae: A regional model and consequences for population structure.
1999-2002	N.S.F. Graduate Teaching Fellows Award ($1,337,000)
1999	N.S.F. Instrumentation Grant, Co-P.I. ($435,000) Acquisition of a confocal microscope
1998	N.C.B.I. (GenBank) Visitors' Program
1998	Invited symposium speaker, A.A.A.S. annual meeting
1998	Invited symposium speaker, S.I.C.B. annual meeting
1997	George F. Papenfuss Prize. Best poster paper in Ecology, Int. Phycol. Congress, Leiden, The Netherlands
1997-2001	N.S.F. grant ($363,950), "Mechanisms by which marine algae respond to environmental variables affecting reproductive success"
1996-2001	Editor, *Journal of Phycology*
1996,97, 99	Biology Panel, N.S.F. Graduate Research Fellowships.
1996	Supplement to 1993-96 N.S.F. award ($12,006).
1995	National Geographic Society grant ($9,209), for continued studies in Baltic.
1995	Co-P.I., N.S.F. Instrumentation Grant ($24,080). "Acquisition of HPLC system."
1994-96	N.S.F. grant ($37,500), "The reproductive ecology of Baltic Fucus vesiculosus".
1994-95	Member, National Research Council Committee on Biological Diversity in Marine Systems (1994-95).
1994	National Geographic Society grant ($20,391) for continued studies in Baltic.
1993-96	N.S.F. grant ($320,000) for "The reproductive ecology of fucoid

	algae".
1993	National Geographic Society grant ($10,400) for "The reproductive ecology of seaweeds: Solution to a Baltic enigma?"
1988-91	N.S.F. grant ($52,443) for "The fast block to polyspermy."
1988-89	Career Advancement Award, N.S.F. ($59,126). "The fast block to polyspermy in fucoid algae".
1985-86	Grantee of the National Geographic Society (continued studies in Qingdao, China).
1984-88	N.S.F. award ($250,000) for "Cell polarization in fucoid zygotes: Interactions of endogenous electrical current and the cytoskeleton".
1983-84	National Program Grantee, Committee on Scholarly Communication with the Peoples' Republic of China (National Academy of Sciences): 5 months at the Institute of Oceanology (Academia Sinica), Qingdao.
1981-83	Science Scholar of the Bunting Institute, Radcliffe College.
1978-79	Smithsonian Fellow (Postdoctoral), Washington, D.C.
1976-77	Luce Scholar (Henry Luce Foundation, Inc., New York). Visiting Investigator at the Institute of Medical Sciences, University of Tokyo.
1974-75	University of California Regents' Fellowship.
1974	Sigma Xi Grant-in-Aid-of-research for work on Fucus.
1973-74	NSF Graduate Traineeship, University of California.
1973	Sigma Xi (Associate Member, Wellesley College).
1972	Wellesley Washington Intern, summer 1972, at the Council on Environmental Quality, Executive Office of the President, Washington, D.C.

Member of the American Society for Cell Biology, American Society of Microbiology, American Society of Plant Biologists, International Phycological Society (Organizing Committee for International Phycological Congress, Szechin, Poland, August, 2017), Northeast Algal Society (Executive Committee, 1983-85; Co-convenor of 1985 annual meeting; Session Chair, 1988, 2007); President, 1994-96), Phycological Society of America (Education Committee, 1986-88, Chair, 1987-88; Bold Award Selection Committee, 1987; Treasurer, 1989-91; Publication Committee, 1993-95; Vice-President [President-elect], 2010; President, 2011; Past-President, 2012), Japanese Phycological Society.

Editorial Board, Journal of Phycology (1987-89), Associate Editor (1988-92); Editor (in-Chief) (1996-2001).

INVITED REVIEWS OF BOOKS AND SCIENTIFIC MEETINGS:

1980	Phycologia 20, 96-99.
1982	American Scientist 70, 319
1983	Quarterly Reviews of Biology 58, 439-40.
1985	American Scientist 73, 484.
1989	Cell 59, 955-56

INVITED SPEAKER:

Seminars:

University of Massachusetts (Amherst), 1981
Harvard University, 1983
University of Rhode Island, 1983
Institute of Oceanology, Academia Sinica, 1984
Purdue University, 1985
Wake Forest University, 1985, 1998
University of Washington, 1988
University of Rhode Island, 1988
Northeastern University, 1988
Stanford University, 1989
University of Liverpool, 1989
Colorado State University, 1990
University of New Hampshire, 1990
Virginia Polytechnic University, 1993
University of Maine (Chemical Engineering Dept. 1993, 1999; PB&P, 1995; School of Marine Sciences, 1999, 2007)
The Jackson Laboratory, 1995
Long Island University, 1995
The New England Aquarium, 1996
Mount Allison University, 1997
California State University (Northridge), 1999. MARC Endowment Lectureship
Laval University (Canada), 2003.
University of Maine, 2005 (Geddes Simpson Memorial Lecture)
North Carolina State University, 2006.
Montreal, 2006
National University of Ireland, Galway, 2008
University of New Brunswick, Fredericton, 2008
Maine Sea Grant Symposium, Orono, 2008 (Keynote address)
National University of Ireland, Galway, 2009
Changshu Institute of Technology, China, 2009
Shanghai Ocean University, China, 2009
University of Maine (SMS), 2012
University of California (Berkeley), 2013
Carnegie Inst. of Washington (Stanford), 2013
University of Maine (SMS), 2014
Joint Genome Institute (DoE), Walnut Creek, 2015
Rutgers University, New Brunswick (NJ), 2016
Marine Biological Laboratory (Woods Hole), 2017
University of New Hampshire (NH), 2017
University of California (Davis), 2017

Plenary Lectures and Symposia:

Amer. Soc. Cell Biol. annual meeting (1985), "Prospectus of Three Women Cell Biologists (M.G. Farquhar, J. B. Olmsted, S. H. Brawley)", sponsored by Women in Cell Biology.

Botanical Society of America, Experimental Embryogenesis, 1988
A.I..B.S. meeting. "Cell polarity".

XIII International Seaweed Symposium, Recent advances in the cell biology of seaweeds, 1989, Vancouver. "Polyspermy blocks".

NATO Advanced Research Workshop, Mechanism of Fertilization: Plants to Humans, Sorrento, Italy, 1989. "Polyspermy blocks".

The Systematics Association & The Marine Biological Association (U.K.),
Plant-Animal Interactions in The Marine Benthos, Liverpool (U.K.), 1990. "Mesoherbivores".

International Phycological Congress, Algal Propagules and Recruitment, Durham, N.C., 1991. "The biology and ecology of algal gametes and zygotes". (Presented by co-invitee L.E. Johnson).

Society for Developmental Biology, Patterns of Organelle Inheritance, Seattle, WA., 1992. "Inheritance in algae".

N.S.F. and JNICT, Oceanographic processes at the land-sea interface, Faro, Portugal, May, 1993. "Fertilization success in estuarine algae".

Society for Integrative and Comparative Biology, Aquatic organisms, Terrestrial eggs, Boston, January, 1998. "Gamete release in marine algae at low tide".

A.A.A.S., Development in a Volatile Environment" February, 1998, Philadelphia, PA. "Environmental effects on reproductive success in fucoid algae".

Marine & Terrestrial Molecular Bioscience: New Frontiers (Univ. of Delaware), "Environmental Controls of Reproduction in Fucoid Algae", June, 2005.

Convenor and Speaker: *Porphyra*: A Crop of the Sea (One of 5 Major Symposia co-sponsored by ASPB/PSA with 6 speakers; Brawley talk: "The Crop and the Organism"), American Society of Plant Biology/Phycological Society of America Joint Annual Meeting, Honolulu, HI, July 2009.

Plenary Speaker, Chinese Phycological Society Annual Meeting, "*Porphyra*: Crop to Model System in the Genomic Age", Zhuhai, China, November, 2009:

Plenary Speaker, XXth International Seaweed Symposium, "*Porphyra*: Crop to Model System", Ensenada, Mexico, February, 2010.

Plenary Speaker, Irish Sea Farm Conference, "*Porphyra*: Nursery Systems to Pilot Farm Trials", Limerick, Ireland, November, 2014.

Symposium Participant ("Macroalgal Genomics"), European Phycological

Congress, London, UK, August, 2015

Symposium Participant/Co-organizer ("The *Porphyra* Genome", specific talk with Holly Goodson (presentor) on the red algal cytoskeleton), International Phycological Congress, Szczecin, Poland, August 2017

Invited Speaker, JGI Annual User's Meeting, March 14, 2018, San Francisco, CA

PUBLICATIONS:

Brawley, S. H., R. Wetherbee, and R. S. Quatrano. 1976a. Fine-structural studies of the gametes and the embryo of Fucus vesiculosus L. (Phaeophyta). I. Fertilization and pronuclear fusion. J. Cell Sci. 20, 233-254.

_____. 1976b. Fine-structural studies of the gametes and embryo of Fucus vesiculosus L. (Phaeophyta). II. The cytoplasm of the egg and young zygote. J. Cell Sci. 20, 255-271.

Brawley, S. H., R. S. Quatrano, and R. Wetherbee. 1977. Fine-structural studies of the gametes and embryo of Fucus vesiculosus L. (Phaeophyta). III. Cytokinesis and the multicellular embryo. J. Cell Sci. 244, 275-294.

Brawley, S. H. and W.H. Adey.1977. Territorial behavior of three-spot damselfish (Eupomacentrus planifrons) increases reef algal biomass and productivity. Env. Biol. Fish 2, 45-51

Quatrano,R. S., S. H. Brawley, and W. E. Hogsett.1979.The control of the polar deposition of a sulfated polysaccharide in Fucus zygotes. In: Determinants of Spatial Organization (S.Subtelny and I. R. Konigsberg, eds.). New York: Academic Press, pgs. 77-96.

Brawley, S. H. and R. S. Quatrano.1979a. Effects of microtubule inhibitors on pronuclear migration and embryogenesis in Fucus distichus (Phaeophyta). J. Phycol. 15, 266-272.

____. 1979b. Sulfation of fucoidin in Fucus embryos. IV. Autoradiographic investigations of fucoidin sulfation and secretion during differentiation and the effect of cytochalasin treatment. Develop. Biol. 73, 193-205.

Brawley, S. H. and W. H. Adey. 1981. The effect of micrograzers on algal community structure in a coral reef microcosm. Marine Biology 61, 167-177.

____. 1981. Micrograzers may affect macroalgal density. Nature 292, 177.

Brawley, S. H. and R. Wetherbee. 1981. Algal cytology and ultrastructure. In: Biology of the Seaweeds (Botanical Monograph series) (C.Lobban and M.Wynne, eds.). Oxford: Blackwell Scientific Pub. Ltd., pgs. 248-299.

Brawley, S. H. and J. R. Sears. 1982. Septal plugs in a green alga. Amer. J. Bot. 69, 455-463.

Brawley, S. H. and W. H. Adey. 1982. Coralliophila abbreviata: a significant corallivore! Bull.

Mar. Sci. 32, 595-599.

Sears, J. R. and S. H. Brawley. 1982. Smithsoniella gen.nov., a possible evolutionary link between the multicellular and siphonous habits in the Ulvophyceae, Chlorophyta. Amer. J. Bot. 69, 1450-1461.

Allen, N. S. and S. H. Brawley. 1984. Observations of exocytosis in Fucus vesiculosus gametes using video-enhanced light microscopy: a video report. Cell Motility 4, 25-27.

Brawley, S. H., D. F.Wetherell, and K. R.Robinson. 1984. Electrical polarity in embryos of wild carrot precedes cotyledon development. Proc. Natl. Acad. Sci. U.S.A. 81, 6064-6067.

Brawley, S. H., and K. R. Robinson. 1985. Cytochalasin treatment disrupts the endogenous currents associated with cell polarization in embryogenesis: studies of the role of f-actin in embryogenesis. J. Cell Biol. 100, 1173-84.

Brawley, S. H. and E. Bell.1987. Partial activation of Fucus eggs with calcium ionophores and low-sodium seawater. Develop. Biol. 122, 217-226.

Brawley, S. H. and X. G. Fei. 1987. Studies of mesoherbivory in aquaria and in an unbarricaded mariculture farm on the Chinese coast. J. Phycol. 23, 614-623.

Brawley, S. H. 1987. A sodium-dependent, fast block to polyspermy occurs in eggs of fucoid algae. Develop. Biol.124, 390-397. (Featured on journal cover.)

Brawley, S. H. and X. G. Fei. 1988. Ecological studies of G. asiatica and G. lemaneiformis in China. Chinese J. Oceanol. Limnol. 6, 22-34.

Brawley, S. H. and D. M. Roberts. 1989. Calmodulin-binding proteins are developmentally regulated in gametes and embryos of fucoid algae. Develop. Biol. 131, 313-320.

Brawley, S. H. 1990. The polyspermy block in fucoid algae. In: Cell Walls and Surfaces, Reproduction, Photosynthesis, Experimental Phycology I (W. Wiessner, D.G. Robinson, R.C. Starr, Eds.). Berlin: Springer-Verlag, pp. 134-144.

Brawley, S. H. 1990. Polyspermy blocks in fucoid algae and the occurrence of polyspermy in nature. In: Mechanism of Fertilization: Plants to Humans (B.Dale, Ed.). Berlin: Springer-Verlag, pp. 419-431.

Brawley, S. H. 1991. The fast block against polyspermy in fucoid algae is an electrical block. Develop. Biol. 144, 94-106.

Brawley, S. H. and L. E. Johnson. 1991. Survival of fucoid embryos in the intertidal zone depends upon developmental stage and microhabitat. J. Phycol. 27, 179-186.

Brawley, S. H. 1992. Mesoherbivores. In: Plant-Animal Interactions in the Marine Benthos (D. John, S. Hawkins & J. Price, Ed.), Oxford University Press, Oxford, pp 235-263.

Brawley, S. H. 1992. Fertilization in natural populations of the dioecious brown alga Fucus ceranoides L. and the importance of the polyspermy block. Marine Biology. 113, 145-

157.

Brawley, S. H. and L. E. Johnson. 1992. Gametogenesis, gametes and zygotes: an ecological perspective on sexual reproduction in the algae. British Phycological Journal 27, 233-252.

Brawley, S. H. and L. E. Johnson. 1993. Predicting desiccation stress in microscopic organisms: the use of agarose beads to determine evaporation rates within and between intertidal microhabitats. J. Phycol. 29, 528-535.

Davison, I. R., L. E. Johnson, and S. H. Brawley. 1993. Sublethal stress in the intertidal zone: tidal emersion inhibits photosynthesis and retards development in embryos of the brown alga Pelvetia fastigiata. Oecologia 96, 483-492.

Committee on Biodiversity in Marine Systems. 1995. Understanding Marine Biodiversity. National Academy Press, Washington, 128 pp.

Rosemond, A. D. and S. H. Brawley. 1996. Species-specific characteristics explain the persistence of Stigeoclonium tenue (Chlorophyta) in a woodland stream. J. Phycol. 32, 54-63.

Serrão, E. A., L. Kautsky and S. H. Brawley. 1996. Distributional success of the marine seaweed Fucus vesiculosus L. in the brackish Baltic Sea correlates with the osmotic capabilities of Baltic gametes. Oecologia 107, 1-12.

Serrão, E. A., G. Pearson, L. Kautsky and S. H. Brawley. 1996. Successful external fertilization in turbulent environments. Proc. Natl. Acad. Sci. U.S.A. 93, 5286-90.

Pearson, G. and S. H. Brawley. 1996. Reproductive ecology of Fucus distichus (Phaeophyceae): An intertidal alga with successful external fertilization. Mar. Ecol. Prog. Ser. 143, 211-23.

Pearson, G. A., E. Serrão, and S. H. Brawley. 1998. Control of gamete release in fucoid algae: sensing hydrodynamic conditions via carbon acquisition. Ecology 79, 1725-1739.

Li, R., S. H. Brawley and T. Close. 1998. Proteins immunologically related to dehydrins in fucoid algae. J. Phycol. 34, 642-50.

Pearson, G. A. and S. H. Brawley. 1998. A model for signal transduction during gamete release in the fucoid alga *Pelvetia compressa*. Plant Physiol. 118, 305-13.

Johnson, L. E. and S. H. Brawley. 1999. Dispersal and recruitment of a canopy-forming intertidal alga: The relative roles of propagule availability and post-settlement processes. Oecologia 117, 517-26.

Serrão, E., S. H. Brawley, J. Hedman, L. Kautsky and G. Samuelsson. 1999. Reproductive success in Fucus vesiculosus (Phaeophyceae) in the Baltic Sea. J. Phycol. 35, 254-269.

Brawley, S. H., L. E. Johnson, G. A. Pearson, V. Speransky, R. Li. and E. Serrão 1999. Gamete release at low tide in fucoid algae: Maladaptive or advantageous? Amer. Zool. 39, 218-

29.

Serrão, E., L. Alice and S. Brawley. 1999. Evolution of the Fucaceae (Phaeophyceae) inferred from nrDNA-ITS. J. Phycol. 35, 382-394.

Brawley, S.H. 1999. Submission and retrieval of an aligned set of nucleic acid sequences. J. Phycol. 35, 433-37.

Speransky, V. S. Speransky, and S. H. Brawley. 1999. Cryoanalytical studies of freezing damage and recovery in Fucus vesiculosus (Phaeophyceae). J. Phycol. 35, 1264-1275.

Rosemond, A. D., P. J. Mulholland, and S. H. Brawley. 2000. Seasonally shifting limitation of stream periphyton: Response of algal populations and assemblage biomass and productivity to variation in light, nutrients, and herbivores. Can. J. Fish. Aquat. Sci. 57, 66-75.

Speransky, S. and S. H. Brawley. 2000. Gamete release is increased by calm conditions in the coenocytic green alga Bryopsis (Chlorophyta). J. Phycol. 36, 730-739.

Speransky, V., S. H. Brawley, and M. E. McCully. 2001. Ion fluxes and modification of the extracellular matrix during gamete release in fucoid algae. J. Phycol. 37, 555-573.

Berndt, M. L., J. A. Callow, and S. H. Brawley. 2002. Gamete concentrations and timing and success of fertilization in a rocky shore seaweed. Mar. Ecol. Prog. Ser. 226, 273-285.

Engel, C., S. H. Brawley, K. J. Edwards and E. Serrão. 2003. Isolation and cross-species amplification of microsatellite loci from the fucoid seaweeds Fucus vesiculosus, F. serratus and Ascophyllum nodosum (Heterokontophyta, Fucaceae). Molecular Ecology Notes 3,180-182.

Li, R. and S. H. Brawley. 2004. Improved survival to heat stress in intertidal embryos simultaneously exposed to hypersalinity and the effect of parental thermal history. Mar. Biol. 144, 205-213.

Calder, E., M. Bagley, and S. H. Brawley. 2004. National Science Foundation Graduate Teaching Fellows promote food science education in K-12 schools in Maine. J. Food Sci. Ed. 2, 58-60.

Gordon, R. and S. H. Brawley. 2004. Effects of water motion on propagule release from algae with complex life histories. Mar. Biol. 145, 21-29.

Coleman, M. A. and S. H. Brawley. 2005. Are life history characteristics good predictors of genetic diversity and structure? A case study of the interetidal alga *Fucus spiralis* (Heterokontophyta: Phaeophyceae). J. Phycol. 41, 753-762.

Coleman, M. and S. H. Brawley. 2005. Spatial and temporal variability in dispersal and population genetic structure of a rockpool alga. Mar. Ecol. Prog. Ser. 300, 63-77.

Coleman, M. A. and S.H. Brawley. 2005. Variability in temperature and historical patterns in reproduction in the *Fucus distichus* complex (Heterokontophyta; Phaeophyceae):

Implications for speciation and the collection of herbarium specimens. J. Phycol. 41, 1110-1119.

Blouin, N., B. L. Calder, B. Perkins, and S. H. Brawley. 2006. Sensory and fatty acid analyses of two Atlantic species of *Porphyra* (Rhodophyta). J. Appl. Phycol. 18, 79-85.

Blouin, N. B., X. G. Fei, J. Peng, C. Yarish, and S. H. Brawley. 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.

Koester, J., S. H. Brawley, L. Karp-Boss and D. G. Mann. 2007. Sexual reproduction in the marine centric diatom *Ditylum brightwellii* (Bacillariophyta). Eur. J. Phycol. 42, 351-366.

Muhlin, J. F., C. R. Engel, R. Stessel, R. A. Weatherbee and S. H. Brawley. 2008. The influence of coastal topography, circulation patterns and rafting in structuring populations of an intertidal alga. Molec. Ecol. 17, 1198-1210.

Schmidt, P. S., E. A. Serrão, G. A. Pearson, C. Riginos, P. D. Rawson, T. J. Hilbish, S. H. Brawley, G. C. Trussell, E. Carrington, D. S. Wethey, J. W. Grahame, F. Bonhomme, and D. M. Rand. 2008. Ecological genetics in the North Atlantic intertidal: Environmental gradients, replicated clines, and adaptation at specific loci. Ecology 89, S91-S107.

Brawley, S. H., J. Pusey, B. J. W. Cole, L. E. Gott and S. A. Norton. 2008. A revolutionary model to improve science education, teachers, and scientists. Maine Policy Review 17, 68-81.

Brawley, S. H., J. A. Coyer, A. M. H. Blakeslee, G. Hoarau, L. E. Johnson, J. E. Byer, W. T. Stam & J. L. Olsen. 2009. Historical invasions of the intertidal zone of Atlantic North America associated with distinctive patterns of trade and emigration. *Proc. Natl. Acad. Sci., U.S.A.* 106, 8239-8244 (doi: 10.1073/pnas.0812300106).

Muhlin, J. & S. H. Brawley. 2009. Recent versus relic: Discerning the genetic signature of *Fucus vesiculosus* (Heterokontophyta; Phaeophyceae) in the northwestern Atlantic. J. Phycol. 45, 828-837.

Gantt, E. and 18 intermediate authors & S. H. Brawley. 2010. *Porphyra*: Complex life histories in a harsh environment. *P. umbilicalis*, the genomics' project. In: J. Seckbach & D. Chapman (eds), Red Algae in the Genomic Age (v. 13, Cellular Origins, Life in Extreme Habitats and Astrobiology), Springer, pp 129-148.

CABI. 2010. *Littorina littorea* [original text by S. Brawley]. In: Invasive Species Compendium. Wallingford, UK: CABI. http://www.cabi.org/isc [26 published pages].

Blouin, N., Brodie, J., Pu, X., Grossman, A. & S. H. Brawley. 2011. *Porphyra*: A marine crop shaped by stress. *Trends in Plant Science* 16, 29-37.

Johnson, L. A., Brawley, S. H. & W. H. Adey. 2011. Factors explaining the continued spread of *Fucus serratus* in the Canadian Maritimes. *Biological Invasions* DOI: 10.1007/s10530-01109976-z.

Muhlin, J. F., Coleman, M. A., Rees, T. A. V. & S. H. Brawley. 2011. Modeling of reproduction

in the intertidal macrophyte *Fucus vesiculosus* L. and implications for spatial subsidies in the nearshore environment. *Mar. Ecol. Prog. Ser.* 440, 79-94 (DOI: 10.3354/meps09350).

Chan, C. X., N. Blouin, Y.Y. Zhuang, S. Zauner, S. Prochnik, E. Lindquist, S. Lin, C. Benning, M. Lohr, C. Yarish, E. Gantt, A. Grossman, S. Lu, K. Muller, J. Stiller, S. Brawley, D. Bhattacharya. 2012. *Porphyra* (Bangiophyceae) transcriptomes provide insights into red algal development and metabolism. *J. Phycol.* 48, 1328-1342.

Chan, C. X., Berg, M., Zäuner, S., Benning, C., Wheeler, G., Levine, I., Grossman, A. R., Blouin, N. A., Prochnik, S. E., Eriksen, R. L., Klein, A. S., Yarish, C., Brawley, S. H. & D. Bhattacharya. 2012. Analysis of *Porphyra* membrane transporters demonstrates gene transfer among photosynthetic eukaryotes and numerous sodium-coupled transport systems. *Plant Physiology* (DOI:10.1104/pp.112.193896).

Stiller, J. W., Perry, J., Rymarquis, L. A., Green, P. J., Prochnik, S., Lindquist, E., Chan, C. X., Yarish, C., Lin, S., Zhuang, Y., Blouin, N. A. & S. H. Brawley. 2012. Major developmental regulators and their expression in two closely related species of *Porphyra* (Rhodophyta). *J. Phycol.* 48, 883-896.

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

Miranda, L., Hutchison, K., Grossman, A. & S. H. Brawley. 2013. Diversity and abundance of the bacterial community of the red macroalga *Porphyra umbilicalis*: Did bacterial farmers produce macroalgae? *PLoS ONE* 8(3) e58269. doi:10.1371/journal.pone.0058269

Kim, J., Brawley, S. H., Prochnik, S., Schmutz, J., Jenkins, J., Stiller, J., & A. R. Grossman. 2016. Genome analysis of Planctomycetes inhabiting blades of the red alga *Porphyra umbilicalis*. *PLoS ONE* 11(3): e0151883.

Wells, M., Potin, P., Craigie, J., Raven, J., Merchant, S., Helliwell, K., Smith, A., Camire, M. & S. H. Brawley. 2017. Algae as nutritional and functional food sources: Revisiting our understanding. *J. Appl.Phycol.* 29: 949-982. doi:10.1007/s10811-016-0974-5.

Brawley, S. H., Nicolas A. Blouin, Elizabeth Ficko-Blean, Glen L. Wheeler, Martin Lohr, Holly V. Goodson, Jerry W. Jenkins, Crysten E. Blaby-Haas, Katherine E. Helliwell, Cheong Xin Chan, Tara Marriage, Debashish Bhattacharya, Anita S. Klein, Yacine Badis, Juliet Brodie, Yuanyu Cao, Jonas Collén, Simon M. Dittami, Claire M. M. Gachon, Beverley R. Green, Steven J. Karpowicz, Jay W. Kim, Ulrich Johan Kudahl, Senjie Lin, Gurvan Michel, Maria Mittag, Bradley J. S. C. Olson, Jasmyn Pangilinan, Yi Peng, Huan Qiu, Shengqiang Shu, John T. Singer, Alison G. Smith, Brittany N. Sprecher, Volker Wagner, Wenfei Wang, Zhi-Yong Wang, Juying Yan, Charles Yarish, Simone Zäuner-Riek, Yunyun Zhuang, Yong Zou, Erika A. Lindquist, Jane Grimwood, Kerrie Barry, Daniel S. Rokhsar, Jeremy Schmutz, John W. Stiller, Arthur R. Grossman, Simon E. Prochnik 2017. Insights into the red algae and eukaryotic evolution from the genome of *Porphyra umbilicalis* (Bangiophyceae, Rhodophyta). *Proc. Natl. Acad. Sci. U.S.* www.pnas.org/cgi/doi/10.1073/pnas.1703088114 (Includes 106 page SI Appendix).

Royer, C., S. Redmond, C-S Lai & S. H. Brawley (accepted, 5/23/18) *Porphyra umbilicalis* in applied and basic research: Reproductive phenology, development, seed stock culture, and a field trial for aquaculture. *Journal of Applied Phycology*.

Quigley, C.T.C., Morrison, H., Medocino, I. & S. H. Brawley. (accepted, 5/15/18) Common garden experiment tests recovery of the macroalgal microbiome and shows regional specialization in blades of *Porphyra umbilicalis* (Bangiophyceae, Rhodophyta). Journal of Phycology

COURSES TAUGHT

Introduction to Cell Biology (with laboratory)-1983,1984,1985,1986,1987,1989,1999.
Developmental Physiology-1985-1986.
Developmental Biology-1987,1988,1990,1991.
Laboratory in Developmental Physiology-1987,1988,1990.
The Greenhouse Effect (Undergraduate Seminar)-1990.
Guest instructor, Developmental Biology, Stanford University (Hopkins Marine Station), 1990.
Basic Biology (with laboratory)- 1992 (Spring & Fall), 1993 (Spring & Fall)., 1994 (Fall).
The Ecology of Rocky Shores-1993,1994.
Introductory Marine Biology -1994,1996,1997.
Signal Transduction Mechanisms, 1996.
Reader (1997), M. Schoenwaelder's Ph.D., Monash University (Australia).
Advanced Phycology, 1999, 2001, 2003, 2007, 2008, 2009, 2015.
Marine and Freshwater Algae (with lab), 2002, 2004, 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2015, 2017.
Physiology Core (SMS 304), 2008.
School of Marine Sciences' Capstone course, 2003, 2004, 2005, 2008, 2009, 2010, 2012, 2014, 2016.
Readings in Developmental Biology (Graduate level), 2009.
Weekly Seminar with NSF GK-12 Graduate Fellows, fall 2000-fall 2005)
Integrative Marine Science (SMS 203), 2011.
Marine Biology (SMS 500), 2014, 2015, 2016, 2017.
Marine Aquaculture: Microalgae and Macroalgae (SMS 491, Sec 2), 2018.

Director of research for undergraduate theses (18 students during 1986-2017, including Michael Goede, Matthew Schoen, Abigal Adams, Wesley Culver, Joseph Rankin, Bailey Bray [2008-2015]); Alexandra Pergerson (2015-2016); Olivia Barberi (2016-2017); Kyle Capistrant-Fossa (2017, Graduated with Highest Honors).

Major Professor: **M.S**. Daniel Market, 1989; Lynn Berndt, 2000; Richard Gordon, 2001, Julie Koester, 2006; Nicolas Blouin, 2007; David Olson, 2011; Charlotte Royer, 2017; Kyle Capistrant-Fossa, 2018-prsent. **Ph.D.** Amy Rosemond, 1993; Ester Serrão, 1996; Rui Li, 1997; Jessica Muhlin, 2007; Nicolas Blouin, 2010; Charlotte C. T. Quigley, Ph.D. degree (expected, 2018).

Postdoctoral Advisor: Dr. Gareth Pearson (1993-96), Dr. Vladislav Speransky (1997-99), Dr. Melinda Coleman (2002-05), Dr. Lilibeth Miranda (2010-2012), Dr. Remy Luthringer (2016-17).

Committee Member for Graduate Theses (2006-2017 only): Morgane Lamonte (Université Laval, 2007), Lisa Fretwell (M.S., 2007), Sheri Johnson (Univ. Maine Ph.D., 2007); Rachel Gettings (Univ. Maine M. S., May, 2010), Tom Danielson (Univ. Maine Ph.D., May, 2010), Gretchen Grebe (Ph.D Committee).

PRIZES WON BY STUDENTS/POSTDOCTORAL FELLOWS:

Best Graduate Student Poster Award (Amy Rosemond, 1989), Ecological Society of America.

Irene Manton Prize for Best Graduate Student Presentation (Ester Serrão, 1992), British Phycological Society.

Robert Wilce Award for Best Graduate Student Presentation (Rui Li, 1997), Northeast Algal Society.

George F. Papenfuss Poster Award (Best Poster in Ecology) (Ester Serrão, Gareth Pearson, Susan Brawley, 1997), International Phycological Society.

Robert Wilce Award for Best Graduate Student Presentation (Lynn Berndt, 2000), Northeast Algal Society.

Graduate Student Poster Competition, 3rd place (Jessica Muhlin, 2007), American Society of Limnology and Oceanography.

Robert Wilce Award for Best Graduate Student Presentation (Jessica Muhlin, 2007), Northeast Algal Society.

Harold Bold Award for Best Graduate Student Presentation, 2nd place (Jessica Muhlin, 2007), Phycological Society of America.

Best Undergraduate Presentation (Sarah Hall, 2008), Northeast Algal Society.

College of Natural Sciences, Forestry & Agriculture, Graduate Research Excellence Award [highest College honor] (Nicolas A. Blouin, 2010), University of Maine CNSFA.

Pew Marine Fellow of the Pew Charitable Trust, 2017-2020 (Assoc. Prof. Ester Serrão, Univ. of Algarve, Portugal)

Provasoli Prize for Best Paper published in the *Journal of Phycology* in 2016 (Lecturer Julie Koester, University of North Carolina at Wilmington)

UNIVERSITY SERVICE:

Vanderbilt University

Department:	Seminar Committee (1984-86, 1990) Darkroom Committee (1986-88)
University:	Committee on Women's Studies (1986-87) Ad hoc Committee on Nursing Program (1987) Ad hoc Committee on Faculty Manual (1987) Board, Women's Center (1987-88) Luce Scholars Nomination Committee (1986, 1988, 1989, 1990) University Travelling Fellowship Selection Committee (1988, 1990). Advisory Board, Center Reproductive Biology Research (1989-91) Committee on Natural Science (1990)

University of Maine

Department:

Peer Committee (2009-11)
Seminar Committee (1992-93)
Seminar Committee (2007-09, 2016-17)
SMS Space Committee (2007-08)
Program Coordinator, Marine Biology Graduate Program (2010-2012)
Seminar Committee (2015-17)
Undergraduate Curriculum Committee (2014-2015; 2017-18)
Chair, Search Committee, Marine Physiologist (2015)

University:

Committee for Oceanography Chair (1992)
Search Committee, Director of Regional Maine Research Program for the Gulf of Maine (1992-93)
Search Committee, Director of Regional Maine Research Program for the Gulf of Maine (1992-93)
Search Committee for Director, Quaternary Studies Institute (1993)
Distinguished Maine Professor Award Nominating Committee, College of Science (1993, 1994)
Instructional Advisory Committee (1993-1995)
Darling Center Visiting Professorship Search Committee (1993)
Bird and Bird Fund Selection Committee (1995, 1996, 1997)
Member Marine Sciences Task Force (1995)
Center for Marine Studies Fellowship Committee (1995)
Advisory committee: Office of International Programs (1996, 1999)
Search Committee, Biochemist (BMMB)(1997)
Hitchner Building Addition Committee (1999)
Ad Hoc *Campus Map* Committee (2000-2003)
Library Committee (2001-02)
Arboretum Committee (2002-2005)
Chair, Geddes Simpson Lecturer Selection Committee (2011-2012)

State:

Member, Dept. of Conservation Ad-hoc eelgrass, kelp and rockweed committee (1996).
Ad hoc advisor to Maine DEP (DEP initiated cyanobacterial toxin testing, 2007).
Ad hoc advisor to Maine DMR (rockweed harvesting), 2010
Member, Maine DMR Rockweed Fishery Management Project Development Team, 2013-2014.

Region:

Science Advisor, New England Aquarium (1996-98).

Other:

Review team (4 members) for the Dept. of Marine Science/Marine Science Institute at the University of Texas (Austin), January 2010.