

Nomination Form (Individual) 2013

Science Award Rachel Carson Award for Scientific Excellence



Nominee's Full Name:	Region:
Dr. Jess W. Jones	Region 5

Note: The full justification (for all 3 criteria) must not exceed **3 pages total**. This is approximately 1,700 words (single spaced) or 11,000 characters (including white space). Excess text WILL NOT be reviewed.

Award Criteria 1: Conservation Application

Dr. Jess Jones, Fish and Wildlife Biologist, is a recognized, national leader in freshwater mussel conservation and restoration. Freshwater mussels are the most imperiled group of animals in the country with a number of species teetering on the brink of extinction. Of the 300 species historically documented in the U.S., over 40 are currently listed as threatened or endangered. Many of these rare species inhabit the upper Tennessee River basin; an area where Jess and his team direct an amazing amount of talent and energy. The task of recovering this group of rare species is daunting because it is complicated by environmental variables such as poor land use practices, extractive industries, climate change, and invasive species. These variables are further compounded by the freshwater mussel lifecycle, one of the most complex in the animal world. Even with these hurdles, Jess and his team are consistently able to show demonstrable, high quality, recovery success both in the field and the laboratory.

Jess fostered partnerships and developed innovative propagation technologies and methodologies that are critical in the continued restoration of multiple federally listed threatened and endangered mussel species. Stationed as a faculty member at the Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg, Virginia, he leads the freshwater mussel restoration work for two multi-million dollar Natural Resource Damage Assessment and Restoration (NRDAR) cases in the upper Tennessee River basin. These cases include multiple partners and long-term (>10 years) projects. To restore the many listed species required by the NRDAR settlements, the Service needed to raise large numbers of mussels in a laboratory setting at a reasonable cost. None of these threatened and endangered species had been propagated in the laboratory prior to these spills. Jess and his team stepped up to determine fish host usage of mussels; improve captive care of fish hosts; enhance feeding ecology of juvenile mussels in captivity; and better understand the dynamics of culture systems for mussels. Jess has been inexhaustible in his efforts to improve the science to meet this critical Service mission. Jess readily shares his innovations. To capture the lessons learned from this intensive research, Jess developed the first laboratory "Protocols for the Captive Care of Host Fishes" for the Virginia Tech aquaculture facility which are now used by other State and Service facilities around the country.

Award Criteria 2: Scientific Contribution

Jess' international collaborations are extraordinary and benefit the Service in multiple ways. He has facilitated academic exchanges among the Service, Virginia Tech, and the Freshwater Fisheries Research Center (FFRC) in China. Jess has elevated the Service's scientific standing in China by conducting seminars with scientists and graduate students in the Department of Fisheries Genetics of FFRC and from the Department of Academic Training and Wuxi Fishery College of Nanjing Agriculture University and from the Chinese Academy of Fishery Science in Beijing to promote conservation and recovery of mussels so these principles can be used throughout China. In return, Jess hosted three visiting Chinese professors from the China Ocean University. These exchanges provided opportunities for the Service to learn how Chinese scientists propagate mussels and how their technology can be applied to improve our own mussel propagation efforts in the U.S. Because of his tireless efforts to promote mussel awareness and conservation, he worked closely with External Affairs to produce a video and blog about his China

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trip and other mussel release events in the U.S. so that the experience could be shared with biologists in the Service, other agencies, and the public. Jess' international collaborations extend beyond China. Currently, he is mentoring a visiting professor from Brazil, Dr. Callil, for one year to learn mussel propagation, culture, and monitoring techniques so she can apply these methods to the conservation and recovery of mussel fauna in southern Brazil.

As a world leader in mussel conservation, Jess is often an invited speaker at local and national meetings and symposiums. This year he was an invited speaker at the Society of American Foresters meeting. The focus of the meeting was threatened, sensitive, and endangered species and Jess shared his expertise on freshwater mussels and important issues related to restoration and land management. Last year he was keynote speaker at the Freshwater Mollusk Conservation Society where he gave an overview of freshwater mussels of the Ohio River Basin.

Jess' contributions facilitated Service and scientific community understanding of the complexities of freshwater mussel biology, ecology, and conservation. Jess conducted population assessments and genetic analysis on many of these species. This research was necessary to broaden our knowledge about freshwater mussel ecology, life history, and demography and to guide Jess' recovery efforts. Jess' scientific research has been widely recognized through numerous peer reviewed publications. A few notable examples are listed below:

Jones, J.W., N. Johnson, P. Grobler, D. Schilling, R.J. Neves, and E.M. Hallerman. Population genetics of the endangered rough pigtoe (*Pleurobema plenum*) (Bivalvia: Unionidae). *Journal of Fish and Wildlife Management* (accepted 2013 to be published 2014).

Jones, J.W., S.A. Ahlstedt, B.J.K. Ostby, B. Beaty, M. Pinder, N. Eckert, R.S. Butler, D. Hubbs, C. Walker, S. Hanlon, J. Schmerfeld, and R.J. Neves. Quantitative assessment of freshwater mussel populations in the Clinch River, Tennessee and Virginia from 2004-2009 and collapse of the fauna at Pendleton Island since 1979. *Journal of the American Water Resources Association* (accepted 2013 to be published 2014).

Tang, M., Y. Jiao, and J.W. Jones. 2014. A hierarchical Bayesian approach for estimating freshwater mussel growth based on tag-recapture data. *Fisheries Research* 149:24-32.

Carey, C.S., J.W. Jones, R.S. Butler, and E.M. Hallerman. 2013. Determining optimum temperature for growth and survival of laboratory-propagated juvenile freshwater mussels. *North American Journal of Aquaculture* 75:532-542.

Jones, J.W. and R.J. Neves. 2012. Influence of life history variation on demographic responses of three freshwater mussel species (Bivalvia: Unionidae) in the Clinch River, U.S.A. *Aquatic Conservation: Marine and Freshwater Ecosystems* 21:57-73.

Award Criteria 3: Extraordinary Results

Jess' mussel conservation work has evolved to including working closely with Virginia Tech to restore and reconfigure the aquaculture center for use to conduct climate change and contaminants research on various stream species, to include mussels and fishes. A stream mesocosm system for growing mussels outdoors and in the greenhouse has been completed (phase I) and an Algal Turf Scubber (phase II) has been constructed and completed to help maintain system water quality. Phase I of the project

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was published in the North American Journal of Aquaculture in October 2013. Jess has broadened his reach to promote mussel conservation and is active in two Landscape Conservation Cooperatives. For the Appalachian Landscape Conservation Cooperative, he has provided technical expertise to help develop aquatic indicator/surrogate species for monitoring aquatic systems. For the North Atlantic Landscape Conservation Cooperative, Jess has been working with others to study interactions between climate change, contaminants, and ecosystems.

Jess' passion and enthusiasm for his work sets him apart from other biologists in the field of mussel conservation and recovery. He inspires others to carry on this work by teaching and mentoring the next generation of mussel conservation biologists. He has taught Applied Conservation Genetics, a graduate level semester course at Virginia Tech, given numerous lectures for conservation and fisheries classes, and participated in course development with the Service's National Conservation Training Center for a new course offering, Mussel Conservation Biology. Jess serves on the committees of five Master of Science projects and one Doctoral project in the Fisheries and Wildlife Sciences Department at Virginia Tech. These students and their projects benefit the Service by improving our knowledge on how to monitor the growth and survival of freshwater mussels and developing a decision-making framework for risk analysis of management strategies to help restore endangered species. In fact, Jess has mentored many students who are considered experts in mussel conservation, some who have gone on to work for the Service around the country.

After one of Virginia's most catastrophic spills destroyed one of the last remaining populations of the federally listed endangered tan riffleshell, Jess' demonstrated persistence, ingenuity, and fostered partnerships with other agencies to release over 26,000 glochidia and juvenile mussels to augment the 100 adult tan riffleshells that remain, increasing the likelihood of species recovery. Furthermore, the laboratory Jess oversees has successfully reared thousands of juvenile oyster mussels, a federally listed endangered mussel, to breeding age (4 years) and has recently documented that these mussels are reproducing in captivity. This is the first ever successful captive breeding on this scale. Jess and his partners have released hundreds of thousands of hatchery-reared mussels to restore one of the nation's most biologically diverse ecosystems. Through the implementation of Jess' novel monitoring methodologies, he has confirmed that survival and growth rates for propagated and released mussels at multiple sites are very similar to natural rates in the sections of the same rivers not affected by the spills. Jess has also observed natural recruitment from released mussels propagated and reared in the lab demonstrating the truly extraordinary success of Jess' restoration efforts.

For the last five years, Jess' passion and dedication in all that he does has provided insights into mussel conservation issues that have helped the Service develop numerous partnerships and achieve extraordinary freshwater mussel conservation results making him deserving of this prestigious award.

This section does not count toward the 3-page limit.

Supplemental Documents Uploaded (check this box if additional documents have been uploaded)

List documents here:

[Jess Jones CV]

Curriculum Vitae

Jess Walter Jones

U.S. Fish and Wildlife Service
106a Cheatham Hall
Department of Fisheries and Wildlife Sciences
Virginia Tech University
Blacksburg, Virginia 24061-0321

Office number: (540)-231-2266
Lab number: (540)-231-7241
Fax: (540)-231-7580
Email address: Jess_Jones@fws.gov

Education:

2004-2009 Ph.D. Fisheries Science, Virginia Polytechnic Institute and State University
2001-2004 M.Sc. Fisheries Science, Virginia Polytechnic Institute and State University
1993-1996 B.Sc. Fisheries Science, Virginia Polytechnic Institute and State University

Employment:

2004-Present Restoration Biologist, U.S. Fish and Wildlife Service, Department of Fish and Wildlife Conservation, Virginia Tech, Blacksburg. The primary duties of this position include:

- Provide project oversight and conduct contracting with university, state and non-governmental cooperators to restore endangered mussel and fish populations in fulfillment of the restoration goals of two multi-million dollar NRDAR case settlements.
- Design and implement complex studies and projects to quantitatively monitor and restore mussel populations in the Clinch and Powell Rivers, including ecotoxicological assessments of damaged and degraded sections of each river.
- Provide technical assistance to federal and state agencies that participate in the restoration and conservation of mussels in the southeastern United States.
- Disseminate project results to agency cooperators, the scientific community and public through written reports, publications, presentations and briefings

1997-2004 Research Specialist (Lab Manager), Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg. The primary duties of this position included the following:

- Supervise the production and culture of endangered juvenile mussels for species recovery at the Freshwater Mollusk Conservation Center (FMCC), Blacksburg, Virginia.
- Research and develop technology for propagation and culture of juvenile mussels, including: (1) evaluation of algal diets, (2) adult and juvenile life history requirements, and (3) design and construction of advanced re-circulating aquaculture systems.
- Prepare reports and publications of project data and disseminate results to agency cooperators and the scientific community.

1996-1997 Biologist's Assistant, Virginia Department of Game and Inland Fisheries, Blacksburg, Virginia.

1993-1996 Fisheries Technician, Virginia Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg.

Professional Service:

- 2012-Present Subject Editor, Conservation Biology and Population Genetics. Journal of Fish and Wildlife Management.
- 2011-Present Editorial Review Board, Conservation. Walkerana: Journal of the Freshwater Mollusk Conservation Society.
- 2009-2010 Provided technical reviews for seven proposals submitted to the U.S. Geological Survey to investigate global climate change on freshwater mussels, snails, crayfishes and fishes
- 2008-2009 Co-organizer and moderator of a symposia entitled: Genetic Diversity of Unexploited Populations of Freshwater Fishes and Mollusks, Annual Meeting of the American Fisheries Society, August 28-Sept. 4, Nashville, TN
- 2008-2010 Co-chair of the Science Committee and member of the Steering Committee for the Clinch-Powell Clean Rivers Initiative, a multi-partner initiative dedicated to the protection and restoration of the Clinch and Powell river watersheds
- 2007-2008 From 2007-2008 helped found the Clinch-Powell Clean Rivers Initiative
- 2006-2007 Co-chair and lead organizer of a national symposium entitled: Conservation Management of the Clinch and Cumberland River Systems: A Collaborative Discussion on Coal Mining and the Aquatic Environment, September 5-7, 2007, Abingdon, Virginia
- 2002-2006 Editor, Natural History and Biodiversity Section, Virginia Academy of Science
- 2003-2007 Committee Chair, Propagation and Restoration Committee, Freshwater Mollusk Conservation Society (FMCS)
- 2005-Present Member of the Mussel Recovery Group for the Virginia Department of Game and Inland Fisheries
- 2005-2007 Committee Member of the Invertebrate Taxa Committee for the Virginia Department of Game and Inland Fisheries
- 2003-2004 Lead organizer of the FMCS Molecular Genetics Workshop, National Conservation Training Center, June 29-30, 2004, Shepherdstown, WV
- 2000-Present Provided manuscript reviews for the following journals:
American Midland Naturalist (2)
Aquatic Conservation: Marine and Freshwater Ecosystems (5)
Conservation Biology (2)
Fisheries Research (2)
Journal of African Aquatic Sciences (1)
Journal of Fish and Wildlife Management (3)
Journal of Heredity (1)
Malacologia (1)
Biological Journal of the Linnean Society (1)
Southeastern Naturalist (1)
Journal of the North American Benthological Society (2)
Walkerana: Journal of the Freshwater Mollusk Conservation Society (2)

Teaching:

- Department of Fish and Wildlife Conservation, Virginia Tech:
- 2012 Instructor, Applied Conservation Genetics (6984)
Guest lecturer, Fisheries Techniques (3114)
- 2010 Instructor, Applied Conservation Genetics (6984)

- 2008 Guest lecturer, Conservation Biology (3114)
 Guest lecturer, Fisheries Techniques (3114)
 Instructor, Applied Conservation Genetics (6984)
- 2007 Guest lecturer, Conservation Biology (3114)
 Guest lecturer, Fisheries Techniques (3114)
- 2006 Instructor, Applied Conservation Genetics (6984)
- 2005 Guest lecturer, Fisheries Techniques (3114)
- 2004 Guest lecturer, Aquaculture (3114)
- 2003 Teaching Assistant, Ichthyology (4514)

Graduate Student Advising at Virginia Tech:

Man Tang. Master of Science 2010-2012. Project Title: Bayesian population dynamics modeling to guide population restoration and recovery of endangered mussels in the Clinch River, Tennessee and Virginia. Committee Co-Chair.

Jennifer Rogers. Master of Science 2011-Present. Project Title: Assessment of Mussel Declines in the Clinch and North Fork Holston Rivers Using Histological Evaluations of Vital Organs. Committee Co-Chair.

Tim Lane. Master of Science 2012-Present. Population viability analysis to guide reintroduction and recovery of two endangered freshwater mussel species (*Bivalvia*: *Unionidae*) in the upper Tennessee River watershed. Committee Chair.

Daniel Schilling. Master of Science. 2012-Present. Assessment of morphological and molecular genetic variation of freshwater mussel species belonging to the genera *Fusconaia*, *Lexingtonia* and *Pleurobema* in the upper Tennessee River drainage. Committee Chair.

Yan Li. 2010-Present. Doctor of Philosophy. Developing population dynamics models for the critically endangered white abalone. Committee Member.

Caitlin Carey. Master of Science 2010-2013 Project Title: Demographic assessment of a reintroduced population of the endangered oyster mussel (*Epioblasma capsaeformis*) in the upper Clinch River, Virginia. Committee Chair.

Rachel Mair. Master of Science. 2011-2013. Determining a suitable diet for rearing endangered Northern riffleshell, *Epioblasma t. rangiana*, in water recirculating aquaculture systems at the White Sulphur Springs National Fish Hatchery, White Sulphur Springs, West Virginia. Committee Member.

Outreach, Non-Technical Reports and Interviews:

- 2012 Interviewed for and helped a reporter from Science with a News Focus article on freshwater conservation in the United States for the November 16 issue. Students and technicians from the Freshwater Mollusk Conservation Center were featured in photographs and interviews for their work in the Clinch and Powell Rivers in Virginia and Tennessee.
- 2009 Interviewed for and helped prepare the article: Clinch River, A Global Hotspot for Biodiversity and Endangered Species — a publication of Healthy Waters, a multi-agency initiative administered by Virginia Department of Conservation and

- Recreation and the Center for Environmental Studies at Virginia Commonwealth University
- 2008 Interviewed by the Bristol Herald Courier for a newspaper article on mussel restoration work in the Clinch River at Cleveland Island, Virginia, September 4; Interviewed by the Coalfields Progress for a newspaper article on status of mussels in the Clinch and Powell rivers, October 2; Interviewed for and helped prepare an article on status of mussels in the Clinch and Powell Rivers, Virginia Tech Research Magazine, August 14
- 2001 Release of endangered juvenile mussels in Tennessee and Virginia. *Ellipsaria* (3) 1:18

Professional Training and Continuing Education:

- 2012 Natural Resource Damage Assessment and Restoration, National Conservation Training Center, December 10-14, Shepherdstown, WV
Multivariate Statistical Analysis Techniques for Ecological Data using R. National Conservation Training Center, June 25-29, Shepherdstown, WV
- 2010 Data Analysis IIIB: Environmental Sampling and Monitoring Using R, National Conservation Training Center, December 13-17, Shepherdstown, WV
- 2009 Data Analysis III: Species Distribution Modeling Using R, National Conservation Training Center, August 17-21, Panama City, FL
Data Analysis II: Ecological Monitoring Using R, National Conservation Training Center, July 27-31, Panama City, FL
- 2008 Environmental compliance training, in compliance with 29, 40 and 49 CFR, May 16, Ft. Lauderdale, FL
- 2007 40 hour Hazardous Waste and Spill Response (40 hr. HAZWOPER), Lafayette, Louisiana, April 9-13
Qualified Individual Spill Response and Leadership Training, Lafayette, Louisiana, April 9-13
- 2006 Ecological Services Basic Training, National Conservation Training Center, April 24-28, Shepherdstown, WV
- 2002 Recent Advances in Conservation Genetics, August 17-30, Front Royal, VA
- 1989 P.A.D.I certified scuba diver (Advanced Open Water)

Awards and Honors:

- 2011 U.S. Fish and Wildlife Service STAR Award for exemplary performance
- 2007 U.S. Fish and Wildlife Service STAR Award for exemplary performance
- 2005 William Preston Thesis Award – The award is for the best original research with the potential to benefit all people. This annual award is the highest academic award for master's degree students given by Virginia Tech University

Publications:

- 2014 **35.** Zipper, C.E., B. Beaty, G.C. Johnson, J.W. Jones, J. Krstolic, B.J.K. Ostby, and W. Wolfe. Freshwater mussel population status and habitat quality in the Clinch River, Virginia-Tennessee, USA: A Featured Collection. *Journal of the American Water Resources Association* (Accepted).
- 34.** Jones, J.W., N. Johnson, Grobler, P., D. Schilling, R.J. Neves and E.M. Hallerman. Population genetics of the endangered rough pigtoe (*Pleurobema plenum*) (Bivalvia: Unionidae). *Journal of Fish and Wildlife Management* (Accepted).

- 33.** Ahlstedt, S.A., J.W. Jones and C. Walker. Current Status of Freshwater Mussel Populations in the Clinch River at the Appalachia Power Company's Clinch River Steam Plant, Russell County, Virginia (Clinch River Miles 268.3-264.2). *Malacological Review* (In Review).
- 32.** A.E. Pinkney, D.A. Cristol, C.T. Driscoll, D.C. Evers, M.J. Hooper, J.W. Jones, R.S. Lazarus, A. Milliken, B.A. Rattner, J. Schmerfeld, D.W. Sparling, T.H. Tear. Interactions between climate change, contaminants, and ecosystems in the North Atlantic Landscape Conservation Cooperative. *Integrated Environmental Assessment and Management* (In preparation).
- 31.** Jones, J.W., S.A. Ahlstedt, B.J.K. Ostby, B. Beaty, M. Pinder, N. Eckert, R.S. Butler, D. Hubbs, C. Walker, S. Hanlon, J. Schmerfeld and R.J. Neves. Quantitative Assessment of Freshwater Mussel Populations in the Clinch River, Tennessee and Virginia from 2004-2009 and Collapse of the Fauna at Pendleton Island Since 1979. *Journal of the American Water Resources Association* (Accepted).
- 30.** Price, J.E., C.E. Zipper, J.W. Jones, C.W. Frank. Water and Sediment Quality in the Clinch River of Virginia and Tennessee, 1964-2010. *Journal of the American Water Resources Association* (Accepted).
- 29.** Tang, M., Y. Jiao, J.W. Jones. Population dynamics and risk assessment to restore populations of endangered freshwater mussels: a case study with the oyster mussel (*Epioblasma capsaeformis*). *Ecological Modeling* (In Review).
- 2013 **28.** Tang, M., Y. Jiao, J.W. Jones. A hierarchical Bayesian approach for estimating freshwater mussel growth based on tag-recapture data. *Fisheries Research* (In press).
- 27.** Huang, Z., J.W. Jones, J. Gu, T. Lane, E.M. Hallerman, X. Song, and R. Wan. Performance of a recirculating aquaculture system utilizing an algal turf scrubber for scaled-up captive rearing of freshwater mussels (Bivalvia: Unionidae). *North American Journal of Aquaculture* 75:543-547.
- 26.** Carey, C.S., J.W. Jones, R.S. Butler and E.M. Hallerman. Determining optimum temperature for growth and survival of laboratory-propagated juvenile freshwater mussels. *North American Journal of Aquaculture* 75:532-542.
- 2012 **25.** Johnson, M.S., W.F. Henley, R.J. Neves, J.W. Jones, R.S. Butler, and S.D. Hanlon. Freshwater Mussels of the Powell River, Virginia and Tennessee: Abundance and Distribution in a Biodiversity Hotspot. *Walkerana: Journal of the Freshwater Mollusk Conservation Society* 15(2):83-98.
- 24.** Pandolfo, T.J., W.G. Cope, G.B. Young, J.W. Jones, D. Hua, and S.F. Lingenfelter. Acute effects of road salts and associated cyanide compounds on the early life stages of the rainbow mussel (*Villosa iris*). *Environmental Toxicology and Chemistry* 31:1801-1806.
- 23.** Jones, J.W., R.J. Neves and E.M. Hallerman. Population performance criteria to evaluate reintroduction and recovery of two endangered mussel species, *Epioblasma*

- brevidens* and *Epioblasma capsaeformis* (Bivalvia: Unionidae). Walkerana: Journal of the Freshwater Mollusk Conservation Society 15(1):27-44.
- 2011 **22.** Jones, J.W. and R.J. Neves. Influence of life history variation on demographic responses of three freshwater mussel species (Bivalvia: Unionidae) in the Clinch River, U.S.A. *Aquatic Conservation: Marine and Freshwater Ecosystems* 21:57-73.
- 21.** Grobler, P., J.W. Jones, N. Johnson, R.J. Neves and E.M. Hallerman. Homogeneity at nuclear microsatellite loci masks mitochondrial haplotype diversity in the fanshell pearlymussel (*Cyprogenia stegaria*). *Journal of Heredity* 102:196-206.
- 2010 **20.** Jones, J.W. and R.J. Neves. Descriptions of a new species and new subspecies of freshwater mussels (Bivalvia: Unionidae), *Epioblasma ahlstedti* and *Epioblasma florentina aureola*, in the Tennessee River drainage, U.S.A. *The Nautilus* 124:77-92.
- 19.** Jones, J.W., R.J. Neves, S.A. Ahlstedt, D. Hubbs, M. Johnson, H. Dan, and B.K. Ostby. Life history and demographics of the endangered birdwing pearlymussel (*Lemiox rimosus*) (Bivalvia: Unionidae). *American Midland Naturalist* 163:335-350.
- 2008 **18.** Silva, P., X. Guan, O. Ho-Shing, J. Jones, J. Xu, D. Hui, D. Notter and E. Smith. Mitochondrial DNA-based analysis of genetic variation and relatedness among Sri Lankan native chickens and Ceylon jungle fowl (*Gallus lafayetti*). *Animal Genetics* 40:1-9.
- 17.** Jiao, Y., R.J. Neves, and J.W. Jones. Estimation of population growth rate of the endangered dromedary pearlymussel (*Dromus dromas*) using a Bayesian averaging approach. *Canadian Journal of Fisheries and Aquatic Sciences* 65:2389-2398.
- 2007 **16.** Neves, R.J., W.F. Henley, H. Dan, and J.W. Jones. Conservation aquaculture: it's application to endangered freshwater mollusks. *Journal of Shellfish Research* 26: 665- 666.
- 15.** Hallerman, E.M., P.J. Grobler, and J.W. Jones. Application of DNA markers for population genetic analysis, pp. 109-136, *In: Zhanjiang (John) Liu (Editor), Aquaculture genome technologies*. Blackwell Publishing, Ames, Iowa.
- 14.** Jones, J.W., and R.J. Neves. A survey to evaluate the status of freshwater mussel populations in the upper North Fork Holston River, Virginia. *Northeastern Naturalist* 14: 471-480.
- 2006 **13.** Valenti, T.W., D.S. Cherry, R.J. Currie, R.J. Neves, J.W. Jones, R. Mair, and C.M. Kane. Chlorine toxicity to early life stages of freshwater mussels (Bivalvia: Unionidae). *Environmental Toxicology and Chemistry* 25:183-189.
- 12.** Jones, J.W., E. M. Hallerman and R.J. Neves. Genetic management guidelines for captive propagation of freshwater mussels (Bivalvia:Unionidae). *Journal of Shellfish Research* 25:527-535.

- 11.** Jones, J.W., R. J. Neves, S.A. Ahlstedt and E. M. Hallerman. A holistic approach to taxonomic evaluation of two closely related endangered freshwater mussel species, the oyster mussel *Epioblasma capsaeformis* and tan riffleshell *Epioblasma florentina walkeri* (Bivalvia:Unionidae). *Journal of Molluscan Studies* 72:267-283.
- 10.** Grobler, P., J.W. Jones, N. Johnson, B. Beaty, R.J. Neves and E.M. Hallerman. Patterns of genetic differentiation in the slabside pearlymussel, *Lexingtonia dolabelloides*, (Lea 1840) in the Tennessee River drainage. *Journal of Molluscan Studies* 72:65-75.
- 2005 **9.** Jones, J.W., R. A. Mair, and R. J. Neves. Factors affecting survival and growth of juvenile freshwater mussels (Bivalvia: Unionidae) cultured in recirculating aquaculture systems. *Journal of North American Aquaculture* 67:210-220.
- 2004 **8.** Jones, J.W., M. Culver, V. David, J. S. Struthers, N. Johnson, R. J. Neves, S. J. O'Brien and E. M. Hallerman. Development and characterization of microsatellite loci in the endangered oyster mussel *Epioblasma capsaeformis* (Bivalvia:Unionidae). *Molecular Ecology Notes* 4:649-652.
- 7.** Jones, J.W., R. J. Neves, S.A. Ahlstedt and R.A. Mair. Life history and propagation of the endangered dromedary pearlymussel (*Dromus dromas*). *Journal of the North American Benthological Society* 23:515-525.
- 2003 **6.** Southwick, R.I., and A.J. Loftus, (Editors), W.F. Henley and J.W. Jones (Co-editors). Investigation and monetary values of fish and freshwater mussel kills. American Fisheries Society, Special Publication 30, Bethesda, Maryland.
- 2002 **5.** Pinder, M.J., E. Wilhem, and J.W. Jones. Status of the freshwater mussels (Bivalvia: Unionidae) in the New River drainage, Virginia. *Walkerana* 13:189-223.
- 4.** Jones, J.W. and R. J. Neves. Life history and propagation of the endangered fanshell pearlymussel (*Cyprogenia stegaria*). *Journal of the North American Benthological Society* 21:76-88.
- 2001 **3.** Hua D., R.J. Neves, and J. Jones. Age determination of freshwater mussels using the method of thin section. *Journal of Fisheries of China*. 25: 413-418.
- 2.** Jones, J.W., R.J. Neves, M. A. Patterson, C. R. Good, and A. DiVittorio. A status survey of freshwater mussel populations in the upper Clinch River, Virginia. *Banisteria*. 17:17-33.
- 1.** Pinder, M.J. and J.W. Jones. Species composition and biotic condition of the fish community of Indian Creek, Tazewell County, Virginia. *Banisteria*. 16:2-18.

Technical Reports:

- 2013 Hua, D., T.W. Lane and J.W. Jones. Propagation, Culture and Monitoring of Mussels for Population Restoration in the upper Clinch River, Virginia. Final Report. U.S. Fish and Wildlife Service, Gloucester, Virginia. 23 pp.

- Lane, T.W., D. Hua and J.W. Jones. Reintroduction of Endangered Freshwater Mussel Populations to High Priority Geographic Areas in the Upper Tennessee River System. Final Report. U.S. Fish and Wildlife Service, Asheville, North Carolina. 18 pp.
- 2012 Johnson, M.S., J.W. Jones and E. Wolf. Life History of the Atlantic Pigtoe (*Fusconaia masoni*): Assessment of Fish Hosts, Age and Growth, and Habitat Usage. Final Report. Virginia Army National Guard and Virginia Department of Military Affairs Facilities Management - Environmental Division, Blackstone, Virginia. 32 pp.
- C.S. Carey, J.W. Jones and E.M. Hallerman. Determining optimal rearing temperatures to maximize survival and growth of laboratory-propagated juveniles of two federally endangered species, Cumberlandian combshell (*Epioblasma brevidens*) and oyster mussel (*Epioblasma capsaeformis*), and one non-listed species, wavyrayed lampmussel (*Lampsilis fasciola*). Final Report. U.S. Fish and Wildlife Service, Asheville, North Carolina. 46 pp.
- Lane, T., D. Hua and J.W. Jones. Propagation, Culture and Monitoring of Mussels for Population Restoration in the upper Clinch River, Virginia. Final Report. U.S. Fish and Wildlife Service, Gloucester, Virginia. 23 pp.
- 2011 Price, J.E., C.E. Zipper, J.W. Jones, C.W. Frank. 2011. Water and Sediment Quality in the Clinch and Powell Rivers of Virginia and Tennessee, 1964-2010. Report submitted to Virginia Department of Mines, Mineral and Energy, U.S. Office of Surface Mining, and U.S. Environmental Protection Agency, Regions III and IV. 146 pp.
- Hua, D., J. Rogers, J.W. Jones and R.J. Neves. Propagation, Culture, and Monitoring of Endangered Mussels for Population Restoration in the Clinch and Powell Rivers. Final Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 44 pp.
- Hua, D., J.W. Jones and R.J. Neves. Propagation, Release and Monitoring of Federally Endangered Mussel Species in the Powell River, Tennessee. Final Report. U.S. Fish and Wildlife Service, Asheville, North Carolina. 18 pp.
- 2008 Jones, J.W., and R.J. Neves. Development of Translocation Protocols for Endangered Freshwater Mussels – Part II: Population Modeling of Two Endangered Freshwater Mussel Species in the Clinch River, U.S.A.: Quantitative Criteria to Evaluate Harvest and Reintroduction of *Epioblasma brevidens* and *Epioblasma capsaeformis*. Final Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 60 pp.
- Jones, J.W., and R.J. Neves. Development of Translocation Protocols for Endangered Freshwater Mussels – Part I: Age, Growth, and Population Demography of Three Freshwater Mussel Species (Bivalvia: Unionidae) in the Clinch River, TN, U.S.A. Final Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 64 pp.

- 2006 Jones, J.W., N. Johnson, P. Grobler, R.J. Neves and E.M. Hallerman. Conservation Genetics of the Endangered Rough Pigtoe (*Pleurobema plenum*) (Bivalvia: Unionidae). Final Report. U.S. Fish and Wildlife Service, Frankfort, Kentucky. 30 pp.
- Grobler, P., J.W. Jones, N. Johnson, R.J. Neves and E.M. Hallerman. Population genetic structure of the endangered fanshell pearlymussel (*Cyprogenia stegaria* Rafinesque, 1820) in the Ohio and Tennessee River drainages. Final Report. U.S. Fish and Wildlife Service, Frankfort, Kentucky. 13 pp.
- Johnson, N., J.W. Jones, P. Grobler, R.J. Neves and E.M. Hallerman. Population genetic analysis of the endangered Cumberland combshell (*Epioblasma brevidens*): implications for species recovery. Final Report. U.S. Fish and Wildlife Service, Frankfort, Kentucky. 24 pp.
- Sproules, J., N. Johnson, P. Grobler, J.W. Jones, R.J. Neves and E.M. Hallerman. Genetic Analysis of Selected Populations of the Rabbitsfoot Pearlymussel (*Quadrula cylindrica cylindrica*) (Bivalvia: Unionidae). Final Report. U.S. Fish and Wildlife Service, Frankfort, Kentucky. 16 pp.
- 2005 Jones, J.W., and R.J. Neves. A survey to evaluate the status of freshwater mussel populations in the upper North Fork Holston River, Virginia. Final Report. Virginia Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg, Virginia. 45 pp.
- Jones, J.W. and R. J. Neves. Survey of freshwater mussel populations in Indian Creek, Tazewell County, Virginia. Final Report. U.S. Fish and Wildlife Service, Abingdon, Virginia. 36 pp.
- Cherry, D.S., T.W. Valenti, R.J. Currie, R.J. Neves, J.W. Jones, R.A. Mair, and C. Kane. Chlorine toxicity to early life stages of freshwater mussels. Final Report. U.S. Fish and Wildlife Service, Gloucester, Virginia. 72 pp.
- 2004 Jones, J.W., R. J. Neves, S.A. Ahlstedt and E. M. Hallerman. Taxonomic Evaluation of Two Closely Related Endangered Freshwater Mussel Species, the Oyster Mussel (*Epioblasma capsaeformis*) and Tan Riffleshell (*Epioblasma florentina walkeri*) (Bivalvia:Unionidae). Final Report. U.S. Fish and Wildlife Service, Asheville, North Carolina. 91 pp.
- Grobler, P., J.W. Jones, N. Johnson, B. Beaty, R.J. Neves and E.M. Hallerman. Patterns of genetic differentiation among four populations of slabside pearlymussel, *Lexingtonia dolabelloides*, in the Tennessee River drainage. Final Report. The Nature Conservancy, Abingdon, Virginia. 36 pp.
- 2003 Mair, R.A., J.W. Jones, and R. J. Neves. Propagation and culture of endangered juvenile mussels from the Big South Fork National River and Recreation Area. Annual Report. National Park Service, Oneida, Tennessee. 30 pp.

- Mair, R.A., J.W. Jones and R.J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 25 pp.
- 2002 Jones, J.W., R.A. Mair and R. J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 80 pp.
- 2001 Henley, W.F., J.W. Jones, J.L. Boyles, J.M. McLeod and R.J. Neves. An evaluation of the Cedar Bluff spill site for the recovery of freshwater mussels. Final Report. U.S. Fish and Wildlife Service, Gloucester, Virginia. 18 pp.
- Jones, J.W. and R. J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 90 pp.
- 2000 Jones, J.W. and R. J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 67 pp.
- 1999 Jones, J.W. and R. J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 63 pp.
- Jones, J.W., R.J. Neves, M. A. Patterson, C. R. Good, and A. DiVittorio. A survey to evaluate the status of freshwater mussel populations in the upper Clinch River, Virginia. Final Report. U.S. Fish and Wildlife Service, Abingdon, Virginia. pp. 45
- 1998 Jones, J.W. and R. J. Neves. Life history and artificial culture of endangered freshwater mussels. Annual Report. Tennessee Wildlife Resources Agency, Nashville, Tennessee. 38 pp.

Presentations:

- 2013 J. Jones. Life history and conservation of freshwater mussels. Invited key note presentation for the West Virginia Society of American Foresters' Annual Symposium, August 27-29, Summersville, West Virginia.
- Tang, M., Y. Jiao, J. Jones. A Hierarchical Bayesian Approach for Estimating Freshwater Mussel Growth Based On Tag-Recapture Data. American Fisheries Society, September 8-13, Little Rock, Arkansas.
- D. Hua, J.W. Jones, T.W. Lane, R.J. Neves and Y. Jiao. Propagation, release and monitoring of mussels to restore populations in the Clinch and Powell rivers, Tennessee and Virginia. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.

- D. Hua, Y. Jiao, R.J. Neves and J.W. Jones. Quantitative analyses of survival and growth of the federally endangered freshwater mussel Cumberlandian combshell (*Epioblasma brevidens*) in the Powell River, Tennessee. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- D. Schilling, J.W. Jones, A. Phipps, M.J. Pinder and E.M. Hallerman. Assessment of morphological and molecular genetic variation of freshwater mussels species belonging to the genera *Fusconaia*, *Pleuronaia*, and *Pleurobema* in the Tennessee River drainage. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- T.W. Lane, J.W. Jones, and B.J.K. Ostby. Longterm monitoring and demographic assessment of mussel populations in the upper Clinch River, Tennessee. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- C.S. Carey, J.W. Jones, R. Butler, E.M. Hallerman and M.J. Kelly. Demographic assessment of a reintroduced population of the endangered oyster mussel (*Epioblasma capsaeformis*) in the upper Clinch River, Virginia. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- J. Rogers, W. Henley, A. Graumann, J.W. Jones and W. Gregory Cope. Assessing sub-lethal effects of chloride on adult *Villosa iris* using histological evaluations of vital organs. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- C.M. Bergeron, M. Johnson, A. White, J. Rogers, P.R. Lazaro, J.W. Jones, B. Beaty, B. Evans, S. Alexander, W. Gregory Cope. Recent precipitous declines of freshwater mussels in the Clinch River: Influence of sediment and water quality stressors. 8th Biennial Symposium of the Freshwater Mollusk Conservation Society, March 11-15, Guntersville, Alabama.
- 2012 A.E. Pinkney, D.A. Cristol, C.T. Driscoll, D.C. Evers, M.J. Hooper, J.W. Jones, R.S. Lazarus, A. Milliken, B.A. Rattner, J. Schmerfeld, D.W. Sparling, T.H. Tear. Interactions between climate change, contaminants, and ecosystems in the North Atlantic Landscape Conservation Cooperative. Society of Environmental Toxicology and Chemistry, Long Beach, California, November 9.
- Jones, J.W. Life History and Conservation of Freshwater Mussels in Virginia. Invited Presentation, Virginia Association of Wetland Professionals, Richmond, Virginia, May 11.
- 2011 Jones, J.W., E.M. Hallerman and R.J. Neves. Population Genetics and Management of Freshwater Mussels in the United States. Invited Presentation, Freshwater Fisheries Research Center, Wuxi, China, July 18.
- Jones, J.W. Freshwater Mussels of the Ohio River Basin: Historical Ecology, Current Conditions and Management in a Rapidly Changing World. Invited Presentation, U.S. Fish and Wildlife Service, Region 5 Science Seminar Series Webcast, April 28.

- Jones, J.W. Freshwater Mussels of the Ohio River Basin: Historical Ecology, Current Conditions and Management in a Rapidly Changing World. Invited Key Note Presentation, Freshwater Mollusk Conservation Society 7th Biennial Symposium, Louisville, Kentucky, April 11-15.
- Hua, D., J.W. Jones, R.J. Neves and Y. Jiao. Propagation, Release and Monitoring of Juvenile Mussels of Two Endangered Species, *Epioblasma capsaeformis* and *E. brevidens* and Two Non-Listed Species in the Clinch and Powell Rivers, Tennessee and Virginia. Freshwater Mollusk Conservation Society 7th Biennial Symposium, Louisville, Kentucky, April 11-15.
- Jones, J.W. Development of the Clinch-Powell Clean Rivers Initiative to Protect a Biodiversity Hotspot. State of the Region Eastern Coal Regional Roundtable, Pipestem State Park, West Virginia, March 21-23.
- Jones, J.W. Population Modeling and Demography of an Endangered Mussel Species in the Clinch River, U.S.A: Quantitative Criteria to Evaluate Reintroductions and Recovery of *Epioblasma capsaeformis*. Northeast Region Biologists Conference, Baltimore, Maryland, February 14-18.
- Jones, J.W., R.J. Neves and E.M. Hallerman. Reintroduction of the Endangered Oyster Mussel: Criteria for Evaluating Population Performance. Southern Division of the American Fisheries Society, Tampa, Florida, January 12-16.
- 2010 Roberts, J., E. Hallerman, J. Jones, P. Angermeier. Effects of dams, reservoirs, and tailwaters on functional connectivity in the upper Tennessee River basin. Annual Meeting of the American Fisheries Society, Pittsburgh, Pennsylvania, August 26-28.
- Jones, J.W. Biological Discoveries in the Clinch and Powell Rivers and Their Importance to Freshwater Mussel Conservation. Conservation Management of the Clinch and Powell River Systems: How Towns, Roads and Development Influence Aquatic Environments, May 25-26, Abingdon, Virginia.
- Johnson, M., R. Neves, W. Henley, J. Jones. Quantitative survey of the freshwater mussel fauna in the Powell River, Virginia and Tennessee. Southern Division of the American Fisheries Society, Asheville, North Carolina, February 26-28.
- Jones, J.W., and R.J. Neves. Population Modeling of the Endangered Oyster Mussel: quantitative criteria to evaluate harvest and reintroductions. Southern Division of the American Fisheries Society, Asheville, North Carolina, February 26-28.
- 2009 Jones, J.W., S.A. Ahlstedt, B.K. Ostby, B. Beaty, M. Pinder, N. Eckert, R. Butler, D. Hubbs, C. Walker, J. Schmerfeld, and R.J. Neves. Status and Trends of Freshwater Mussel Populations in the Clinch and Powell Rivers, Tennessee and Virginia. Annual Spring Meeting of The Clinch-Powell Clean Rivers Initiative. May 27-28, Abingdon, VA

- Jones, J.W., P. Grobler, N. Johnson, R.J. Neves and E.M. Hallerman. Long-term Demographic Trends of Freshwater Mussels (Bivalvia: Unionidae) in the Mississippi River Valley, USA: Genetic Evidence for Population Contraction, Expansion, and Secondary Contacts during the late Pleistocene and Holocene. Annual Meeting of the American Fisheries Society, August 28-Sept. 4, Nashville, TN
- Jones, J.W., and J. Schmerfeld. Collapse of the Pendleton Island Mussel Preserve and the Mussel Dead-Zone in the Clinch River, VA. U.S. Fish and Wildlife Service's Region 5 Environmental Contaminants Workshop, September 22-24, Block Island, RI
- Jones, J.W. Natural History and Conservation of Freshwater Mussels (Bivalvia: Unionidae) in Virginia. Historical Explorations into Virginia's Natural History: Virginia Natural History Society Symposia, September 25-26, Martinsville, VA
- Wang, N., C. Ingersoll, J. Kunz, C. Ivey, W. Brumbaugh, C. Kane, S. Alexander, B. Evans, R. Neves, D. Hua, C. Walker, J. Jones, R. Mair, N. Eckert, S. Bakaletz. Effects of coal mining discharges on juvenile mussels and commonly tested organisms. Symposium of the Freshwater Mollusk Conservation Society. April 19-24, Baltimore, Maryland.
- Johnson, M., R. Neves, W. Henley, J. Jones. Status of the freshwater mussel fauna in the Powell River, Tennessee and Virginia. Symposium of the Freshwater Mollusk Conservation Society. April 19-24, Baltimore, Maryland.
- 2008 Neves, R.J., Hua Dan, J.W., Jones, and W.F. Henley. Propagation and culture of endangered freshwater mussels. Society for Conservation Biology, July 13-17, Chattanooga, Tennessee, USA.
- Jones, J.W., and J. Schmerfeld. Decline, recovery and restoration of freshwater mussel populations in the Clinch and Powell rivers of the southeastern United States. U.S. Fish and Wildlife Service's Environmental Contaminants Program National Training Meeting, May 12-16, Ft. Lauderdale, FL
- Neves, R.J., Hua Dan, J.W., Jones, and W.F. Henley. Restoration of endangered mussels in the United States. National Shellfisheries Association Meeting. April 7-10, Providence, RI
- 2007 Jones, J.W. Decline and recovery of freshwater mussel populations in the Clinch, and Powell rivers of the southeastern United States. Virginia/West Virginia Water Research Symposium: Connecting Management to Aquatic Communities, Skelton Conference Center, November 26-30, Blacksburg, Virginia.
- Jones, J.W. Decline and recovery of freshwater mussel populations in the Clinch, Powell, and Big South Fork Cumberland rivers of the southeastern United States. Conservation Management of the Clinch and Cumberland River Systems: A Collaborative Discussion on Coal Mining and the Aquatic Environment, September 5-7, Abingdon, Virginia.

Wang, N., J. Kunz, C. Ingersoll, C. Kane, S. Alexander, B. Evans, R.J. Neves, Hua Dan, C. Walker, and J.W. Jones. Assessing the sensitivity of juvenile freshwater mussels to coal mining effluents and slurries. Conservation Management of the Clinch and Cumberland River Systems: A Collaborative Discussion on Coal Mining and the Aquatic Environment, September 5-7, Abingdon, Virginia.

Jones, J.W., P. Grobler, R.J. Neves, and E.M. Hallerman. Complex patterns of genetic variation in freshwater mussels (Bivalvia: Unionidae) of the United States: implications for conservation genetic studies. 137th Annual Meeting of the American Fisheries Society, August 31-September 6, San Francisco, California.

Jones, J.W., P. Grobler, R.J. Neves, and E.M. Hallerman. Complex patterns of genetic variation in freshwater mussels (Bivalvia: Unionidae) of the United States: implications for conservation genetic studies. Society for Conservation Biology, July 1-5, Port Elizabeth, South Africa.

Neves, R.J., Hua Dan, J.W., Jones, R. Mair, and W.F. Henley. Propagation and restoration of endangered mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. Dean' Forum on the Environment, Virginia Tech. February 26, Blacksburg, Virginia.

Grobler, P., J.W. Jones, N. Johnson, R.J. Neves and E.M. Hallerman. Population genetic structure of the endangered fanshell pearlymussel (*Cyprogenia stegaria* Rafinesque, 1820) in the Ohio and Tennessee River drainages. Symposium of the Freshwater Mollusk Conservation Society. March 11-15, Little Rock, Arkansas.

Jones, J.W., N. Johnson, P. Grobler, R.J. Neves and E.M. Hallerman. Conservation Genetics of the Endangered Rough Pigtoe (*Pleurobema plenum*) (Bivalvia: Unionidae). Symposium of the Freshwater Mollusk Conservation Society. March 11-15, Little Rock, Arkansas.

Johnson, N., J.W. Jones, P. Grobler, R.J. Neves and E.M. Hallerman. Population genetic analysis of the endangered Cumberland combshell (*Epioblasma brevidens*): implications for species recovery. Symposium of the Freshwater Mollusk Conservation Society. March 11-15, Little Rock, Arkansas.

Johnson, N., P. Grobler, J.W. Jones, R.J. Neves and E.M. Hallerman. Genetic Analysis of Selected Populations of the Rabbitsfoot Pearlymussel (*Quadrula cylindrica cylindrica*) (Bivalvia: Unionidae). Symposium of the Freshwater Mollusk Conservation Society. March 11-15, Little Rock, Arkansas.

2006 Neves, R.J., W.F. Henley, Hua Dan and J.W. Jones. Conservation aquaculture: it's application to endangered freshwater mollusks. Northeast Aquaculture and Exposition, December 6-8, Mystic, Connecticut.

Jones, J.W. Hazardous material spill response, cleanup, and natural resource restoration, Clinch River, Virginia. U.S. Fish and Wildlife Service's Environmental Contaminants Program National Training Meeting, August 1-4, Colorado Springs, CO.

- Neves, R.J., R.A. Mair, and J.W. Jones. A case study of propagation and juvenile mussel releases in Virginia and Tennessee. Propagation and captive care of freshwater mollusks. Workshop of the Freshwater Mollusk Conservation Society, March 5-7, Columbus Zoo and Aquarium, Columbus, Ohio.
- Jones, J.W. Propagation and culture of juvenile mussels in the United States: how federal and state hatchery programs are turning the corner toward success. Propagation and captive care of freshwater mollusks. Workshop of the Freshwater Mollusk Conservation Society, March 5-7, Columbus Zoo and Aquarium, Columbus, Ohio.
- Koch, L. and J.W. Jones. U.S. Fish and Wildlife Service discussion regarding mussel propagation policy. Workshop of the Freshwater Mollusk Conservation Society, March 5-7, Columbus Zoo and Aquarium, Columbus, Ohio.
- 2005 Hallerman, E.H., J.W. Jones, and R. J. Neves. Utility of genetic markers as an aid to propagation of imperiled freshwater mussels. Symposium of the Freshwater Mollusk Conservation Society. May 15-18, St. Paul, Minnesota.
- Morrison, C., J.W. Jones, M. Eackles, N. Johnson, T. King, R. J. Neves and E. H. Hallerman. Phylogenetic relationships among members of the tribe Pleurobemini: preliminary results. Symposium of the Freshwater Mollusk Conservation Society. May 15-18, St. Paul, Minnesota.
- Jones, J.W., R.J. Neves, N. Johnson, and E. M. Hallerman. Phylogenetic relationships among freshwater mussel species of the genus *Epioblasma*. Symposium of the Freshwater Mollusk Conservation Society. May 15-18, St. Paul, Minnesota.
- Johnson, N., J.W. Jones, P.J. Grobler, R.J. Neves, and E. M. Hallerman. Population genetic analysis of the endangered Cumberland combshell *Epioblasma brevidens*: implications for species recovery. Symposium of the Freshwater Mollusk Conservation Society. May 15-18, St. Paul, Minnesota.
- 2004 Jones, J.W., R. J. Neves, S.A. Ahlstedt and E. M. Hallerman. A holistic approach to taxonomic evaluation of two closely related endangered freshwater mussel species, the oyster mussel *Epioblasma capsaeformis* and tan riffleshell *Epioblasma florentina walkeri* (Bivalvia:Unionidae). Conservation genetics workshop of imperiled mollusks and fishes, sponsored by the Freshwater Mollusk Conservation Society. June 29-30, National Conservation Training Center, Shepherdstown, West Virginia.
- Jones, J.W., E. M. Hallerman and R.J. Neves. Genetic management guidelines for conservation and captive propagation of freshwater mussels (Bivalvia:Unionidae). Conservation genetics workshop of imperiled mollusks and fishes, sponsored by the Freshwater Mollusk Conservation Society. June 29-30, National Conservation Training Center, Shepherdstown, West Virginia.
- Neves, R.J., J.W. Jones, and E.M. Hallerman. Conservation and restoration of freshwater fauna in the United States. Conservation genetics workshop of imperiled

mollusks and fishes, sponsored by the Freshwater Mollusk Conservation Society. June 29-30, National Conservation Training Center, Shepherdstown, West Virginia.

Grobler, P., J.W. Jones, N. Johnson, B. Beaty, E. M. Hallerman and R.J. Neves. Patterns of genetic differentiation in the slabside pearlymussel, *Lexingtonia dolabelloides*, (Lea 1840) in the Tennessee River drainage. Conservation genetics workshop of imperiled mollusks and fishes, sponsored by the Freshwater Mollusk Conservation Society. June 29-30, National Conservation Training Center, Shepherdstown, West Virginia.

Jones, J.W., and R.J. Neves. A survey to evaluate the status of freshwater mussel populations in the upper North Fork Holston River, Virginia. Virginia Academy of Sciences, 82nd Annual Meeting. May 25-27, Virginia Commonwealth University, Richmond, Virginia.

Jones, J.W. The ecology and conservation of freshwater mussels: the importance of host fish in determining population dynamics. Virginia Tech Chapter of the American Fisheries Society, Department of Fisheries and Wildlife Sciences, Virginia Tech. April 6, Blacksburg, Virginia.

Jones, J.W., R. J. Neves, R. A. Mair and W. F. Henley. Propagation and culture of endangered juvenile mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. (Poster Presentation) Expanding the Ark: The Emerging Science and Practice of Invertebrate Conservation. March 25-26, American Museum of Natural History, New York City, New York.

Jones, J.W., R. J. Neves, R. A. Mair and W. F. Henley. Propagation and culture of endangered juvenile mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. Southern Division of the American Fisheries Society 2004. February 26-29, Oklahoma City, Oklahoma.

Jones, J.W. A holistic approach to taxonomic evaluation of two closely related endangered freshwater mussel species, the oyster mussel *Epioblasma capsaeformis* and tan riffleshell *Epioblasma florentina walkeri* (Bivalvia:Unionidae). Thesis Defense Seminar, Department of Fisheries and Wildlife Sciences, Virginia Tech. February 20, Blacksburg, Virginia

2003 Mair R.A., J.W. Jones, R. J. Neves, S. A. Ahlstedt and S. Bakaletz. Propagation and culture of endangered juvenile mussels from the Big South Fork National River and Recreation Area. Virginia Academy of Sciences, 81th Annual Meeting. May 26-29, University of Virginia, Charlottesville, Virginia.

Neves, R.J., J.W. Jones, W.F. Henley and R. A. Mair. Production of freshwater mussels for freshwater pearl production. National Shellfisheries Association, 95th Annual Meeting. April 13-17, New Orleans, Louisiana.

Mair R.A., J.W. Jones, R. J. Neves, S. A. Ahlstedt and S. Bakaletz. Propagation and culture of endangered juvenile mussels from the Big South Fork National River and

Recreation Area. Symposium of the Freshwater Mollusk Conservation Society. March 16-19, Durham, North Carolina.

Jones, J.W., R. A. Mair and R. J. Neves. Factors affecting survival and growth of juvenile freshwater mussels (Bivalvia:Unionidae) cultured in recirculating aquaculture systems. Symposium of the Freshwater Mollusk Conservation Society. March 16-19, Durham, North Carolina.

Neves, R.J., J.W. Jones, R.A. Mair, and W.F. Henley. Construction of a mussel propagation facility: a partnership for restoration and recovery of endangered species. Aquaculture America 2003. February 18-21, Louisville, Kentucky.

Jones, J.W., R. J. Neves, R. A. Mair and W. F. Henley. Propagation and culture of endangered juvenile mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. Aquaculture America 2003. February 18-21, Louisville, Kentucky.

2002 Jones, J.W., and R. J. Neves. Propagation and culture of endangered juvenile mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. Regional Coalfield Water Resource Symposium. September 4, University of Virginia's College at Wise, Virginia.

Mair R.A., J.W. Jones, and R. J. Neves. Life history aspects of the creeper, *Strophitus undulatus*, and green floater, *Lasmigona subviridis*, (Bivalvia: Unionidae). Virginia Academy of Sciences, 80th Annual Meeting. May 22-25, Hampton University, Hampton, Virginia.

Neves, R.J., J.W. Jones and W. F. Henley. Propagation of endangered freshwater mussels in recirculating culture systems. National Shellfisheries Association, Mystic, CT.

Jones, J.W., R. J. Neves, R. A. Mair and W. F. Henley. Culture of endangered juvenile mussels (Unionidae) in recirculating aquaculture systems. Propagation and restoration of freshwater mussels workshop of the Freshwater Mollusk Conservation Society. March 14-15, National Conservation Training Center, Shepherdstown, West Virginia.

Jones, J.W., R. J. Neves, R. A. Mair and W. F. Henley. Production of endangered juvenile mussels (Unionidae) at the Freshwater Mollusk Conservation Center, Virginia Tech. Propagation and restoration of freshwater mussels workshop of the Freshwater Mollusk Conservation Society. March 14-15, National Conservation Training Center, Shepherdstown, West Virginia.

2001 Jones, J.W. and R. J. Neves. Propagation and culture of endangered juvenile mussels (Unionidae) at the Virginia Tech Aquaculture Center. North American Benthological Society, 65th Annual Meeting. June 22-25, LaCrosse, Wisconsin.

- Jones, J.W. and R. J. Neves. Propagation and culture of endangered juvenile mussels (Unionidae) at the Virginia Tech Aquaculture Center. Virginia Academy of Sciences, 79th Annual Meeting. May 22-25, James Madison University, Harrisonburg, Virginia.
- Jones, J.W. and R. J. Neves. Life history aspects of the endangered dromedary pearlymussel (*Dromus dromas*). Symposium of the Freshwater Mollusk Conservation Society. March 12-14, Pittsburgh, Pennsylvania.
- 2000 Jones, J.W. Propagation and culture of endangered juvenile freshwater mussels for recovery of listed species in the upper Tennessee River drainage. L.I.T.M.U.S. seminar, Department of Fisheries and Wildlife Sciences, Virginia Tech. October 19, Blacksburg, Virginia.
- Jones, J.W. and R. J. Neves. Propagation and culture of endangered juvenile freshwater mussels at the Virginia Tech Aquaculture Center. Third International Conference of Recirculating Aquaculture Systems. July 19-21, Roanoke, Virginia.
- Jones, J.W. and R. J. Neves. Propagation and culture of endangered juvenile freshwater mussels at the Virginia Tech Aquaculture Center. Aquaculture America 2000. February 2-5, New Orleans, Louisiana.
- 1999 Jones, J.W. and R. J. Neves. Life history aspects of the endangered fanshell pearlymussel (*Cyprogenia stegaria*). Symposium of the Freshwater Mollusk Conservation Society. March 17-19, Chattanooga, Tennessee.
- Jones, J.W. and R. J. Neves. Life history aspects of the endangered fanshell pearlymussel (*Cyprogenia stegaria*). Joint Meeting of the Virginia and North Carolina Chapters of the American Fisheries Society. January 5-6, Danville, Virginia.
- 1998 Jones, J.W. and Richard J. Neves. Host fish identification and artificial culture of two federally endangered freshwater mussels, the fanshell pearlymussel (*Cyprogenia stegaria*) and the birdwing pearlymussel (*Lemiox rimosus*). Virginia Academy of Sciences, 76th Annual Meeting. May 26-29, George Mason University, Fairfax, Virginia.
- Contracts Awarded or Administered:**
- 2013-2015 J.W. Jones. Restoration of freshwater mussel populations in the Clinch River, Virginia – Certus NRDAR Project. Contract Amount \$210,000.00. Virginia Department of Game and Inland Fisheries, Richmond, Virginia.
- 2013-2014 J.W. Jones and B. Watson. Restoring Freshwater Mussel Populations in the South Fork Shenandoah River System, Virginia, Phase I: Assessment of Reintroduction Sites. Contract Amount \$58,000. DuPont, Wilmington, Delaware.
- 2012-2013 J.W. Jones and S. Ciparis. Assessment of water quality and health of freshwater mussels. Contract Amount \$81,236. U.S. Fish and Wildlife Service, Gloucester, Virginia.

- 2012-2014 J.W. Jones and W.M. Ford. An *in situ* assessment of mussel declines in the Clinch River, Virginia. Contract Amount \$76,000. U.S. Geological Survey, Reston, Virginia.
- 2012-2013 J.W. Jones., E.M. Hallerman, and R.J. Neves. Restoration of freshwater mussel populations in the Clinch River, Virginia – Certus NRDAR Project. Contract Amount \$138,138. U.S. Fish and Wildlife Service, Gloucester, Virginia.
- 2012-2014 J.W. Jones and E.M. Hallerman. Development of a phenotypic trait-based key to delineate “look-alike” freshwater mussel species belonging to the genera *Fusconaia*, *Lexingtonia* and *Pleurobema*. Contract Amount \$90,000. Virginia Department of Game and Inland Fisheries, Richmond, Virginia.
- 2011-2014 W.F. Henley and J.W. Jones. Assessment of Mussel Declines in the Clinch and North Fork Holston Rivers Using Histological Evaluations of Vital Organs. Contract Amount \$283,131. U.S. Fish and Wildlife Service, Gloucester, Virginia.
- 2011-2012 J.W. Jones and E. Wolf. Development of Propagation Technology for the Atlantic Pigtoe *Fusconaia masoni*. Contract Amount \$58,000. Department of Defense, Legacy Program.
- 2011-2012 W.F. Henley and J.W. Jones. Evaluations of Histologically Prepared Organ Tissues of *Villosa iris* Held at Selected Sites in the North Fork Holston River, Saltville, Virginia. Contract Amount \$114,978. U.S. Fish and Wildlife Service, Gloucester, Virginia.
- 2011-2011 W.F. Henley, J.W. Jones and E.M. Hallerman. Silo Construction, Logistical Preparation, Selection of Statistical Procedures for Histological Evaluations at Selected Sites in the North Fork Holston River, Virginia. Contract Amount \$31,043. U.S. Fish and Wildlife Service, Gloucester, Virginia.
- 2011-2014 J.W. Jones and W.M. Ford. Development of Demographic Metrics to Evaluate Success of Mussel Reintroductions in the Upper Tennessee River System. Contract Amount \$52,333. U.S. Geological Survey, Reston, Virginia.
- 2011-2013 J.W. Jones and W.M. Ford. Restoration of freshwater mussel populations to high priority geographic areas in the upper Tennessee River system. Contract Amount \$63,448. U.S. Geological Survey, Reston, Virginia.
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