

JAMES S. DIANA

Contact Information

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Education

University of Alberta	Ph.D., Zoology, 1979
California State University, Long Beach	M.A., Biology, 1975
California State University, Long Beach	B.S., Marine Biology, 1974

Dates of Academic Appointments at University of Michigan

1996-2017	Professor of Fisheries and Aquaculture
2009-present	Director, Michigan Sea Grant College Program
1999-2007	Associate Dean, School of Natural Resources and Environment
1984-1996	Associate Professor and Associate Research Scientist, Center for Great Lakes and Aquatic Sciences
1979-1984	Assistant Professor and Assistant Research Scientist

Professional Experience

1975	Fisheries Biologist, California Department of Fish and Game
1974	Fisheries Biologist, Inyo National Forest, California

Adjunct Appointments

Adjunct Associate Professor, Institute of Agronomy and Veterinary Medicine, University of Rabat, Morocco.

Research Affiliate, Institute of Marine Biology, University of Hawaii.

Visiting Scientist, Australian School of Environmental Studies, Griffith University, Brisbane, Queensland.

Visiting Scientist, Pacific Aquaculture and Coastal Resources Center, University of Hawaii, Hilo.

Honors

Lifetime Achievement Award, World Aquaculture Society and AquaFish CRSP – 2010

Establishment of the Jim Diana Scholarship in Aquatic Ecology, SNRE – 2007

Justin W. Leonard Award of Excellence, Michigan Chapter, American Fisheries Society – 2006

University of Michigan Undergraduate Teaching Award for 2004–2005

Associate Fisheries Biologist, Michigan Department of Natural Resources – 1986-present

Scientific Societies

American Fisheries Society
World Aquaculture Society
Network of Tropical Aquaculture Scientists
International Association for Great Lakes Research
Michigan Aquaculture Association

Peer-reviewed Publications

- Ahmed, N. S.W. Bunting, M. Glaser, M.S. Flaherty, and J.S. Diana. 2017. Can greening of aquaculture sequester blue carbon? *Ambio* 46:468–477.
- Duan, Y.J., C.P. Madenjian, C.X. Xie, J.S. Diana, T.P. O'Brien, Y.M. Zhao, J.X. He, S.A. Farha, and B. Huo. 2016. Age and growth of round gobies in Lake Huron: Implications for food web dynamics. *Journal of Great Lakes Research* 42:1443-1451.
- Krieger, J.R., and Diana, J.S. 2016. Development and evaluation of a habitat suitability model for young lake sturgeon (*Acipenser fulvescens*) in the North Channel of the St. Clair River, MI. *Can. J. Fish. Aquat. Sci.* [DOI 10.1139/cjfas-2016-0357](https://doi.org/10.1139/cjfas-2016-0357)
- Diana, J.S., P. Hanchin, and N. Popoff. 2015. Movement patterns and spawning sites of muskellunge *Esox masquinongy* in the Antrim chain of lakes, Michigan. *Environmental Biology of Fishes* 98:833-844.
- Ahmed, N., and J.S. Diana. 2015a. Threatening “white gold”: Impacts of climate change on shrimp farming in coastal Bangladesh. *Ocean and Coastal Management* 114:42-52.
- Ahmed, N., and J.S. Diana. 2015b. Coastal to inland: Expansion of prawn farming for adaptation to climate change in Bangladesh. *Aquaculture Reports* 2:67-76.
- Ahmed, N., and J.S. Diana. 2015. Does climate change matter for freshwater aquaculture in Bangladesh? *Journal of Regional Environmental Change* 16:1659-1669.
- Crane, D.P., L.M. Miller, J.S. Diana, J.M. Casselman, J.M. Farrell, K.L. Kapuscinski, and J.K. Nohner. 2015. Muskellunge and northern pike ecology and management: important issues and research needs. *Fisheries* 6:258-267.
- David, S.R., R.S. Kik IV, J.S. Diana, E.S. Rutherford, and M.J. Wiley. 2015. Evidence of countergradient variation in growth of spotted gars from core and peripheral populations. *Transactions of the American Fisheries Society* 144:837-850.
- Nohner, J.K., and J.S. Diana. 2015. Muskellunge spawning site selection in northern Wisconsin lakes and a GIS-based predictive habitat model. *North American Journal of Fisheries Management* 35:141-157.
- Boase, J.C., B.A. Manny, K.A.L. Donald, G.W. Kennedy, J.S. Diana, M.V. Thomas, and J.A. Chiotti. 2014. Habitat used by juvenile lake sturgeon (*Acipenser fulvescens*) in the North Channel of the St. Clair River (Michigan, USA). *Journal of Great Lakes Research* 40: 81-88.
- Diana, J.S., H.S. Eгна, T. Chopin, M.S. Peterson, L. Cao, R. Pomeroy, M. Verdegem, W.T. Slack, M.G. Bondad-Reantaso, and F. Cabello. 2013. Responsible aquaculture in 2050: Valuing local conditions and human innovations will be key to success. *BioScience* 63:255-262.

- Cao, L., J.S. Diana, and G.A. Keoleian. 2013. Role of life cycle assessment in sustainable aquaculture. *Reviews in Aquaculture* 4:1-11.
- Mychek-Londer, J.G., D.B. Bunnell, W. Stott, J.S. Diana, J.R.P. French III, and M.A. Chircinske. 2013. Using diets to reveal overlap and egg predation among benthivorous fishes in Lake Michigan. *Transactions of the American Fisheries Society* 142:492-504.
- Diana, J.S. 2012. Is lower intensity aquaculture a valuable means of producing food? An evaluation of its effects on near-shore and inland waters. *Reviews in Aquaculture* 4:234-245.
- Diana, J.S. 2012. Some principles of pond fertilization for Nile tilapia using organic and inorganic inputs. Pages 163-177 in C.C. Mischke, editor. *Pond Fertilization: Impacts of Nutrient Input on Aquaculture Production*. John Wiley and Sons, Inc., New York.
- Hung, L.T., V.C. Luong, N.P. Hoa, J.S. Diana. 2012. Impacts of the introduction of alien tilapias (*Oreochromis spp.*) on 75 the fisheries and biodiversity of indigenous species in tri an reservoir, Vietnam. Pages 76-85 in Editors L. Liping and K. Fitzsimmons, *Better science, better fish, better life: Proceedings of the ninth international symposium on tilapia in aquaculture*. AquaFish Collaborative Research Support Program, Shanghai, China.
- Cao, L., J.S. Diana, G.A. Keoleian, and Q. Lai. 2011. Life cycle assessment of Chinese shrimp farming systems targeted for export and domestic sales. *Environmental Science & Technology* 45:6531-6538.
- Boase, J.C., J.S. Diana, M.V. Thomas, and J.A. Chiotti. 2011. Movements and distribution of adult lake sturgeon from their spawning site in the St. Clair River, Michigan. *Journal of Applied Ichthyology* 27 (Suppl. 2):58-65.
- Liu, L., L. Kang, Y. Yaling, Y. Jun, Y. Yi, and J.S. Diana. 2011. The dangers of microcystins in aquatic systems, and progress of research into their detection and elimination. *World Aquaculture* 42(2):53-57, 69.
- Liu, L., K. Li, T. Chen, X. Dai, M. Jiang, and J.S. Diana. 2011. Effects of *Microcystis aeruginosa* on the life history of water flea *Daphnia magna*. *Chinese Journal of Oceanology and Limnology* 29:892-897.
- Shrestha, M.K., R.L. Sharma, K. Gharti, and J.S. Diana. 2011. Polyculture of sahar (*Tor putitora*) with mixed-sex Nile tilapia. *Aquaculture* 319: 284-289.
- Jiang Min, Yu Gen-ding, Dai Xilin, Liu Liping, Gu Deping, Hu Weiguo, and J.S. Diana. 2010. Multivariate statistical analysis of chlorophyll-a and water quality parameters in ponds of *Litopenaeus vannamei* culturing. *Journal of Fisheries of China* 34:1712-1718.
- Ahmad, S.A.S., A.N. Bart, Y. Yi, J.E. Rakocy, and J.S. Diana. 2010. The effect of the introduction of Nile tilapia (*Oreochromis niloticus*, L.) on small indigenous fish species (mola, *Amblypharyngodon mola*, Hamilton; chela, *Chela cachius*, Hamilton; punti, *Puntius sophore*, Hamilton). *Aquaculture Research* 41:904-912.
- Diana, J.S. 2010. Should cormorants be controlled to enhance yellow perch in Les Cheneaux Islands? A comment on Fielder (2008). *Journal of Great Lakes Research* 36:190-194.
- Yuan, D., Y. Yi, A. Yakupitiyage, K. Fitzsimmons, and J.S. Diana. 2010. Effects of addition of red tilapia (*Oreochromis spp.*) at different densities and sizes on production, water quality and nutrient recovery of intensive culture of white shrimp (*Litopenaeus vannamei*) in cement tanks. *Aquaculture* 298:226-238.

- Rai, S., Y. Yi, M.A. Wahab, A.N. Bart, and J.S. Diana. 2010. Comparison of the growth and production of carp in polyculture ponds with supplemental feeding using rice straw and kanchi as substrates. *Our Nature* 8:92-105.
- Diana, J.S. 2009. Aquaculture production and biodiversity conservation. *BioScience* 59:27-38.
- Schwantes, V.S., J.S. Diana, and Y. Yi. 2009. Social, economic, and production characteristics of giant river prawn *Macrobrachium rosenbergii* culture in Thailand. *Aquaculture* 287:120-127.
- Diana, J.S., and Smith, K. 2008. Combining ecology, human demands, and philosophy into the management of northern pike in Michigan. *Hydrobiologia* 601:125-135.
- Yi, Y., and J.S. Diana. 2008. Strategies for Nile Tilapia (*Oreochromis niloticus*) Pond Culture. In *Proceedings of the Eighth International Symposium on Tilapia in Aquaculture*, edited by K. Fitzsimmons, pp. 11-21. Cairo, Egypt: Egypt Ministry of Agriculture, ISBN 978-1-888807-18-9.
- Rai, S., Y. Yi, M.A. Wahab, A.N. Bart, and J.S. Diana. 2008. Comparison of rice straw and bamboo stick substrates in periphyton-based carp polyculture systems. *Aquaculture Research* 39:464-473.
- Ling, C., Y. Yi, W.M. Wang, A. Yakupitiyage, D.R. Yuan, and J.S. Diana. 2008. Effects of pretreatment with microbial phytase on phosphorous utilization and growth performance of Nile tilapia (*Oreochromis niloticus*). *Aquaculture Nutrition*, 1-11.
- Ling, C., W. Weimin, Y. Yi, Z. Yuan, S. Siong, and J.S. Diana. 2007. Environmental impact of aquaculture and countermeasures to aquaculture pollution in China. *Environmental Science Pollution Research* 14(7):452-462.
- Diana, J.S., and T.L. Margenau, editors. 2007. *The muskellunge symposium: a memorial for E. J. Crossman*. Springer, Dordrecht, The Netherlands.
- Zexia, Gao, W. Weimin, Y. Yi, K. Abbas, L. Dapeng, Z. Guiwei, and J. S. Diana. 2007. Morphological studies of peripheral blood cells of the Chinese sturgeon, *Acipenser sinensis*. *Fish Physiology and Biochemistry* 33:213-222.
- Ling, C., W. Wanga, C. Y., Y. Yi, J.S. Diana, A. Yakupitiyage, Z. Luo, and D. Li. 2007. Application of microbial phytase in fish feed. *Enzyme and Microbial Technology* 40 (2007) 497-507.
- Tain, F.H., and J.S. Diana. 2007. Impacts of extension practice: Lessons from small farm-based aquaculture of Nile tilapia in Northeastern Thailand. *Society and Natural Resources* 20:583-595.
- Gao, Z.X., W.M. Wang, K. Abbas, X.Y. Zhou, Y. Yi, J.S. Diana, H.P. Wang, H.L. Wang, Y. Li, and Y.H. Sun. 2007. Haematological characterization of loach *Misgurnus anguillicaudatus*: comparison among diploid, triploid and tetraploid specimens. *Comparative Biochemistry and Physiology - Part A: Molecular & Integrative Physiology* 147: 1001-1008.
- Yi, Y. A. Wahab, and J.S. Diana. 2006. On-station trials of different fertilization regimes used in Bangladesh. *Journal of Aquaculture in the Tropics*, 21(1): 45-57.
- Diana, J.S., S. Maruca, and B. Low. 2006. Prey consumption by cormorants and its effect on the yellow perch population of Les Cheneaux Islands area, Northern Lake Huron. *Journal of Great Lakes Research* 32:306-320.

- DePhilip, M., J.S. Diana, and D. Smith. 2005. Movement of walleye in an impounded reach of the Au Sable River, Michigan, USA. *Environmental Biology of Fishes* 72:455-463.
- McRae, B.J., and J.S. Diana. 2005. Factors influencing density of age-0 brown and brook trout in the Au Sable River, Michigan. *Transactions of the American Fisheries Society* 134:132-140.
- Diana, J.S. 2004. *Biology and ecology of fishes*, Second Edition. Cooper Publishing Group, Traverse City, Michigan.
- Diana, J.S., J.P. Hudson, and R.D. Clark, Jr. 2004. Seasonal and daily movements of large brown trout in a Michigan stream. *Transactions of the American Fisheries Society* 133:34-44.
- Yi, Y., C.K. Lin, and J.S. Diana. 2003. Waste recycling in fishpond culture through integrated culture systems. Pages 265-270 in B. Phillips, B.A. Megrey, and Y. Zhou, editors. *Proceedings of the Third World Fisheries Congress: feeding the world with fish in the next millennium—the balance between production and environment*. American Fisheries Society, Symposium 38, Bethesda, Maryland.
- Giap, D.H., Y. Yi, N.S. Cuong, L.T. Luu, J.S. Diana, and C.K.Lin. 2003. Application of GIS and remote sensing for assessing watershed ponds for aquaculture development in Tahi Nguyen, Vietnam. 2003 Map Asia Conference.
- Yi, Y., C.K. Lin, and J.S. Diana. 2003. Hybrid catfish (*Clarias macrocephalus* x *C. gariepinus*) and Nile tilapia (*Oreochromis niloticus*) culture in an integrated pen-cum-pond system: growth performance and nutrient budgets. *Aquaculture* 217:395-408.
- Rust, A., J.S. Diana, T. Margenau, and C. Edwards. 2002. Lake characteristics influencing spawning success of muskellunge *Esox masquinongy*. *North American Journal of Fisheries Management* 22(3): 834-841.
- Yi, Y., C.K. Lin, and J.S. Diana. 2002. Techniques to mitigate clay turbidity problems in fertilized earthen fish ponds. *Aquacultural Engineering* 27:39-51.
- Yi, Y., C.K. Lin, and J.S. Diana. 2002. Recycling pond mud nutrients in integrated lotus-fish culture. *Aquaculture* 212:213-226.
- Lin, C.K., M.K. Shrestha, Y. Yi, and J.S. Diana. 2001. Management to minimize the environmental impacts of pond draining: harvest draining techniques and effluent quality. *Aquacultural Engineering* 25(2):125-135.
- Schaeffer, J.S., J.S. Diana, and R. C. Haas. 2000. Effects of long term changes in the benthic community on yellow perch in Saginaw Bay, Lake Huron. *Journal of Great Lakes Research* 26:340-351.
- Schaeffer, J.S., R.C. Haas, J.S. Diana, and J.E. Breck. 1999. Field test of two energetic models for yellow perch. *Transactions of the American Fisheries Society* 128:414-435.
- Diana, J.S., and C.K. Lin. 1998. The effects of fertilization on growth and production of Nile tilapia in rain-fed ponds. *Journal of the World Aquaculture Society* 29:405-413.
- Zorn, S., T. Margeneau, J.S. Diana, and C.J. Edwards. 1998. The influence of spawning habitat on natural reproduction of muskellunge in Wisconsin. *Transactions of the American Fisheries Society* 127:997-1007.
- Diana, J.S. 1997. Feeding strategies. Pages 245-263 in H. Egna and C. Boyd, editors. *Dynamics of pond aquaculture*. CRC Press, Boca Raton, Florida.

- Diana, J.S., J.P. Szyper, T.R. Batterson, C.E. Boyd, and P.H. Piedrahita. 1997. Water quality in ponds. Pages 53-71 in H. Egna and C. Boyd, editors. Dynamics of pond aquaculture. CRC Press, Boca Raton, Florida.
- Seim, W.K., C.E. Boyd, and J.S. Diana. 1997. Environmental considerations. Pages 163-182 in H. Egna and C. Boyd, editors. Dynamics of pond aquaculture. CRC Press, Boca Raton, Florida.
- Diana, J.S., C.K. Lin, and Y. Yi. 1996. Timing of supplemental feeding for tilapia production. *Journal of the World Aquaculture Society* 27:410-419.
- Yi, Y., C.K. Lin, and J.S. Diana. 1996. Influence of Nile tilapia (*Oreochromis niloticus*) stocking density in cages on their growth and yield in cages and in ponds containing cages. *Aquaculture* 146:205-215.
- Diana, J.S. 1995. Biology and ecology of fishes. Biological Sciences Press. Carmel, Indiana. 441 p.
- Diana, J.S. 1996. Energetics. Pages 103-124 in J. Craig, editor. Pike: Biology and Exploitation. Fishery Series Number 19. Chapman and Hall, London.
- Diana, J.S., C.K. Lin, and K. Jaiyen. 1994. Supplemental feeding of tilapia in fertilized ponds. *Journal of the World Aquaculture Society* 25:497-506.
- Lin, C.K., and J.S. Diana. 1995. Co-culture of catfish (*Clarias macrocephalus* x *C. Gariepinus*) and tilapia (*Oreochromis niloticus*) in ponds. *Aquatic Living Resources* 8:449-454.
- Buurma, B.J., and J.S. Diana. 1994. Effects of feeding frequency and handling on growth and mortality of cultured walking catfish, *Clarias fuscus*. *Journal of the World Aquaculture Society* 25:175-182.
- Diana, J.S. 1993. Conservation and utilization of fish genetic resources in capture and culture fisheries. Pages 89-103 in J.I. Cohen and C.S. Potter, editors. Case studies of genetic resource conservation in natural habitats. American Association for the Advancement of Science, Washington, D.C.
- Diana, J.S. 1992. Review of "Pond fishes in China, edited by Zhong Lin, 1991." *Progressive Fish-culturist* 54:278-279.
- Diana, J.S., C.K. Lin, and P.J. Schneeberger. 1991. Relationships among nutrient inputs, water nutrient concentrations, primary production, and yield of *Oreochromis niloticus* in ponds. *Aquaculture* 92:323-341.
- Diana, J.S., D. Dettweiler, and C.K. Lin. 1990. Effect of Nile tilapia (*Oreochromis niloticus*) on the ecosystem of aquaculture ponds, and its significance to the trophic cascade hypothesis. *Canadian Journal of Fisheries and Aquatic Sciences* 48:183-190.
- Diana, J.S., and R. Salz. 1990. Energy storage, growth, and maturation of yellow perch from different locations in Saginaw Bay, Michigan. *Transactions of the American Fisheries Society* 119:976-984.
- Clapp, D.F., R.D. Clark, Jr., and J.S. Diana. 1990. Range, activity, and habitat of large, free-ranging brown trout in a Michigan stream. *Transactions of the American Fisheries Society* 119:1022-1034.
- Diana, J.S. 1990. Food habits of salmonids in western Lake Huron. *Journal of Great Lakes Research* 16:271-278.

- Diana, J.S., D.F. Clapp, E.M. Hay-Chmielewski, G. Schnicke, D. Siler, W. Ziegler, and R.D. Clark, Jr. 1989. Relative success of telemetry studies in Michigan. *American Fisheries Society Symposium* 7:346-352.
- Diana, J.S., and A.W. Fast. 1989. The effects of water exchange rate and density on culture of *Clarias fuscus*. *Aquaculture* 78:267-276.
- Diana, J. S. 1989. Review of "Synopsis of biological data on the northern pike *Esox lucius* Linnaeus, 1758, by Alexander J.P. Raat, 1988." *Copeia* 1989:1099-1100.
- Diana, J.S., S.L. Kohler, and D.R. Ottey. 1988. A yield model for walking catfish production in aquaculture systems. *Aquaculture* 71:23-35.
- Diana, J.S., P.J. Schneeberger, and C.K. Lin. 1988. Relationships between primary production and yield of tilapia in ponds. Pages 1-6 in R.S.V. Pullin, T. Bhukasawan, K. Tonguthai and J.L. Maclean, editors. *The Second International Symposium on Tilapia in Aquaculture. ICLARM Conference Proceedings* 15.
- Diana, J.S. 1987. A simulation of the mechanisms causing stunting in northern pike populations. *Transactions of the American Fisheries Society* 116:612-617.
- Diana, J.S., and D.R. Ottey. 1986. Biological principles of pond culture: fish. Pages 55-66 in J.E. Lannan, R.O. Smitherman, and G. Tchobanoglous, editors. *Principles and practices of pond aquaculture: a state of the art review*. Oregon State University Press, Corvallis, Oregon.
- Flath, L.E., and J.S. Diana. 1985. The seasonal energy dynamics of the alewife in southeastern Lake Michigan. *Transactions of the American Fisheries Society* 114:328-337.
- Diana, J.S. 1984. The growth of largemouth bass, *Micropterus salmoides* (Lacepede), under constant and fluctuating temperatures. *Journal of Fish Biology* 24:165-172.
- Diana, J.S. 1983. Oxygen consumption by largemouth bass under constant and fluctuating thermal regimes. *Canadian Journal of Zoology* 61:1892-1895.
- Diana, J.S. 1983. An energy budget for northern pike. *Canadian Journal of Zoology* 61:1968-1975.
- Diana, J.S. 1983. Growth, maturation, and production of northern pike in three Michigan lakes. *Transactions of the American Fisheries Society* 112:38-46.
- Diana, J.S. 1982. An experimental analysis of the metabolic rate and food utilization of northern pike. *Comparative Biochemistry and Physiology* 71A:395-399.
- Diana, J.S. 1980. Diel activity pattern and swimming speeds of northern pike (*Esox lucius*) in Lac Ste. Anne, Alberta. *Canadian Journal of Fisheries and Aquatic Sciences* 37:1454-458.
- Diana, J.S. 1979. The feeding pattern and daily ration of a top carnivore, the northern pike (*Esox lucius*). *Canadian Journal of Zoology* 57:2121-2127.
- Diana, J.S., and W.C. Mackay. 1979. Timing and magnitude of energy deposition and loss in the body, liver, and gonads of northern pike (*Esox lucius*). *Journal of the Fisheries Research Board of Canada* 36:481-487.
- Diana, J.S., and E.D. Lane. 1978. The movement and distribution of Paiute cutthroat trout, *Salmo clarki seleniris*, in Cottonwood Creek, California. *Transactions of the American Fisheries Society* 107:444-448.

- Diana, J.S., W.C. Mackay, and M. Ehrman. 1977. Daily movements and habitat preference of northern pike (*Esox lucius*) in Lac Ste. Anne, Alberta. Transactions of the American Fisheries Society 106:560-565.
- Diana, J.S., and D.M. Wong. 1975. Studies on the Pauite cutthroat trout in the North Fork of Cottonwood Creek, White Mountains, California. Cal-Neva Wildlife Transactions 1975:125-131.

Popular Publications

- Manyala, J.O., R.S. Pomeroy, P. Nen, K. Fitzsimmons, M.K. Shrestha, and J.S. Diana. 2015. Low-cost tilapia production with fertilization and supplementary feeding. World Aquaculture, March 2015:43-46.
- Bennett, L., J.S. Diana, and L. Qiuming. 2012. Learning from tradition: Integrated aquaculture practices in Yingbin Bay, China. Global Aquaculture Advocate Nov/Dec: 36-37.
- Diana, J.S. 2009. Considering sustainability in seafood and other food products. Resource Oct/Nov:10-13.
- Diana, J.S. 2009. F. Tain, V. Schwantes, M. Clark. Outreach assessments: studies examine aquaculture links to Thai communities. Global Aquaculture Advocate. Nov/Dec: 10-12.
- Schwantes, V., J.S. Diana, and Y. Yi. 2007. Freshwater prawn farming in Thailand – Cooperation keeps intensive production profitable. Global Aquaculture Advocate Jan/Feb:70-73.
- Asaduzzaman, M.D., M.A. Wahab, Y. Yi, J.S. Diana, and C.K. Lin. 2006. Bangladesh prawn-farming survey reports industry evolution. Global Aquaculture Advocate Nov/Dec: 40-42.
- Yuan, D., Y. Yi, and J.S. Diana. 2006. Walking catfish production in Thailand: Hybrid species helped fuel culture boom. Global Aquaculture Advocate May/June: 59-61.
- Diana, J.S., Y. Yi, and C.K. Lin. 2004. Integrated cage-cum-pond systems improve fish production with limited inputs. Global Aquaculture Advocate July/August: 62-63.
- Diana, J.S. 1992. Review of "The Living Ocean: Understanding and Protecting Marine Biodiversity by B. Thorne-Miller and J. Catena, 1991." Endangered Species Update 9:14.

Published Proceedings/Reports

- Diana, J.S. 2005. Combined cage in pond culture systems for Southeast Asia. Aquaculture Compendium, CAB International, Oxfordshire, UK.
- Diana, J.S., P.W. Webb, and T. Essington. 2003. Growth and appetite of juvenile lake sturgeon *Acipenser fulvescens*. Michigan Department of Natural Resources, Fisheries Division, Research Report 1063, Ann Arbor.
- Diana, J.S., G.Y. Belyea, and R.D. Clark, Jr., editors. 1997. History, status, and trends in populations of yellow perch and double-crested cormorants in Les Cheneaux Islands, Michigan. Michigan Department of Natural Resources, Fisheries Division, Special Report, Number 17, Ann Arbor.
- Diana, J.S., C.A. Jones, D.O. Lucchesi, and J.C. Schneider. 1987. Evaluation of the yellow perch fishery and its importance to the local economy of the Les Cheneaux Islands area. Grant LRP-8C-7, Coastal Management Program of the Department of Natural Resources.

- Diana, J.S., W.Y.B. Chang, D.R. Ottey, and W. Chuapoehuk. 1985. Production systems for commonly cultured freshwater fishes of southeast Asia. University of Michigan, Great Lakes and Marine Waters Center, International Programs Report Number 7.
- Diana, J.S. 1979. An energy budget for northern pike (*Esox lucius*) in Lac Ste. Anne, Alberta. Ph.D. Dissertation, University of Alberta, Edmonton. 160 p.
- Wells, A.W., and J.S. Diana. 1975. Survey of the freshwater fishes and their habitats in the coastal drainages of Southern California. Contract Report 53-P, Natural History Museum of Los Angeles County. 364 p.
- Diana, J.S. 1975. The movement and distribution of Paiute cutthroat trout, *Salmo clarki seleniris* Snyder, in the North Fork of Cottonwood Creek, Mono County, White Mountains, California. Master's thesis, California State University, Long Beach. 98 p.

Papers Presented

- A Perspective on the Sustainability of Seafood from the Great Lakes. Presented at the 2017 Michigan Seafood Summit, on May 17, 2017.
- Why Do So Many Americans React Negatively to Increasing Aquaculture in the US? Presented at the National Aquaculture Extension Conference, June 6, 2017.
- Establishing School Ponds for Fish Farming and Education. Presented at the AquaFish Innovation Lab in Surabaya, Indonesia, April 24, 2016.
- Aquaculture in Michigan – Future Directions and Challenges. Presented at the 2016 Lake Erie/Detroit River Fishery Workshop in Taylor, Michigan, April 21, 2016.
- Spawning Habitat for Muskellunge Is Far More Variable than We Ever Expected – Even Two Years Ago. Presented at the Hugh C. Becker Muskellunge Symposium, Minnetonka, Minnesota March 13, 2016.
- Aquaculture in Michigan – Future Directions and Challenges. Presented at the Great Lakes: Michigan's Water Heritage Conference at Kellogg Center in Lansing, March 8, 2016.
- Restoration of Muskellunge in Green Bay, Lake Michigan. Presented at the International Association for Great Lakes Research Conference. West Lafayette, Indiana, June 2-6, 2013.
- Spawning Habitat for Muskellunge Is Far More Variable Than We Ever Expected.” Presented at the annual meeting of the American Fisheries Society in Little Rock, Arkansas, September 8-12, 2013.
- Some Principles of Pond Fertilization for Nile Tilapia Using Organic and Inorganic Inputs. Presented at the World Aquaculture Society meeting in Nashville, Tennessee, February 22, 2013.
- Seafood Cards – Their impact today and role for the future. Presented at a symposium of the Monterey Bay Aquarium Seafood Watch Program during the World Aquaculture Society meeting in Nashville, Tennessee, February 23, 2013.
- Is semi-intensive aquaculture a valuable means of producing food? An evaluation of its effects of on biodiversity in near shore and inland waters. Presented at the annual American Fisheries Society conference in Seattle, Washington. September 9, 2011.
- Technology development in improving sustainability and reducing environmental impacts of aquaculture systems,” Presented at a workshop: Identifying Better Management Practices to Improve the Giant River Prawn Industry in Thailand. Thailand. August 10, 2011.

Development of more efficient tilapia systems in Southeast Asia. Presented at the Institute of Agriculture and Animal Science in Chitwan, Nepal, August 2010.

Asian Carp – A Great Lakes Dilemma and a Global Treasure? Presented at the Freshwater Summit, Traverse City, October 29, 2010.

Consumption of hatchery trout by walleye in two major rivers in Michigan. Presented at the 2010 Midwest Fish and Wildlife Conference in Minneapolis, MN on December 17, 2010.

Dr. Yang Yi: A memorial. Gave a presentation on the life of colleague, Yang Yi, at the World Aquaculture Society Conference in San Diego on March 3, 2010.

Advances in optimizing pond culture systems. Presented at the World Aquaculture Society Conference in San Diego, March 3, 2010.

Determining the environmental performance of marine shrimp culture using life cycle assessment. Presented at the Aquaculture Interchange Program's Symposium, *Integrated Technologies for Advanced Shrimp Production*, in Honolulu, Hawaii, October 14, 2009.

Determining the ecological footprint of shrimp aquaculture through life cycle analysis (LCA)—A case study in Hainan Province, China. Presented at the World Aquaculture Society Meeting in Seattle, WA, February, 2009.

Outreach, acceptance, and success of pond aquaculture in promoting rural economy and social stability. Presented at the World Aquaculture Society Meeting in Seattle, WA, February, 2009.

Aquaculture production and biodiversity conservation. Presented to the Michigan Aquaculture Association Conference, Ann Arbor, MI, February 2009.

Spawning site selection and movement of muskellunge in the Elk-Skegemog chain of lakes. Presented at the annual Michigan Department of Resources annual retreat in Roscommon, MI, February 2009.

Human influences on natural spawning and reproductive success of muskellunge. Presented at the Michigan Chapter American Fisheries Society Meeting, Dundee, MI, March 19, 2009.

Ecological aspects of fertilizing and feeding regimes used to improve efficiency of pond culture for Nile tilapia. Presented at the Workshop on Cage Aquaculture in Cairo, Egypt, April 26, 2008.

Outreach, acceptance, and success of pond aquaculture in promoting rural economy and social stability. Presented at the Workshop on Cage Aquaculture in Cairo, Egypt, April 27, 2008.

Understanding our Impact on the Natural World. Mortar Board and University Unions Arts and Programs. UM Student Union, November 6, 2007.

Use of cages in pond aquaculture to reclaim wastes from intensive feeding of fish. Presented at the Workshop on Cage Aquaculture in Cairo, Egypt, May 12, 2007.

A field energy budget for northern pike, an aquatic piscivore. Presented as part of the Biology Department Seminar Series at Eastern Illinois University, in Charleston, IL, February 22, 2007.

The history and philosophy of management for northern pike in Michigan. Presented at the American Fisheries Society annual meeting, in Lake Placid, New York, September 14, 2006.

Integrated cage-cum-pond aquaculture systems: a conceptual model. Presented at the The Second International Symposium on Cage Aquaculture in Asia at Zhejiang University, Hangzhou, China, July 5, 2006.

Aquaculture and biodiversity conservation. Presented at the Biodiversity Conservation in Agriculture Symposium in Punta Cana, Dominican Republic June 1, 2006.

Comparison of giant freshwater prawn, *Macrobrachium rosenbergii*, culture in open water exchange system, closed aeration system and integrated recycling system. Presented at the World Aquaculture Society Annual Meeting in Florence, Italy, May 21, 2006.

Influence of dams on walleye and brown trout in the Au Sable River. Presented to the Midwest Fish and Wildlife Conference, December 13, 2005, in Grand Rapids.

Human influences on natural spawning and reproductive success of muskellunge. Presented at the International Muskie Symposium, October 29, 2005, in Indianapolis, Indiana.

Efficient Fertilization, Feeding, and Culture Systems for Nile Tilapia in Southeast Asia. Presented at the annual meeting of the American Fisheries Society, August 24, 2005, in Madison, Wisconsin.

A study of aquaculture brownfields: abandoned and converted shrimp ponds in Thailand. Presented at the annual meeting of Aquaculture America, January 19, 2005, in New Orleans, Louisiana.

Efficient fertilization, feeding, and culture systems for Nile tilapia in southeast Asia. J.S. Diana, Y. Yi, and C.K. Lin. Presented at the annual meeting of the American Fisheries Society in Madison, Wisconsin, August 25, 2004.

Integrated cage-cum-pond aquaculture systems: a conceptual model. Presented at the annual meeting of the World Aquaculture Society in Honolulu, Hawaii, March 4, 2004.

History, status, and future trends in the world's capture and culture fisheries. Invited presentation at Bangladesh Agricultural University in Myenmensingh, Bangladesh, January 25, 2004.

Dams and other human influences on the AuSable River system. Invited presentation at Howard University in Washington, D.C., September 30, 2003.

The effects of dams and other human disturbances on rivers. Invited presentation at the Asian Institute of Technology in Bangkok, Thailand, January 21, 2004.

Pollution Clean Up and Prevention. Presented at the Restore the Greatness Workshop in Ann Arbor, MI, September 17, 2003.

The Great Lakes Research Program at the University of Michigan. Presented at the International Joint Commission meeting in Ann Arbor, MI, September 18, 2003.

Dams and other human influences on the AuSable River system. Invited presentation at Howard University in Washington, D.C., September 30, 2003.

A sustainable fishery? Dams and other human influences on the Au Sable river system, Michigan. Invited presentation to the Sustainable Science and Planning Society at Griffith University, Queensland, Australia, May 14, 2003.

The role of human development in reproductive failure and habitat decline for muskellunge in inland lakes. Invited presentation to the Queensland Department of Primary Industries, Fisheries Laboratory, Deception Bay, March 21, 2003.

Development and habitat decline; the role of human development in the decline of muskellunge. Invited presentation to the Illinois Natural History Survey in Sullivan, Illinois, June 11, 2002.

Development and habitat decline; the role of human development in the decline of muskellunge. Invited presentation at Auburn University, in Auburn, Alabama, March 8, 2002.

Influence of dams on Interactions between walleye and brown trout in the AuSable River. Presented at the annual Midwest Fish and Wildlife Conference in Chicago, Illinois, December 6, 1999.

Movements of lake sturgeon in the St. Clair River, Michigan. Presented at the annual Midwest Fish and Wildlife Conference in Milwaukee, Wisconsin, December 9, 1997.

Movements of brown trout in the Au Sable River, Michigan. Presented at the annual meeting of the American Fisheries Society in Dearborn, Michigan, August 28, 1996.

Supplemental feeding for production of Nile tilapia *Oreochromis niloticus*. Presented as an invited speaker to the annual World Aquaculture Society Conference in Bangkok, Thailand, January 30, 1996.

The relationship between growth and ration for juvenile lake sturgeon. Presented at the annual Midwest Fish and Wildlife Conference in Toronto, Ontario, December 9, 1992.

Aging of esocids and other aging techniques. Presented at the Region I meeting of the Michigan Department of Natural Resources in Marquette, Michigan, March 3, 1992.

Aquaculture and sustainable development. Presented to the Aspen Global Change Institute in Aspen, Colorado, August 20, 1991.

Long- and short-term effects of temperature on fish. Presented to the Aspen Global Change Institute in Aspen, Colorado, August 10, 1990.

Cascading trophic interactions: a test of the hypothesis using tilapia culture data. J.S. Diana, C.K. Lin, and D. Dettweiler. Presented to the annual meeting of the World Aquaculture Society in Los Angeles, California, February 15, 1989.

Integrated culture of walking catfish and tilapia in earthen ponds. C.K. Lin and J.S. Diana. Presented to the annual meeting of the World Aquaculture Society, in Los Angeles, California, February 15, 1989.

Relative success of telemetry studies in Michigan. J.S. Diana, D.F. Clapp, E.M. Hay-Chmielewski, G. Schnicke, D. Siler, W. Ziegler, and R.D. Clark, Jr. 1988. Presented to the International Symposium on Fish Marking Techniques in Seattle, Washington, June, 1988.

Effects of fertilization rate on primary production and yield of Tilapia in ponds. J.S. Diana and C.K. Lin. Presented to the annual meeting of the World Aquaculture Society in Honolulu, Hawaii, January 6, 1988.

Relationships among nutrient input, primary production, and yield of *Tilapia nilotica* in ponds. J.S. Diana, P.J. Schneeberger, and C.K. Lin. Presented to The Second International Symposium on Tilapia in Aquaculture in Bangkok, Thailand, March 16, 1987.

Aquaculture of an air breathing fish, the walking catfish. Presented at the spring meeting of the Michigan Chapter, American Fisheries Society in East Lansing, Michigan, March 27, 1987.

Mechanisms causing stunting in northern pike populations. Presented to the annual meeting of the American Fisheries Society in Providence, Rhode Island, September 17, 1986.

Tank experiments with *Clarias fuscus*. J.S. Diana. Presented at the Mariculture Research and Training Center/University of Hawaii Sea Grant Extension Aquaculture Workshop Series (Spawning Induction in the Chinese catfish) in Kaneohe, Hawaii. August 9, 1986.

Diel thermoregulation and energetic optimization in largemouth bass. Presented to the annual meeting of the American Fisheries Society in Hilton Head, South Carolina, September 24, 1982.

Latitudinal variations in energy allocation by northern pike. Presented to the 43rd Midwest Fish and Wildlife Conference in Wichita, Kansas, December 7, 1981.

Energetics of growth and reproduction in game fish populations. Presented to the U.S. Fish and Wildlife Service, Southwest Fisheries Center La Jolla, California, December 19, 1979.

The feeding pattern and daily ration of a top carnivore, the northern pike. Presented to the annual meeting of the American Fisheries Society in West Yellowstone, Montana, September 9, 1979.

Effects of spawning on the somatic and liver condition of northern pike from Lac Ste. Anne, Alberta. J.S. Diana and B.A. Medford. Presented to the annual meeting of the Canadian Society of Zoologists in Victoria, British Columbia, May 9, 1977.

Aspects of the ecology of Paiute cutthroat trout in Cottonwood Creek, Mono County, California. J.S. Diana and D.M. Wong. Presented to the annual meeting of the American Fisheries Society in Sacramento, California, January 24, 1975.

Popular Presentations

Seafood from Our Great Lakes Region. Presented as part of Grosse Pointe Art Center's Our Rivers, Our Lakes Show, November 3, 2016.

A Perspective on the Sustainability of Seafood from the Great Lakes. Presented as part of the Dine and Discover seminar series at the Ann Arbor City Club, on November 30, 2016.

Predators of the Great Lakes. Presented as part of the Livingston Reads program at the Cromain Library in Livingston County, on March 23, 2017.

The Future of Seafood and Sustainability. Presented to Les Voyageurs, Ann Arbor, March 15, 2015.

Michigan Fisheries and the Future. Presented at the Michigan Seafood Summit, East Lansing. March 12, 2015.

Muskellunge: The ecology and Future of a Mega-Piscivore. Presented at University of Michigan, for SNRE's Conservation Ecology Seminar series, February 28, 2015.

Extinction is Forever. Participated in a Science Café panel. Ann Arbor, October 22, 2014.

Participated in a Panel on Aquaculture for the Fortune Fish and Gourmet Show. Chicago, September 16, 2014.

Does aquaculture have an important role in producing seafood in Midwestern states? Presented at the Department of Environmental Sciences, University of Toledo, November 19, 2014.

Participated as a panelist in *Aquaculture: Setting the Table for Change*, moderated by Paul Greenberg. Sustainable Foods Institute-Monterey Bay Aquarium, Monterey, CA, May 16, 2014

Long-term Changes in Great Lakes Ecosystems; a Prognosis. Presented to the Glacier Hills Senior Living Community, Ann Arbor, October 5, 2012.

Can shrimp farming ever become a sustainable form of aquaculture?" Presented at University of Michigan, for SNRE's Conservation Ecology Seminar series, February 8, 2013.

Long-term changes in Great Lakes ecosystems: a prognosis. Presented at the Ann Arbor City Club's Lunch and Learn program, September 21, 2011.

The Future of the Great Lakes. Presented for discussion for a Science Cafe seminar series in Jackson, Michigan, December 1, 2011.

The Future of the Great Lakes. Presented for discussion for the Science Café at Conor O'Neill's in Ann Arbor, Michigan, April 13, 2011.

Our Great Lakes: an Earth Day Perspective. Presented at Schoolcraft College, Michigan, as part of their week-long Earth Day celebration, April 20, 2010.

The role of the Great Lakes in Michigan's economic future. Presented to the Wolverine Caucus Forum, *Jobs, Science, and the Great Lakes* in Lansing, Michigan, March 17, 2010.

Long-term Changes in Great Lakes Ecosystems: A Prognosis for the Future. Presented for the Ann Arbor-Ypsilanti Reads event at the Ann Arbor District Library, February 15, 2010.

Understanding our impact on the natural world: Measuring your ecological footprint. Presented to St. Mary's Student Parish Social Justice Ministry in Ann Arbor Michigan, November 7, 2007.

Dams and other human influences on the fishery of AuSable River system, Michigan. Presented to the Ann Arbor Area Chapter, Trout Unlimited in Ann Arbor, Michigan, October 7, 2005.

Dams and other human influences on the fishery of AuSable River system, Michigan. Presented to the Fisheries and Wildlife Department at the University of Massachusetts in Amherst, Massachusetts, October 4, 2004.

End of the line: aquatic habitat loss and extinctions in North America. Presented to the University of Michigan Geriatrics Center's Learning in Retirement in Ann Arbor, Michigan, February 7, 2002.

Movements of lake sturgeon in the St. Clair River, Michigan. Presented to the St. Clair *Waterways for Wildlife* Steering Committee in Detroit, Michigan, January 20, 1998.

Feeding the World's Population. Presented to the Huron Valley Fishing Friends sportsman's club in Flint, Michigan, November 21, 1996.

Over-wintering in animals and Ecological changes in the Laurentian Great Lakes. Presented to the University of Michigan Alumni Association, Camp Michigania, Boyne City, Michigan, December 30 and 31, 1995.

Changes in the philosophical basis for resource management in the last century. Presented to Les Voyagers Club of Ann Arbor in Ann Arbor, Michigan, April 12, 1992.

Our changing philosophy in the environment and management of natural resources, and Can the oceans really hope to feed our growing human population? Presented to the University of Michigan Alumni Association, Camp Michigania, Boyne City, Michigan, August 11 and 13, 1992.

Culture of fishes for food in the Third World, and Recent changes in environmental concerns. Presented to University of Michigan Alumni Association, Camp Michigania, Boyne City, Michigan, June 17 and 19, 1991.

Environmental concerns since Earth Day, 1970. Presented at the Rose Bowl Faculty Seminar in Los Angeles, California, December 29, 1989; and again to the University of Michigan Alumni Association in Ann Arbor, Michigan, April 2, 1990.

Aquaculture in Thailand. Presented to the Center for South and Southeast Asian Studies, as part of their brown bag lecture series in Ann Arbor, Michigan, September 29, 1989.

Summer Steelhead. Presented at Natural Resources Week, Great Lakes Issues Section in East Lansing, Michigan, March 26, 1987.

Grants Received

- U.S. Agency for International Development (Oregon State University prime). 2007-present. Improving sustainability and reducing environmental impacts of aquaculture systems in China, and South and Southeast Asia.
- University of Michigan, Third Century Initiatives, Transforming the Future. 2013-present. Researching fresh solutions to the energy/water/food challenge in resource constrained environments.
- National Oceanic and Atmospheric Administration, Great Lakes Restoration Initiative. 2015-2016. Restoring native fish spawning habitat in the St Clair River Delta (Middle Channel) in the St. Clair River Area of Concern.
- U.S. Environmental Protection Agency. 2015-2016. Fort Wayne Reef: Restoring fish spawning habitat in the Detroit River.
- National Science Foundation. 2009-2014. Collaborative research: improving the environmental sustainability of shrimp aquaculture through microbial resource management.
- Department of the Interior; U.S. Geological Survey. 2009-2014. Forecasting climate-change induced effects on fish growth and consumption in the Great Lakes.
- Department of the Interior; U.S. Geological Survey. 2009-2011. Evaluating the negative effect of benthic egg predators on bloater recruitment in northern Lake Michigan.
- U.S. Fish and Wildlife Service. 2009-2011. Great Lakes spotted muskellunge reintroduction natural spawning effort evaluation.
- Mousetrap Foundation. 2009-2011. Investigating ecosystem-level impacts of shrimp farm eutrophication in Thailand through stable isotope ratio analysis, and an evaluation of eco-certification's potential to support related best management practices.
- Great Lakes Fishery Commission. 2008-2015. International management of fisheries in large lakes.
- Graham Environmental Sustainability Institute. 2006-2009. Development of sustainable shrimp aquaculture.
- U.S. Agency for International Development (Oregon State University prime). 2003-2007. Capacity building in environmental-friendly aquaculture development in China as well as in the region.
- Department of Commerce/NOAA. 2005-2008. The influence of seasonal hypoxic events in the central basin of Lake Erie on the short-term growth of organisms from multiple trophic levels. Co-principle investigator with Tomas Hook.
- Michigan Department of Natural Resources/NOAA. 2004-2006. Evaluating movements of juvenile lake sturgeon in southern Lake Huron, St. Clair River, and Lake St. Clair, Michigan.
- Great Lakes Fishery Trust. 2003-2008. Enhancing the Muskegon River Initiative: Fish recruitment at the interface of the Great Lakes and their watersheds. Co-principle investigator with Michael Wiley.
- U.S. Agency for International Development (Oregon State University prime). 1983-2003. Collaborative research support program for pond culture systems in Thailand.
- Michigan Sea Grant. 2000-2004. Effects of Great Lakes marsh fragmentation of fish assemblages. Co-principle investigator with Paul Webb.

Great Lakes Protection Fund. 2000-2004. Impacts of watershed fragmentation and restoration on fish habitat, migration and production in Great Lakes tributaries.

National Marine Fisheries Service, through Michigan Department of Natural Resources. 1998-2001. Evaluating the movements of lake sturgeon in Lake St. Clair, Michigan.

Michigan Department of Natural Resources. 1998-2001. Trout movement on the AuSable River, Michigan.

Michigan Department of Natural Resources/Detroit Edison. 1997-2001. Movements of lake sturgeon in the St. Clair River, Michigan.

Michigan Department of Natural Resources. 1993-1999. Editing and final production of technical and research reports.

United States Department of Agriculture/Forest Service. 1993-1996. Evaluation of techniques for improving reproduction of muskellunge in Wisconsin.

Michigan Department of Natural Resources. 1995-1998. Evaluating the influence of dams on the movement patterns of walleye and brown trout in the Au Sable River.

Michigan Department of Natural Resources. 1995-1997. Estimating the relative impact of predation by the double-crested cormorant on the mortality and population dynamics of yellow perch in Les Cheneaux Islands area of Lake Huron.

Michigan Department of Natural Resources. 1994-1997. Age and growth of chinook salmon in Lake Michigan.

Oregon State University. 1993-1995. Collaborative research in pond dynamics/aquaculture in Egypt.

National Marine Fisheries Service. 1990-1992. Growth and metabolism energy budget of lake sturgeon (*Acipenser fulvescens*) (with Paul Webb, project director).

Trout Unlimited and Anglers of the Au Sable. 1990-1992. Radio tracking of large brown trout in the Mainstream Au Sable River.

Michigan Fly Fishing Club. 1989-1991. Radio tracking of brown trout in the South Branch Au Sable River.

Michigan Department of Natural Resources. 1988-1990. Daily and seasonal movements of smallmouth bass in the Huron River.

Michigan Sea Grant. 1987-1990. Competition for food among the major predators in Saginaw Bay.

Michigan Department of Natural Resources. 1986-1989. Mechanisms behind stunting of northern pike.

Michigan Fly Fishing Club. 1986-1988. Radio tracking of large brown trout in the South Branch Au Sable River.

Flint River Chapter, Michigan Steelheaders and Michigan DNR. 1983-88. Summer steelhead in Michigan.

Michigan Department of Natural Resources. 1986-88. Biology and economics of yellow perch fishing in the Les Cheneaux Islands area.

Michigan Department of Natural Resources. 1986-87. Public access in southeastern Michigan.

Michigan Sea Grant. 1983-86. Food habits of salmon in Lake Huron.

U.S. Agency for International Development. 1982-86. Strengthening of Southeast Asian aquaculture institutions. (with K.F. Lagler, co-PI).

Michigan Sea Grant. 1983-85. Movements, growth, and mortality of yellow perch in Saginaw Bay.

U.S. EPA. 1980-81. Saginaw and Pine rivers in-place pollutants mitigation feasibility study of PCB's and PBB's. (co PI--Clifford Rice, project director).

National Institute of Health. 1980. Effects of temperature on the lipid composition of eggs and sac fry rainbow trout.

Courses Taught

ENVIRON 501 Sustainable Aquaculture (3 hrs.) – 2012-present
ENVIRON 409 Ecology and Biology of Fishes (4 hrs.) – 2015-present
ENVIRON 409 Ecology of Fishes (4 hrs.) – 1985-2014
ENVIRON 201 Ecological Issues (4 hrs.) – 1998-2011
NRE 701 Master's Project – 2010, 2011
NRE 580 Integrated Assessment (4 hrs.) – 2009
NRE 580 Environmental Integrative Assessment (4 hrs) – 2009
NRE 639 Aquaculture Seminar (2 hrs.) – 2007-2008
NRE 701 Master's Project Planning Course (1-2 hrs) – 2005
NRE 427 Aquaculture (3 hrs.) – 1987-1999
NRE 409 Ecology of Fishes (4 hrs.) – 1982-1999
NRE 639 Ecosystems Management Seminar (3 hrs.) – 1997-1998
NRE 639 Seminar - Conservation Biology (3 hrs.) – 1996
NRE 521 Biological Management (3 hrs.) – 1985-1991
NRE 460 Fishery Science (4 hrs.) – 1980-1991
NRE 405 The Global Environment (3 hrs.) – 1985-1986
NRE 100 Freshman Discovery (4 hrs.) – 1982-1983
NRE 500 Endangered Species Management (3 hrs.) – 1982
NRE 519 Sport Fishery Management (new; 3 hrs) – 1982
NRE 326 Aquatic Ecology (3 hrs) – 1981
NRE 519 Advanced Fishery Management (3 hrs.) – 1979-1981

Guest Lectures

ENVIRON 201 Ecological Issues – 2013-2016
SEAS 215 Social Issues in Southeast Asia – 2015, 2016
NRE 589 Ecological Restoration – 2015, 2016
NRE 311 Aquatic Ecosystems – 2013
NRE 501 Restoration Ecology – 2013
NRE 741 Natural Resource Paradigms – 1999-2000
NRE 100 Introduction to Natural Resources – 1996-2000
NRE 453 Tropical Conservation and Resource Management – 1997
NRE 741 Research Paradigms – 1990-95
NRE 405 Global Ecology – 1988-94
NRE 422 Biology of Fishes – 1989-90
NRE 301 Ecological Issues – 1985-86
NRE 100 Introduction to Natural Resource Problems – 1985-86

Graduate Students Supervised

Ph.D.

<u>Student</u>	<u>Title of Dissertation</u>	<u>Date</u>
J. Krieger	Habitat utilization and early life history characteristics of larval, young of year and juvenile lake sturgeon (<i>acipenser flvescens</i>) in the Great Lakes connecting channels	2017
K. Seo Park	Comparability and transferability in ecosystem-assessment techniques and tools: an international case study	2015
J. Johnson	Water life: the gendered practices and politics working with fish along Uganda's cosmopolitan littoral	2015
T. Lawrence	Lake Victoria's Fisheries: Examining Co-management Institutions and the Community Level	2015
S. David	Life history, growth, and genetic diversity of the spotted gar <i>Lepisosteus oculatus</i> from peripheral and core populations.	2012
L. Cao	Farming shrimp for the future: challenges and strategies towards environmental sustainability, economic profitability and social acceptability.	2012
L. TeWinkel	The vertical migration of adult bloater <i>Coregonus hoyi</i> : characteristics, limits, and causes.	1998
J. Schaeffer	Mechanisms regulating growth and food consumption of walleyes and yellow perch in Saginaw Bay, Lake Huron.	1994
K. Smith	Vegetation-open water interface and the predator-prey interaction between largemouth bass and bluegills.	1993
M. Baddy	The biology of the squid <i>Loligo vulgaris</i> in relation to the artisanal fishing site of Tifnit, Morocco.	1986
P. Seelbach	Population biology of steelhead in the Little Manistee River, Michigan.	1989
R. Clark	A mathematical model for assessing recreational fishing regulations.	1985
A. Al-Jerian	The production factors of a traditional Red Sea fishery and its bioeconomics.	1985

Master's

<u>Student</u>	<u>Title of Thesis</u>	<u>Date</u>
B. Keeler	Stocking density effects of small indigenous species (SIS) on carp polyculture systems in Nepal	2016
A. Sakas	Evaluation of Whiteleg Shrimp (<i>Litopenaeus vannamei</i>) growth and survival in three salinities under RAS conditions	2016
E. Spooner	Muskellunge (<i>Esox masquinongy</i>) feeding habits and habitat preferences in Lake St. Clair	

R. Young	Assessing the spatiotemporal distribution of larval lake sturgeon <i>Acipenser fulvescens</i> within the St. Clair River Delta, Michigan	2015
W. Conard	A population study of Northern Madtom in the St. Clair—Detroit River System, Michigan.	2015
K. Keeler	Determining the Role of Fish Planktivory on Spiny Water Flea (<i>Bythotrephes longimanus</i>) Production in Upper Great Lakes.	2014
C. Jovanovic	Impacts of a recovering walleye population on an altered forage fish community in Saginaw Bay, Lake Huron	2013
Z. Stepan	Aquaculture and Child Nutrition among the Tharu People in Rural Nepal: An Investigation of the Impact of Fish Consumption and Methylmercury in Cultured Fishes on Child Health	2013
M. Lynch	Assessment of wetland habitat use by juvenile fishes, with a focus on rock bass <i>Ambloplites rupestris</i> within the St. Clair River delta, Michigan, USA.	2012
K. Battige	Great Lakes spotted muskellunge restoration: evaluating natural recruitment and modeling spawning habitat in Green Bay, Lake Michigan.	2011
K. Birkett	An analysis of spatial and temporal changes in fish and benthic macroinvertebrate communities associated with zebra mussel (<i>Dreissena polymorpha</i>) abundance in the Huron River, Southeastern Michigan.	2011
K. Hayse-Gregson	Assessing the efficiency of herbivorous fish as nutrient sinks in an integrated freshwater cage aquaculture system using a phosphorus mass balance model.	2011
S. Kempke	An assessment of the ecological impacts from low intensity shrimp farm wastewater in the Bang Pakong River Region of Thailand using stable isotope analysis.	2011
J. Londer	Diet overlap and food habits of slimy sculpin, deepwater sculpin, and round goby during winter and spring in offshore Lake Michigan.	2011
T. Brookhart	Exploring business strategy and assessing the potential for sustainable seafood products in San Francisco Bay Area seafood restaurants.	2011
S. Ledwin	Assessment of the Ecological Impacts of two shrimp farms in southern Belize.	2010
J. Nohner	Development of GIS model to predict muskellunge spawning habitat in northern Wisconsin lakes.	2009
S. David	The influence of physical habitat factors on a near-shore fish community in the lower Muskegon River, Michigan.	2008
K. Park	Effects of different sampling effort and taxonomic resolution on assessment metrics.	2008

L. Theodore	Ecological and Socioeconomic characteristics of integrated aquaculture practices in Yingbin Bay, Hainan Province, China.	2007
B. Colleran	Northeast Michigan integrated assessment: ecological assessment component.	2007
K. Lord	Movements and habitat use of juvenile lake sturgeon in the north channel of the St. Clair River.	2007
V. Schwantes	Social, economic, and production characteristics of freshwater prawn <i>Macrobrachium rosenbergii</i> culture in Thailand.	2007
V. Tobias	Groundwater sources and their influence on the distribution of steelhead in Topanga Creek, Topanga, California.	2006
E. Uloth	Exotic shrub response to prescribed burning: effects of top-killing and nitrogen fertilization.	2005
M. Clark	A study of aquaculture brownfields: abandoned and converted shrimp ponds in Thailand.	2003
M. Sallouti	Shrimp aquaculture in northeastern Brazil: can it be sustainable?	2003
J. Boase	Integrating sonic tracking and GIS to determine habitat selection and benthic prey distribution of adult lake sturgeon in Lake St. Clair.	2003
K. Cronk	Long-term changes in macroinvertebrate populations and water quality in four urbanized streams of Southeast Michigan.	2002
B. McRae	Natural reproduction and survival of brown trout in the Au Sable River.	2002
M. Agy	Seasonal dynamics of zooplankton near the spring plume in Lake Michigan.	2001
J. Abdella	Trout and walleye interactions in the Au Sable River.	2001
B. Sparks-Jackson	Invertebrate community changes along small- scale gradients.	2001
A. Johnson	Lake characteristics influencing muskellunge <i>Esox masquinongy</i> spawning success.	2000
I. Minn	The effects of channel shape and hydrology on streambank vegetation in 34 southern lower Michigan streams.	2000
S. Perrine	The effect of river gradient on freshwater fish biogeography and mophology.	2000
F. Tain	Impacts of aquaculture extension on small- scale <i>Oreochromis niloticus</i> production in northeastern Thailand.	1999
M. DePhilip	Evaluation of the influence of dams on movement patterns of walleye and brown trout in the Au Sable River, Michigan.	1997
S. Maruca	Double-crested cormorant predation of yellow perch in Les Cheneaux Islands, Lake Huron.	1997
J. Wesley	Age and growth of chinook salmon in Lake Michigan: verification, current analysis, and past trends.	1996

S. Zorn	The influence of spawning habitat on natural reproduction of muskellunge in Wisconsin.	1996
J. Hudson	Seasonal and daily movements of large brown trout in the mainstream Au Sable River, Michigan.	1993
T. Zorn	The effect of streamflow on the short-term carrying capacity of a stream for juvenile smallmouth bass: A test of the instream flow incremental methodology.	1993
G. Regal	Range of movement and daily activity of wild brown trout in the South branch Au Sable River, Michigan.	1992
B. Buurma	The effects of feeding frequency and handling in culture of the walking catfish, <i>Clarias fuscus</i> .	1990
J. Beam	Daily and seasonal movement, as related to habitat use, of smallmouth bass in the Huron River, Michigan.	1990
R. Salz	Factors influencing growth and survival of yellow perch from Saginaw Bay, Lake Huron.	1989
G. Noguchi	Effects of temperature, PCB exposure and starvation on the lipid content and fatty acid composition of larval rainbow trout.	1989
P. Toledo	Predatory effect of largemouth bass (<i>Micropterus salmoides</i>) on Atherinids (<i>Chirostoma sp.</i>) in Lake Patzcuaro, Michoacan, Mexico.	1988
D. Lucchesi	A biological analysis of the yellow perch population in the Les Cheneaux Islands, Lake Huron.	1988
D. Clapp	Movement, habitat use, and daily activity patterns of trophy brown trout in the south branch of the Au Sable River, Michigan.	1988
R. Haak	Mortality, growth, and yield of channel catfish in Saginaw Bay, Lake Huron.	1987
D. Fielder	An assessment of the introduction of summer steelhead into Michigan.	1987
J. Fenske	Attitudes and attributes of anglers who fish for trout in Michigan.	1983
P. Cosentino	Fish community structure and utilization of Harsens Island-Marsh Bay Complex, Lake St. Clair.	1983
P. Schneeberger	Observations and modeling of fish gilling in commercial trap-net pots.	1982
T. Hill	Identification of lake whitefish stocks in western Lake Huron.	1982
L. Flath	The seasonal energy demands of the alewife in southeastern Lake Michigan.	1982
R. Harper	Biology of the lake whitefish, <i>Coregonus clupeaformis</i> (Mitchell) in a cyclic hydroelectric storage reservoir (Franklin D. Roosevelt Reservoir, Washington).	1982

Master's Projects

C. Fee, A. Hayes, C. Nenn	Management of Columbia spotted frog and Lahontan cutthroat trout in central and northeast Nevada.	1995
S. Casey, D. Forsyth, R. Held, S. Katich, C. Shattuck	Climate Ready Great Lakes	2011

Program in Scholarly Research

This program was initiated to introduce urban/minority high school students to research at the University of Michigan. Each student works on a well-defined research problem for a period of at least one year, visits UM campus, sets up summer residency, turns in a written report and gives a presentation of their work. Each student works under the supervision and guidance of a faculty member. The students I have worked with are:

Tavares Ford 1990
Regina McGill 1983

Undergraduate Research Opportunity Program

This is a program of the graduate school to introduce undergraduates, particularly minority students, to laboratory work in the sciences. Each student works under direct supervision and guidance of a faculty member for one summer or during the school year.

Nick Shattuck 2010
Alex Allen 2005
Andrew Wesolek 2005
Marci Hartlein 1993-94
Debbie Rodriguez 1993
Kevin Trieu 1991

Scientific Committee Membership

Co-Chair, Planning Committee for the International Association for Great Lakes Research 2017
Conference in Detroit, 2016-present.

Chair, Steering Committee for the Michigan Seafood Summit, 2014-present

Member, Cooperative Institute for Limnology and Ecosystems Research Management Council,
2012-present.

Member, North Central Regional Aquaculture Center, Research Technical Committee, 2005-
2014.

Member, Escoid Technical Committee, North Central Division, American Fisheries Society,
2008-present.

Co-Chair, Technical Committee, Pond Dynamics/Aquaculture Collaborative Research Support
Program, 1999-present.

Member, Warmwater Regulations Committee, Michigan Department of Natural Resources,
1995-present.

Member, Esocid Technical Committee, Michigan Department of Natural Resources. 1990-
present.

Member, Great Lakes Net-pen Aquaculture Science Panel (Advisory to the Michigan Departments of Natural Resources, Agriculture and Rural Development, and Environmental Quality), 2015-2017.

Member, Program Committee for 2016 Midwest Fish and Wildlife Meeting, 2014-2016.

Member, Seafood Watch Science Advisory Board, Monterey Bay Aquarium, 2012-2016.

Member, Program Committee for Midwest Fish and Wildlife Meeting, 2004-2005.

Member, International Muskie Symposium Program Committee, 2005.

Associate Editor for the Transactions of the American Fisheries Society, 1996-1999.

Member, Honorary Editorial Advisory Board for Encyclopedia of Life Support Systems, 1996-1998.

Member, Michigan Chapter of the Nature Conservancy's Science Advisory Board, 1996-present.

Member, Esocid Technical Committee, North Central Division, American Fisheries Society, 1993-2008.

Chair, Nominating Committee American Fisheries Society, 1996.

President, North Central Division, American Fisheries Society, 1994-1995.

Member, Steering Committee, Midwest Fish and Wildlife Conference, Detroit, Michigan, December 1995, 1993-1995.

Council Chair, Consortium for International Fisheries and Aquaculture Development, 1989-1995.

Vice President, North Central Division, American Fisheries Society, 1993.

Chair, Justin W. Leonard Award Committee, Michigan Chapter, American Fisheries Society, 1988-1991.

Chair, Best Paper Awards Committee, North Central Division, American Fisheries Society, 1990, 1991.

Fisheries Section Chair, Michigan Academy of Sciences, Arts, & Letters, Grand Rapids, Michigan, March 1989.

Fish Culture Session Chair, World Aquaculture Society, Los Angeles, California, February 1989.

Poster Session Chair, American Society of Ichthyologists and Herpetologists, Ann Arbor, Michigan, June 1988.

Member, Publication Awards Committee, American Fisheries Society, 1986, 1988.

Program Committee and Poster Session Chair, American Fisheries Society, Winston-Salem, North Carolina, September 1987.

Program Chair, Midwest Fish and Wildlife Conference, Grand Rapids, Michigan, December 1985.

Awards Committee Chair, North Central Division, American Fisheries Society, 1985-1986.

President, Michigan Chapter, American Fisheries Society, 1983-1984.

Program Chairman, Michigan Chapter, American Fisheries Society, 1982-1983.

Chair, Albert S. Hazzard Award Committee, Michigan Chapter, American Fisheries Society, 1981-1982.

Consulting

2015-2016	Smith Group JJR Landscape Architects
2007-8	American Soybean Association
2002	Michigan Department of Natural Resources
1999	Snell Environmental Group
1997	Dow Corning Corporation
1997	Hagler Bailly Consulting, Inc.
1995	Michael, Best and Friedrich—Wind Lake, Wisconsin
1994	Brennan, Steil, Basting and MacDougall, SC—Lake Ripley, Wisconsin
1993	Sweezey Lake
1993	Stonebridge Development
1993	Loch Erin
1991	Gelman Sciences
1991	Art Van, Inc.
1990	Oregon State University
1987-89	Braithwaite Consultants, Inc.
1987	Duck Lake Property Owners Association
1985-88	University of Minnesota project in Morocco.
1985	Hiawatha Sportsmen's Club
1984	Emerald Lakes Club
1984	Agency for International Development
1983-84	Huron Mountain Club

Referee

Journal Articles:

Ambio
Asian Fisheries Science
Aquaculture
Aquaculture Environment Interactions
Aquatic Living Resources
Biological Invasions
Bioscience
Canadian Journal of Fisheries and Aquatic Sciences
Canadian Journal of Zoology
Climate Change
Copeia
Ecology of Freshwater Fish
Environmental Biology of Fishes
Fisheries Management and Ecology
Hydrobiologia
Journal of Aquaculture in the Tropics
Journal of Biodiversity, Science, Ecosystem Services and Management
Journal of Experimental Zoology
Journal of Fish Biology
Journal of Great Lakes Research
Journal of the World Aquaculture Society
Michigan Academician
North American Journal of Aquaculture

North American Journal of Fisheries Management
Progressive Fish-Culturist
Reviews in Fisheries Science
Science
Transactions of the American Fisheries Society

Grants:

The Natural Sciences and Engineering Research Council of Canada
Bi-national Agricultural Research and Development Fund
Board on Science and Technology for International Development
Center for Tropical and Subtropical Aquaculture
Great Lakes Fishery Commission
Hawaii Sea Grant
Iowa Science Foundation
NATO Advanced Study Institute
National Science Foundation
National Sea Grant College Program
Natural Resources Council, UK
New York Sea Grant
North Central Regional Aquaculture Center
Ohio Sea Grant
Southern Regional Aquaculture Center
U.S. Department of Agriculture's Small Business Innovation Research Program
US Fish and Wildlife Service
University of Newfoundland
Wisconsin Sea Grant

Book Chapters

Chapter - "Fertilization strategies" *in* Dynamics of Pond Aquaculture, by C. Boyd and H. Egna.
Chapter - "Growth" *in* Methods of Fish Biology, by P.B. Moyle and C. Schreck.
Chapter - "Biotelemetry" *in* AFS Marking and Tagging Manual, by L.A. Neilsen
Several chapters *in* Ecology of Fishes, by N.H. Ringler.

Other

Associate Editor, Transactions of the American Fisheries Society, 1996-1999.
Editor, Technical and Research Reports for the Michigan Department of Natural Resources, 1993-1999.
Served on the Honorary Editorial Advisory Board for Encyclopedia of Life Support Systems Publishers, 1996-2002.
Reviewed and rewrote section on FISHERIES for Funk and Wagnall Encyclopedia.

University Service

Director, Michigan Sea Grant College Program, 2009-present
Member, SNRE Admissions and Scholarship Committee, 2014-present
Chair, SNRE Search Committee for Professor of Practice, 2017

Member, Department of State U.S. Student Fulbright Program Campus Evaluation Committee, 2012, 2014, 2015, 2017

Coach, University of Michigan Bass Fishing Club, 1998-present

Faculty Advisor, Michigan Backpacking Club, 2009-present

Faculty Advisor, Michigan Fly Fishing Club, 2013-present

Faculty Associate, Center for East and Southeast Asian Studies, 1995-present

Member, Doris Duke Conservation Scholars Program, 2016- 2017

Member, SNRE Executive Committee, 2009-2011

Associate Dean, School of Natural Resources and Environment, 1999-2007

Member, SNRE Promotion and Tenure Committee, 2009-2010

Coordinator, SNRE Aquatics Field of Study, 2007-2010

Member, UM International Council, 2007-present

Member, PitE Space Committee, 2007-present

Chair, SNRE Search Committee for CILER Director, 2008

Chair, SNRE Ph.D. Committee, 2002-2007

Chair, SNRE MS Committee, 2002-2007

Chair, SNRE Scholarship and Admissions Committee, 2002-2007

Chair, SNRE Properties Committee, 1999-2007

Chair, SNRE Landscape Architecture Subprogram, 2004-2005

Ad hoc member, SNRE Executive Committee, 2003-2007

Member, Associate Provosts and Associate Deans Group, 2000-2007

Member, Erb Executive Board of Directors, 2004-present

Member, Nominating Committee, Rackham Executive Board, 2005

Participant, University of Michigan Tsunami Relief Project, 2005

Member, Bioterrorism Steering Committee, 2001

Member, Environmental Sciences/Studies Governance Committee, 2000-2001

Member, Environmental Sciences/Studies Curriculum Development Committee, 2000-2001

Member, Terrestrial Vertebrate Ecologist Search Committee, 2000

Member, Dana Renovation and Expansion Committee, 1999

Chair, SNRE Academic Affairs Committee, 1995-2002

Chair, SNRE Financial Aid Committee, 1999-2002

Co-chair, Ecosystem Management Pilot Program, School of Natural Resources and Environment, 1996-2001

Chair, Resource Ecology Management Concentration, School of Natural Resources and Environment, 1994-1999

Chair, Michigan's Environment Project, School of Natural Resources and Environment, 1996
Member, Administrative Services Task Force, School of Natural Resources and Environment, 1996-1997
Faculty Representative, Board of Directors, University of Michigan Alumni Association, 1994-1996
Chair, Anadromous Fisheries Search Committee, 1993-1994
Member, Council for Great Lakes Studies, 1989-1995
Chair, Senate Advisory Committee on University Affairs, 1991-1992
Chair, University Senate Assembly, 1991-1992
Vice-Chair, Senate Advisory Committee on University Affairs, 1990-1991
Member, Senate Advisory Committee on University Affairs, 1989-1990
Member, University Senate Assembly, 1987-1990
Member, Board in Control of Intercollegiate Athletics, 1989-1992
Member, Academic Performance Committee, 1989-1992
Member, PEW Conservation Scholars Nomination Committee, 1991-1992
Member, Budget Priorities Committee, 1989-1991
Member, Environmental Protection Task Force, 1989-1990
UM Representative, Consortium for International Fisheries and Aquaculture Development, 1983-1989
Member, Center for Great Lakes and Aquatic Sciences Executive Committee, 1987-1989
Member, Natural Sciences Library Committee, 1982-1989
Member, Great Lakes Research Division Transition Team, 1988
Chair, Stream Ecology Search Committee, SNR, 1986
Member, Executive Committee, SNR, 1985-1986
Member, Camp Filibert Roth Committee, SNR, 1982-1983
Member, Minority Affairs Committee, SNR, 1980-1982
Member, Rackham Dissertation/Thesis Grant Committee, 1980

Community Service

Member, St. Mary Student Parish Richard Lecture Series Committee, 2009-2011
Member, Principal Search Committee, Father Gabriel Richard High School Board, 2002
President, Father Gabriel Richard High School Board, 1993-1997; 1998-2000
President, Father Gabriel Richard High School Booster Club, 1993-1997
Chair, Principal Search Committee, Father Gabriel Richard High School Board, 1994
Member, Education Commission, St. Thomas Parish, Ann Arbor, 1989-1996