

Aaron A. Koning

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CURRENT APPOINTMENTS

- 2020- **Postdoctoral Research Fellow**, University of Nevada, Reno
Faculty Mentors: Dr. Zeb Hogan & Dr. Sudeep Chandra
Project: Evaluating the efficacy of spatial conservation areas for conserving fish and augmenting Mekong River fisheries in Tonle Sap Lake, Cambodia.
- 2020- **Consultant**, Conservation International
Project: Assessing efficacy of community fishery management on Tonle Sap Lake, Cambodia *and* Implementing a framework for community conservation of subsistence fisheries in rivers of the Cardamom Mountains, Cambodia.
- 2019- **National Geographic Explorer**
Project: Using riverine reserves to conserve biodiversity and support local fisheries.

PREVIOUS PROFESSIONAL APPOINTMENT

- 2018 **CORNELL ATKINSON SUSTAINABILITY POSTDOCTORAL RESEARCH FELLOW**
- Faculty Mentors: Dr. Peter B. McIntyre (Cornell University), Michele Thieme (World
2020 Wildlife Fund), Robin Abell (Conservation International).
Project: Assessing the long-term feasibility of riverine reserves to sustain inland fisheries and biodiversity.

EDUCATION

- 2018 **PH.D. ZOOLOGY**, University of Wisconsin-Madison, Madison, WI
Faculty Advisor: Dr. Peter B. McIntyre
Dissertation Title: Riverine reserves: the conservation benefits of spatial protection for rivers in the context of environmental change.
- 2007 **B.S. BIOLOGY**, Wheaton College, Wheaton, IL
Faculty Advisor: Dr. Kristen Page

PEER-REVIEWED PUBLICATIONS

- [13] Costello DM, et al. *In Review*. Global patterns and controls of nutrient immobilization on decomposing cellulose in riverine ecosystems *Submitted to Global Biogeochemical Cycles*.
- [12] Kelson SJ, Hogan ZS, Jerde CL, Chandra S, Ngor PB, **Koning AA**. Fishing methods matter: Comparing the community and trait composition of the Dai (Bagnet) and gillnet fisheries in the Tonle Sap River. *Water* 13(13):1767
- [11] Jerde CL, Mahon AR, Campbell T, McElroy ME, Pin K, Childress JN, Armstrong MN, Zehnpfennig JR, Kelson SJ, **Koning AA**, Ngor PB, Nuon V, So N, Chandra S, Hogan ZS. *In Review*. Are genetic reference libraries sufficient for environmental DNA metabarcoding of Mekong River Basin fish? *Water* 13(14):1904

- [10] Lynch AJ, et al. (Book Chapter) *Accepted*. Societal values of inland fishes. In K Tockner & T. Mehner (Eds.), *Encyclopedia of Inland Waters*, 2nd Edition.
- [9] **Koning AA** and McIntyre PB. 2021 Grassroots conservation reserves rescue a river food web from cascading impacts of intensive fishing. *Frontiers in Ecology and the Environment*. Published online 19 Jan. 2021.
- [8] Cooke SJ, et al. 2021. A global perspective on the influence of the COVID-19 pandemic on freshwater fish biodiversity. *Biological Conservation* 253:108932.
- [7] **Koning AA**, Perales KM, Fluet-Chouinard E, McIntyre PB. 2020. A network of grassroots reserves protects tropical river fish diversity. *Nature* 588:631–635.
- [6] Tiegs SD, et al. 2019. Global patterns and drivers of ecosystem functioning in rivers and riparian areas. *Science Advances* 5(1): eaav0486.
- [5] **Koning AA** et al. 2017. Aquatic ecosystem impacts of land sharing versus sparing: nutrient loading to Southeast Asian rivers. *Ecosystems* 20(2):393–405.
- [4] Winemiller KO et al. 2016. Balancing hydropower and biodiversity in the Amazon, Congo, and Mekong. *Science* 351(6269):128–129.
- [3] McIntyre PB, et al. 2016. Conservation of migratory fishes in freshwater ecosystems. In GP Closs, M Krkosek, JD Olden (Eds.), *Conservation of Freshwater Fishes* (pp. 324–360). Cambridge, UK: Cambridge University Press.
- [2] Childress ES, **Koning AA**. 2013. Polydomous *Crematogaster pilosa* (Hymenoptera: Formicidae) colonies prefer highly connected habitats in a tidal salt marsh. *Florida Entomologist* 96(1):235–237.
- [1] Cooperman MS, et al. 2012. A watershed moment for the Mekong: newly announced community use and conservation areas for the Tonle Sap Lake may boost sustainability of the world's largest inland fishery. *Cambodian Journal of Natural History* 2:101–106.

MANUSCRIPTS IN PREPARATION [DRAFTS AVAILABLE UPON REQUEST]

- [2] **Koning AA** and McIntyre PB. Principles for the design of riverine reserves.
- [1] **Koning AA**, Swanson V†, McIntyre PB. High plasticity of gut-length and trophic position revealed in Southeast Asian fishes.
† undergraduate mentee.

SELECTED FELLOWSHIPS, GRANTS & AWARDS

National Geographic Early Career Award, 2019–2021.	\$10,000
Cornell Atkinson Sustainable Biodiversity Grant, 2019.	\$7,000
Cornell Atkinson Postdoctoral Fellowship, Cornell University, 2018–2020.	\$151,820
NSF IGERT Trainee, University of Wisconsin-Madison, 2016–2018.	\$83,958
NSF Graduate Research Fellowship, 2011–2015.	\$157,353
NSF Doctoral Dissertation Improvement Grant, 2016–2018.	\$15,860
Mustard Seed Foundation Harvey Fellowship, 2013–2015.	\$40,000
IGERT Small Grant Competition Award, 2018.	\$8,000
IGERT Small Grant Competition Award, 2016–2017.	\$2,420
Maleug Award, University of Wisconsin Center for Limnology, 2016.	\$1,000
Graduate Research Grant, University of Wisconsin, Dept. of Zoology, 2013.	\$2,900
Graduate Research Grant, University of Wisconsin, Dept. of Zoology, 2012.	\$3,450

Anna G. Birge Award, University of Wisconsin Center for Limnology, 2012.

\$2,000

TEACHING, MENTORSHIP & OUTREACH

TEACHING FACULTY – BIO 342 Fish Ecology and Management Summer 2021

Au Sable Institute of Environmental Studies

Developed and taught a 5-week, field-intensive undergraduate course in northern Michigan

LEAD INSTRUCTOR – MSID 4001 Sustainability and the Environment 2015-2016

University of Minnesota Studies in International Development Program

Taught advanced course covering global environmental issues within the context of Thailand

LEAD INSTRUCTOR – People, Ecology & Development 2014-2016

International Sustainable Development Studies Institute, Chiang Mai, Thailand

Lectured undergraduates on global environmental problems facing coastal Thai communities

TEACHING ASSISTANT – Zoology 101 Animal Biology

University of Wisconsin-Madison

2012

Facilitated weekly discussions of introductory material ranging from cells to ecosystems

TEACHING ASSISTANT – Zoology 102 Animal Biology Lab

University of Wisconsin-Madison

2011

Led weekly laboratory investigations of organisms across animal phyla

ECOLOGY CURRICULUM DEVELOPER – People, Ecology & Development Program 2009-2011

International Sustainable Development Studies Institute, Chiang Mai, Thailand

Wrote materials and facilitated ecological field studies for several undergraduate courses

STUDENT RESEARCH MENTOR – Zoology 152 Introductory Biology

University of Wisconsin-Madison

Direct mentor for three undergraduate researchers, including a Holstrom Fellow award-winner for excellence in undergraduate research.

SELECTED OUTREACH ACTIVITIES

Volunteer, Center for Limnology Hasler Laboratory Public Open House 2011, 2012, 2013

Guest Instructor, Limnology on the Lake for middle school students 2012, 2013

MEDIA COVERAGE

Forbes, Research featured in online article, 'Climate and energy illustrate potential to liberate the good trends from the bad,' published online 8 March 2021.

<https://www.forbes.com/sites/jeffopperman/2021/03/08/climate-and-energy-illustrate-potential-to-liberate-the-good-trends-from-the-bad/?sh=140fe7032ab5>

National Geographic, Research featured in online article, 'This Thai village created a tiny fish reserve years ago. Today, it's thriving,' published online 12 January 2021.

<http://on.natgeo.com/2XAONKo>

National Geographic, Research featured in online article, 'River sanctuaries help giant fish recover in Southeast Asia,' published online 25 April 2019.

<https://www.nationalgeographic.com/environment/2019/04/sanctuaries-help-fish-recover-southeast-asia/>

INVITED SEMINARS

Koning AA. Riverine reserves: testing the efficacy and impacts of community-based protection on Southeast Asian fishes. Shedd Aquarium, Chicago, IL. Jan 27. Host: Karen Murchie 2020

Koning AA. Riverine reserves: testing the efficacy and impacts of community-based protection for inland fisheries. World Wildlife Fund, Washington DC. Jan 21. Host: Michele Thieme 2020

Koning AA. Riverine reserves: testing the efficacy and impacts of spatial protection for tropical inland fisheries. University of Illinois, Illinois Natural History Survey, Champaign-Urbana, IL. Nov 21. Hosts: David Philipp & Julie Claussen 2019

Koning AA. Trophic consequences of intensive harvest cascade through a tropical river food web. Carleton University, Ottawa Canada. Feb 1. Host: Steven J. Cooke 2019

PRESENTATIONS

Koning AA. Ongoing Mahseer research in Thailand. Opening Keynote at the 2nd International Mahseer Conference, Chiang Mai, Thailand. 2020

Koning AA, Perales KM, Fluet-Chiounard E, McIntyre PB. Community-based reserves benefit fish and fishers in Southeast Asia's Salween River Basin. American Fisheries Society Annual Meeting. Reno, NV. 2019

Williams R, Philipp DP, Claussen JE & **Koning AA.** Using native fish conservation areas to conserve mahseer species in Bhutan and Thailand. American Fisheries Society Annual Meeting. Reno, NV 2019

Koning AA. Grassroots conservation reserves effectively protect Mahseer-dominated foodwebs in Southeast Asian Rivers. 1st International Mahseer Conference, Paro, Bhutan. 2019

Koning AA & McIntyre PB. Riverine reserves: Can spatial protection conserve freshwater biodiversity and maintain inland fisheries? University of Wisconsin Department of Integrative Biology Seminar. Madison, WI. 2018

Koning AA & McIntyre PB. Grassroots reserves protect tropical river food webs. University of Wisconsin Ecology Symposium. Madison, WI. 2018

Koning AA & McIntyre PB. A tropic cascade: fish mediate top-down control on algal biomass inside and outside of reserves. Ecological Society of America Annual Meeting. Portland, OR. 2017

Koning AA & McIntyre PB. Riverine reserves: migrating principles of marine reserve design upstream. Society for Freshwater Science Annual Meeting. Raleigh, NC. 2017

Scott Tiegs and CELLDEX Consortium. Global-scale patterns and drivers of organic matter decomposition in streams and riparian zones. Society for Freshwater Science Annual Meeting. Raleigh, NC. 2017

Koning AA & McIntyre PB. Limitation and landcover: nutrient status and limitation within tributaries of two major Southeast Asian rivers. Ecological Society of American Annual Meeting. Sacramento, CA. 2014

Koning AA. Top-down control of ecosystem production in aquatic ecosystems. Wheaton College, Wheaton, IL

PROFESSIONAL SERVICE

Co-Chair for the 2nd International Mahseer Conference, Chiang Mai, Thailand, Feb 11–15 2020

Scientific Advisory Committee Member, Fisheries Conservation Foundation 2019-present

Reviewer for Harvey Fellowship Program 2013-present

Resource Person for NSF Graduate Research Fellowship applicants 2013-present

Ad-hoc reviewer: *Science* (co-review), *Science Advances* (co-review), *Ecological Applications*, *Ecology* (co-review), *Ecosphere* (co-review), *Fish and Fisheries* (co-review), *Inland Waters*, *Water*, *Ecology of Freshwater Fish*, *Journal of North American Fisheries Management*, *African Journal of Ecology*, *Journal of Molluscan Studies*

Membership: Ecological Society of America, Society for Freshwater Science, American Fisheries Society