

February 28, 2019

CURRICULUM VITAE

Klaus B. Huebert

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I. EDUCATION

2009	PhD, University of Miami, Rosenstiel School of Marine and Atmospheric Science, Marine Biology and Fisheries
1999	BA, Goshen College, Biology

II. PROFESSIONAL BACKGROUND

2016-present	Associate Research Scientist, University of Maryland Center for Environmental Science, Horn Point Laboratory, Cambridge, MD
2016	Visiting Research Associate Scientist, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD
2010-2015	Research Scientist, University of Hamburg, Institute for Hydrobiology and Fisheries Science, Hamburg, Germany
2009-2010	National Research Council Research Associate, Southeast Fisheries Science Center, Miami, FL
2002-2009	Graduate Fellow / Assistant, University of Miami, Rosenstiel School of Marine and Atmospheric Science, Miami, FL
1999-2002	Research Technologist, Northwestern University, Feinberg School of Medicine, Chicago, IL

III. AWARDS AND SPECIAL RECOGNITION

2011	ASLO Early Career Travel Award, Aquatic Sciences Meeting, San Juan, PR
2009	John Blaxter Award, Best Student Poster, Larval Fish Conference, Portland, OR
2008	Harding Michel Fellowship, University of Miami
2008	2nd place, Best Student Platform Presentation, American Fisheries Society Florida Chapter Meeting, Ocala, FL
2008	3rd Place, Rowland Award, Best Student Paper in Marine Biology, University of Miami
2006	Donald deSylva Award, Outstanding Fisheries Related Research, University of Miami
2005-2008	Harry Vernon and Circle of Friends Scholarships, Miami Billfish Tournament
2006	Sally Richardson Award, Best Student Oral Paper, Larval Fish Conference, Lake Placid, NY
2005	Student Travel Award (to Lizard Island Research Station, Australia), Marine Science Graduate Student Organization, University of Miami
2002-2005	Robert Maytag Fellowship, University of Miami

IV. RESEARCH

A. Areas of Professional Expertise

Ecological models of fish

Analysis and synthesis of biological, oceanographic, and environmental data

Ecology and physiology of aquatic animals

Field and lab studies of fish early life history stages

B. Publications

1. Peer-reviewed Publications

Zamora LM¹, Kahn RA, **Huebert KB**, Stohl A, and Eckhardt S (2018) A satellite-based estimate of aerosol-cloud microphysical effects over the Arctic Ocean. *Atmospheric Chemistry and Physics*, 18:14949-14964. doi:10.5194/acp-18-14949-2018 ([link](#))

1: Recipient of a NASA Goddard Space Flight Center, Climate and Radiation Laboratory 2019 Annual Peer Award for the best first author paper.

Huebert KB, Pätsch J, Hufnagl M, Kreuz M, and Peck MA (2018) Modeled larval fish prey fields and growth rates help predict recruitment success of cod and anchovy in the North Sea. *Marine Ecology-Progress Series*, 600:111-126. doi:10.3354/meps12615 ([link](#))

Kanstinger P, Beher J, Grenzdörffer G, Hammer C, **Huebert KB**, Stepputis D, and Peck MA (2018) What is left? Macrophyte meadows and Atlantic herring (*Clupea harengus*) spawning sites in the Greifswalder Bodden, Baltic Sea. *Estuarine, Coastal and Shelf Science*, 201:72-81. doi:10.1016/j.ecss.2016.03.004 ([link](#))

Peck MA, Arvanitidis C, Butenschön M, Canu DM, Chatzinikolaou E, Cucco A, ... van de Wolfshaar KE (2018) Projecting changes in the distribution and productivity of living marine resources: A critical review of the suite of modeling approaches used in the large European project VECTORS. *Estuarine, Coastal and Shelf Science*, 201:40-55. doi:10.1016/j.ecss.2016.05.019 ([link](#))

Nagelkerken I, **Huebert KB**, Serafy JE, Grol GG, Dorenbosch M, and Bradshaw CJA (2017) Highly localized replenishment of coral reef fish populations near nursery habitats. *Marine Ecology-Progress Series*. doi:10.3354/meps12062 ([link](#))

Queirós AM, **Huebert KB**, Keyl F, Fernandes JA, Stolte W, Maar M, ... Peck MA (2016) Solutions for ecosystem-level protection of ocean systems against climate change. *Global Change Biology*, 22:3927–3936. doi:10.1111/gcb.13423 ([link](#))

Moyano M, Illing B, Peschutter P, **Huebert KB**, and Peck MA (2016) Thermal impacts on the growth, development and ontogeny of critical swimming speed in Atlantic herring larvae. *Comparative Biochemistry and Physiology part A: Molecular and Integrative Physiology*, 197:23-34. doi:10.1016/j.cbpa.2016.02.020 ([link](#))

Huebert KB and Peck MA (2014) A day in the life of fish larvae: modeling foraging and growth using Quirks. *PLOS ONE*, 9:e98205. doi:10.1371/journal.pone.0098205 ([link](#))

Hufnagl M, **Huebert KB**, and Temming A (2013) How does seasonal variability in growth, recruitment, and mortality affect the performance of length-based mortality and asymptotic length estimates? *ICES Journal of Marine Science*, 70:329-341. doi:10.1093/icesjms/fss163 ([link](#))

Peck MA, **Huebert KB**, and Llopiz JK (2012) Marine fish larvae and their prey: extrinsic and intrinsic factors driving match-mismatch dynamics. *Advances in Ecological Research*, 47:177-302. doi:10.1016/b978-0-12-398315-2.00003-x ([link](#))

Huebert KB (2012) Connecting recent studies on fish vertical navigation. *Journal of Fish Biology*, 80:739-740. doi:10.1111/j.1095-8649.2012.03271.x ([link](#))

Zamora LM, Oschlies A, Bange HW, Craig JD, **Huebert KB**, Kock A, and Löscher CR (2012) Nitrous oxide dynamics in low oxygen regions of the Pacific: insights from the MEMENTO database. *Biogeosciences*, 9:5007-5022. 10.5194/bg-9-5007-2012 ([link](#))

Huebert KB, Cowen RK, and Sponaugle S (2011) Vertical migrations of reef fish larvae in the Straits of Florida and effects on larval transport. *Limnology and Oceanography*, 56:1653-1666. doi:10.4319/lo.2011.56.5.1653 ([link](#))

Huebert KB, Sponaugle S, and Cowen RK (2010) Predicting vertical distributions of reef fish larvae in the Straits of Florida from environmental factors. *Canadian Journal of Fisheries and Aquatic Sciences*, 67:1755-1767. doi:10.1139/f10-116 ([link](#))

Huebert KB and Sponaugle S (2009) Observed and simulated swimming trajectories of late-stage coral reef fish larvae off the Florida Keys. *Aquatic Biology*, 7:207-216. doi:10.3354/ab00200 ([link](#))

Huebert KB (2008) Barokinesis and depth regulation by pelagic coral reef fish larvae. *Marine Ecology-Progress Series*, 367:261-269. doi:10.3354/meps07576 ([link](#))

2. Non Peer-reviewed Publications

Jørgensen C, Peck MA, Antognarelli F, Azzurro E, Burrows MT, Cheung WWL, ... Domenici P (2012) Conservation physiology of marine fishes: advancing the predictive capacity of models. *Biology Letters*, 8:900-903. doi:10.1098/rsbl.2012.0609 ([link](#))

3. Submitted Publications

Gray MW, Chaparro O, **Huebert KB**, O'Neill SP, Couture T, Moreira A, Brady DC (accepted) Does brooding prepare young for tomorrow's acidic oceans and estuaries? *Journal of Shellfish Research*

Glaspie CN, Clouse M, **Huebert KB**, Ludsins SA, Mason DM, Pierson JJ, ... Brandt SB (submitted) Impact of hypoxia on the pelagic food web of the northern Gulf of Mexico. *Estuaries and Coasts*

4. Other Works

Roman MR, Kimmel DG, Pierson JJ, and **Huebert KB** (2018) Mesozooplankton sample data from R/V Pelican cruises PE03-NGOMEX, PE04-NGOMEX, PE06-NGOMEX, PE07-NGOMEX, PE09-05 in the Northern Gulf of Mexico from 2003-2008. Biological and Chemical Oceanography Data Management Office Data Sets, 746107 ([link](#)). doi:10.1575/1912/bco-dmo.749705 ([link](#))

Roman MR, Boicourt WC, Pierson JJ, and **Huebert KB** (2018) ScanFish Optical Plankton Counter (OPC) data from R/V Pelican cruises PE03-NGOMEX, PE04-NGOMEX, PE06-NGOMEX, PE07-NGOMEX, PE09-05, PE11-06 in the Northern Gulf of Mexico from 2003-2010. Biological and Chemical Oceanography Data Management Office Data Sets, 746081 ([link](#)). doi: 10.1575/1912/bco-dmo.749700 ([link](#))

Huebert KB (2015) Shiny app for the Quirks larval fish model. https://klausbh.shinyapps.io/shiny_quirks

Huebert KB (2013-2018) Quirks – A comparative modeling tool for the study of marine fish larvae. <https://sourceforge.net/projects/larvalfishquirks/>

C. Contracts and Grants

1. Awarded

Coles VJ, **Huebert KB**, Pierson JJ, Rose KA, Silsbe GM, and Stukel MR. Predicting, validating, and understanding zooplankton distributions from space in an eddy rich ocean, NASA Interdisciplinary Research in Earth Science Program, 8/22/2017-8/21/2020, \$1,038,803

Chambers RC, Rose KA, and **Huebert KB**. Synthesis and understanding of ocean acidification biological effects data by use of attribute-specific, individual-based models, NOAA Ocean Acidification Program, 4/1/2016-9/30/2017, \$150,000

Huebert KB. Predicting commercially important reef fish stocks from settlement patterns of more abundant species. National Academy of Sciences, National Research Council, Research Associateship Program, 9/1/2009-8/31/2010, \$47,000

D. Seminars and Presentations

1. Invited Seminars

Huebert KB (2016) Virtual fish on a plankton data diet. University of Maryland Center for Environmental Science, Horn Point Laboratory, Cambridge, MD, 2/3/2016

Huebert KB (2015) An exploration of larval fish ecology. Eckerd College, St. Petersburg, FL, 11/19/2015

Huebert KB (2015) Ecology of marine fish larvae: from individuals to ecosystems. University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD, 10/14/2015

Huebert KB (2015) Challenges in using oceanographic plankton data to model higher trophic levels. NOAA National Centers for Environmental Information, Silver Spring, MD, 10/6/2015

Huebert KB (2010) Behavior and transport of pelagic coral reef fish larvae in the Straits of Florida. University of Hamburg, Institute for Hydrobiology and Fisheries Science, Hamburg, Germany, 10/22/2010

Huebert KB (2009) Behavior and transport of pelagic coral reef fish larvae in the Straits of Florida. Mote Marine Laboratory, Sarasota, FL, 9/16/2009

Huebert KB (2008) Can pelagic coral reef fish larvae regulate depth via pressure cues? Leibniz Institute of Marine Sciences, Kiel, Germany, 2/7/2008

2. Conference Presentations

Rose KA, Justic D, Huang H, Craig JK, **Huebert KB**, LaBone E, Meselhe EA, Yang J, Jung H, Xue Z, and Tian H (2018) Simulating fish population responses to coastal hypoxia: movement behavior and the tradeoff between more oxygen and less food. Ocean Deoxygenation Conference, Kiel, Germany

Rose KA, Justic D, Huang H, Craig JK, **Huebert KB**, LaBone E, Meselhe EA, Yang J, Jung H, Xue Z, and Tian H (2018) Predicting fish population responses to hypoxia using 2-D and 3-D coupled biophysical models. American Fisheries Society Annual Meeting, Atlantic City, NJ

Huebert KB, Chambers RC, and Rose KA (2018) Population models for synthesis of climate effects on fish early life history stages. International Symposium on the Effects of Climate Change on the World's Oceans, Washington, DC

Huebert KB, Pierson JJ, Roman MR (2017) Northern Gulf of Mexico plankton size spectra. ICES Annual Science Conference, Ft. Lauderdale, FL

Takasuka A, Robert D, Shoji J, Sirois P, Fortier L, Oozeki Y, ... Nyuji M (2017) Reaching consensus on the growth–survival paradigm in early life stages of fish. International Symposium on Drivers of Dynamics of Small Pelagic Fish Resources, Victoria, Canada

Peck MA, Hufnagl M, **Huebert KB**, Sandersfeld T, Moyano M (2017) Physiological modelling of the foraging and growth of early life stages of small pelagic fish: Fish don't eat temperature. International Symposium on Drivers of Dynamics of Small Pelagic Fish Resources, Victoria, Canada

Huebert KB, Roman MR, Pierson JJ (2017) Gulf of Mexico zooplankton synthesis and data portal. Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans, LA

Huebert KB, Pätsch J, Hufnagl M, Kreus M, and Peck MA (2015, invited) Modeling larval fish growth using Quirks. Symposium on Growth-Survival Paradigm in Early Life Stages of Fish, Yokohama, Japan

Peck MA, Hufnagl M, **Huebert KB**, and Moyano M (2015) Spatially-explicit biophysical models of the growth and survival of early life stages of fish: a synthesis with recommendations. Symposium on Growth-Survival Paradigm in Early Life Stages of Fish, Yokohama, Japan

Queirós AM, Keyl F, **Huebert KB**, Maar M, Stolte W, Kay S, ... Peck MA (2015) Multi-model projection of spatial planning and climate conflicts in the Northeast Atlantic. ICES Annual Science Conference, Copenhagen, Denmark

Huebert KB, Hufnagl M, Pätsch J, Kreus M, Diekmann R, and Peck MA (2014) Care and feeding of virtual fish larvae. Larval Fish Conference, Quebec City, Canada

Peck MA, **Huebert KB**, Hufnagl M, Kreus M, and Pätsch J (2013, presented by Huebert) Modelling Trophodynamic Consequences of Climate Variability on North Sea Fish Population. Larval Fish Conference, Miami, FL

Huebert KB and Peck MA (2013) Quirks - a free tool for comparative modeling of marine fish larvae. Larval Fish Conference, Miami, FL

Huebert KB and Peck MA (2012) One individual-based model for four fish species in the North Sea. Larval Fish Conference, Os, Norway

Peck MA, **Huebert KB**, and Llopiz JK (2012) Integrating marine fish physiology, behaviour and physical constraints into biophysical IBMs of fish early life stages. Larval Fish Conference, Os, Norway

Peck MA, Hufnagl M, **Huebert KB**, Kreuz M, and Pättsch J (2012) Will climate-driven warming uncouple marine food webs? Projections from biophysical, size-based modeling. Second International Symposium on Effects of Climate Change on the World's Oceans, Yeosu, Korea

Peck MA, **Huebert KB**, Hufnagl M, and Llopiz JK (2012) Integrating marine fish physiology, behaviour and physical constraints into early life stage biophysical IBMs: Recent advances and future challenges. Second International Symposium on Effects of Climate Change on the World's Oceans, Yeosu, Korea

Huebert KB and Peck MA (2011) Trait-based modelling of marine fish early life stages. ICES Annual Science Conference, Gdansk, Poland

Ruttenberg BI, Bohnsack JA, Ault JS, Smith SG, McClellan D, Javech J, ... **Huebert KB** (2011) Thirty Years of Change in Reef Fish Communities in the Florida Keys: The Importance of Habitat, Protection, and the Long-View. American Fisheries Society Annual Meeting, Seattle, WA

Huebert KB, Serafy JE, Walter JF, and Bohnsack JA (2011) Linking small fish to big fish: population dynamics of gray snapper in Biscayne National Park. Aquatic Sciences Meeting, San Juan, Puerto Rico

Huebert KB, Serafy JE, Walter JF, and Bohnsack JA (2010) Linking small fish to big fish: population dynamics of gray snapper in Biscayne National Park. Larval Fish Conference, Santa Fe, NM

Huebert KB, Sponaugle S, and Cowen RK (2009) Effects of vertical migrations by reef fish larvae on larval transport. Larval Fish Conference, Portland, OR

Huebert KB, Sponaugle S, and Cowen RK (2008) Does vertical migration behavior of reef fish larvae influence their transport? International Coral Reef Symposium, Ft. Lauderdale, FL

Huebert KB and Sponaugle S (2008) The home stretch: 3-D swimming trajectories of settlement-stage coral reef fish larvae in the Florida Keys. Ocean Sciences Meeting, Orlando, FL

Huebert KB and Sponaugle S (2008) Swimming trajectories of settlement-stage coral reef fish larvae in the Florida Keys. American Fisheries Society Florida Chapter Meeting, Ocala, FL

Huebert KB (2006) Can pelagic coral reef fish larvae regulate their swimming depths via hydrostatic pressure cues? Larval Fish Conference, Lake Placid, NY

3. Conference Posters

Huebert KB, Chambers RC, and Rose KA (2017) Modeling Cumulative Effects of Ocean Acidification and Warming on Winter Flounder Populations. Larval Fish Conference, Austin, TX

Huebert KB (2016) Interactive larval fish modeling demonstrations using Quirks. Larval Fish Conference, Solomons, MD

Queirós AM, **Huebert KB**, Somerfield PJ, Peck MA, and VECTORS modelers (2013) Hotspots of change in the North Sea Ecosystem: what do numerical models tell us. VECTORS[†] Annual Meeting, Athens, Greece

Huebert KB and Peck MA (2013) Incorporating morphometric traits into physiological models of marine fish larvae. Larval Fish Conference, Miami, FL

Huebert KB and Peck MA (2012, presented by Peck) Generic individual-based modeling of larval sprat, herring, and anchovy in the North Sea. Symposium on Forage Fish Interactions, Nantes, France

Huebert KB and Sponaugle S (2009) Observed and simulated swimming trajectories of late-stage coral reef fish larvae offshore of the Florida Keys. Larval Fish Conference, Portland, OR

Huebert KB (2007) Fish larvae regulate depth via pressure cues. New Frontiers in Marine Science Conference, Baltimore, MD

E. Workshops

DFO Canada – US NOAA Ocean Acidification Working Group[§] Meeting (invited), Ottawa, Canada, December 2018

Workshop on utilizing bioenergetics measurements and modeling to evaluate climate change effects on marine species and ecosystems. International Symposium on the Effects of Climate Change on the World's Oceans, Washington, DC, June 2018

ICES WGIPEM* Meeting, Copenhagen, Denmark, April 2018

Workshop on Growth-Survival Paradigm in Early Life Stages of Fish (invited), Yokohama, Japan, November 2015

ICES WGIPEM* Meeting, Plymouth, United Kingdom (by videoconference), March 2015

VECTORS[†] Future Scenario Modelling Workshop, Hamburg, Germany, May 2013

ICES WGIPEM* Meeting, Paris, France, February 2013

VECTORS[†] North Sea Regional Workshop, Paris, France, October 2012

European Cooperation in Science and Technology Workshop: Conservation Physiology of Marine Fishes (invited), Oristano, Italy, May 2012

ICES WGIPEM* Meeting, Copenhagen, Denmark, March 2012

ICES WGPBI[‡] Meeting, Pasaia, Spain, April 2011

F. Active Memberships in Professional Societies and Working Groups

American Fisheries Society, Early Life History Section (2006-present)

Association for the Sciences of Limnology and Oceanography (2008-present)

ICES WGIPEM* (2012-present)

DFO Canada – US NOAA Ocean Acidification Working Group[§] (2017-present)

V. TEACHING AND TRAINING

A. Teaching Experience

Co-Instructor, R-Club, Horn Point Laboratory, 2018-present

Guest Lecturer, Coastal Marine Ecology (~400 level), University of Hamburg, 2013

Co-Instructor, Statistical Analysis in R (~500 level), University of Hamburg, 2011

Teaching Assistant and Lecturer, Research Diving Techniques (spring: RSM 500, fall: MSC 201), University of Miami, 2007

Guest Lecturer, Research Diving Techniques (spring RSM 500, fall MSC 201), University of Miami 2006-2010

Teaching Assistant and Lecturer, Tropical Marine Biology (MBF 514), Bimini Biological Field Station, University of Miami, 2005

Guest Lecturer, Ecology and Physiology of Coral Reefs (MBF 518), University of Miami, 2005

Guest Lecturer, Marine Biology (Biol 304), J.N. Roth Marine Station, Goshen College, 2004

English Teacher (all ages), Los Dajaos, Dominican Republic Study Service Term, Goshen College, 1998

B. Students Mentored

Maria Gambill (PhD student, University of Hamburg), 2012-2013

Berenike Tietjen (PhD student, University of Hamburg), 2011-2013

Björn Illing (PhD student, University of Hamburg), 2011-2013

Claudia Soares (Visiting PhD student, University of Hamburg), 2012

C. Volunteers Supervised

Toni Turkopuls (UMCES HPL), 2017

Chantal Harper (undergraduate student, University of Miami), 2006-2007

VI. OUTREACH AND SERVICE

A. Editorial

Manuscript Reviewer for *Bulletin of Marine Science*, *Coral Reefs*, *Environmental Biology of Fishes*, *Environmental Monitoring and Assessment*, *ICES Journal of Marine Science*, *Ichthyological Research*, *Journal of Marine Research*, *Marine Biology*, *Marine Ecology Progress Series*, *PLOS ONE*, and *Regional Studies in Marine Science*

B. University of Maryland System

Co-Founder and Co-Organizer, R-Club, Horn Point Laboratory, 2018-present

C. Outside University of Maryland System

Student Talk Judge, Larval Fish Conference, Austin, TX, 2017

Session Co-chair, "Assessing and evaluating phenotypic variation in fish early life history stages: field studies, experiments, and modeling," Larval Fish Conference, Austin, TX, 2017

Webmaster, American Fisheries Society, Early Life History Section, 2016-2018

Pre-K Science Outreach Speaker, NASA Goddard Child Development Center, Greenbelt, MD, 2016

Contributor, VECTORS[†] Synthesis Website, 2014 ([link](#))

Session Co-Chair, "Advances and novel application of methods for the study of early life history stages of fishes," Larval Fish Conference, Miami, FL, 2013

Student Poster Judge, Larval Fish Conference, Miami, FL, 2013

Student Poster Judge, Larval Fish Conference, Santa Fe, NM 2010

Fundraiser, Marine Science Graduate Student Auction, University of Miami, 2006-2008

D. Laboratory Committees

UMCES HPL Computer Committee, 2016-present

*: International Council for the Exploration of the Sea, Working Group on Integrative, Physical-biological, and Ecosystem Modelling

†: VECTORS of Change in Oceans and Seas Marine Life, Impact on Economic Sectors

‡: International Council for the Exploration of the Sea, Working Group on Modelling of Physical/Biological Interactions

§: Research, Modelling, and Experimentation Working Group under the collaborative framework for joint Fisheries and Oceans Canada / US National Oceanic and Atmospheric Administration Ocean Acidification Research and Monitoring