

## Biographical Sketch - Anne R. Kapuscinski

### ***Professional Preparation***

Swarthmore College, Biology, B.A. 1976  
Weyerhaeuser Company, Aquaculture Research Technician, 1976-77  
Oregon State University, Fisheries (Minor in Water Resources), M.S. 1980  
Oregon State University, Fisheries, Ph.D. 1984

### ***Appointments***

#### University of California, Santa Cruz

Director (inaugural) of Coastal Science & Policy Program  
Professor of Environmental Studies 2018-

#### Dartmouth College

Sherman Fairchild Distinguished Professor of Sustainability Science (inaugural holder) 2009 –2018  
Chair of Environmental Studies Program 2011-2014

#### University of Minnesota

Sea Grant Extension Specialist in Aquaculture and Biotechnology 1984- 2009  
Founding Fellow, Institute on the Environment 2007-2009  
Founding Director, Institute for Social, Economic, and Ecological Sustainability 1996-2009  
Professor, Dept. Fisheries, Wildlife and Conservation Biology 1994-2009  
Associate /Assistant Professor, Department of Fisheries and Wildlife 1989-1994/1984-1989

### ***Selected Relevant Publications***

Pavlowich, T., A. R. **Kapuscinski**, and D.G. Webster. 2019. Navigating socio-ecological tradeoffs in small-scale fisheries management: an agent-based population model of spotlight parrotfish, *Sparisoma viride*, for a Caribbean coral reef fishery. *Ecology and Society* 24(3):1. <https://doi.org/10.5751/ES-10799-240301>

Sarker, P.K., **Kapuscinski, A.R.**, Bae, A.Y., Donaldson, E., Sitek, A.J., Edelson, O.F., Fitzgerald, D.S., 2018. Towards sustainable aquafeeds: Evaluating substitution of fishmeal with lipid-extracted microalgal co-product (*Nannochloropsis oculata*) in diets of juvenile Nile tilapia (*Oreochromis niloticus*). *PLoS ONE* 13(7): e0201315. <https://doi.org/10.1371/journal.pone.0201315>

Pavlowich T. and A.R. **Kapuscinski** AR. 2017. Understanding spearfishing in a coral reef fishery: Fishers' opportunities, constraints, and decision-making. *PLoS ONE* 12(7): e0181617. <https://doi.org/10.1371/journal.pone.0181617>

Sarker, P.K., A.R. **Kapuscinski**, A. Lanois, E. Livesey, and K. Bernhard, M. Coley. 2016. Towards sustainable aquafeeds: complete substitution of fish oil with marine microalga *Schizochytrium* sp. improves growth and fatty acid deposition in juvenile Nile tilapia (*Oreochromis niloticus*). *PLoS ONE* 11(6): e0156684. <https://doi.org/10.1371/journal.pone.0156684>

Sarker, P.K., M.M. Gamble, S. Kelson and A. R. **Kapuscinski**. 2015. Nile tilapia (*Oreochromis niloticus*) show high digestibility of lipid and fatty acids from marine *Schizochytrium* sp. and of protein and essential amino acids from freshwater *Spirulina* sp. feed ingredients. *Aquaculture Nutrition*: 11pp. <https://doi.org/10.1111/anu.12230>

**Kapuscinski**, A.R. and P.K. Sarker. 2015. Aquaculture feed formulation and aquaculture product produced with the same. US Patent Application Publication No. US2018/0303129 A1.

Gerst, M.D., M.E. Cox, M. Laser, K. Locke, and A. **Kapuscinski**. 2014. A taxonomic framework for assessing governance challenges and environmental effects of integrated food-energy systems. *Environmental Science & Technology*: 8 pp. & Suppl. Info. DOI [10.1021/es504090u](https://doi.org/10.1021/es504090u)

Pennington, K.M. and A.R. **Kapuscinski**. 2011. Predation and food limitation influence fitness traits of growth-enhanced transgenic and wild-type fish. *Transactions of the American Fisheries Society* 140:221- 234. <http://www.tandfonline.com/doi/abs/10.1080/00028487.2011.545012>

Schmitt Olabisi, L., A.R. **Kapuscinski**, K. Johnson, P. Reich, B. Stenquist, and K. Draeger. 2010. Using scenario visioning and participatory system dynamics modeling to investigate the future: Lessons from Minnesota 2050. *Sustainability* 2(8): 2686-2706. [www.mdpi.com/2071-1050/2/8/2686](http://www.mdpi.com/2071-1050/2/8/2686)

### **Other Relevant Manuscripts**

Sarker, P.K., **Kapuscinski, A.R.**, Vandenberg G.W., Proulx E., Sitek A.J. 2019. Towards sustainable and ocean-friendly aquafeeds: Evaluating a fish-free feed for rainbow trout (*Oncorhynchus mykiss*) using three marine microalgae species. *Elementa: Science of the Anthropocene: in revision*.

Sarker, P.K., **Kapuscinski, A.R.**, Fitzgerald, D.F., Nash, H.M., Tsukui, T., DeSouza, A.V.B., Chen, E., Schelling, B.M., 2019. Towards sustainable aquafeeds: Creating a fish-free feed for Nile tilapia (*Oreochromis niloticus*) using microalgae and co-products. *Scientific Reports*: in preparation.

McKuin, B., Sarker, P., Fitzgerald, D., Bae, A., Campbell, J.E., Sabarsky, M., and **Kapuscinski, A.** (2019). Towards sustainable fish-free aquafeeds: Environmental benefits of complete substitution of fishmeal and fish oil with marine microalgae, *Environmental Science and Technology*: in preparation.

### **Synergistic Activities**

**Selected Honors:** 2019 Ocean Award: Innovation Award from [Boat International](#) and [Blue Marine Foundation](#); Rachel Carson Environmental Award from Natural Products Association (2014); Distinguished Service Award, Conservation Biology Society (2008); Distinguished Graduate, Oregon State University Dept. of Fisheries & Wildlife, 2003; Pew Fellow in Marine Conservation (2001); Honor Award from US Secretary of Agriculture (1997); Walter Jones Memorial Fisheries Development Award, Oregon State University, 1984; Sea Grant Association National Student Award (1983).

**National Academy of Science Committees – Chair:** [Strengthening Sustainability Programs and Curricula in Undergraduate and Graduate Education](#) (since 2018), a committee of the National Academies of Science, Engineering and Medicine; Research on Ecological Effects of GEOs on Wildlife and Habitats, 2007-2008. **Member:** Atlantic Salmon of Maine, 2001-2004; Bioconfinement of GEOs, 2002-2004; Salmon and Society in the Pacific Northwest, 1992-1995.

**Editorial – *Elementa: Science of the Anthropocene*** (<http://elementascience.org/>); inaugural Editor in Chief, [Sustainability Transitions](#) domain; *Biological Invasions*, Guest Editor of special issue on genetic biocontrol of invasive fish, 2011-13; Lead Editor *Environmental Risk Assessment of Genetically Modified Organisms*, CABI Publishers (Vols. 1- 4) 2003-09.

**Union of Concerned Scientists – [Chair of Board of Directors](#)** since Oct 2016. Board member since 2000. Fiduciary and oversight responsibilities, cross-program strategic advice, scientific advice on food and environment, advisory committee on Kendall Post-Doctoral Fellowships, broader impacts involvement in UCS Science Network, mass media interviews and op-eds, and various public programs.

**Consultative Group on International Agriculture Research (CGIAR)** – WorldFish Center Board of Trustees (2003-07) and Chair Science Advisory Board (2007-2011).

**Scientific Advisor to US and State Agencies – U.S.:** Great Lakes Fishery Commission; Food and Drug Administration (FDA); National Research Council (Nat'l Academy of Science); U.S Congress testimony and briefings to House Merchant Marine and Fisheries Committee, Senate Commerce Committee; U.S. Congress Office of Technology Assessment (OTA); Bonneville Power Administration; Advising Secretary of USDA including Advisory Committee on Agricultural Biotechnology, Agricultural Biotechnology Advisory Committee (ABRAC), and Vice-Chair of ABRAC. **State:** Chair, MN Governor's Task Force on Aquaculture; Chair, MN Governor's Aquaculture Advisory Committee; Coordinator, Aquaculture Discharge Workgroup, Minnesota Dept. of Agriculture.

**Scientific Advisor to International & Intergovernmental Agencies** – Global Environment Facility- Scientific and Technical Advisory Panel; United Nations: Food and Agriculture Organization, World Health Organization, UN Environment Program; Organization for Economic Cooperation and Development (OECD); EU Food Safety Authority; OIE World Organization for Animal Health.