

Curriculum Vitae

William B. Ludt

CONTACT

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EDUCATION

- 2005-2009 **B.S. in Natural Resources**
University of Arizona
Specialization in Wildlife Conservation and Management
- 2009-2011 **M.S. in Marine Science**
University of Texas at Austin
- 2012-Present **PhD in Systematics, Ecology and Evolution**
Louisiana State University

RESEARCH INTERESTS: My research focuses on evolutionary biology, historical biogeography, and ichthyology. More specifically I am interested in using genomic approaches to understand the evolutionary history, and speciation, of coral and rocky reef fishes.

SCIENTIFIC PUBLICATIONS

Ludt WB, Morgan L*, Bishop J, Chakrabarty P. A quantitative and statistical biological comparison of three semi-enclosed seas: The Red Sea, the Persian (Arabian) Gulf, and the Gulf of California Sea. *In press – Marine Biodiversity*.

Chakrabarty P, Faircloth B, Alda F, **Ludt WB**, McMahan CD, Near TJ, Dornberg A, Albert JS, Arroyave J, Stiassny MLJS, Sorenson L, Alfaro ME. Phylogenomic Systematics of Ostariophysan fishes: Ultraconserved Elements Support the Surprising Non-Monophyly of Characiformes. *In press – Systematic Biology*.

Ng HH, Tan HH, Lim KKP, **Ludt WB**, Chakrabarty P. (2015) Fishes of the eastern Johor Strait. *The Raffles Bulletin of Zoology, Supplement 31*.

* Designates undergraduate author

Ludt WB, Rocha LA, Erdmann MV, Chakrabarty P. (2015). Skipping across the tropics: The evolutionary history of sawtail surgeonfishes (Acanthuridae: *Prionurus*). *Molecular Phylogenetics and Evolution*, 84, 166-172.

Derouen V, **Ludt WB**, Ho HC, Chakrabarty P. (2015). Examining evolutionary relationships and shifts in depth preferences in batfishes (Lophiiformes: Ogcocephalidae). *Molecular Phylogenetics and Evolution*, 84, 27-33.

Ludt WB, Rocha LA. (2015). Shifting seas: the impacts of Pleistocene sea-level fluctuations on the evolution of tropical marine taxa. *Journal of Biogeography*, 42(1), 25-38.

Ludt WB, Bernal MA, Bowen BW, Rocha LA. (2012). Living in the past: phylogeography and population histories of Indo-Pacific wrasses (genus *Halichoeres*) in shallow lagoons versus outer reef slopes. *PloS One*, 7(6), e38042.

OTHER PUBLICATIONS

Ludt WB. (2016). A review of: *A Field Guide to Coastal Fishes from Alaska to California*. *Copeia*, 104(2), 611–612.

Ludt WB. (2015). A review of: *Review of Atlantic and Eastern Pacific Anthiine Fishes (Teleostei: Perciformes: Serranidae), with Descriptions of Two New Genera*. *Copeia*, 103(1), 229-230.

SELECTED PRESENTATIONS

Ludt WB, Myers CE. What drives anti-tropical distributions across the fish tree of life? 2016 ASIH Meeting, New Orleans, LA & 2017 IBS Meeting, Tucson, AZ.

Ludt WB, Kenworthy E*, Bernal MA, Salas E, Chakrabarty P. Seeing spots: speciation and population genetics of Tropical Eastern Pacific Surgeonfishes. 2016 ASIH Meeting, New Orleans, LA.

Turner A, **Ludt WB**, Chakrabarty P. Molecular phylogeny of threadfin breams (Nemipteridae), with comments on their transitions to and from coral reefs. 2016 ASIH Meeting, New Orleans, LA.

Alda F, McMahan C, Tagliacollo V, Bernt M, Waltz B, **Ludt WB**, Albert J, Chakrabarty P. Analysis of Neotropical freshwater fish radiations using ultraconserved elements (UCEs). SSE Spotlight: Understanding history & process in rapid diversification with genomic data. 2016 Evolution Meeting, Austin, TX.

Ludt WB, Brown JM, Burrridge CP, Chakrabarty P. An investigation of branch lengths using ultraconserved elements. 2016 Evolution Meeting, Austin, TX.

- Kenaley CP, **Ludt WB**, Chakrabarty P. Phylogenetic and morphometric analysis of hitchhiking: new insights into the morphological evolution of suction disks in the Remoras. 2015 ASIH Annual Meeting, Reno, NV.
- Ludt WB**, Burrige CP, Chakrabarty P. What, if anything, is a morwong? 2015 Evolution Meeting, Guaruja, Brazil.
- Ludt WB**, Rocha LA, Erdmann MV, Chakrabarty P. Crossing the tropics: insights from temperately restricted *Prionurus* surgeonfishes. 2014 ASIH Annual Meeting, Chattanooga, TN.
- Derouen V, **Ludt WB**, Hsuan-Ching H, Chakrabarty P. Phylogeny and Divergence Time Estimation in Batfishes (Lophiiformes: Ogcocephalidae). 2014 ASIH Annual Meeting, Chattanooga, TN.
- Ludt WB**, Chakrabarty P, Rocha LA. Living outside the coral triangle: the evolutionary history and biogeography of the genus *Prionurus*. 9th Indo-Pacific Fish Conference, Okinawa, Japan & 2013 ASIH Annual Meeting, Albuquerque, NM.
- Derouen V, **Ludt WB**, Ho H, Chakrabarty P. Phylogeny and divergence time estimation of batfishes (Poster Presentation). 2013 ASIH Annual Meeting, Albuquerque, NM.
- Ludt, WB**, Bernal M, Bowen B, Rocha LA. Sea level fluctuations and diversity in two habitats: Comparisons of two lagoon and two seaward reef wrasses (Genus: *Halichoeres*). 2011 ASIH Annual Meeting, Minneapolis, MN.
- Bernal M, **Ludt WB**, Craig MT, Bowen B, Rocha LA. Phylogeography of *Halichoeres claudia* and *Halichoeres ornatissimus*: New insights on patterns of population connectivity across the Central-West Pacific. 2011 ASIH Annual Meeting, Minneapolis, MN.
- Rocha LA, Bernal MA, **Ludt WB**. Molecules and morphology indicate speciation by hybridization in a marine fish (Poster Presentation). 2010 ASIH Annual Meeting. Providence, RI
- Ludt WB**, Pierson J, Kimmel D, Roman M. Determining egg development rates of *Acartia tonsa* in the Chesapeake Bay using a DAPI staining technique and its significance (Poster Presentation). 2009 CERF Conference. Portland, OR
- Soria G, Martinez I, **Ludt WB**, Shaw W, Cudney-Bueno R. Collection of bivalve postlarvae to test an "Order Zero" connectivity model in the Northeastern Gulf of California, Mexico (Poster Presentation). 2008 7th Annual William R. and Lenore Mote International Symposium in Fisheries Ecology. Sarasota, FL

INVITED SEMINARS

2017 Southeastern Louisiana University

AWARDS & GRANTS

2017 – 2019 **NSF DEB 1701323 DISSERTATION RESEARCH: Phylogenomics and Evolutionary Rates associated with Salinity and Thermal Shifts in Centrarchiformes (\$17,967)**

2016 **Outstanding Graduate Student Award**, LSU Museum of Natural Science

2016 **BioGrads Travel Award**, Louisiana State University (\$400)

2016 **USNM Schultz Fund** (\$3,065)

2016 **Ron & Mary Neal PUF Fellowship** (\$11,525)

2015 **Sigma Xi Grants in Aid of Research** (\$720)

2015 **BioGrads Travel Award**, Louisiana State University (\$400)

2014 **Lerner-Gray Memorial Fund for Marine Research** (\$2,000)

2013 **BioGrads Travel Award**, Louisiana State University (\$300)

2013 **McDaniel Travel Award**, Louisiana State University (\$400)

2011 **Summer 2011 Professional Development Award**, University of Texas at Austin (\$500)

PROFESSIONAL EXPERIENCE

2016 **Ichthyology Consultant for Middle East Fishes**,
Environmental Agency of Abu Dhabi, Abu Dhabi, United Arab Emirates

2016 **Ichthyology Consultant for Gulf of Mexico Fishes**,
Field Museum of Natural History, Chicago, IL

2015 & 2016 **Organizer and Leader of UCE Workshop for Louisiana Ichthyologists**,
Louisiana State University, Baton Rouge, LA

2015 **Instructor**, Fish Identification Course, Kuwait Institute of Scientific Research,
Kuwait

- 2015 **Teaching Assistant**, Ichthyology, Biology Department, Louisiana State University, Baton Rouge, LA
- 2013-2016 **Curatorial Assistant**, Ichthyology, Museum of Natural Science, Louisiana State University, Baton Rouge, LA
- 2013-2014 **Teaching Assistant**, Introductory Biology, Biology Department, Louisiana State University, Baton Rouge, LA
- 2012 **Graduate Research Assistant**, Museum of Natural Science, Louisiana State University, Baton Rouge, LA
- 2010-2012 **Graduate Research Assistant**, Marine Science Institute, The University of Texas at Austin, Port Aransas, TX
- 2009-2010 **Teaching Assistant**, Oceanography, Marine Science Department, The University of Texas at Austin
- 2008-2009 **Lab Assistant**, Pangas Project, The University of Arizona
Organized and analyzed bivalve samples from the Northern Gulf of California
- 2007-2008 **Field Assistant**, Pangas Project, The University of Arizona
Deployment and retrieval of bivalve collection devices using Scuba in the Northern Gulf of California
- 2008 **REU Intern**, Maryland Sea Grant, Horn Point Laboratory, Cambridge, MD
Staining copepod eggs from the Chesapeake Bay and analyzing egg stage distribution throughout the water column

PROFESSIONAL SOCIETIES

AAUS
American Society of Ichthyologists and Herpetologists
Sigma Xi
Society of Systematic Biologists
The Society for the Study of Evolution
The Systematics Association

SYNERGISTIC ACTIVITIES/PUBLIC SERVICE

- 2016 **Main Presenter and Tour Guide for Fishes at LSUMNS Night at the Museum Series**, Baton Rouge, LA
- 2015 – 2016 **Leader of LSUMNS tours for the Louisiana Master Naturalist of Greater Baton Rouge chapter**, Baton Rouge, LA

- 2015 – 2016 **Exhibitor for Our Finned Friends: USS Kidd Veterans Memorial & Museum**, Baton Rouge, LA
- 2014 **BIOS Graduate Mentor**, Baton Rouge, LA
- 2013 – 2016 **Exhibitor for LSU Ocean Commotion**, Baton Rouge, LA
- 2013 **Environmentors Science Fair Judge**, Baton Rouge, LA
- 2011 **UTMSI representative for the 2nd Annual Coastal Bend Feria Para Aprender**
Corpus Christi, TX
- 2010 – 2011 **Dive Program Volunteer**, Texas State Aquarium
- 2010 **Explore UT Exhibitor**, The University of Texas at Austin

Mentor to 6 undergraduate students:

Link Morgan: Collections and database inventory
 Erica Kenworthy: LSU undergraduate trained in genetic laboratory procedures
 Gabe Navar: Database management of LSU ichthyology collection
 Glynn O’Neill: LSU undergraduate trained in genetic laboratory procedures
 Chris Crowe: Database management of LSU ichthyology collection
 Winston Anthony: REU at the University of Texas Marine Science Institute
 trained in laboratory procedures and analysis of genetic data

PROFESSIONAL SERVICE

- 2017 Web Content Coordinator, Graduate Student Committee – American Society of Ichthyologists and Herpetologists
- 2016 Founding member and organizer for the LSUMNS Museum Experience for Undergraduates program
- 2016 Chair of Graduate Student Committee - American Society of Ichthyologists and Herpetologists
- 2014-2015 President of LSU BioGrads
- 2013-2014 LSU Museum of Natural Science Seminar Coordinator
- 2014 ASIH Book Raffle Committee member

Manuscript reviews for: Conservation Genetics, Copeia, Journal of Biogeography, Journal of Fish Biology, Molecular Ecology, Molecular Phylogenetics and Evolution (Awarded “Outstanding Reviewer” Status in 2015), PLoS ONE, Zootaxa

PARTICIPATION IN SCIENTIFIC EXPEDITIONS

- 2016 UNITED ARAB EMIRATES – General trawling collection in coastal areas
- 2015 BRAZIL - One week general collecting on the Amazon and Tapajós Rivers
- 2015 PANAMA - Targeted 2 week long collecting trip for marine reef fishes in the offshore Pacific Islands of Panama
- 2015 KUWAIT and UNITED ARAB EMIRATES - General collecting trip for the LSU Museum of Natural Science, and also a teaching trip for a short course on ichthyology and fish identification in the Arabian Gulf
- 2014 KUWAIT - Ichthyology collection trip to collaboration with Kuwait Institute for Scientific Research. Collected over 500 spp for the LSU Museum of Natural Science.
- 2014 COSTA RICA - Collecting trip to northern Costa Rica to collect freshwater and marine fishes
- 2012 SINGAPORE - 3 week Comprehensive Marine Biodiversity Survey of Palau Ubin, and the Johore Straits in Singapore
- 2012-2014 GULF OF MEXICO - Three research cruises collecting benthic fishes for LSU ichthyology collection in August and November
- 2007-2008 GULF OF CALIFORNIA - Five research expeditions to the Northern Gulf of California, bivalve larval settlement and distribution