

CURRICULUM VITAE

Paul V. Zimba

SSN: (available on request)

References: available upon request

BUSINESS ADDRESS:

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, 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 2015-present	Director, Center for Coastal Studies, and Professor, Texas A&M Corpus Christi
September 2009- August 2015	Director, Center for Coastal Studies, and Associate Professor, 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

Director, Center for Coastal Studies, Texas A&M University Corpus Christi

Duties and Accomplishments: Center director for the oldest research unit on campus. Tasked with re-invigorating Center with new research direction. Initiated analytical research program to replace monitoring studies. Moved Center from <0.5 to 3.7:1 grant:state funding ratio in three years, while state resources decreased by >40%. Increased publication rate to >3 papers per Center scientist from <1 prior to employment. Personally secured over \$4.8 million in external funding from national, state, and private sector in addition to \$2.260 M MRI funding from NSF during last five years. Supervision of up to 10 full time employees and 9 graduate assistants. Chaired seven faculty searches, member on 4 administrative searches, and 8 other search committees. Supervisor: Dean Frank Pezold 361-825-3655.

Research Microbiologist GS-0403-15 (May 2008-August 2009).
Research Microbiologist GS-0403-14 (May 2003 – May 2008).
Research Microbiologist GS-0403-13 (April 1999 – May 2003).
Research Microbiologist GS-0403-12 (April 1996 – April 1999).

Combined Research Duties and Accomplishments: Optimizing fish productivity/water quality relationships (CRIS). Work included ecological analyses of ponds (fish, zooplankton, nutrients, phytoplankton), herbicidal toxicology/discovery for control of harmful algal species, ecophysiology of toxin producing cyanobacteria, and remote sensing approaches to monitor pond phytoplankton composition and physiology. The role of herbicides in altering marsh function (Grant); Role of carotenoids in reducing free radicals in humans (Grant); Control of off-flavor in blue-green algae (Grant). Ground truthing for remote sensing (contract). Toxin production and coral reef degradation by a coralline microbial consortia (Grant). Toxin production by algae in the Salt River Reservoirs, Arizona. Supervision of one full-time technician, one MS student, and 2 summer students. Supervision of up to 4 full time support personnel. Acquired over \$2.3 million in external grants/contracts. (Former Supervisor: Dr. Ken Davis (retired), USDA-ARS, 141 Expt. Station Rd. Stoneville, MS 38776.

Scientist-Control of off-flavors in channel catfish aquaculture systems (CRIS). Secured funding to assess atrazine impacts on marsh plants in Louisiana (USGS). (Supervisor: Dr. Chris Dionigi formerly USDA-ARS-SRRC, current: (202) 513-7243 Asst. Director- National Invasive Species Council, Washington, DC).

SIGNIFICANT TEACHING/MENTORING ACCOMPLISHMENTS (Texas A&M University Corpus Christi)

Courses revised/taught:

Biology 4405, 5412 Limnology, Ecology of Running Waters
Biology 6399 Ecophysiology of Marine Plants
Biology 5399 Separation techniques for biologists
Biology 5431 Phycology
Biology 4590 Marine Biology Field Camp
DIS: Instrumentation (1-3 hrs), Marine Biology (1-3 hrs)

Adjunct faculty member

Loyola University, New Orleans LA 1996-2000
SUNY-Syracuse NY 2006-2009
University of Mississippi 2005-2013
Medical University of South Carolina 2010-2013

Student Mentoring/Advisor

Chair:

Margaret S. Hopson, MS, University of Florida 1993-1996, Univ of Brasilia
Marci L. Savage, MS TAMUCC 2010-2012, Chemist, Testmark
Alexandra Rafalski, MS TAMUCC 2010-2012, PhD candidate Michigan St. Univ.
Maureen Trnka, Ph.D. CMSS, TAMUCC, 2010-2015, NOAA, Washington, DC
Philip Ordner MS TAMUCC 2011-2013, Software Engineer, Mitrastech
I-Shuo Huang, MS, TAMUCC 2012-2014, PhD student TAMUCC
Katie LeMay MS TAMUCC 2012-2014
Joe Kowalski PhD student, MARB, TAMUCC 2011-
Sean O'Mara MS TAMUCC 2012-2014, PhD candidate Univ of Minn.
Lixin Wang, MS TAMUCC 2013-2016, Laboratory Coordinator, Sam Houston St. Univ.

Susan Shanks, MS TAMUCC 2013-2018
Brittany Kosar, MS TAMUCC 2014-2016, Junior college instructor, Arizona
Jennifer Savicky, MS TAMUCC 2014-2016, Technician, NY University
I-Shuo Huang, PhD, TAMUCC 2014-2018, Post-doc TAMUCC
Michael Lewis, MS TAMUCC 2016-2018
Adam Chorazyczewski, MS TAMUCC 2016-2018, Technician UC Davis

Member:

Juliette Smith, Ph.D., SUNY-Syracuse 2006-2008; now VIMS/William & Mary
Matthew Bertin, Ph.D., Med. Univ. South Carolina, 2009-2012; now Univ. Rhode Island
Orathai Pongruktham, Ph.D., University of Mississippi, 2007-2012
Kaitlyn Schroeder, Ph.D. MARB, TAMU-CC, 2010-2017, Scientist, DOE
Kelly Correia, MS MARB, TAMU-CC, 2013-2016
Nate Huysman, MS FAMA, TAMU-CC, 2013-2015 now Idaho State Hatchery
Martin Donley, MS ESCI, TAMU-CC, 2011-2018 now Physics teacher, CA high school
Blake Bosch, MS ESCI, TAMU-CC, 2015-2018

REU Supervisor:

Rachel Humphries, TAMUCC, 2009-2011, currently MS student Univ. S. Florida
Angiela Jones, LSAMP TAMUCC, 2012-2013
Tran Le, 2012, REU SURF student
Mikala Cifuentes, Univ. of Dallas, 2011, completed medical school
Jarod Prince, Morehouse College, 2010, REU SURF summer student
David Hunsicker, Northland College, 2010, REU SURF summer student
Diliani Roldan URP Mayaguez, 2013, REU Summer surf student, Teaching Aide
Caitlyn Martinez, LSAMP, TAMUCC, 2014-2015, REU
Kelsey Scott, SUNY Geneseo, 2014, REU SURF student PhD student Univ. of Ohio

Student Awards of note:

Ming Y.T., Su, P. Mehrubeoglu, R. and Zimba, P. 2012. Hyperspectral Analysis of Algae Species in Mixed Media. 3rd place poster, Graduate Student Scholarly Symp., TAMUCC.
Savage, M.L. 2011. Fatty Acid Composition of Six *Euglena sanguinea* strains. WHOI Student Travel Scholarship. \$400
Rafalski, A. 2011. Evaluation of brevetoxin accumulation and degradation in coastal mammals, invertebrates, and fish found moribund on Texas beaches during red tide blooms. Hans and Pat Suter Scholarship. \$900
Savage, M.L. 2011. Optimization of microalgae using 5-ion space methods. Millicent Quaiman Scholarship. \$900
Rafalski, A. 2011. Euglenophycin toxicity to a marine copepod. WHOI Student Travel Scholarship. \$400
Savage, M.L. 2010. Macroalgal chemical composition in the coastal bend. Millicent Quaiman Scholarship. \$1000
Rafalski, A. 2010. Characterization and detection of a novel heterotrophic dinoflagellate and its toxin. Hans and Pat Suter Scholarship. \$1000
Huang, I-Shuo. 2014. Isolation of a new to science cyanobacterial toxin. TX SeaGrant. \$1000
O'Mara, Sean. 2014. Quantitation of fatty acid amides produced by *P. parvum*. Texas Academy of Science. \$2000.
Huang, I-Shuo. 2014. *Nueces mysidocida gen nov* a new genus and species of cyanobacteria produces the novel toxin mysidophycin. Texas Academy of Science, \$1500.

- Huang, I-Shuo. 2015. Classification of anabaenopeptins, an ignored class of cyanotoxins. TX SeaGrant \$1000.
- Kosar, B. 2015. Ciguatera-toxin concentrations in lionfish. TX SeaGrant \$1000.
- Lawson, B. 2015. Primary productivity of the Nueces salt marsh community. TX SeaGrant \$2000.
- Huang, I-Shuo. 2016. Anabaenopeptin survey. *Phycological Society of America* Research Support. \$1000.
- Ramirez, Lindsey. 2016. Serum stress indicators in terrapins. Texas Academy of Science \$500.
- Huang, I-Shuo. 2017. Climate change/pH effects on toxin-producing freshwater and marine cyanobacteria. Texas Academy of Science \$1500.
- McKay, M. 2017. Paleolimnological evidence for salinity shifts in Baffin Bay TX. Texas Academy of Science \$1,000.
- Bachnak, S. 2015. Regional High School Junior High School Science Winner \$1000 award.
- Kirby, C. 2017. Regional High School Science Fair winner, \$1000 award.
- Bachnak, S. 2017. Regional High School Science Fair Honorable Mention.

RESEARCH GRANT AND CONTRACT AWARDS

1. Texas General Land Office. 2017-2018. TGLO Cooperative Internship Program. \$43,300.
2. Texas General Land Office. 2017-2018. Land-use change in south Texas. CMP \$88,500 (co-PI).
3. NOAA ECOHAB. 2017. Mitigation of a HAB using hydrogen peroxide. \$5,000.
4. Coastal Bend Bays Program. 2016-2018. Plastic impacts on coastal Texas estuaries. \$47,500 (Co-PI).
5. National Science Foundation. #1626494. 2016. MRI: Acquisition of Hybrid Mass Spectrometer for Geochemistry and Environmental Studies. (co-PI) \$681,416.
6. Texas General Land Office. 2016-2017. TGLO Cooperative Internship Program. \$43,300.
7. Texas General Land Office 2015-2017. Nueces Delta Wetland Functionality Study. \$88,997
8. Department of Energy/Lawrence Livermore National Laboratory. 2015-2018. Bacterial-algal symbioses in biofuel production. \$182,500.
9. Texas General Land Office. 2015-2016. TGLO Cooperative Internship Program. \$36,300.
10. USEPA/Gulf of Mexico Program #MX00D19214-02014-2016. 2014-2018. Use of Seawater Electrolysis to Build Artificial Reef Habitat: Comparison with Traditional Shell Reefs. \$198,030.
11. Ed Rachal Foundation. 2013-2018. Artificial reef formation using electrolysis. \$190,000.
12. Morris J. Lichtenstein Medical Foundation. 2013-2017. Anti-angiogenesis assessment resulting from euglenophycin exposure. \$313,034.
13. AlgaeVenture Systems. Algal consulting. 2013-2017. Compositional assessment to assist site selection for harvesting. \$176,500.
14. Texas Research and Development Fund. 2013-2014. Post-doctoral Enhancement Support. \$25,000.
15. Texas Research and Development Fund. 2012-2013. Click chemistry for toxin detection. \$5,000.
16. Texas General Land Office. 2012-2013. TGLO Cooperative Internship Program. \$36,300.
17. Photon8. Shell Game Changers Program. 2013. Carbohydrate production by microalgae. \$450,000 (TAMUCC-\$141,500).
18. NSF-NIH/NIES. 2011-2015. OCE 1313558 and1 R01 ES21968-1. Development of a multiplex freshwater cyanotoxin method for cyanotoxin and euglenophycin detection. \$399,092 (co-PI TAMUCC \$267,054).

19. Texas Research and Development Fund. 2012-2013. Post-doctoral Enhancement Support. \$25,000.
20. Texas General Land Office. 2011-2012. TGLO Cooperative Internship Program. \$36,300.
21. Harvey Weil Sportsman Conversationalist Award. 2012. The effect of freshwater cyanobacterial toxins on crab abundance. \$4,000.
22. Texas SeaGrant. 2012-2014. The toxin(s) of the Texas brown tide organism *Aureoumbra lagunensis*, and its impacts on shellfish. \$155,600.
23. Texas General Land Office. 2010-2011. TGLO Cooperative Internship Program. \$36,300.
24. Texas SeaGrant. 2011-2013. Brevetoxin in beached moribund fish. \$10,000.
25. Sonic Solutions. 2011. Evaluation of ultrasound efficacy using TEM. \$1,000.
26. 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. \$2,321,232 (co-PI \$163,056).
27. 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.
28. U.S. Geological Survey. 2010-2011. Survey of Sediment Toxicity in U.S. Coastal Estuaries. \$31,232.
29. Texas SeaGrant. 2010-2011. Brevetoxin in beached fishes. \$10,000.
30. U.S. Geological Survey. 2009-2010. Survey of Sediment Toxicity in U.S. Coastal Estuaries. \$31,232.
31. Klubec Koi LLC. 2010. Identification of harmful algal blooms in koi ponds. \$4,900.
32. U.S EPA. 2010-2011. Production of ¹⁵N Cylindrospermopsin. \$42,600.
33. Morris J. Lichtenstein Medical Foundation. 2010-2011. Euglenophycin synthesis and anti-cancer evaluation. \$238,060.
34. Texas General Land Office. 2009-2010. TGLO Cooperative Internship Program. \$36,300.
35. Texas Research and Development Fund 2011. Brevetoxin in beached moribund fish. \$26,052.
36. NSF Major Research Instrumentation.0959654. 2010-2012. Acquisition of equipment for evaluation of biochemical and culture properties of microalgae. \$586,849 (co-PI \$238,000).
37. Texas Research Development Fund. 2009. Assessment of Primary Producer Components within the South Texas Coastal Bend. \$12,000.
38. Arizona Game and Fish Department.2007-2009. Isolation of toxins from *Prymnesium parvum*. \$70,000.
39. USDA/CSREES Program. 2008-2011. Assessment of steroid composition of reproductively competent fishes. \$26,532.
40. University of Arizona. 2006-2007. Isolation of cyanotoxic species from the Salt River. \$7,000.
41. University of Michigan. 2004-2007 Quantification of microcystin from potable waters. \$425,800 (subcontract \$22,000).
42. Florida International University/NIH. 2005-2007. Identification of microcystins produced by *Phormidium*-the causative organism in coralline black band disease. \$321,680 (subcontract \$27,500).
43. Miss. St. Univ. 2001-2006. Assessment of remote sensing to manage problematic algal species in catfish ponds. \$158,300 (co-PI \$16,400).
44. South Carolina Cancer Institute. 2003-2005. Assessment of antioxidant properties of algal pigments. \$64,564 (subcontract \$22,400).
45. SRAC program 1998-2002. Control of blue-green algae in aquaculture ponds. U.S.D.A. competitive research grant program. \$142,500 (co-PI \$43,200).

46. United States Geological Survey (NAWQA Program) 1998-2000. The role of atrazine in altering marsh function in downstream Mississippi River waters. 1999-2001. \$80,000.
47. Jones, Edmunds and Assoc. 1997. Modeling chlorophyll and nutrients in Florida streams. \$3,695
48. Saint Johns Water Management District. 1995-1996. Modeling water quality, submersed light, and nutrients in the Indian River Lagoon. \$59,984 (co-PI \$2,330).
49. U.S. Environmental Protection Agency (EMAP). 1995. Water column nutrient analyses and particulate carbon and nitrogen analyses. \$7,140
50. Florida Dept. of Environmental Protection (FMRI). 1994-1995. Nutrient analyses in Florida bay. \$4,350
51. Florida Dept. of Environmental Protection (FMRI). 1994-1995. Seagrass/light/microalgal relationships in Florida Bay. \$67,000
52. Saint Johns Water Management District. 1993-1995. Light quality/submersed macrophyte relationships in the Indian River Lagoon. \$362,455 (co-PI \$123,500).
53. Jones, Edmunds, and Assoc. 1993. Periphyton analyses of south Florida streams. \$14,100
54. South Florida Water Management District. 1989-1991. Ecological studies of the littoral and pelagic communities of Lake Okeechobee, Fl. Epiphytes, Submersed Plants, Benthic Algal Mats. \$4,852,450 (co-PI 289,433).
55. South Florida Water Management District. 1990. Phosphorus dynamics in upland marsh habitats. \$22,280 (co-PI).
56. Bureau of Land Reclamation. 1990. Phytoplankton Composition of Stanley Lake, CO \$1,600.
57. Bureau of Reclamation. 1990-1991. Phytoplankton composition of Colorado River reservoirs. \$10,800.
58. Mississippi State University. 1985-1988. Predoctoral Research Fellowship \$30,000.
59. MS-AL Sea Grant Fellow. 1987-1988. \$6,100.
60. MS-AL Sea Grant Fellow. 1986-1987. \$5,852.
61. Horns Point Laboratory. Phytoplankton and periphyton analyses. 1985-1988. \$4,400.
62. University of Hawaii. Summer Fellow Research. 1985. \$3,300.

THESES/DISSERTATIONS:

MS: The distribution of *Ceratium* spp. over the mid-Atlantic Bight. Biological Sciences, Old Dominion University, Norfolk, VA 1985

PhD: Production dynamics, community structure, and carbon metabolism of phytoplankton and subtidal microalgae in a Mississippi salt marsh. Biological Sciences, Mississippi State University, Mississippi State, MS 1990

PUBLICATIONS:

Peer-Reviewed Journal Articles and Patents:

1. *Asquith, A., Altig, R., and Zimba, P.V.* 1987. Geographic variation in the mating call of the green treefrog *Hyla cinera*. *Am. Midl. Nat.* 119:101-110.
2. *Zimba, P.V., Sullivan, M.J., and Glover, H.E.* 1990. Carbon fixation in cultured marine benthic diatoms. *J. Phycol.* 26:306-311.
3. *Zimba, P.V., Hopson, M.S. and Colle, D.E.* 1993. Elemental composition of five submersed plants from Lake Okeechobee, FL. *J. Aquatic Plant Manage.* 31:137-140.
4. *Hopson, M.S. & Zimba, P.V.* 1993. Temporal variation in submersed plant biomass, Lake Okeechobee, Florida. *J. Aquatic Plant Manage.* 31:76-81.
5. *Phlips, E.J., Zimba, P.V., Hopson, M.S., and Crisman, T.L.* 1993. Dynamics of the plankton community in submerged plant dominated regions of Lake Okeechobee, Florida. *Verh. Int. Verein Limnol.* 25:423-426.
6. *Phlips, E.J., Aldridge, F.J., Zimba, P.V., Ihnat, J., Conroy, M., and Ritter, P.* 1993.

- Zonation patterns of phytoplankton and nutrients in Lake Okeechobee, Florida. *Archiv fuer Hydrobiologie* 128:437-458.
7. Conley, D.J., Zimba, P.V., and Theriot, E. 1994. Silica content of freshwater and marine benthic diatoms. *Memoirs Cal. Acad. Sci.* 17:95-101.
 8. Zimba, P.V. 1995. Epiphytic algal biomass of the littoral zone, Lake Okeechobee, Florida (USA). *Archiv fuer Hydrobiologie Beih.* 45:233-240.
 9. Zimba, P.V., Hopson, M.S., Smith, J., Colle, J.V., and Shireman, J.V. 1995. Chemical composition and distribution of submersed aquatic vegetation in Lake Okeechobee, FL (1989-1991). *Archiv fuer Hydrobiologie* 45:241-246.
 10. Harris, T.T., Williges, K.A., and Zimba, P.V. 1995. Primary productivity and decomposition rates of five emergent macrophyte communities in the Lake Okeechobee marsh system. *Archiv fuer Hydrobiologie* 45:63-78.
 11. Zimba, P.V. and Bates, S.R. 1996. Mineralogical and microscopic analyses of material deposited on submersed macrophytes in Florida lakes. *Hydrobiologia* 340:37-41.
 12. Zimba, P.V. and Hopson, M.S. 1997. Quantification of epiphyte removal efficiency from five submersed plant species. *Aquatic Botany* 58:173-179.
 13. Hopson, M.S., Zimba, P.V., Philips, E.A., Fernandes, C.A., and Davis, J.S. 1998. Temporal variations in biomass of the algal epiphytes associated with the dominant submersed macrophytes in Lake Okeechobee, Florida (U.S.A.). *Verh. Int. Verein Limnol.* (International Society of Limnology) 26:1736-1740.
 14. Lloyd, S.W., Lea, J.K., Zimba, P.V., and Grimm, C.C. 1998. Rapid analysis of geosmin and 2-methylisoborneol in freshwater using solid-phase micro-extraction procedures. *Water Research* 32:2140-2146.
 15. Zimba, P.V. 1998. Use of nutrient enrichment bioassays to identify nutrients limiting epiphytic growth in Lake Okeechobee, Florida: confirmation of silica and nitrogen limitation. *Archiv fuer Hydrobiologie* 141:459-468.
 16. Zimba, P.V., Dionigi, C.P., and Millie, D.F. 1999. Evaluating the relationship between photopigment synthesis and 2-methylisoborneol accumulation in cyanobacteria. *J. Phycol.* 35:1422-1429.
 17. Schrader, K.K., Duke, S.O., Kingsbury, S.K., Tucker, C.S., Duke, M.V., Dionigi, C.P., Millie, D.F., and Zimba, P.V. 2000. Evaluation of ferulate for controlling the musty odor cyanobacterium *Oscillatoria perornata* in aquaculture ponds. *J. Applied Aquaculture* 10:1-16.
 18. Grimm, C.C., Lloyd, S.L., Batista, R., and Zimba, P.V. 2001. Using MD/SPME/GC/MS for analyzing fish tissue. *Journal of Chromatographic Science* 38:289-295.
 19. Zimba, P.V., Dionigi, C.P., and Brashear, S.S. 2001. Selective toxicity of exogenous l-lysine to cyanobacteria, relative to a chlorophyte and a diatom. *Phycologia* 40:483-486.
 20. Zimba, P.V., Grimm, C.C., Dionigi, C.P., and Weirich, C. 2001. Phytoplankton biomass, off-flavor: pigment relationships in Louisiana catfish aquaculture ponds. *J. World Aquaculture Society* 96-104.
 21. Zimba, P.V., Khoo, L., Gaunt, P.S., Brittain, S., and Carmichael, W.W. 2001. Confirmation of catfish, *Ictalurus punctatus* (Rafinesque), mortality from *Microcystis* toxins. *J. Fish Dis.* 24:41-47.
 22. Mischke, C. and Zimba, P.V. 2001. Assessment of zooplankton size fractionation for monitoring fry and fingerling culture ponds. *North American Journal of Aquaculture* 63:289-292.
 23. Zimba, P.V., Tucker, C.S., Mischke, C.C., and Grimm, C.C. 2002. Short-term effect of diuron on catfish production pond ecology. *North American Journal of Aquaculture* 64:16-23.
 24. Zimba, P.V., Bowie, S., Chatham, M.E., and Nonneman, D.S. 2002. Variants of

- microcystin in southeastern USA catfish production ponds. *Verh. Internationale Limnologie Verein.*28:1163-1166.
25. Nonneman, D. and Zimba, P.V. 2002. A PCR-based test to assess the potential for microcystin occurrence in channel catfish production ponds. *J. Phycology* 38:230-233.
 26. Hapeman, C.J., Dionigi, C.P., Zimba, P.V., and McConnell, L.L. 2002. Agrochemical and nutrient impacts on estuaries and other aquatic systems. *J. Ag. and Food Chemistry* 50:4382-4384.
 27. Zimba, P.V., Mischke, C.C., and Brashear, S.S. 2003. Pond-age water column trophic relationships in channel catfish *Ictalurus punctatus* production ponds. *Aquaculture* 219:291-301.
 28. Zimba, P.V. and Grimm, C.C. 2003. A synoptic survey of musty/muddy odor metabolites and microcystin toxin occurrence and concentration in southeastern USA channel catfish (*Ictalurus punctatus* Ralfinesque) production ponds. *Aquaculture* 218:81-87.
 29. Ritchie, J.E., Zimba, P.V., and Everitt, J. 2003. Remote sensing methods to assess water quality. *Photogrammetric Engineering and Remote Sensing* 69:695-705.
 30. Mischke, C.C., Li, M., and Zimba, P.V. 2004. Nutrient enrichment does not alter zooplankton chemical composition in catfish fingerling ponds. *North American Journal of Aquaculture*. 43:34-46.
 31. Mischke, C.C. and Zimba, P.V. 2004. Plankton community responses in earthen channel catfish nursery ponds under various fertilization regimes. *Aquaculture* 233:219-235.
 32. Zimba, P.V., Rowan, M., and Triemer, R.E. 2004. Identification of euglenoid algae that produce ichthyotoxin(s). *J. Fish Diseases* 65:35-38.
 33. Teas, J., Hebert, J.R., Fitton, H., and Zimba, P.V. 2004. Algae-a poor man's HAART? *Medical Hypotheses* 62:507-510.
 34. Grimm, C.C., Lloyd, S.L., and Zimba, P.V. 2004. Instrumental versus sensory detection of off-flavors in farm raised channel catfish. *Aquaculture* 236: 309-319.
 35. Thomson, S.J., Zimba, P.V., Bryson, C.T., and Alarcon-Calderon, V.J. 2005. Potential for remote sensing from agricultural aircraft using digital video. *Applied Eng. In Agriculture* 21:531-537.
 36. Mischke, C. C., Wise, D.J., Steeby, J., and Zimba, P.V. 2006. Effects of smallmouth buffalo and potassium permanganate treatment on plankton and pond water quality. *North American Journal of Aquaculture* 68:36-40.
 37. Zimba, P.V. and Gitelson, A.A. 2006. Remote estimation of chlorophyll in hyper-eutrophic aquatic systems: modeling tuning and accuracy estimation. *Aquaculture* 256:272-286.
 38. Zimba, P.V., Camus, A., Allen E.H., and Burkholder, J.M. 2006. Co-occurrence of white shrimp, *Penaeus vannamei*, mortalities and microcystin toxin in a southeastern USA shrimp facility. *Aquaculture* 261:1048-1055.
 39. Danaher, J., Tidwell, J.H., MCoyle, S.D., Disgupta, S., and Zimba, P.V. 2007. Effects of two densities of caged monosex *Nile tilapia* on water quality, phytoplankton populations, and production when polycultured with *Macrobrachium rosenbergii* in temperate ponds. *Journal of the World Aquaculture Society* 38:367-382.
 40. Burkholder, J.M., Hallegraeff, G.M., Melia, G., Cohen, A., Bowers, H., Oldach, D.A., Parrow, M.W., Sullivan, M.J., Zimba, P.V., and Mallin, M.A. 2007. Phytoplankton and bacterial assemblages in ballast water of US military ships as a function of port of origin, voyage time, and ocean exchange practices. *Harmful Algae* 6:486-518.
 41. Richardson, L.L., Sekar, R., Meyers, J.L., Gantar, M., Voss, J.D., Kaczmarzsky, L., Remily, E.R., Boyer, G.L., and Zimba, P.V. 2007. The presence of the cyanobacterial toxin microcystin in black band disease of corals. *Federation of European Microbiological Sciences Microbiological Letters* 272:182-187.

42. Stchapit, E., Ochs, C.A., and Zimba, P.V. 2008. Spatial and temporal variation in phytoplankton structure in a southeastern U.S. reservoir determined by HPLC and light microscopy. *Hydrobiologia* 600:215-228.
43. Li, M.H., Robinson, E.H., Oberle, D.F., and Zimba, P.V. 2008. Effects of various dietary carotenoid pigments on fillet appearance and pigment absorption in channel catfish *Ictalurus punctatus*. *J. World Aquaculture Soc.* 38: 557-563.
44. Bucollo, A.P., Sullivan, M.J., and Zimba, P.V. 2008. Effects of nutrient enrichment on primary production and biomass of sediment microalgae in a subtropical seagrass bed. *Journal of Phycology* 44:874-881.
45. Johnson, R.M., Viator, R.P., Veremis, J.C., Richard, E.P., and Zimba, P.V. 2008. Discrimination of sugarcane varieties with pigment ratios and high resolution hyperspectral leaf reflectance data. *J. Assoc. Sugar Cane Technologists* 28:63-75.
46. Smith, J.L., Boyer, G.L., and Zimba, P.V. 2008. A review of cyanobacterial odorous and bioactive metabolites: impacts and management alternatives in aquaculture. *Aquaculture* 280:5-20.
47. Sassengrath, G.E., Heilman, P., Luschei, E., Bennett, G.L., Fitzgerald, G., Klesius, P., Tracy, W., Williford, J.R., and Zimba, P.V. 2008. Technology, complexity and change in agricultural production systems. *Renewable Agriculture and Food Systems*. 23: 285–295.
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NOTE: italics indicate graduate student authorship

Additional publications:

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2. Zimba, P.V. 1985. The distribution of *Ceratium* spp. over the mid-Atlantic Bight. MS thesis. Old Dominion University, 61 pp.
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PRESENTATIONS

PRE-TAMUCC:

Over 100 presentations during 1985-2009.

POST-TAMUCC:

Hill, E. M., B. A. Nicolau, R. F. Duke, A. S. Baxter, and Zimba, P.V. 2010. Tolerance of benthic invertebrates to reoccurring hypersaline conditions resulting from reduced inflows in the Nueces River Delta, Texas, USA. Freshwater Inflows: Beyond 2010 Conference. Corpus Christi, TX. Poster presentation.

Zimba, P. V., P. Ordner, A. Rafalski, and M. Savage. 2011. Autoecology of the toxin producing *Euglena sanguinea*. 65th Phycological Society of America annual meeting. 21 July 2011. Seattle Washington. Poster presentation.

Zimba, P. V. 2011. Harmful algal blooms in aquaculture: be aware! Texas Aquaculture Association. Bayside, TX. invited oral presentation.

Siccardi, A.J., Zimba, P.V., Fuqua, Z.B., Rhodes, W.K., Durocher, M.D., Bennett, J.G., Richardson, C.M., Savage, M.L., Stafford, D.H., and Samocha, T.M. 2013. Comparison of Biomass and Lipid Production of Mono and Mixed Cultures of *Nannochloropsis salina* and *Phaeodactylum tricornutum* in Outdoor Raceways Using Natural Seawater in Corpus Christi, Texas. NAABB annual meeting Phoenix, AZ. Poster Presentation.

Gutierrez, N., Birchfield, M., Vega, R., Blandon, I., Gamez, R., and Zimba, P.V. 2013. Top-down control of lined pond aquaculture. Texas Aquaculture Association, Bay City, TX. 23-25 January 2013

Birchfield, M., Gutierrez, N., M., Vega, R., Blandon, I., Gamez, R., and Zimba, P.V. 2013. Bottom-up control of lined aquaculture pond productivity. Texas Aquaculture Association. Bay City TX 23-25 January 2013

Zimba, P.V. 2013. Toxins. Plenary Speaker. 54th Western Fish Disease Workshop and AFS Fish Health Section Annual Meeting. Port Townsend WA, 18-20 June 2013.

Zimba, P.V. 2013. Recent toxin advances at TAMUCC. Poster Presentation. Phycological Society of America. Orlando, FL August 5-12 2013.

O'Mara, S., Gutierrez, D., and Zimba, P.V. 2013. Fatty acid amides in *P. parvum* are abundant in Texas reservoirs and algal isolates from 2 continents. Poster Presentation. 7th Symposium on Harmful Algal Species. Sarasota, FL. 26-30Nov 2013.

Huang, I.-S., Guttierrez, D., Moeller, P.D., and Zimba, P.V. 2013. A new to science cyanobacterial toxin is produced by *Leptolyngbya* sp. Poster Presentation. 7th Symposium on Harmful Algal Species. Sarasota, FL. 26-30Nov 2013.

Huang, I. and Zimba P.V.2014. How would elevated CO2 affect the physiology of freshwater and marine cyanobacteria? Oral presentation at 71st Phycological Society of American annual meeting, Seaside, CA

Coehlo, E. and Zimba, P.V. 2013. Use of seawater electrolysis to build oyster reef. 66th Gulf Caribbean Fisheries Institute Meeting. Poster Presentation. Corpus Christi TX 4 November 2013.

Huang, I.-S., Zimba, P.V. et al. 2015. A phylogenetic assessment of cyanobacterial toxin accumulation in terrestrial, freshwater, and marine species. Phycological Society of America July 22-25, 2015.

Zimba, P.V., Huang, I.S. 2015. An evaluation of marine epiphyte removal efficiency after physical/chemical removal methods. Phycological Society of America July 22-25, 2015.

Huang, I., Pietrasiak, N., Allen, E., Burkholder, J.M., Gobler, C.J., Casamatta, D.A., Zimba, P.V.

2017. Cladistic assessment of cyanotoxin accumulation in marine, freshwater, and terrestrial cyanobacterial isolates. Oral presentation at the 120th Annual Meeting of the Texas Academy of Science, Belton, TX.

Huang, I., Pietrasiak, N., Allen, E., Burkholder, J.M., Gobler, C.J., Casamatta, D.A., Zimba, P.V. 2016. Cladistic assessment of cyanotoxin accumulation in marine, freshwater, and terrestrial cyanobacterial isolates. Invited oral presentation at the 10th International Conference on Toxic Cyanobacteria, Wuhan, China.

Huang, I., Pietrasiak, N., Allen, E., Burkholder, J.M., Gobler, C.J., Casamatta, D.A., Zimba, P.V. 2016. Cladistic assessment of cyanotoxin accumulation in marine, freshwater, and terrestrial cyanobacterial isolates. Oral presentation at 70th Phycological Society of American annual meeting, Cleveland, OH.

Huang, I., Pietrasiak, N., Allen, E., Burkholder, J.M., Gobler, C.J., Casamatta, D.A., Zimba, P.V. 2016. Cladistic assessment of cyanotoxin accumulation in marine, freshwater, and terrestrial cyanobacterial isolates. Oral presentation at American Society of Mass Spectrometry biannual meeting, San Antonio, TX.

Ramirez, L., Baxter, A., Withers, K., and Zimba, P. V. 2016. Does elevated salinity induce a physiological response in Texas diamondback terrapin *Malaclemys terrapin littoralis*? Poster Presentation. October 28-30, 2016. 7th Symposium on the Ecology, Status, and Conservation of Diamondback Terrapin 2016. Diamondback Terrapin Working Group. Fairhope, Alabama.

Ramirez, L., Baxter, A., Withers, K., and Zimba, P. V. 2016. Does elevated salinity induce a physiological response in Texas diamondback terrapin *Malaclemys terrapin littoralis*? Poster Presentation. July 6-10, 2016. Joint Meeting of Ichthyologists and Herpetologists 2016. New Orleans, Louisiana.

Zimba, P.V. 2016. An overview of freshwater and marine toxins impacting aquaculture systems. World Aquaculture Society Annual meeting San Antonio, TX. presentation

Lewis, M.L., Withers, K., Woods, T., and Zimba, P.V. 2017. Reducing oil toxicity using oil-degrading microbes. CleanGulf Conference. Houston TX 5-7 December 2017. poster

Chorazywski, A., Myali, X., and Zimba, P.V. 2018. Effect of phycosphere-associated bacteria on growth and fatty acid accumulation in *Phaeodactylum tricornerutum*. World Aquaculture Society Annual Meeting Los Vegas, NV 19-22 Feb 2018. Presentation

Shalygin, S., Huang, I-S., and Zimba, P.V. 2018. A reevaluation of *Hyella* Cal Aq792, and establishment of *Odorella bentonica*. Phycological Society of America. Vancouver BC. July 28-3 August 2018. Poster

Shalygin, S., Zimba, P. and Huang, I-S. Climatological and Anthropocene effects on sandflat communities of Laguna Madre, TX. Phycological Society of America. Vancouver BC. July 28-3 August 2018. Presentation

Service to the World

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

Consultant-Ecuador tilapia farms 2010- present

Member- Board of Trustees, *Phycological Society of America* 2006-2013 (2 terms)

Journal Editorial Service

<i>Aquaculture</i>	Periodic Reviews	2004-present
<i>Applied and Env. Micro.</i>	Periodic Reviews	2015-present
BIOLOGY	Periodic Reviews	2018-present
<i>Chinese J of Oceanography</i>	<i>Senior Editor</i>	2011-2013
<i>Environmental Science & Technology</i>	Periodic Reviews	2008-present
<i>Harmful Algae</i>	<i>Editorial Board</i>	2007-2014
	Periodic Reviews	2004-present
<i>J. Agricultural and Food Chemistry</i>	Periodic Reviews	1999-present
<i>J. Applied Aquaculture</i>	Periodic Reviews	2001-present
<i>J. of Aquaculture Res. and Development</i>	<i>Senior Editor</i>	2011-2015
<i>Journal of Microbiology</i>	Periodic Reviews	2013-present
<i>Journal of Phycology</i>	Periodic Reviews	2016-present
<i>J. World Aquaculture Society</i>	Periodic reviews	2005-present
<i>Toxins</i>	Editorial Board	2014-present
<i>Marine Drugs</i>	Periodic Reviewer	2014-present
<i>Nature Climate Change Letters</i>	Periodic Reviews	2016-present
<i>Pakistan J. Botany</i>	Periodic Reviews	2015-present
<i>Phycologia</i>	Periodic Reviews	2010-present
<i>Soil & Sediment Contamination</i>	Periodic Reviews	2006-present
<i>Toxicon</i>	Periodic Reviews	2010-present
<i>Toxins</i>	<i>Editorial Board</i>	2013-present
<i>Water</i>	Periodic reviews	2012-present
<i>Water, Air & Soil Pollution</i>	Periodic Reviews	2002-present
<i>Water Research</i>	Periodic Reviews	2008-present
<i>Hydrobiologia</i>	Periodic Reviews	2009-present
	Editorial Board	2019-present
<i>Plos One</i>	Periodic Reviews	2015-present
<i>J of Phycology</i>	Periodic Reviews	2004-present

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

NOAA Science Advisory Board Gulf Coast Ecosystem Restoration Science Program
Advisory Working Group Member 2014-2017

Texas Center of Excellence Advisory Council Member 2015-

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, NSF MRI 2012, UK NERC Program 2011, Royal Netherlands Academy of Arts and Science 2012

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 220
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- *Standard Methods for the Examination of Waste Water*
Board of Trustees member- *Phycological Society of America* 2006-2012
Panelist, *National Academy of Sciences*, Algal Biofuel Sustainability 2011-2012