

Curriculum Vitae

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Virginia Commonwealth University

Department of Biology

1000 W. Cary Street

Richmond, VA 23284-2012

Education

B.S.	Univ. of AL in B'ham	Biology	1981
Ph.D.	Old Dominion University	Oceanography	1989
Postdoc-	Johns Hopkins University's Chesapeake Bay Institute	Molecular Genetics	1989-90
continued	East Carolina University		1990-91
	Nova University	Penaeid Shrimp Culture	1989
	Woods Hole	Integrated Aquaculture Systems	1990
	Rutgers	Molec. and Mathematical Approaches	1991
	American Fisheries Society	Genetic Resource Management	1992
	VCU	Rapid Bioassessment Protocols	1997
	VCU	Ecology and Identification of Wetlands	1998
	NC State	Quantitative Trait Gene Mapping	1999
	VCU	Web-Based Learning	2001
	VCU	Spanish II	2007
	VCU	Grace E. Harris Leadership Institute	2009-10
	MCV	Statistical Genomics	2010
	VCU	Stormwater Analysis	2010
	NFWF	Stormwater Auditing	2010
	CLCbio	Next-gen sequencing data analysis	2012
	VCU	R Workshops (Basic and Intermediate)	2012-14

Recent Professional Positions and Appointments

Academic:

1991-present	Virginia Commonwealth University , Richmond, VA Interim Chair (2016); Assoc. Chair ('09-'16), Prof. ('08-present); Assoc. Prof. ('98-'08); Asst. Prof. ('92-'98); Research Asst. Prof. ('91-'92)
2013-present	Affiliate, VCU Forensic Science, Richmond, VA
2001-present	Fellow, VCU Center for the Study of Biological Complexity, Richmond, VA
2001-present	Fellow, VCU Center for Environmental Studies, Richmond, VA

Public:

2015-present	Americans in Ukraine Foundation (Founding Board Member)
2011-present	B3EcoHomes, LLC, Richmond, VA (Director)
2007-2010	Patrick Henry School of Science and Arts, Richmond, VA (Founding Board Member and VP Education)
2007-2011	GenEco, LLC, Richmond, VA (Director)
1996-2000	<i>Ad Hoc</i> Panel on the Introduction of Non-Indigenous Oyster Species
1996-2004	Member, U.S.D.O.C. Marine Fisheries Advisory Committee
1990-1994	Commissioner, Atlantic States Marine Fisheries Commission, Washington, DC

Research

Recent Publications (2007-present): (contact author, *student coauthor)

- Ip CLC, Loose M, Tyson JR, deCesare M, **Brown BL**, and 18 others. 2015. MinION analysis and reference consortium: Phase 1 data release and analysis. [version1; referees: 2 approved] F1000Research. 4:1075. doi: <http://dx.doi.org/10.12688/f1000research.7201.1>
- Brown BL**, LePrell RV, Franklin RB, Rivera MC, Cabral FM, Eaves* HL, Gardiakos* V, Keegan KP, King TL. 2015. Metagenomic analysis of planktonic microbial consortia from a non-tidal urban-impacted segment of James River. *Standards in Genomic Sciences*. 10:65. DOI:10.1186/s40793-015-0062-5.
- Fetherman ER, Lepak JM, **Brown BL**, Harris DJ. 2015. Optimizing times of initiation for triploid walleye production using pressure shock treatment. *North American Journal of Fisheries Management*. *North American Journal of Aquaculture* 77:471-477.
- Kester KM, Eldeib* GM, **Brown BL**. 2015. Genetic differentiation of two host-foodplant complex sources of the parasitic wasp, *Cotesia congregata* (Say) [Hymenoptera: Braconidae]. *Annals of the Entomological Society of America: Ecology and Population Biology*. 108:1014-1025. doi: <http://dx.doi.org/10.1093/aesa/sav088>
- King TL, Eackles MS, Aunins AW, Brockmann HJ, Hallerman E, **Brown BL**. 2015. Conservation genetics of the American horseshoe crab (*Limulus polyphemus*): allelic diversity, zones of genetic discontinuity, and regional differentiation. Chapter 4 in: RH Carmichael, ML Botton, PKS Shin and SG Chuengeds. *Changing global perspectives on biology, conservation, and management of horseshoe crabs*. Springer, New York. ISBN 978-3-319-19542-1.
- King TL, Henderson AP, Kynard BE, Kieffer MC, Peterson DL, Aunins AW, **Brown BL**. 2014. A nuclear DNA perspective on delineating evolutionarily significant lineages in polyploids: the case of the endangered shortnose sturgeon (*Acipenser brevirostrum*). *PLoS One*. 9: e102784
- Michalak K, Czesny S, Epifanio J, Snyder R, Schultz E, Velotta J, McCormick S, **Brown B**, Sanotopietro G, Michalak P. 2014. Beta-thymosin gene polymorphism facilitates freshwater invasiveness of alewife (*Alosa pseudoharengus*). *Journal of Experimental Zoology*. In press.
- Aunins* AW, Epifanio JM, **Brown BL**. 2014. Genetic evaluation of American shad restoration success in James River, Virginia. *Marine and Coastal Fisheries*. In press.
- Caplins* SA, Friedline CJ, **Brown BL**, Turbeville JM. 2014. Microsatellites of the self-compatible nemertean *Prosorhochmus americanus* (Hoploneurtea). *Conservation Genetics Resources*. DOI 10.1007/s12686-014-0380-8.
- Kellogg ML, Smyth AR, Luckenback MW, Carmichael RH, **Brown BL**, Cornwell JC, Piehler MF, Owens MS, Dalrymple DJ, Higgins CB. 2014. Use of oysters to mitigate eutrophication in coastal waters. *Estuarine, Coastal and Shelf Science*. 151: 156-168. Invited feature.
- Aunins* AW, **Brown BL**, Balazik* M, Garman G. 2013. Migratory movements of American shad in the James River fall-zone, Virginia. *North American Journal of Fish Management*. 33: 569-575.
- Morrissey* EM, Jenkins* AS, **Brown BL**, RB Franklin. 2013. Resource availability effects on nitrate-reducing microbial communities in a freshwater wetland. *Wetlands*. 33:301-310.
- Higgins* CB, Stephenson K, Tobias C, Piehler MF, Smyth* A, Dame R, **Brown BL**. 2013. Impact of aquacultured oyster biodeposition on sediment N₂ production in Chesapeake Bay. *Marine Ecology Progress Series*. Volume 473: 7-27.
- Ashe* KM and nine co-authors. 2011. Vesicular monoamine transporter-1 (VMAT-1) mRNA and immunoreactive proteins in mouse brain. *Neuroendocrinology Letters* 32: 253-258.
- Franklin, RB, Campbell* AH, Higgins* CB, Barker* MK, **Brown BL**. 2011. Enumerating bacterial cells on bioadhesive coated slides. *Journal of Microbial Methods* 87: 154-160.
- Campbell* AH, Meritt DW, Franklin RB, Boone EL, Nicely* CT, **Brown BL**. 2011. Effects of age and composition of field-produced biofilms on oyster larval setting. *Biofouling* 27: 255-265.
- Higgins* CB, Stephenson K, **Brown BL**. 2011. Nutrient bioassimilation capacity of aquacultured oysters: quantification of an ecosystem service. *Journal of Environmental Quality* 40:271-277.

- Ashe* KM, Chiu W-L, Khalifa AM, Nicolas* AN, **Brown BL**, DeMartino RR, Alexander CP, Waggener CT, Fischer-Stenger K, and Stewart JS. 2011. Vesicular monoamine transporter-1 (VMAT-1) mRNA and immunoreactive proteins in mouse brain. *Neuroendocrinology Letters* 32: 253-258.
- Kester KM, Toothman* MH, **Brown BL**, Street IV WS, Cruz TD. 2010. Recovery of Environmental Human DNA by Insects. *Journal of Forensic Science* 55: 1543-1551.
- Wang HP, Li L, Wallat G, **Brown B**, Yao H, Gao Z, Tiu L, O'Bryant P, Rapp D, MacDonald R. 2009. Evaluation of relative growth performance and genotype by environment effects for cross-bred yellow perch families reared in communal ponds using DNA parentage analyses. *Aquaculture Research*. 2009: 1-11.
- Zhan A, Wang Y, **Brown B**, and Wang HP. 2009. Isolation and Characterization of Novel Microsatellite Markers for Yellow Perch (*Perca flavescens*). *International Journal of Molecular Sciences*. 10: 18–27.
- Shrinivas* K, Kester K, Martin PAW, and **Brown B**. 2008. Molecular markers to determine the ecological fate of *Bacillus thuringiensis* ssp. *Kurstaki*. *Molecular Ecology Resources*. 8: 1145-1148.
- Toothman* MH, Kester KM, Champagne* J, Dawson Cruz T, Street WS, **Brown BL**. 2008. Characterization of human DNA in environmental samples. *Forensic Science International* 178: 7-15.
- Brown BL**, Li L, Givens* CB, Wang HP, Wallat GK, Tiu LG. 2007. Yellow perch strain evaluation I: Genetic variance of six broodstock populations. *Aquaculture* 271: 142-151.
- Li L, Wang HP, Givens CB, Czesny S, **Brown BL**. 2007a. Isolation and characterization of microsatellites in yellow perch (*Perca flavescens*). *Molecular Ecology Notes*. 7: 600-603.

Publications under review:

- Jenkins J, Draugelis-Dale RO, Glennon RP, Kelly AM, **Brown BL**, Morrison JR. An accurate method for assessing triploid induction of fish larvae. *Transactions of the American Fisheries Society*.

Recent Grants Awarded (2007-present):

- USGS-ICES. “Use of a sustained-release chemical delivery device in assessing effects of systemic insecticides.” J Jenkins (PI), B Brown (**Co-PI**). 2015-2016. \$26,615. 2016-2017. Supplement \$9,800.
- National Science Foundation. “Climate change effects on coastal wetlands – Linking microbial community composition and ecosystem responses” RB Franklin PI, BL Brown & S Neubauer (**Co-PIs**). 2014-2017, \$779K.
- Garden Club of Virginia. “Defining the rhizosphere metagenome of the pitcher plant, *Sarracenia flava*, to aid conservation efforts.” N Andresen* (PI) and BL Brown (**host**). 2015-2016. \$4000.
- Rice River Center. “A PCR-based method of detecting *Crassostrea virginica* in the gut of *Stylochus ellipticus*.” A Reinertson* (PI) and BL Brown (**host**). 2014-2015. \$500.
- Rice River Center. “Understanding the role of *Stylochus ellipticus* as a predator of *Crassostrea virginica* in Chesapeake Bay tributaries.” M Barker* (PI) and BL Brown (**host**). 2013-2014. \$500.
- Virginia Oyster Reef Foundation. “Presence in James River of *Stylochus ellipticus*, an underappreciated predator of newly set oyster larvae in Chesapeake Bay.” BL Brown and A Aunins (**Co-PIs**). 2011-2012. \$23K.
- PHSSA, “Directing PHSSA's Stormwater Demonstration Project” **PI**, 2010-2012, \$56K.
- FishAmerica Foundation, “James River American Shad Telemetry Study.” Aunins and Brown Subcontractors, (**Co-PIs**) 2009, \$8K.
- US Department of Defense, “Interrelatedness and inbreeding in the deer population of Ft. Eustis, Virginia.” **PI**, 2008 –2009, \$30K.
- Nat'l Fish & Wildlife Foundation (originating source EPA), “Nutrient Assimilation Credit Trading: Opportunities from Enhanced Oyster Production” BL Brown (**Co-PI**) with Stevenson at VaTech (**PI**), 2006 –2010, \$386K, **PI** 2009-2010 \$76K.

Virginia Dept. Game and Inland Fisheries, “Genetic Evaluation of Restoration Success in American Shad Returning to James River.” **PI** 2006 –2009, \$180K.
Ohio State University (originating source USDA), “Ohio Aquaculture V: Integrated Genetic Improvement of Yellow Perch Broodstock.” **PI** 2006 –2008, \$53K, **PI** 2005 –2007, \$53K, **PI** 2004 –2006, \$53K, **PI** 2003 –2005, \$36K.

Proposals Pending:

NSF-DEB, “SG: The effects of saltwater intrusion on nitrogen cycling in tidal freshwater wetlands.” BL Brown (**Co-PI**) with S Neubauer (**PI**), 2017–2018, \$150K.

Current Collaborations:

Aaron Aunins, USGS
Tracey Dawson Cruz, VCU Forensic Science
John M. Epifanio, Illinois Natural History Survey
Rima Franklin, VCU Biology
Chris Gough, VCU Biology
Colleen Higgins, VCU Biology
Jill Jenkins, USGS
Kevin P. Keegan, University of Chicago
Karen Kester, VCU Biology
Tim King, USGS
Scott Neubauer, VCU Biology
Maria Rivera, VCU Biology
Hanping Wang, Ohio State University
Mick Watson, Roslin Institute, University of Edinburgh

Teaching

Courses taught:

Population Genetics for Forensic Scientists	FRSC 591
Introductory Biology Lab	BIOZ 101
Environmental Science	BIOL 103 / BIOL 114
Biotechniques	BIOZ 300
Genetics Lab (pre-2010) & Genetics Megalab (2015-16)	BIOZ 310
Conservation Biology	BIOL 510
Capstone Seminar (numerous topics)	BIOL 475
Independent Study	BIOL 492, BIOL 692
Preceptorship	BIOL 496
Honors Research & Thesis	BIOL 498
Ecological Genetics	BIOL 550
Conservation Applications	BIOL 610
Conservation Genetics	BIOL 650
Conservation Ecology Research Seminar	BIOL 690
Seminar	BIOL 693
Graduate Thesis	BIOL 698
Introduction to College Life	VCU 101

Yale National Initiative:

2016 Teaching Fellow for Richmond Public Schools and Virginia Commonwealth University

Teaching Publications:

Brown BL. 2012. Environmental Science Laboratory Workbook. 6th edition. Custom published for VCU.
Niculescu VA, Chinnici JP, **Brown BL.** 2000. Attitudes in physics education: an alternative approach to teaching physics to non-science college students. J. Math. Sci. Collab. Explor. 3: 119-129.

Teaching Grants Awarded:

None since 2002.

Students:

*Graduated PhD students – 4 (*Co-major professor)*

Aaron Aunins	Colleen Higgins	Ember Morrissey*
Hugh Eaves*		

*Graduated MS students – 24 (*Co-major professor)*

Marion Barker	Colleen Higgins	Kshama Shrinivas*
William Brooks	Kathleen Jensen*	Doris Smith
Charlene Couch*	Georgia Karns*	James Sparks*
Pamela Davenport	Diana Kercher	Angela Toombs
Michael Day	Devon Kersten*	Mary Toothman*
Dean Franklin	Antoine Nicolas	Kieron Torres*
Chandler Givens	April Piggott	Heather Washburn*
Alaina Hart (Campbell)	Summer Schultz	Vishakha

*Trainees in the EGL – 42 (received *Undergrad. or §Grad. Independent Study credit)*

Elizabeth Anderson*	Ghadeer Bukhari§ Cassandra	Amuche Ejiofor*
Nikki Andresen	Butler	Chris French
Marion Barker	Kia Brown*	Viki Gardiakos
Tiasha Bhowmick*	Diane Carr*	Will Green
	Jonathan Crissman	Alia Hamdan*

Colleen Higgins*
Joseph W. Hudgins
Sumona Kabir*
Kathryn Kirchoff*
Janet LaPrade*
Sung Lee*
Connie Xiaohong Li*
Fatima Mansouri
John Myers
Vivian Nguyen

Antoine Nicolas§
Kia Parkinson*
April Piggott
Catie Porro*
Anna Reinertson*
Hannah Sadek
Becky Schlisserman*
Kristyn Sennett*
Darlene Schiltz*
Summer Schultz

Joseph Siragussa
Brittany Smalley*
Russell Snead*
Lindsay Thompson§
Mary Toothman*
Kieron Torres§
Bradley (Todd) Webb
Bei Xia
Carrie Yeatman

GTAs² and GRAs³ supervised – 33

Aaron Aunins (RA)
Stephen Baker (TA)
Marion Barker (TA)
Constance Bolte (TA)
William Brooks (TA, RA)
Alaina Campbell (TA, RA)
Darianne CLoudy (TA)
Kaelyn Considine (TA)
Charlene Couch (TA, RA)
Mindee Coulter (TA)
Paul Cuomo (TA)

Alyssa Darling (TA)
Matt Ettinger (TA)
Dorothy Field (TA)
Jaime Fuest (TA, RA)
Colleen Higgins (TA, RA)
Zalak Maniar (TA)
Maria Mood (TA)
Crystal Nance (TA)
Antoine Nicolas (TA, RA)
Jane Rebman (TA)
Denise Rodier (TA)

Kimberly Royal (TA)
Summer Schultz (TA, RA)
Corraine Scott (TA)
Hugh Sullivan (TA)
David Taylor (TA, RA)
Lindsay Thompson (TA)
Vishakha (TA)
Annamarie Wijnholds (TA)
Molly Woodson (TA)
Stephanie Yocca (TA)
Carl Zimmerman (TA)

Postdoctoral scholars sponsored – 9

Aaron Aunins
John Epifanio
Georgios Giannopoulos

Katherine Hartop
Colleen Higgins
Li Li

Hong Min
Yasser Saad
Jon Waters

Visiting Scientists who worked in my lab – 2

Hui-Xiu Liang
Manju Das

High school trainees – 6

Katie Bailey
Tracy Hamm

Kevin Hunt
Alex Sledd

Andrea Sydnor
Raj Trivedi

¹ has not yet taken qualifying exam

² graduate teaching assistant

³ grant-funded graduate research assistant

Service

International:

- 2015-present MinION Analysis and Reference Consortium, Member
- 2014-2015 North American Journal of Fisheries Management (Associate Editor)
- 2009-2014 Open Evolution Journal Editorial Advisory Board Member
- 1995-2001 WAS (World Aquaculture Society)
Vice-President of WAS 1999-2000
Treasurer of WAS 1996-1999
Secretary / Treasurer of the US Chapter of WAS 1994-1996
Co-chair, Steering Committee for the 1997 WAS Annual Meeting, Seattle
Editor of the US Chapter Newsletter 1995-2001
- 1997-2000 SPACC: Genetics Workgroup (Small Pelagic Fish and Climate Change) Member
- 1997-2001 CGIAR (FAO Consultative Group on International Agricultural Research) Member

National:

- 2011-2012 Advisor: Woods Hole Oceanographic Institute Project entitled: Assessing the constraints and potential for full scale shellfish culture to remediate estuary environments
- 2002 Conference Co-Chair, Ecosystem-based Approach to Fisheries Mgmt. Annapolis, MD
- 2000 Conference Chair, Aquaculture America 2000, New Orleans, LA
- 1996-2004 MAFAC (Marine Fisheries Advisory Committee) Member appointed by US Sec of Commerce
- 1996-2000 Ad-Hoc Panel on the Introduction of Non-Indigenous Oyster Species Member
- 1990-1994 ASMFC (Atlantic States Marine Fisheries Commission) Commissioner appointed by Governor Wilder
Vice-Chair 1993-1994
Commissioner 1990 -1994

State:

- 2010 Virginia Department of Education. Reviewer for Science SOLs.
- 1992-1994 Virginia Aquaculture Advisory Board (Co-chair)
- 1994-present Virginia Aquaculture Technical Committee

Local:

- 2007-2010 Patrick Henry School of Science and Arts (**VP Education** for Charter School)

Recent University and College Committees:

- 2015-present HHMI USE Inclusive Excellence Proposal Preparation Group, Co-Writer with Scott Gronert, Roz Hobson, and 10 others across the university
- 2013 LOFTI, Biology Representative for Learning Outcomes Initiative
- 2006-2009 H&S Undergraduate Academic Committee, **Chair** 2008-2009
- 2006-2007 H&S General Education Steering Committee
Chair, Science & Technology Subcommittee 2006-2007

Recent Departmental Committees:

2016	Life Sciences Building Assistant Search, Member
2016	Forensic Science, Baneshwar Singh Third-Year Review Committee, Member
2015	Life Sciences, Tarynn Witten Promotion Committee, Chair
2015	Wenheng Zhang Third-Year Review Committee, Chair
2015	Forensic Science, Molecular Biologist Search Committee, Member
2014	Greg Walsh Third-Year Review Committee, Chair
2013	Building Supervisor Search, Chair
2013	Asst. Director of Advising Search Committee, Chair
2012-2013	Space Use <i>Ad Hoc</i> Committee, Member
2012	Leigh McCallister Promotion and Tenure Committee, Chair
2012	Carmen Rodriguez Promotion and Tenure Committee, Member
2012	Director of Advising Search Committee, Chair
2011	Paul Bukaveckas Promotion and Tenure Committee, Chair
2011	James Coleman Promotion and Tenure Committee, Member
2011-present	Life Sciences Building Aquatics Facility, Coordinator
2010	Wan-Ling Chiu Promotion and Tenure Committee, Chair
2010-11	Budget and Facilities, Member
2010-11	Senior Biologist Search Committee, Chair
2008-present	Executive Committee of the Department of Biology, Member

Recent Referee for T&P Considerations outside VCU:

University of Maryland Center for Environmental Studies
University of Otago, New Zealand

Recent Proposal Reviewer for Panels and Agencies:

CSREES
Department of Environmental Quality
MARFIN
National Science Foundation IGERT
North Carolina Sea Grant
NOAA
SBIR
Tobacco Indemnity Fund
US Dept of Agriculture
US Dept of Commerce
VCU UROP

Recent Reviewer for Journals:

Acta Ichthyologica et Piscatoria
Conservation Genetics
Cytometry
Journal of Experimental Marine Biology and Ecology
Marine Ecology Progress Series
North American Journal of Fisheries Management
Transactions of the American Fisheries Society