

# CURRICULUM VITAE

**Paul V. Zimba**

SSN: (available on request)

## **BUSINESS ADDRESS:**

Associate Professor and Director,  
Center for Coastal Studies, Unit 5866  
Texas A&M University Corpus Christi  
6300 Ocean Drive  
Corpus Christi, TX 78412

## **RESEARCH AREAS**

Algal toxins, aquatic ecosystem ecology, harmful algae, wetlands, aquaculture, microalgal taxonomy and physiology, remote sensing, carbon fixation assessment, aquatic ecosystem stressors, cyanobacteria secondary metabolites

## **EDUCATION:**

<u>Degree</u>	<u>Date</u>	<u>Major Field and Institution</u>
Ph.D.	1990	Biological Sciences, Mississippi State University
Summer Fellow	1985	Dept. of Oceanography, Univ. of Hawaii
M.S.	1985	Biological Sciences, Old Dominion University
B.A.	1979	Biological Sciences, Va. Wesleyan College

## **PROFESSIONAL EXPERIENCE (POSITIONS HELD):**

September 2009- present	Director, Center for Coastal Studies, Texas A&M Corpus Christi
March 1996 – August 2009	Research Microbiologist, Agricultural Research Service, U.S.D.A.
November 1988- March 1996	Research Asst. Professor, Post-doc, OPS professional, Dept. of Fisheries, University of Florida
May 1988 - August 1988	Asst. Radiation Safety Officer, Mississippi State University
August 1985 - May 1988	Research Fellow, Mississippi State University
February 1984 - July 1985	Biologist, Horn Pt. Lab, University of Maryland
May 1976 - September 1980	Ordinary Seaman Wiper, Seafarers Intl. Union

## **SIGNIFICANT TEACHING/MENTORING ACCOMPLISHMENTS**

### **Adjunct faculty member**

Loyola University, New Orleans LA 1996-present  
SUNY-Syracuse NY 2006-2009  
University of Mississippi 2005-present  
Medical University of South Carolina 2010-present

### **Student Mentoring/Advisor**

Chair:

Margaret S. Hopson, MS, University of Florida 1995  
Marci L. Savage, MS 2010-2012  
Alexandra Rafalski, MS 2010-2012  
Philip Ordner MS 2011-2013  
Michael Birchfield MS 2012-  
Andrew McArdle MS 2012-  
Katie LeMay MS 2012-  
Joe Kowalski Ph.D. 2011-  
Sean O'Mara MS, 2012-

Member:

Juliette Smith, Ph.D., SUNY-Syracuse 2006-2008  
Matthew Bertin, Ph.D., MUSC, 2010-  
Orathai Pongruktham, Ph.D., University of Mississippi, 2007-2012  
Maureen Trnka, Ph.D. candidate CMSS, 2010-  
Kaitlyn Schroeder, Ph.D. candidate, MARB, 2010-  
Kyle Bowers, MS candidate, LSci, 2011

**SELECTED RESEARCH GRANT AND CONTRACT AWARDS (last 5 years-of 24 total):**

1. Photon8. Shell Game Changers Program. 2013. Carbohydrate production by microalgae. \$450,000 (TAMUCC-\$142,500).
2. NSF-NIH/NIES. 2011-2013. 1 R01 ES21968-1-Development of a multiplex freshwater cyanotoxin method for cyanotoxin and euglenophycin detection. \$399,092 (TAMUCC \$267,052).
3. Texas Research and Development Fund. 2012-2013. Post-doctoral Enhancement Support. \$25,000.
4. Ed Rachal Foundation. 2012-2014. Evaluation of electrical deposition methods for carbonate reef accretion. \$45,000.
5. Harvey Weil Sportsman Conversationalist Award. 2012. The effect of freshwater cyanobacterial toxins on crab abundance. \$4,000.
6. Texas SeaGrant. 2012-2014. The toxin(s) of the Texas brown tide organism *Aureoumbra lagunensis*, and its impacts on shellfish. \$155,600.
7. Texas SeaGrant. 2011-2013. Brevetoxin in beached moribund fish. \$10,000.
8. Savannah River National Laboratory. 2011-2012. Risk Assessment of Algal Production Systems: Impacts on Growth, Biomass/Lipid Quality, and Bioactive Metabolites. DOE (EERE) pass thru funding. \$163,056
9. Gulf of Mexico Program. 2011-2012. Food habits and food webs of high Hg content commercially and recreationally harvested fishes in the Gulf of Mexico. \$64,055
10. U.S. Geological Survey. 2009-2010. Survey of Sediment Toxicity in U.S. Coastal Estuaries. \$31,232.
11. Klubec Koi LLC. 2010. Identification of harmful algal blooms in koi ponds. \$4,900.
12. U.S EPA. 2010-2011. Production of <sup>15</sup>N cylindrospermopsin. \$42,600.
13. Morris J. Lichtenstein Medical Foundation. 2010-2011. Euglenophycin synthesis and anti-cancer evaluation. \$238,060.
14. Texas Research and Development Fund 2011. Brevetoxin in beached moribund fish. \$26,052.
15. Texas Research Development Fund. 2009. Assessment of Primary Producer Components within the South Texas Coastal Bend. \$12,000.
16. Arizona Game and Fish Department. 2007-2009. Isolation of toxins from *Prymnesium parvum*. \$70,000.
17. USDA/CSREES Program. 2008-2011. Assessment of steroid composition of reproductively competent fishes. \$26,532.

**SELECTED PUBLICATIONS (last 5 years-of 18 total for period):**

Peer-Reviewed Journal Articles (italics indicate students mentored):

1. Mischke, C.C. & Zimba, P.V. 2009. Influence of fertilizer nitrogen types on water quality. *Aquaculture Research* 40:1-5.

2. Hurlburt, B.K., Brashear, S.S., Lloyd, S.L., Grimm, C.C., Zimba, P.V., & Thomson, J.L. 2009. The impact of weather on off-flavor episodes at a commercial catfish farm. *Aquaculture Research* 40:566-574.
3. Brostoff, W.N., J.G. Holmquist, J.G., Schmidt-Gengenbach, J. and Zimba, P.V. 2010. Fairy, tadpole, and clam shrimps (Branchiopoda) in seasonally inundated playas in the western Mojave Desert and effect on primary producers. *J. Saline Systems* 6:11.
4. Radomski, A. & Zimba, P.V. 2010 Does pond water reflectance influence double-crested Cormorant selection of aquaculture ponds? *J. World Aquaculture Society* 41:430-437.
5. Zimba, P.V., Moeller, P.D., Beauchesne, K.B., Lane, H.E., & Triemer, R.E. 2010. Euglenophycin- a novel toxin produced by certain Euglenophyceae. *Toxicon* 55:100-104.
6. Smith, J.L., Schultz, K., Zimba, P.V. Boyer, G.L. 2010. Possible mechanism for the foodweb transfer of covalently-bound microcystins. *Ecotoxicology and Environmental Safety* 75:657-671.
7. Grisham, M.P., Johnson, R.M., Zimba, P.V. 2010. Detecting sugarcane yellow leaf virus infection in asymptomatic leaves with hyperspectral remote sensing and associated leaf pigment analysis. *Journal of Virology* 167:140-145.
8. Zablutowicz, R.M., Zimba, P.V., Locke, M.A., Lizotte Jr, R.E., Knight, S.S., Gordon, R.E. 2010. Effects of Land Management Practices on Water Quality in Mississippi Delta Oxbow Lakes: Biochemical and Microbiological Aspects. *Agriculture, Ecosystems and Environment* 139: 214-223.
9. Hurlburt, B.K., Brashear, S., and Zimba, P.V. 2011. Detection of cyanobacteria in closed water systems in southern Louisiana (USA). *Water* 3:79-86.
10. Zimba, P.V., Schrader, K.K., Hyldig, G., Strobel, B.W., and Jorgensen, N.O.G. 2011. Evaluation of geosmin and 2-methylisoborneol off-flavour in smoked rainbow trout fillets using instrumental and sensory analyses. *Aquaculture Research* 2011:1-5.
11. Hill, E.M., Nicolau, B.A., and Zimba, P.V. 2011. History of water availability and habitat improvement in the Nueces Estuary, Texas, USA. *Texas Water Journal* 2:97-111.
12. Zimba, P.V. 2012. An improved method for phycobilin analysis. *Harmful Algae* 17:35-39.
13. Mehrubeoglu, M., M. Y. Teng, M. Savage, A. Rafalski, and P. V. Zimba. 2012. Hyperspectral imaging and analysis of mixed algae species in liquid media. *2012 IEEE International Conference on Imaging Systems and Techniques (IST)*, 421 - 424.
14. Bertin, M.J., Zimba, P.V., Beauchesne, K.R., Huncik, K.M., and Moeller, P.D.R. 2012. Identification of toxic fatty acid amides isolated from the harmful alga *Prymnesium parvum* Carter. *Harmful Algae* 20:111-116.
15. Bertin, M.J., Zimba, P.V., Beauchesne, K.R., Huncik, K.M., and Moeller, P.D.R. 2012. The contribution of fatty acid amides to *Prymnesium parvum* Carter toxicity. *Harmful Algae* 20:117-125.
16. Ochs, C.A., Pongruktham, O., and Zimba, P.V. 2013. Darkness at the break of noon: phytoplankton production in the lower Mississippi River. *Limnol. Oceanogr.* 58: 555–568.
17. Gutierrez, D., Rafalski, A., Moeller, P., Beauchesne, K., and Zimba, P.V. 2013. Quantitative mass spectrometric analysis and post-extraction stability assessment of the euglenoid toxin euglenophycin. *Toxins* 5:1586-1596.

**NOTE: italics indicate graduate student mentored**

## **SERVICE**

### **Service to the World**

Consultant- Colombia shrimp farms 2009 (sanctioned by USDA/ARS)

Consultant-Ecuador tilapia farms 2010- present  
Associate Editor- *Harmful Algae* (2007-), *Chinese Journal of Oceanography* (2011-), *The Open Journal of Marine Biology* (2010-), *Standard Methods for the Examination of Waste Water*(2010-)  
Senior Editor- *The Open Journal of Aquaculture Research and Development* 2011-  
Member- Board of Trustees, *Phycological Society of America* 2006-2012 (3 terms)

### **Service to the Nation**

NRC panelist (National Academy of Science), Sustainability of Biofuels in the United States 2011-2012  
Center Review Panel, North Carolina State University 2012-2012

### **PROFESSIONAL ACTIVITIES OF NOTE:**

Reviewed manuscripts for 24 journals and proposals for U.S. EPA, NSF, NIH, NOAA, Sea Grant, NRI, USDA, and other national and regional agencies  
Panel Reviewer-US EPA STAR grants 2007, UK NERC Program 2011, Royal Netherlands Academy of Arts and Science 2012  
Graduate committees: 9 Masters (1 student graduated December 1995), 6 Ph.D. students  
Adjunct faculty-Loyola University (New Orleans, LA) 1997-1999  
Adjunct faculty-University of Mississippi 2003-present  
Adjunct faculty-SUNY-Environmental School of Forestry 2006-present  
AAUS certified diver, PADI Deep, Wreck, Advanced Open water Certifications, over 180 research dives logged  
Completed U.S. Coast Guard Safe Boating and Seamanship Course 1983  
Completed Chromatography Institute of America short course (HPLC) 1996  
Completed Randomization Theory short course (Univ. of Wyoming) 1997  
Completed Introduction to Supervision Course 1999  
Completed Leadership: Change, Challenge, and Empowerment 1999  
Completed: Success-Oriented Supervision 2004  
U.S. Merchant Marine Ordinary Seaman Wiper Classification 1975-present  
Watch leader on >10 multi-day scientific cruises 1982-1996  
Volunteer Naturalist-Aquarium of the Americas 1996-1999  
Gordon Research Conference Participant (Speaker) 2003, 2005  
Assoc. Editor-*Harmful Algae*, *The Open Marine Biology Journal Series*, *Standard Methods for the Examination of Waste Water*  
Board of Trustees member- *Phycological Society of America* 2006-2012  
Senior Editor-*Journal of Aquaculture and Research Development* 2012-  
Panelist, *National Academy of Sciences*, Algal Biofuel Sustainability 2011-2012