

**BRENDEN S. HOLLAND**

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***Professional Preparation***

1999-2003 Postdoctoral Fellow, Kewalo Marine Lab  
1992-1997 PhD in Biological Oceanography Texas A&M University  
1988-1991 MS in Biological Oceanography, Texas A&M University  
1981-1986 BA in Biological Science, University of California at San Diego

***Academic Positions***

2017-present **Assistant Professor**  
Hawaii Pacific University

2011-2016 **Associate Research Professor**  
PBRC, SOEST, UH Manoa

2013-present **Graduate Faculty**  
Plant and Environmental Protection Sciences, Center for Tropical Agriculture and  
Human Resources, UH Manoa

2006-2011 **Assistant Research Professor**  
Center for Conservation Research & Training, UH Manoa

2003-2006 **Junior Researcher**  
Center for Conservation Research & Training, UH Manoa

2005-2016 **Graduate Faculty**  
Ecology, Evolution and Conservation Biology Program, UH Manoa

2004-2016 **Associate Graduate Faculty**  
Biology, UH Manoa

1997-1999 **Visiting Professor**  
Faculty of Biology, Maharakham University, Thailand

1992-1997 **Graduate Research Assistant**  
Animal Genetics, Texas A&M University

1995-1996 **Marine Science Policy Officer,**  
Sea Grant Fellow NOAA, Silver Spring, MD

1989-1997 **Scientific Dive Master/NitrOx/Rescue Diver/**  
Texas A&M University, Flower Gardens Long-term Monitoring  
Project, (14 cruises, >350 logged scientific dives)

**Research Summary Statement**

My primary professional focus lies within biological sciences and environmental integrity of Pacific ecosystems. While my scientific focus has been on the use of field observations and molecular tools to understand the pace and pattern of diversification and biogeography of endemic Pacific Island taxa, objectives of numerous recent projects include elucidation and mitigation of impacts of and solutions to the global escalation of biological invasions.

***Fellowships & Scholarships***

Packard Foundation Conservation Biology Fellow, 1999-2000.  
Sea Grant Knauss Marine Policy Fellowship, Washington, D.C., 1995-1996.  
Sea Space Graduate Marine Science Scholarship, Houston, TX (2) 1992, 1994.  
Sea Grant College Program Graduate Student Research Abstract Award, 1992.

### **Professional Interests**

Conservation Biology, Biological Invasions, Molecular Ecology, Phylogeography, Phylogenetics, Island Biogeography, Oceanography, STEM Education

### **Grants & Awards**

- NSF, IOS Behavioral and Biochemical Ecology of Gastropod Trail Following. (PI), Co-PI's: J.Y. Yew, N. James, D. Takagi. 2017 Preproposal, declined.
- USFWS, 2016. Hawaiian Tree Snail Conservation Lab operating cost, 2015-16, \$59,864 (PI).
- UROF, University of Hawaii, 2016. The Shell Game: Isotope Analysis of Extinct Prehistoric Land Snail Shells from Leeward Oahu, \$1,200 (PI, advisor to undergraduate student C. Thompson).
- Life Sciences Division, Army Research Office, Defense University Research Instrumentation Program (DURIP). Direct Analysis in Real Time Mass Spectrometry for Extraction-Free Chemical Profiling of Live Biological Tissues and Fluids. (Senior Personnel, PI Joanne Yew) \$240,000. 2016-2018.
- Department of Defense, US Army Garrison, Dept. of Public Works, 2015-16. \$51,681 (PI).
- USFWS, Hawaiian Tree Snail Conservation Lab operating cost, 2015-16, \$60,000 (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2014-15. \$54,000 (PI).
- Hawaii Sea Grant, Ecology of circalunar aggregations of the box jellyfish *Alatina moseri*, 2014. \$9,999 (PI).
- Dept. of the Navy, Candidate Endangered Species Surveys on Guam, 2014-15. \$135,470. (PI).
- UROF, University of Hawaii, 2014. Predatory Behavior of Hawaii's Land Dwelling Flatworms, \$5,000 (PI, advisor to undergraduate student M. Khramov).
- Conchologists of America, 2013-2014. Ecology of *Euglandina rosea* in Hawaii, \$1,500. (PI, advisor to MS Student B. Dietrich).
- Yoshimoto Scholarship, Ecology Evolution and Conservation Biology, UH. Movement behavior in invasive Jackson's chameleons. 2013. \$2,300 (PI, advisor to PhD Student M. Wright).
- Conchologists of America, 2012-2013. Harmful Herpetofauna in Hawaii, \$1,500. (PI, advisor to PhD Student M. Wright).
- East Texas Herpetological Society, Interspecific interactions: competition among invasive *Anolis* lizards in Hawaii. 2012-2013 \$500 (PI, advisor to PhD student M. Wright).
- UROF, University of Hawaii, 2012. Feeding Behavior in Endemic Snail-Eating Caterpillars, \$5,000. (PI, advisor to undergraduate Honors student Z. Williams).
- NSF, Biodiversity Discovery and Analysis Program. 2011-2013, \$650,000. Co-PI (PI K. Hayes).
- Department of Defense, US Army Garrison, Dept of Public Works, 2013-2014. \$82,000. (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2012-2013. \$157,000. (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2011-2012. \$260,000 (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2010-2011. \$220,000 (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2009-2010. \$203,845 (PI).
- Department of Defense, US Army Garrison, Dept of Public Works, 2008-2009. Startup funds for molecular lab set-up. \$38,188 (PI).
- EPSCoR II REAP, 2007-2008. Phylogeography of the endemic Hawaiian achatinellid land snails. \$29,325. Proposal #R21622583122007. (PI, Co-PIs R.H. Cowie and M. DeMaintenon).
- Sea Grant Biennium Institutional Program. 2005-2007. Genetic partitions and stock structure in Hawaiian opihi (Gastropoda: *Cellana* spp.). \$74,276. (Co-PI, PI R. Toonen).
- University of Hawaii Research Council Faculty Travel Grant, 2007 Evolution meeting, Christchurch, New Zealand. \$1,920 (PI).
- University of Hawaii Research Council Faculty Travel Grant, 2005 Japan Evolution Society meeting, Sendai, Japan. \$1,620. PI.
- Conchologists of America. 2005. Island biogeography of endemic Pacific amber snails (Gastropoda: Succineidae). \$1,500 (PI).
- University of Hawaii Research Council Faculty Travel Grant, 2005 SICB meeting, San Diego, CA.

- \$1,400 (PI).  
 Sea Grant Program Development Grant. 2005. Molecular systematic status of Hawaiian box jellyfish. \$9,814 (PI, Co-PI G. Crow).  
 Conchologists of America. 2004. Biogeography of a widely distributed land snail family: Colonization pathways, evolutionary patterns and systematics of Pacific Island Succineidae. \$1,500. PI.  
 National Park Service, Defining Genetic Stock Structure in Opihi. 2004. \$27,000. Co-PI (Co-PIs E.A. Kay and C. Smith; Graduate Research Assistant C.E. Bird).  
 Sea Grant Program Development Fund. 2004. Genetic partitions and stock structure in Hawaiian opihi (Gastropoda: *Cellana* sp.). \$9,920. (Co-PI, PI B. Bowen)  
 National Science Foundation. 2003-2006. Revision and phylogeographic analysis of Pacific island succineid land snails. Biodiversity and Inventories Program, #0316308. \$400,086. Contributor (PI R.H. Cowie, Co-PI M.J. deMaintenon)  
 US Fish and Wildlife Service. 2003. Hawaiian tree snail implementation and recovery plan surveys for Molokai and Maui. \$19,070 (Co-PI).  
 Conchologists of America. 2002. Use of genetic tools in the efforts to save vanishing Hawaiian tree snails. \$1,200 (PI).  
 U.S. Department of the Army Environmental Division Grant. 2001. Conservation genetics of endangered Hawaiian tree snails. \$43,000 (Co-PI).  
 Henry Doorly Zoo, Omaha, NE. Field supplies for Endangered Herbivores of Thailand Study. 1998. \$3,000 (Co-PI).  
 Oceanography Graduate Student Council Field Work Minigrant. 1997. \$250 (PI)  
 Corpus Christi State University Cooperative Study Grant. 1993. \$3,000 (PI).  
 Texas A&M Sea Grant College Program International Travel Grant. 1992. \$2,000 (PI).  
 Texas A&M Experiment Station International Travel Grant. 1992. \$900 (PI).  
 Texas A&M Sea Grant College Program Discretionary Fund Grant. 1991. \$6,000 (PI).  
 Center for Marine Conservation, Gulf of Mexico Marine Debris Survey. 1990. \$2,000 (PI).

***Publications: Peer-reviewed Articles & Book Chapters***

<sup>^</sup> graduate student co-author (23), \* undergraduate student co-author (9)

- Van Kleeck M.J. <sup>^</sup>, T.A.H. Smith<sup>^</sup> & **B.S. Holland**. Cannibalism and ontogenetic resource partitioning in an invasive lizard. (In review)  
**Holland, B.S.**, M. Gousy-Leblanc\*, & J.Y. Yew. Strangers in the dark: Conspecific trail following in adult Hawaiian tree snails (In review)  
**Holland, B.S.**, M. Gousy-Leblanc\*, & N. Tutic\*. Genetic consequences of habitat fragmentation in three species of Hawaiian tree snails (Auriculellinae): Range reduction without a genetic bottleneck. *Biodiversity and Conservation* (In revision, accepted)  
 2017 Van Kleeck M.J. <sup>^</sup> & **B.S. Holland**. Gut check: Predatory impact in the Hawaiian Islands and comparison of native and invasive range diets of the wrinkled frog (*Glandirana rugosa*). *Pacific Science*, 62 (In press)  
 2017 Van Kleeck M.J. <sup>^</sup> & **B.S. Holland**. Chemical control of the invasive Jackson's chameleon (*Trioceros jacksonii xantholophus*) in Hawaii. (In press)  
 2017 O'Rorke, R., L. Tooman, K. Gaughan\*, **B.S. Holland**, & A.S. Amend. Not just browsing: An animal that grazes microbes facilitates community diversity. *ISMEJ* 11(8):1788-1798.  
 2017 **Holland, B.S.**, L.M. Chiaverano & C.K. Howard\*. Diminished fitness in an endemic Hawaiian snail in nonnative host plants. *Ethology, Ecology and Evolution* 29(3): 229-240.  
 2016 O'Rorke, R., **B.S. Holland**, G.M. Cobian<sup>^</sup>, K. Gaughen\* & A.S. Amend. Dietary preferences of Hawaiian tree snails to inform culture for conservation. *Biological Conservation* 198:177-182.  
 2015 Van Kleeck, M.J.<sup>^</sup>, L.M. Chiaverano & **B.S. Holland**. Prey-associated head-size variation in an invasive lizard in the Hawaiian Islands. *Biological Journal of the Linnean Society* 116(3):626-636.

- 2015 Crow, G.L., L.M. Chiaverano, J. Crites, M.A. Khramov\* & **B.S. Holland**. Box jellyfish (Cubozoa: Carybdeidae) in Hawaiian waters and first record of *Tripedalia cystophora* in Hawaii. *Bishop Museum Bulletin in Zoology*, 9: 93-108.
- 2015 O'Rorke R., G.M. Cobian<sup>Δ</sup>, **B.S. Holland**, M.R. Price, & A.S. Amend. Dining local: the diet of a snail that grazes microbial communities is geographically structured, *Environmental Microbiology* 17(5):1753-1764.
- 2014 Chiaverano, L.M. <sup>Δ</sup> & **B.S. Holland**. Impact of a predatory invasive lizard on the endangered Hawaiian snail *Achatinella mustelina*: a threat assessment. *Endangered Species Research* 24:115-123.
- 2014 Chiaverano, L.M.<sup>Δ</sup>, M.J. Wright<sup>Δ</sup>, & **B.S. Holland**. Movement behavior of invasive Jackson's chameleons in Hawaii. *Journal of Herpetology* 48(4): 471-479.
- 2013 Chiaverano, L.M., **B.S. Holland**, G.L. Crow, L. Blair, & A.A. Yanagihara. Long-Term Fluctuations in Circalunar Beach Aggregations of the Box Jellyfish *Alatina moseri* in Hawaii, with Links to Environmental Variability, *PLoS ONE* (8)10: DOI: 10.1371/journal.pone.0077039
- 2013 **Holland, B.S.** & E.A. Kay. Biogeography. In: *The Pacific Islands: Environment and Society*. (M. Rapaport, ed), pages 83-94, 2nd Ed., University of Hawaii Press. Invited contribution.
- 2012 **Holland, B.S.** If the conceptual straitjacket fits, chances are you're already wearing it. Book Review/Commentary, *Molecular Panbiogeography of the Tropics*, M.J. Heads, 565 pages. *Frontiers in Biogeography* 4(4): 144-147.
- 2012 **Holland B.S.**, T. Chock\*, A. Lee\* & S. Sugiura. Tracking behavior in the snail, *Euglandina rosea*: First evidence of preference for endemic versus biocontrol target pest species in Hawaii. *American Malacological Bulletin* 30(1):153-157.
- 2011 Bird, C.E., **B.S. Holland**, B.W. Bowen & R.J. Toonen. Diversification in broadcast-spawning sympatric Hawaiian limpets (*Cellana* spp.). *Molecular Ecology* 20: 2128-2141.
- 2011 Rubinoff, D., **B.S. Holland**, M. San Jose<sup>Δ</sup>, & J.A. Powell. Geographic proximity not a prerequisite for invasion: Hawaii not the source of California invasion by light brown apple moth (*Epiphyas postvittana*). *PLoS ONE* 6(1):23-31.
- 2011 Sugiura, S., **B.S. Holland** & R.H. Cowie. Predatory behaviour in juvenile *Euglandina rosea*. *Journal of Molluscan Studies* 77: 101-102.
- 2010 Rubinoff, D., **B.S. Holland**, A. Shibata\*, R.H. Messing and M. Wright. Rapid invasion despite lack of genetic variation in the erythrina gall wasp (*Quadrastichus erythrinae* Kim). *Pacific Science* 64(1): 23-32.
- 2010 **Holland, B.S.**, S.L. Montgomery, & V. Costello. A reptilian smoking gun: first record of invasive Jackson's chameleon (*Chamaeleo jacksonii xantholophus*) predation on native Hawaiian species. *Biodiversity and Conservation* 19(5):1437-1441.
- 2009 **Holland, B.S.** Island flora and fauna: Snails. In: *The Encyclopedia of Islands*. (R. Gillespie & D.A. Clague, eds), pages 537-542, Science Publishing Group, University of California Press. Invited contribution.
- 2009 **Holland, B.S.** & R.H. Cowie. Land snail models in biogeography: A tale of two snails. *American Malacological Bulletin* 27:59-68. Invited review.
- 2008 **Holland, B.S.**, C.C. Christensen, K.A. Hayes<sup>Δ</sup>, R.H. Cowie. Biocontrol in Hawaii: A Response to Messing (2007). *Proceedings of the Hawaiian Entomological Society* 40:81-83.
- 2008 Cowie, R.H. & **B.S. Holland**. Molecular biogeography and diversification of the endemic terrestrial fauna of the Hawaiian Islands. *Philosophical Transactions of the Royal Society of London B* 363(1508): 3363-3376.
- 2007 Bird, C.E.<sup>Δ</sup>, **B.S. Holland**, B.W. Bowen & R.J. Toonen. Contrasting phylogeography in three endemic Hawaiian limpets (*Cellana* spp.) with similar life histories. *Molecular Ecology* 16(15): 3173-3187.
- 2007 **Holland, B.S.** & R.H. Cowie. A geographic mosaic of passive dispersal: population structure in the endemic Hawaiian amber snail *Succinea caduca* (Mighels 1845). *Molecular Ecology* 16(12): 2422-2435.

- 2007 **Holland, B.S.** & M.G. Hadfield. Molecular systematics of the endangered O'ahu tree snail *Achatinella mustelina* (Mighels 1845): Synonymization of subspecies and estimation of gene flow between chiral morphs. *Pacific Science* 61(1): 53-66.
- 2006 **Holland, B.S.** & R.H. Cowie. Dispersal and vicariance in Hawaii: submarine slumping does not create deep inter-island channels. *Journal of Biogeography* 33(12): 2155-2156.
- 2006 **Holland, B.S.** & R.H. Cowie. New island records for the endemic Hawaiian land snail *Succinea caduca* (Mighels 1845). *Bishop Museum Occasional Papers* 88: 58-60.
- 2006 Cowie, R.H. & **B.S. Holland**. Dispersal is fundamental to evolution on oceanic islands. *Journal of Biogeography* 33(2): 193-198. Guest Editorial.
- 2005 Rubinoff, D. & **B.S. Holland**. Between the two extremes: Mitochondrial DNA is neither the panacea nor the nemesis of phylogenetic and taxonomic inference. *Systematic Biology* 54(6): 952-961.
- 2004 **Holland, B.S.** Book Review of *Ecological Genetics: Design, Analysis, and Applications* by A. Lowe, S. Harris, and P. Ashton (2004) xi + 326 pp., Blackwell Publishing, Oxford, UK. *Oryx* 38(4): 466.
- 2004 **Holland, B.S.** & R.H. Cowie. Molecular phylogeography of a dry land, ephemeral endemic Hawaiian snail (*Succinea caduca*). *Integrative and Comparative Biology* 44(6): 709-709 (abstract).
- 2004 Hadfield, M.G., **B.S. Holland** & K.J. Olival\*. Contributions of *Ex Situ* Propagation and Molecular Genetics to the Conservation of Hawaiian Tree Snails. In: *Experimental Approaches to Conservation Biology*. (M. Gordon & S. Bartol, eds). University of California Press, Berkeley and Los Angeles. Pages 16-34.
- 2004 **Holland, B.S.**, M.N. Dawson, G.L. Crow & D.K. Hofmann. Global phylogeography of *Cassiopea* (Scyphozoa: Rhizostomeae): Molecular evidence for cryptic species and multiple invasions of the Hawaiian Islands. *Marine Biology* 145: 1119-1128.
- 2004 **Holland, B.S.** & M.G. Hadfield. Origin and diversification of the endemic Hawaiian tree snails (Achatinellinae: Achatinellidae) based on molecular evidence. *Molecular Phylogenetics and Evolution* 32(2): 588-600.
- 2004 Rundell, R.J.<sup>Δ</sup>, **B.S. Holland**, & R.H. Cowie. Molecular phylogeny and biogeography of endemic Hawaiian succineid land snails (Pulmonata: Gastropoda). *Molecular Phylogenetics and Evolution* 31: 246-255.
- 2002 **Holland, B.S.** & M.G. Hadfield. Islands within an island: phylogeography and conservation genetics of the endangered Hawaiian tree snail *Achatinella mustelina*. *Molecular Ecology* 11(3): 365-376.
- 2001 **Holland, B.S.** Invasion without a bottleneck: microsatellite variation in natural and invasive populations of the brown mussel, *Perna perna* (L). *Marine Biotechnology* 3(5): 407-415.
- 2000 Apte, S.<sup>Δ</sup>, **B.S. Holland**, L.S. Godwin<sup>Δ</sup>, & J.P.A. Gardner. Jumping ship: a stepping stone event mediating transfer of a non-indigenous species via a potentially unsuitable environment. *Biological Invasions*, 2: 75-79.
- 2000 **Holland, B.S.** Genetics of marine bioinvasions. *Hydrobiologia* 420: 63-71 (also published as a book chapter in *Marine Genetics*, A.M. Solé-Cava, C. A.M. Russo & J. Thorpe, Springer Science pp. 63-71)
- 1999 **Holland, B.S.**, D.S. Gallagher, D.W. Hicks<sup>Δ</sup>, and S.K. Davis. Cytotaxonomic verification of a non-indigenous marine mussel in the Gulf of Mexico. *The Veliger* 42(3): 280-282.
- 1992 Gittings, S.R., G.S. Boland, K.J.P. Deslarzes<sup>Δ</sup>, C. Combs<sup>Δ</sup>, **B.S. Holland**, & T.J. Bright. Mass spawning and reproductive viability of reef corals at the East Flower Garden Bank, northwest Gulf of Mexico. *Bulletin of Marine Science* 51(3): 420-428.
- 1991 Lockwood, S.F.<sup>Δ</sup>, **B.S. Holland**, J.W. Bickham, B.J. Hanks<sup>Δ</sup>, & J.J. Bull. Intraspecific genome size variation in a turtle (*Trachemys scripta*) exhibiting temperature-dependent sex determination. *Canadian Journal of Zoology* 69: 2306-2310.

**Technical Publications**

- 2015 **Holland, B.S.** & D. Rubinoff. *Candidate Endangered Species Survey Results and Recommendations*, NAVFAC, Andersen AFB, Guam, 55 pages.
- 2015 **Holland, B.S.** & D. Rubinoff. *Candidate Endangered Species Management Plan*, NAVFAC, Andersen AFB, Guam, 30 pages.
- 2014 **Holland, B.S.** & D.S. Sischo. *Haputo Ecological Reserve Candidate Endangered Species and Invasive Predator Survey*, Guam. Report for Garcia & Associates/Myounghee & Associates, 28 pages.
- 2013 **Holland, B.S.** & D.S. Sischo. *Terrestrial Biological Surveys on Tinian in Support of the Commonwealth of the Northern Marianas Islands Joint Military Training Environmental Impact Statement/Overseas Environmental Impact Statement*. Report for Cardno TEC, 28 pages.
- 1998 **Holland, B.S.** & C.Y. Barrios (eds). *Cultural Forest Conservation in Northeastern Thailand: A Model Study in Community Based Sustainable Resource Management*. Office of Environmental Policy and Planning, Bangkok, Thailand. 129 pages
- 1995 **Holland, B.S.** Coral genetics research at the Flower Gardens. *Reef Research Rendezvous: a report on science in the Flower Garden Banks National Marine Sanctuary*. Flower Gardens Fund Technical Series, Report #94-02
- 1992 Gittings, S.R., G.S. Boland, K.J.P. Deslarzes, D.K. Hagman, & **B.S. Holland**. *Long-term monitoring at the East and West Flower Garden Banks*, OCS Study MMS 92-0006. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Regional Office, New Orleans, LA. 206 pages
- 1990 Gittings, S.R., G.S. Boland, **B.S. Holland**, & K.J.P. Deslarzes. *Ecological monitoring program at the Flower Garden Banks*. In: Minerals Management Service. Proceedings: Tenth Annual Information Transfer Meeting. U.S. Dept. of Interior. Minerals Management Service. New Orleans, LA. MMS Contract # 14-35-0001-30499. OCS Study/MMS 90-0027, 441 pages.

**Presentations Since 2004**

- 2016 Chiaverano, L.M., **B.S. Holland**, R. Vandermeulen, G. Crow, & L. Blair. Does light pollution drive near-shore aggregations of the box jellyfish in Hawaii? Jellyfish Blooms Symposium, Barcelona, Spain.
- 2016 Smith, T.A.H., M.J. Van Kleeck & **B.S. Holland**. I come from the land down under: Ecological niche modeling in the invasive plague skink in Hawaii. American Society of Ichthyologists and Herpetologists, New Orleans, LA.
- 2014 Wright, M., L.M Chiaverano, & **B.S. Holland**. Role of social interaction and habitat suitability in movement behavior of Jackson's chameleons in Hawaii. Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN.
- 2014 Howard, C.A.K. & **B.S. Holland**. Is an Alien Plant Invasion Really So Bad? Comparative Performance of an Oahu Snail (*Auriculella diaphana*) in Native Versus Non-Native Host Plants. Society for Integrative and Comparative Biology, Austin TX.
- 2013 Wright, M., Chiaverano, L.M., **B.S. Holland**. Radio-tracking Jackson's chameleons to understand range size and movement behavior. Tester's Symposium, UH Manoa.
- 2013 **Holland, B.S.** Biogeography of Hawaiian Land Snails: Diversity in Adversity. University of Guam, Biology Seminar Series, Mangilao, Guam.
- 2013 **Holland, B.S.** Herpetological misadventures of a malacologist. Hawaii Herpetology Club.
- 2012 **Holland, B.S.** Big radiations on small remote islands. Hawaii Malacological Society. Honolulu, HI.
- 2012 **Holland, B.S.**, Costello V., Joe, S. Hawaiian Conservation Conference. Completion of the state of the art enclosure at Puu Hapapa, and progress in efforts to stem the loss of endangered *Achatinella mustelina*. Honolulu Convention Center.

- 2012 **Holland, B.S.** Keep your friends close and your enemies closer, behavioral ecology of invasive predators in Hawaii. American Malacological Society, Cherry Hill New Jersey.
- 2011 **Holland, B.S.** Recent progress in studies of behavioral ecology of invasive predators of native invertebrates in Hawaii. Hawaiian Insect Diversity: Evolutionary Biology Meets Conservation Management, Entomological Society Pacific Branch meeting.
- 2010 **Holland, B.S.** Hawaiian Conservation Conference. Crisis at Pu'u Hapapa: Emergency efforts to stop the catastrophic loss of endangered *Achatinella musteilina*. Honolulu Convention Center.
- 2009 **Holland, B.S.** Moderator, Invertebrate Evolution and Diversity, Pacific Biosciences Research Center Second Annual Symposium on Biodiversity. May, Hawaii Imin Conference Center, East West Center, University of Hawaii.
- 2008 **Holland, B.S.** & R.H. Cowie. Hawaiian land snail diversity, its decline and replacement by aliens. American Association for the Advancement of Science, Pacific Division. Hawaii Preparatory Academy, Waimea, Hawaii. Invited oral presentation.
- 2008 **Holland, B.S.** & R.H. Cowie. What can phylogeography tell us about conservation of endemic island snails? American Association for the Advancement of Science, Pacific Division. Hawaii Preparatory Academy, Waimea, Hawaii. Invited oral presentation.
- 2008 **Holland, B.S.** Understanding large radiations on small islands: phylogeography and conservation. Pacific Biosciences Research Center Biodiversity Symposium. East-West Center, University of Hawaii, Manoa. Invited oral presentation.
- 2007 Bird, C.E., **B.S. Holland**, B. Bowen, & R. Toonen. Using patterns of population structure to revive a crashed multi-species fishery. Biodiversity Extinction Crisis Conference - A Pacific Response. University of New South Wales, Sydney Australia. Oral presentation by C.E. Bird.
- 2007 **Holland, B.S.** Is the answer "Blowin' in the wind"? Comparative dispersal potential predicts population structure in native Hawaiian snails. Evolution, Christchurch, New Zealand. Poster presentation.
- 2006 **Holland, B.S.** & R.H. Cowie. Phylogeography of the multi-island endemic Hawaiian land snail *Succinea caduca*. American Malacological Society, Seattle WA. Oral presentation.
- 2005 **Holland, B.S.** Evolutionary Patterns in Hawaiian Land Snail Radiations: Comparative Biogeography of Two Major Groups, the Succineidae and the Achatinellinae (Achatinellidae). Symposium on Ecological and Molecular Approaches to Island Biology, Japan Evolution Conference, Tohoku University, Sendai, Japan. Invited oral presentation.
- 2005 **Holland, B.S.** Comparative phylogeography of Hawaiian tree and amber snails: do snails care more about vicariance or dispersal? American Malacological Society, Asilomar, CA. Oral presentation.
- 2005 Bird, C., A. Kay, & **B.S. Holland**. Growth rates and reproductive patterns in opihi. A.L. Tester Symposium, University of Hawaii, Honolulu, HI. Oral presentation.
- 2005 Bird, C.E., **B.S.Holland**, R.J.Toonen, & B.W.Bowen. Molecular systematics and population structure of opihi (*Cellana* spp.) inferred from mitochondrial DNA sequences. A.L. Tester Symposium, University of Hawaii, Honolulu, HI. Poster presentation.
- 2005 **Holland, B.S.** & R.H. Cowie. Phylogeography of the endemic Hawaiian amber snails (Gastropoda: Succineidae). SICB, San Diego. Poster presentation.
- 2005 deMaintenon, M., **B.S. Holland** & R.H. Cowie. The shell game: reconciling morphology with DNA to reconstruct biogeographic and systematic patterns in succineid land snails. SICB, San Diego. Poster presentation.
- 2005 Evolution, diversification and conservation of the Hawaiian Succineidae. American Malacological Society. Asilomar Conference Center, Pacific Grove, CA. Invited oral presentation.
- 2004 Molecular approaches to understanding marine bioinvasions: case studies and applications. UH Hilo, job candidate seminar. Invited oral presentation.
- 2004 Olival, K.J., **B.S. Holland**, & M.G.Hadfield. The conservation and management of endangered O'ahu tree snails (Genus: *Achatinella*). Balancing the Arc: Invertebrate Conservation. American Museum of Natural History. Poster presentation.

### ***Thesis & Dissertation***

- 1997 **Holland, B.S.** Genetic architecture of a biological invasion: geographic pattern of genetic variation in the brown mussel, *Perna perna*, from natural and nonindigenous populations. 160 pages. Texas A&M University, College Station, TX
- 1991 **Holland, B.S.** Mitochondrial DNA sequence variation of the 16S ribosomal RNA gene from five western Atlantic populations of the star coral, *Montastrea annularis*. 92 pages. Texas A&M University, College Station, TX

### ***Editorial & Review Experience***

- Associate Editor, *Ecological Research*, Ecological Society of Japan, 2013 present.
- Subject Editor, *Taprobanica*, Nature Conservation Society of Sri Lanka, 2009-present.
- Subject Editor, *Journal of Evolutionary Biology Research*, Academic Journals, 2009-present.
- Editorial Board, *International Journal of Biodiversity*, 2012-present.
- Editorial Board, *Ciencias Marinas*, Ensenada, México. 2002-present.
- Review Board, International Workshop on *Marine Genetics*, Rio de Janeiro, Brazil. 1998-1999.
- Fisheries Genetics Advisory Board Member-Aquatic Resources Research Institute, Bangkok Thailand. 1997-1998.
- I have reviewed grant proposals for the **National Science Foundation** Biological Oceanography (2) and Systematics, and Postdoctoral Research Fellowship Program (16); the **Marsden Fund**, Royal Society of New Zealand; Portugal's **Foundation for Science & Technology** (2) 2010, Chilean **Millenium Science Initiative** 2013 (5) and the **Polish National Science Centre** 2015 (2).
- I have reviewed Environmental Impact Statements, Assessments and Endangered species recovery plans including: USFWS 5-Year Stock Island tree snail/*Orthalicus reses*, Military Reservation SDEIS, Lanai Natural Energy Project 2010, Federal Register USFWS Proposal Listing 39 Endangered Species and Critical Habitat for 135 Species, Maui Nui, 2012.
- I have reviewed manuscripts for **42** peer-reviewed scientific journals

### ***Recent Professional Service Activities***

- Member of Kualii Council Tenure Track Faculty Search Committee, 2015-16.
- Member EECB Grad faculty, 2004-present
- Member Graduate Student Grants Evaluation Committee, EECB 2006-present
- Chair of Graduate Student Grants Evaluation Committee, EECB 2012-present
- Mentor to International Interns: Sherbrook University, Canada, Summer of 2014, Fall 2015; 2 interns from Sa Paulo, Brazil Summer 2015; 2016. Hosted an intern from London, Summer 2015.
- Supervisor / Mentor High school interns: 2 AP Punahou Seniors (2014), 1'Iolani Senior (2014), 4 Waipahu HS Seniors (2010-2013), 1 Kaiser High School Senior (2015)
- I provide regular lab tours and lectures, totaling a few hundred elementary, middle and high school students each year, plus dozens of adults from organizations such as the Hawaiian Malacological Society, Brigham Young University, the Manoa Heritage Foundation, HECO, and other private organizations. As part of this regular outreach activity, I emphasize the value of water services and protection of coastal marine ecosystems provided by native rain forests, the critical role played by our reefs in maintaining marine resource integrity, and the importance of not releasing or spreading weeds, pets or other nonnative organisms because of environmental damage to sensitive native ecosystems caused by invasive species globally.
- Over 45 undergraduate students trained
  - 7 Graduate Student Committees
  - 12 Graduate Students Trained (non-committee, UH students unless otherwise indicated)
  - Graduate Student Committee Chair



Bonnie Dietrich, PEPS MS, graduated 2015  
Melissa Van Kleeck, Zoology PhD, graduated 2016  
Paul Riley, NREM MS, expected graduation 2017  
Brook Friswold, NREM MS, expected graduation 2017

- Postdoctoral Fellows Trained  
Shinji Sugiura (Kobe Univ.)  
Luciano M. Chiaverano (Univ. of Southern MS, Stennis Space Center)  
Richard O'Rorke (Griffith Univ.)

### ***Teaching Experience***

#### **Courses Taught & Tutored**

- Genetics 3050, Hawaii Pacific University, 3 credits
- General Biology 2050, 2 sections, Hawaii Pacific University, 4 credits
- Environmental Biology, BIOL 123 & 123L, UHWO, Fall 2014 (5 credits), Fall 2015 (6 credits)
- Graduate Systematics and Phylogenetics, PEPS 662, Department of Plant and Environmental Protection Science, University of Hawaii Manoa. Co-taught with Daniel Rubinoff.
- Principles of Genetics, upper division undergraduate, Mahasarakham University, Thailand, 1997-1998.  
Population Genetics: Causes and Consequences of Genetic Variation, upper division undergraduate course, Mahasarakham University, Thailand, 1997-1998.
- Molecular Genetic Techniques, undergraduate course, Mahasarakham University, Thailand, 1997-1998.
- Biology. Student/Athlete Mentor Program Science Tutor, Department of Intercollegiate Athletics, Texas A&M University, 1990-1992.
- Biology101, undergraduate course, Department of Biology, Texas A&M University, 1989-1990.

#### ***Selected Outreach & Media***

Interview with by Jay Fidel on ThinkTech Hawaii "New Directions in Environmental Management" (60 mins):

<http://www.youtube.com/watch?v=oCFrsxvg-DY>

Video clip with Dan Rubinoff on island forest conservation, produced by Liquid Planet, funded by Hawaii Tourism Authority (5 mins):

<http://www.youtube.com/watch?v=7wnMCDOCpCA>

News clip on conservation efforts aimed at understanding movement behavior of invasive chameleons (KHON2 News; March 7, 2013)(2 mins):

[http://www.clipsyndicate.com/video/playlist/1805/3970800?title=broadcast\\_local\\_2](http://www.clipsyndicate.com/video/playlist/1805/3970800?title=broadcast_local_2)