

CURRICULUM VITAE

**Bastian Bentlage**

Assistant Professor of Bioinformatics  
Marine Laboratory  
University of Guam  
Mangilao, GU 96923

**EDUCATION**

The University of Kansas

Ph.D. with honors, Ecology & Evolutionary Biology, 2006-2012

Dissertation: “Phylogenetic systematics, taxonomy, and biogeography of jellyfish (Cnidaria: Medusozoa).” Major advisor: Pauly Cartwright Committee: Allen G. Collins, Mark T. Holder, Jorge Soberón, Xingong Li

Leibniz Universität Hannover (Germany)

Diplom, Zoology, Ecology and Hydrobiology, 2003-2006

Thesis: “Phylogeography of *Pericharax heteroraphis* (Porifera) from the Great Barrier Reef (Australia).” Advisor: Gert Wörheide

Christian-Albrechts-Universität Kiel (Germany)

Vordiplom (pre-degree), Biology, 2000-2003

**PROFESSIONAL POSITIONS AND APPOINTMENTS**

2016-present	Assistant Professor of Bioinformatics, Marine Laboratory, University of Guam
2015-2016	Peter Buck Postdoctoral Fellow, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution
2012-2015	Faculty Research Associate, Department of Cell Biology and Molecular Genetics, University of Maryland. PI: Charles F. Delwiche
2012-2015	Research Collaborator, National Museum of Natural History, Smithsonian Institution
2006-2012	Graduate Research and Teaching Assistant, Department of Ecology and Evolutionary Biology, The University of Kansas

**GRANTS AND FELLOWSHIPS**

2015-2016	Smithsonian Peter Buck Postdoctoral Fellowship: “Loss and gain of complex life history characters in trachyline jellyfish (Cnidaria: Medusozoa: Hydrozoa)” \$96,000 stipend & \$8,000 research allowance
2009-2012	NSF DEB-0910237: “DISSERTATION RESEARCH: Biogeography of Open Ocean Hydrozoans (Cnidaria: Medusozoa)” \$14,990, PI Bastian Bentlage, co-PI Pauly Cartwright
2009-2010	Smithsonian Institution Predoctoral Fellowship: “Biogeography of Open Ocean Jellyfishes” \$27,000 stipend & \$4,000 research allowance

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2007-2008 PADI Foundation: “An Integrative Approach to Understanding Species Distributions and Relationships of Australiasian Box-Jellyfishes (Cubozoa; Cnidaria)” \$5,970, PI Bastian Bentlage

### TEACHING EXPERIENCE

#### Courses Taught

Evolutionary Biology Seminar (Biol. 412), University of Kansas, Fall 2006, Spring 2011  
Topics in Systematics (Biol. 701), University of Kansas, Fall 2011  
Physiology of Organisms Laboratory (Biol. 408), University of Kansas, Spring 2007 & 2012  
Introductory Biology Laboratory (Biol. 150), University of Kansas, Fall 2006  
Molecular Systematics Laboratory, Leibniz Universität Hannover, Summer 2004  
Comparative Animal Anatomy Laboratory, Leibniz Universität Hannover, Spring 2004

#### Undergraduates, Interns, and Volunteers Mentored

2015 Roberta Bracciale (Graduate from the University of Salento, Italy)  
2013-2015 Andy Park (Undergraduate Student, University of Maryland)  
2012-2014 Travis Rogers (Undergraduate Student, University of Maryland)  
2010 Gabby Labove (Undergraduate Student, American University)  
2009 & 2014 Tara H. Lynn (Smithsonian Minority Internship Program)  
2009 Senora Cressman (Smithsonian Alternative Spring Break Program)

#### Public Outreach and Education

“Diversity of Marine Invertebrates”: Training of volunteers in marine invertebrate diversity and evolution, National Museum of Natural History, Washington DC, Fall 2016.  
“The secret life of jellyfish”: Hands-on lab for teens and pre-teens on the live cycle of jellyfish using live animals in the Q?rius science education space, National Museum of Natural History, Washington DC, Summer 2015.  
“[Things that Sting](#)”: Hands-on lab for teens and pre-teens on cnidarians in the Q?rius science education space, National Museum of Natural History, Washington DC, Spring 2015.  
“Plants in a drop”: Hands-on microscopy labs (2) for teens and pre-teens in the Q?rius science education space, National Museum of Natural History, Washington DC, Spring 2014.  
Presentations (2) on algal diversity and the evolution of photosynthetic life to the general public through the “The Scientist is in” program of the National Museum of Natural History, Washington DC, Spring 2014.  
Introduction to marine invertebrates for primary school children at Raintree Montessori Elementary, Lawrence KS, Fall 2010.  
Presentations (6) on jellyfish and their kin to the general public through the “The Scientist is in” program of the National Museum of Natural History, Washington DC, Spring 2010.  
Contributor to the “Species Naming contest for the Bonaire Banded Box Jellyfish” that involved the public in the process of naming a new species of box jellyfish (details in the June section of [www.yearofscience2009.org](http://www.yearofscience2009.org), Spring-Summer 2009).  
Presentation on marine invertebrates for the general public at Natural History Museum, University of Kansas, Lawrence KS, Spring 2007.

**BIBLIOGRAPHY** (\* indicates undergraduate co-authors)

## Submitted/In Review

1. Grange L, Smith CR, Lindsay DJ, **Bentlage B**, Youngbluth MJ (in review) High abundance of the epibenthic trachymedusa *Ptychogastris polaris* (Hydrozoa, Trachylina) in subpolar fjords along the West Antarctic Peninsula.
2. Lindsay DJ, Grossmann MM, **Bentlage B**, Collins AG, Minemizu R, Hopcroft RR, Miyake H, Umetsu-Hidaka M & Nishikawa J (in review) The perils of online biogeographic databases: A case study with the “monospecific” genus *Aegina*.
3. Narwani A, **Bentlage B**, Alexandrou MA, Fritschie KJ, Delwiche C, Oakley TH, Cardinale, BJ (in review) Transcriptomics of species interactions and coexistence in freshwater green algae.

## Peer-Reviewed Journal Articles

1. Acevedo MJ, Straehler-Pohl I, Morandini AC, Stampar SN, **Bentlage B**, Matsumoto G, Yanagihara A, Toshino S, Bordehore C, Fuentes VL (in press) Revision of the genus *Carybdea* (Cnidaria: Cubozoa: Carybdeidae): the identity of its type species *Carybdea marsupialis*. *Zootaxa*
2. Kayal E, **Bentlage B**, Collins AG (2016) Insights into the transcriptional and translational mechanisms of linear organellar chromosomes in the box jellyfish *Alatina alata* (Cnidaria: Medusozoa: Cubozoa). *RNA Biology* 9: 799-809.
3. Lawley JW\*, Lewis Ames C, **Bentlage B**, Yanagihara A, Goodwill R, Kayal E, Hurwitz K, Collins AG (2016) Distribution of the box jellyfish *Alatina alata*: circumtropical species or multiple invasions? *Biological Bulletin* 231
4. **Bentlage B**, Rogers TS\*, Bachvaroff TR and Delwiche CF (2016) Complex ancestries of isoprenoid synthesis in dinoflagellates. *Journal of Eukaryotic Microbiology* 63: 123-137.
5. Kayal E, **Bentlage B**, Cartwright P, Yanagihara AA, Lindsay DJ, Hopcroft RR and Collins AG (2015) Phylogenetic analysis of higher-level relationships within Hydrozoa (Cnidaria: Hydrozoa) using mitochondrial genome data and insight into their mitochondrial transcription. *PeerJ* 3: e1403.
6. Lindsay DJ, Grossman MM, Nishikawa J, **Bentlage B**, Collins AG (2015) DNA barcoding of pelagic cnidarians: current status and future prospects. *Bulletin of the Plankton Society of Japan* 62: 39-43.
7. Alexandrou MA, Cardinale BJ, Hall J, Delwiche CF, Fritschie K, Narwani A, Venail P, **Bentlage B**, Pankey M and Oakley T (2015) Evolutionary relatedness does not predict competition and co-occurrence in natural or experimental communities of green algae. *Proceedings of the Royal Society B* 282: 20141745.
8. Cooper ED, **Bentlage B**, Gibbons TR, Bachvaroff TR and Delwiche CF. (2014) Metatranscriptome profiling of a harmful algal bloom. *Harmful Algae* 37: 75-83.
9. **Bentlage B**, Peterson AT, Barve N and Cartwright P (2013) Plumbing the depths: Extending

- ecological niche modeling and species distribution modeling in three dimensions. *Global Ecology and Biogeography* 22: 952-961.
10. **Bentlage B** (2013) Description of the chirodropid box jellyfish *Chiropsella rudloei*, n. sp. (Cnidaria: Cubozoa) from Madagascar. *Marine Biodiversity Records* 6: e118.
  11. Lewis C, **Bentlage B**, Yanagihara A, Gillan W, van Blerk J, Keil D, Bely AE, Collins AG (2013) Redescription of *Alatina alata* (Reynaud 1830) (Cnidaria: Cubozoa) from Bonaire, Dutch Caribbean. *Zootaxa* 3737: 473-487.
  12. **Bentlage B** and Shcheglovitova M (2012) NichePy: modular tools for estimating the similarity of ecological niche and species distribution models. *Methods in Ecology and Evolution* 3: 484-489.
  13. **Bentlage B** and Lewis C (2012) An illustrated key and synopsis of the families and genera of carybdeid box jellyfish (Cnidaria: Cubozoa: Carybdeida), with emphasis on the “Irukandji family” (Carukiidae). *Journal of Natural History* 41/42: 2595-2620.
  14. Kayal E, **Bentlage B**, Collins AG, Kayal M, Pirro S and Lavrov D (2012) Evolution of linear mitochondrial genomes in medusozoan cnidarians. *Genome Biology and Evolution* 4: 1-12.
  15. Collins G, **Bentlage B**, Gillan W, Lynn TH\*, Morandini AC and Marques AC (2011) Naming the Bonaire banded box jelly, *Tamoya ohboya*, n. sp. (Cnidaria: Cubozoa: Tamoyidae). *Zootaxa* 2753: 53-68. *This work was part of a public species naming contest for the Year of Science 2009 celebration.*
  16. **Bentlage B**, Cartwright P, Yanagihara AA, Lewis C, Richards GS and Collins AG (2010) Evolution of box jellyfish (Cnidaria: Cubozoa), a group of highly toxic invertebrates. *Proceedings of the Royal Society B* 277: 493–501. *Cover article.*
  17. **Bentlage B** (2010) *Carybdea alata* auct.: rediscovery of the *Alatina grandis* type. *Zootaxa* 2713: 52-54.
  18. **Bentlage B**, Peterson AT and Cartwright P (2009) Inferring distributions of chirodropid box-jellyfishes (Cnidaria: Cubozoa) in geographic and ecological space using ecological niche modeling. *Marine Ecology Progress Series* 384: 121-133.
  19. Lewis C and **Bentlage B** (2009) Clarifying the identity of the Japanese Habu-kurage, *Chironex yamaguchii*, sp. nov. (Cnidaria: Cubozoa: Chirodropida). *Zootaxa* 2030: 59-65.
  20. Collins AG, **Bentlage B**, Lindner A, Lindsay D, Haddock SHD, Jarms G, Norenburg JL, Jankowski T and Cartwright P (2008) Phylogenetics of Trachylina (Cnidaria: Hydrozoa) with new insights on the evolution of some problematical taxa. *Journal of the Marine Biological Association of the United Kingdom* 88: 1673-1685.
  21. **Bentlage B** and Wörheide G (2007) Low genetic structuring among *Pericharax heteroraphis* (Porifera: Calcarea) populations from the Great Barrier Reef (Australia), revealed by analysis of nrDNA and nuclear intron sequences. *Coral Reefs* 26: 807-816.
  22. Collins AG, **Bentlage B**, Matsumoto GI, Haddock SHD, Osborn KJ and Schierwater B

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(2006) Solution to the phylogenetic enigma of *Tetraplatia*, a worm-shaped cnidarian. *Biology Letters* 2: 120-124.

### PROFESSIONAL PRESENTATIONS

Invited Symposia and Seminars

1. **Bentlage** (2015) “Metamorphosis in the life of jellyfish” Senate of Scientists lightning talk series, National Museum of Natural History, Smithsonian Institution, Washington, DC.
2. **Bentlage B** (2013) “Jellyfish distributions in the open oceans” Chesapeake Biological Laboratory, Center for Environmental Science, University of Maryland, Solomons, MD.
3. **Bentlage B** (2013) “Jellyfish distributions in the open oceans” Institute of Marine and Environmental Technology, Baltimore, MD.
4. **Bentlage B**, Peterson AT, Xingong L, Collins AG, Cartwright P (2009) “Biogeography of open ocean jellyfishes: Integrating ecological niche modeling & phylogeography in a 3D environment” 10<sup>th</sup> International Congress of Ecology, Brisbane, AUS.

Contributed Presentations and Published Abstracts (last 5 years)

1. **Bentlage B** (2016) “Loss of metagenesis and the evolution of a parasitic life style in trachyline jellyfish (Cnidaria: Hydrozoa)” 5<sup>th</sup> Jellyfish Blooms Symposium, Barcelona, Spain.
2. **Bentlage B**, Delwiche CF (2013) “Comparative transcriptomics of green algae: Relating species interactions to differential gene expression” 10<sup>th</sup> International Phycological Congress – Algae in a Changing World, Orlando, FL.
3. **Bentlage B** (2013) “Species distributions in the open oceans: integrating distribution models and population genomics” Annual Meeting of the Society for Integrative and Comparative Biology (SICB), San Francisco, CA.

### PROFESSIONAL SERVICE

NSF panelist

NSF DEB panel, March 2014

Journal editorial review board

Zootaxa subject editor, 2014-present

Journal articles reviewed for

Biological Journal of the Linnean Society, BMC Evolutionary Biology, Ecology, GIScience & Remote Sensing, Global Ecology and Biogeography, Hydrobiologia, Integrative and Comparative Biology, Invertebrate Systematics, Journal of Biogeography, Marine Biology, Molecular Ecology, Molecular Phylogenetics and Evolution, PeerJ, Plankton & Benthos Research, PLOS ONE, Scientia Marina, Scientific Reports, Zootaxa