

Jennifer F. Howard Ph.D.

CAREER FOCUS

Interested in utilizing my scientific expertise and passion for environmental conservation to address high-level policy issues; my experience in academic, non-profit, and government sectors to foster innovative policies; and my ability to understand and communicate complex scientific issues to a large range of audiences to lead trans-disciplinary efforts.

PROFESSIONAL EXPERIENCE

Conservation International, Marine Climate Change Director

Arlington, Virginia • 2013 – present

Duties: My work focuses on establishing mechanisms to conserve coastal and marine ecosystems as a means to protect vulnerable coastal communities from the threats of climate change. In this role, I helped found the Global Mangrove Alliance and represent Conservation International on its Strategy Team. I sit on the scientific advisory board for the International Partnership for Blue Carbon. I also manage the Blue Carbon Initiative, a global program on coastal carbon science and marine policy working to mitigate climate change through the restoration and sustainable use of coastal and marine ecosystems. In addition, I lead efforts to establish innovative carbon finance schemes that utilize carbon crediting to provide long-term finance to our coastal conservation and restoration efforts all over the world. I lead Conservation International's work on marine debris where I am developing a global marine debris strategy.

Major Accomplishments:

- Led or participated in grant development (public and private) that has secured over \$27 million dollars for climate mitigation and adaptation work globally
- As a founding member of the Global Mangrove Alliance I provide thought leadership and played a lead role in the development of their global strategy, fundraising pipeline, theory of change, and communications plan.
- As the lead of the Global Mangrove Alliance Membership Committee I secured eight new members and the support of over ten countries in less than six months.
- Led the production of the field manual “Coastal Blue Carbon: methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrass meadows.”
- Coordinated and led five international meetings of the Blue Carbon Initiative's Scientific and Policy Working Groups
- Established the first ever blue carbon crediting project in the world through a partnership with Apple Corporation in Colombia
- Secured a technical advisory role with the International Partnership for Blue Carbon and the Trash Free Seas Alliance
- My paper “Clarifying the role of coastal and marine systems in climate mitigation” was one of the top ten most downloaded papers for the Journal *Frontiers in Ecology and the Environment* in 2017
- My paper “The potential to integrate blue carbon into MPA design and management” was one of the top twenty most downloaded papers for the journal *Aquatic Conservation* in 2017
- Completion of Conservation International's Emerging Leaders Program
- Gained experience working in Liberia, Kenya, Indonesia, Brazil, Colombia, Fiji, Philippines, and Ecuador

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National Oceanic and Atmospheric Administration (NOAA), AAAS Science and Technology Fellow

Silver Spring, Maryland • 2011 – 2013

Duties: I served as a technical advisor within the National Marine Fisheries Science (NMFS) Division where I strengthened the divisions by ensuring the relevance and utility of the NMFS portfolio to the broader NOAA mission of science, service, and stewardship. My position allowed me the opportunity to influence key programmatic decisions while exercising a high level of independent judgment and decision-making.

Major Accomplishments:

- Led a team of 63 scientists to produce a 340-page state of the knowledge report on climate impacts on marine ecosystems and ecosystem services. The report was used by the U.S. Global Change Research Project as the main technical input to the Oceans Chapter of the National Climate Assessment.
- Developed a plan of action for natural resource management personnel at the federal, state, and tribal levels to utilize as they prepare for and make policy/management decisions about climate change.
- Co-lead of the Oceans and Coasts Indicators Technical Team to develop a prototype indicator system for the U.S. Global Change Research Program, National Climate Assessment. The indicator and data products produced by this effort will support the USGCRP strategic goals via the indicator system, a web-based tool.
- Was lead author for sections of the National Fish, Wildlife, and Plants Climate Adaptation Strategy (NFWPCAS)
- Led the coordination and development of The Strategic Research Plan for Federal Research and Monitoring of Ocean Acidification that provides agencies guidelines and research priorities to advance our understanding of ocean acidification.

University of Maryland, Reproductive Physiology Postdoctoral Fellow

College Park, Maryland • 2009 – 2011

Duties: I performed molecular genetic laboratory experiments as part of a comprehensive study focused on endocrine disrupting chemicals, endocrinology of aquatic species, and basic reproductive physiology of fish. Our work was aimed at identifying risks to wildlife due to improperly managed waste water.

Major Accomplishments:

- As head of the laboratory, I played a critical role in hiring and mentored two graduate and six undergraduate students. I managed all financial resources related to their work, advised them on their research topics, trained them in several laboratory techniques, and reviewed their grant applications.
- My Principle Investigator was in his first year as a Professor so I led the procurement of materials and equipment, development of a safety strategy, and development of a record keeping process as part of overall laboratory start up.
- I wrote and received a grant from the Morris Foundation to fund my research – \$500k over 3 years.
- Was lead author on several peer reviewed journal articles.

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San Diego Zoo's Institute for Conservation Research, Heller Research Fellow

Escondido, California • 2007 – 2009

Duties: Planned and oversaw the establishment of a proteomics lab within the Reproductive Endocrinology Department. I coordinated and conducted laboratory research in the field of reproductive physiology and endangered species conservation. Participated in grant and manuscript writing/editing and near daily tours of the research facility. Actively sought opportunities to communicate the societies core issues involving wildlife conservation.

PROFESSIONAL MEMBERSHIPS

EcoWomen, Executive National Board Member

Washington DC • 2009 – 2015

Duties: I was responsible for the disburse all monies for the National Board and overseeing the keeping of proper accounting records. I was responsible for developing and approving the budget for the National Board as well as the State Chapters, screening Chapter applications for funds, tracking expenses and record keeping for all State Chapters. I lead efforts to identify and apply for grants at the National level as well as approving Chapter applications for grants, and for maintaining a library of final grants submitted by the National Board and the Chapters.

EDUCATION

Ph.D. in Physiology, Texas A&M University, 2008

College Station, Texas

B.S. in Animal and Veterinary Sciences, Clemson University, 2003

Clemson, South Carolina

PEER REVIEW PUBLICATIONS

1. **Howard, J.**, Schindler-Murray, L., Pidgeon, E., Godoy, F., Landis, E., Funk, J., Lovelock, C. Turning REDD+ Blue for coastal wetland conservation, climate change mitigation and adaptation. (in preparation)
2. **Howard, J.**, Altman, I., Kittinger, J., Kaufman, L., Agostini, V., Auster, P., Böerder, K., Bruno, J., Carr, M., Cook, R., Crowder, L., Gaines, S., Green, S., Hannah, L., Henderson, S., Munch, S., Oleson, K., Roman, J., Saini, R., Sandin, S., Witman, J. Can fisheries management achieve joint goals of human wellbeing and biodiversity conservation in coral reefs? A critical assessment and review (in preparation)
3. Clay, P., **Howard, J.**, Griffis, R., lead authors; Busch, S., Colburn, L., Himes-Cornell, A., Rumrill, S., & Zador, S. Oceans and Coasts Indicators: Understanding and Coping with Climate Change at the Land-Sea Interface. (in review with *Climatic Change*).
4. **Howard, J.**, McLeod, E., Thomas, S., Eastwood, E., Fox, M., Wenzel, L. & Pidgeon, E. (2017). The Potential of Integrating Blue Carbon into MPA Design and Management. *Aquatic Conservation*. 27(S1):100-115.
5. **Howard, J.**, Sutton-Grier, A., Herr, D., Kleypas, J., Landis, E., McLeod, E., Simpson, S. & Pidgeon, E. (2017). Clarifying the role of coastal and marine systems in climate mitigation. *Frontiers in Ecology*, 15, 42-50.

Jennifer F. Howard Ph.D.

6. Quinn, C., **Howard, J.**, Chen, C., Coffee, J., Quintela, C., Parker, B. & Smith, J. (2016). Adaptation and poverty reduction in Mozambique: an opportunity for developing countries to lead. *Climate Policy*, 1-5.
7. Alongi, D.M., Murdiyarso, D., Fourqurean, J.W., Kauffman, J.B., Hutahaean, A., Crooks, S., Lovelock, C.E., **Howard, J.**, Herr, D., Fortes, M. and Pidgeon, E., 2016. Indonesia's blue carbon: a globally significant and vulnerable sink for seagrass and mangrove carbon. *Wetlands ecology and management*, 24(1), pp.3-13.
8. Petes, L.E., **Howard, J.F.**, Helmuth, B.S. & Fly, E.K. (2014). Science integration into US climate and ocean policy. *Nature Climate Change*, 4, 671-677.
9. **Howard, J.F.**, Babij, E., Griffis R., et. al. (2013). Oceans and Marine Resources in a Changing Climate. *Oceanography and Marine Biology: An Annual Review*, 51, 71-192.
10. Staudt, A., Leidner, A., **Howard, J.**, Brauman, K., Dukes, J., Hansen, L., Paukert, C., Sabo, J. & Solórzano L. (2013). The added complications of climate change: understanding and managing biodiversity and ecosystems. *Frontiers in Ecology and the Environment* 11: 494–501.
11. **Farmer¹, J.L.**, Orlando, E.F. (2012). Creating Females? Developmental Effects of 17 α -Ethinylestradiol on the Mangrove Rivulus' Ovotestis, *Integrative and Comparative Biology*, 52(6):769–780
12. Ellestad, L.E., Cardon, M., Chambers, I.G., **Farmer¹, J.L.**, Hartig, P., Stevens, K., Villeneuve, D.L., Wilson, V. and Orlando, E.F., 2014. Environmental gestagens activate fathead minnow (*Pimephales promelas*) nuclear progesterone and androgen receptors in vitro. *Environmental science & technology*, 48(14), pp.8179-8187.
13. Ahn HW, **Farmer¹ JL**, Bazer FW, Spencer TE. Progesterone and Interferon tau Regulated Genes in the Ovine Uterine Endometrium. *Reproduction*. 2009 Nov;138(5):813-25
14. Dunlap KA, Erikson DW, Burghardt RC, White FJ, Reed KM, **Farmer¹ JL**, Spencer TE, Magness RR, Bazer FW, Bayless KJ, Johnson GA. Progesterone and Placentation Increase Secreted Phosphoprotein One (SPP1 or Osteopontin) in Uterine Glands and Stroma for Histotrophic and Hematotrophic Support of Ovine Pregnancy. *Biol Reprod*. 2008 Nov;79(5):983-90.
15. **Farmer¹ J**, Burghardt R, Jousan FD, Hansen P, Bazer F, Spencer T. Galectin-15 (LGALS15) Functions to Promote Trophectoderm Migration and Attachment. *FASEB J*. 2008 Feb;22(2):548-560.
16. Lewis S, **Farmer¹ J**, Burghardt R, Newton G, Adelson D, Bazer F, Spencer T. Galectin-15 (LGALS15): A Gene Confined to Sheep and Goats? *Biol Reprod*. 2007 Dec;77(6):1027-36.

REPORTS AND MANUALS

1. **Howard, J.**, Hoyt, S., Isensee, K., Pidgeon, E., Telszewski, M. (eds.) (2014). Coastal Blue Carbon: Methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrass meadows. Conservation International, Intergovernmental Oceanographic Commission of UNESCO, International Union for Conservation of Nature. Arlington, Virginia, USA.
2. Herr, D., E. Trines, **J. Howard**, M. Silvius & E. Pidgeon (2014). Keep it fresh or salty. An introductory guide to financing wetland carbon programs and projects. Gland, Switzerland: IUCN, CI and WI. iv + 46pp.
3. Griffis R. and **Howard J.** [Eds]. 2013. Ocean and Marine Resources in a Changing Climate: Technical Input into the 2013 National Climate Assessment. Washington DC; Island Press

¹Farmer is my maiden name