

John M. Epifanio - Curriculum Vitae

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EDUCATION

1992	<i>Ph.D.</i> , University of Illinois at Urbana-Champaign.
1986	<i>M.S.</i> , University of Wisconsin at Stevens Point.
1982	<i>B.S.</i> , University of Illinois at Urbana-Champaign.

RESEARCH AND ACADEMIC INTERESTS

Conservation Genetics & Molecular Ecology – Examination of structure & function of genetic variation for aquatic resource management, conservation, and rehabilitation; efficacy and effects of hybridization and non-native taxa.

Resource Conservation Policy – Analyses of state and federal aquatic wildlife policies.

POSITIONS

2001 - Present	<i>Director and Associate Professional Scientist.</i> Center for Aquatic Ecology, Illinois Natural History Survey (INHS).
2000 - 2001	<i>Assistant National Program Leader.</i> Fisheries and Aquatic Ecology Program, US Forest Service.
1997 - Present	<i>Adjunct Faculty.</i> Department of Biology, Virginia Commonwealth University (VCU).
1996 - 1999	<i>Resource Scientist-Conservation Geneticist.</i> Trout Unlimited (TU).
1994 - 1996	<i>Assistant Professor.</i> Ecology & Evolutionary Biology Program and the Department of Fisheries & Wildlife, Michigan State University (MSU).
1992 - 1994	<i>Post-doctoral Research Associate.</i> Department of Biology, VCU.
1985 - 1992	<i>Assistant Research Biologist.</i> Illinois Fish Genetics Laboratory, INHS.
1990 - 1991	<i>Policy Fellow & Legislative Aide.</i> U. S. Senator John H. Glenn.
1983 - 1985	<i>Research Assistant.</i> Wisconsin Cooperative Fishery Research Unit.

HONORS AND AWARDS

2001	Spot Award for Exceptional Performance, USDA-Forest Service.
2000	Spot Award for Outstanding Performance, USDA-Forest Service.
2000	Robert L. Kendall Award for Best Published Paper (TAFS).
1993	AAAS Science and Diplomacy Fellowship.
1991	John E. Skinner Student Award (AFS).
1990	Congressional and Policy Fellowship (Sea Grant).
1985	Salmon Unlimited, Inc. Scholarship, (UWSP).
1984	Best Paper Award (Illinois Chapter of AFS).
1978-1982	State of Illinois General Assembly Scholarship (University of Illinois).
1978-1979	Edmund James Scholar, University of Illinois.

PROFESSIONAL SERVICE IN SCIENCE COMMUNICATIONS

- Editorial: Associate Editor, Transactions of the American Fisheries Society; Assistant Editor, Proceedings of the First World Fisheries Congress.
- Peer Review (Journals): Canadian Journal of Fisheries and Aquatic Sciences; Conservation Biology; Conservation Genetics; Environmental Biology of Fishes; Fisheries; Journal of Great Lakes Research; Journal of Marine Biology; Marine Ecology-Progress Series; North American Journal of Fisheries Management; Physiological Zoology; Reviews in Fish Biology and Fisheries; Southeastern Association of Fish and Wildlife Agencies; Transactions of the American Fisheries Society.
- Peer Review (for Symposia Proceedings): Genetics of Sub-polar Fishes and Invertebrates; Black Bass 2000; Crappie Biology Symposium; World Fisheries Congress I; Uses and Effects of Cultured Fishes in Aquatic Ecosystems; Proceedings of the Maryland Conservation of Biological Diversity Conference; Proceedings of the VII International Symposium on the Biology and Management of Coregonid Fishes; Propagated Fishes in Resource Management – Proceedings.
- Peer Review (Book Chapters): Strategies for Restoring River Ecosystems: Sources of Variability and Uncertainty in Natural and Managed Systems (AFS Publication); Genetic Principles and Practices for Fisheries Scientists (AFS Publication).
- Peer Review (Other): Office of Technology Assessment (U. S. Congress); Maryland Sea Grant College Program; Michigan Sea Grant College Program; Atlantic Salmon Genetics Project (National Marine Fisheries Service); Bring Back the Natives Grants Program (US Forest Service / National Fish & Wildlife Foundation); Michigan State University AURIG Program; National Fish and Wildlife Foundation; Utah Agricultural Experiment Station; Menominee Tribal Fisheries Commission; Great Lakes Fishery Trust; University of Illinois Campus Research Board.
- Reviews of Popular/Outreach Literature or Media: *Water: a Natural History*, by Alice Outwater. © 1996. Basic Books. New York, NY. Book Review In Trout Magazine, Summer 1997. *Salmon, Trout, Lakes and Streams*. © 1995, 1996. Jere Mossier Productions. Hayden, ID. Video Review In Trout Magazine, Summer 1997. *Life of the Lakes*. Michigan Sea Grant Program. *Great Lakes Fisheries Leadership Institute Curriculum*. Great Lakes Sea Grant Network.

UNIVERSITY & PROFESSIONAL SERVICE/LEADERSHIP/CONTINUING EDUCATION

- 2003-2004 Member. Fish Endangered Species Technical Advisory Committee. IDNR.
- 2002-2005 *Co-Chair*. AFS Support Committee to establish a Fisheries Conservation Foundation.
- 2002-2003 *Committee Member*. Stephan A. Forbes Award for Outstanding Achievement. INHS.
- 2002-2003 *Steering Committee & Program Committee*. Propagated Fish in Resource Management. American Fisheries Society Special Conference & Symposium.
- 2002-2003 *Chair*. R. Weldon Larimore/ Jordan Creek Research Award Committee.
- 2002 *Scientific Expert Witness*. Principles and practice: environmental lawyering. University of Virginia Law School.
- 2001-2003 *Liaison*. Ron Ward Memorial Scholarship. Champaign-Urbana Bass Club.
- 2001-2003 *Judge*. Stevan R. Phelps Award for Best Published Paper in Genetics (AFS).
- 2001 *Ichthyologist Search Committee*. Center for Biodiversity. INHS.
- 2001 *Board Member*. National Fishing and Boating Week. Recreational Boating and Fishing Foundation.
- 2001 *Judge*. Robert L. Kendall Award for Best Published Paper (TAFS).
- 2001 *Facilitator*. Watersheds, Fish, and Wildlife Program Partnership Workshop. USDA-Forest Service.
- 2000-2001 *Coordinator/Liaison*. Bring Back the Natives grants program for US Forest Service & National Fish and Wildlife Foundation
- 2000 *Facilitator*. Wildlife, Fish, and Rare Plants Program Meeting. Northeast Region of the USDA-Forest Service.
- 2000 *Issues-Panel Moderator*. Black Bass 2000 Conference (AFS).
- 2000 *Genetics Technical Team*. Lower Clark Fork River Bull Trout Recovery and Management Team (Montana & Idaho).
- 1997-2002 *External College Advisory Committee*. College of Natural Resources. Virginia Polytechnic Institute and State University.

- 2000 *Co-organizer & Instructor.* Vermont Fish Genetics Workshop, VDF&G and USGS/BRD.
- 1998-2000 *President.* Genetics Section. AFS.
- 1998-2000 *Governing Board.* AFS.
- 1998-1999 *Co-chair, Steering Committee.* Symposium on hybridization in fishes, AFS.
- 1998-1999 *Co-chair, Steering Committee.* Symposium on the ecological and genetic effects of aquaculture, AFS.
- 1999 *Genetics technical consultant.* Robust Redhorse Conservation Committee (Georgia).
- 1997-2002 *Associate Editor for molecular and ecological genetics.* Editorial Board, Transactions of the American Fisheries Society.
- 1997-1998 *Vice-President.* Genetics Section, AFS.
- 1997-1998 *Secretary.* Potomac Chapter, AFS.
- 1997-98, '02 *Student Paper Referee.* Annual meetings of AFS.
- 1996-1998 *Chair.* Conservation Genetics Review Committee, Genetics Section, AFS.
- 1996 *Invited Participant.* Workshop on Ethics in the Environment, Agriculture, and Biotechnology. National Science Foundation.
- 1995-1996 *Co-Organizer.* Interdepartmental Molecular and Quantitative Genetics Workshop. Michigan State University (MSU).
- 1995-1996 *Department Representative.* College of Agriculture and Natural Resources Biotechnology Program. MSU.
- 1995-1997 *Lake Sturgeon Recovery Team.* Michigan DNR.
- 1994-1996 *Chair.* Genetics and Biodiversity Tech. Committee. North Central Div., AFS.
- 1995-1996 *Seminar Steering and Arrangements Committee.* Ecology & Evolutionary Biology Program. MSU.
- 1995-1996 *University Faculty Grievance Board.* MSU.
- 1993-1994 *Co-Chair, Steering Committee.* Point/Counterpoint Debate Series on Conservation Genetics and Hatcheries, AFS.
- 1993 *Ecological Effects Working Group.* Performance Standards for Safely Conducting Research with Genetically Modified Fish, USDA.
- 1992 *Natural Populations Working Group.* Expert Consultation on Conservation of Aquatic Genetic Resources, FAO/UN.

GRADUATE STUDENT COMMITTEES

Major Professor & Advisor

- 2003-Present *Kyle Hansen.* Fine-scale movements of bass in northern lakes. Natural Resource and Environmental Sciences. UI. Co-advisor.
- 2003-Present *Tasha Silich.* A test of kin selection theory in colonial breeding bluegill. Natural Resource and Environmental Sciences. UI. Co-advisor.
- 1994-1997 *Julie Weeder.* Effective population size of Michigan's chinook salmon. Degree conferred May, 1997. Ecology & Evolutionary Biology Program, MSU. Major Advisor.
- 1994-1997 *Sima Pandya.* Systematics and morphological variation in the common caiman with conservation and legal implications. Degree conferred August, 1997. Ecology & Evolutionary Biology Program, MSU. Major advisor.

Graduate Student Committees, 1995-Present

Ph.D. Dissertation Committees

Vaughn Cooper, MSU
Daniel Villeneuve, MSU

Joe Parkos, UI
Jim Ludden, NIU

MS. Thesis Committees

Dean Franklin, VCU
Debbie Thomas, VCU
David Taylor, VCU
Becky Fuller, MSU
Brandon Barthel, UI
Kate Inendino, UI

Emily Grant, UI
David Glover, UI
Diana Kercher, VCU

TEACHING EXPERIENCE

- Springs 2002& 2003 Aquatic Ecology Discussion. Co-organizer, graduate level discussion course. UI.
- Fall 1999 *Ecological Genetics*. Co-instructor, graduate level lecture and discussion course. VCU.
- Fall 1999 *Conservation Biology*. Co-instructor, advanced undergraduate level lecture and discussion course. VCU.
- Spring 1996 *Advanced Concepts in Evolutionary Biology*. Co-instructor, graduate level literature and discussion course. MSU.
- Fall 1995 *Conservation and Genetics*. Instructor, graduate level lecture, literature, and discussion course. MSU.
- Spring 1995 *Population and Evolutionary Genetics*. Co-instructor, graduate level seminar and discussion course. MSU.
- Fall 1993 *Topics in Conservation Biology*. Co-instructor, graduate level seminar, VCU.
- Spring 1993 *Topics in Fish Reproductive Behavior*. Co-instructor, graduate level seminar, VCU.
- 1993-present Guest lecturer for multiple undergraduate courses including, Professional Ethics in Natural Resource Management; Conservation Biology; Introduction to Fisheries and Wildlife Management; Evolutionary Ecology; Resource Ecology.

GRANT SUPPORT

- 2003-2007 Principal Investigator. The Saline Branch Ammonia Spill: an omnibus proposal to monitor and study the spill's effects on the aquatic community and remediation efforts. Submitted to IDNR/IEPA/IAG. \$303K.
- 2003-2008 Co-Principal Investigator. Urban Community Development To Enhance Nearshore Lake Michigan Fisheries Habitat And Sustainable Fisheries-Based Industries. Submitted to National Sea Grant Program. \$500K.
- 2003 Principal Investigator. A genetic test of kin selection theory in colonially breeding sunfish. Submitted to the University of Illinois Campus Research Board. \$32K.
- 2002-2006 Principal Investigator. The Saline Branch Ammonia Spill: effects on the resident smallmouth, largemouth, and spotted bass populations and patterns of recolonization. Submitted to University of Illinois Office of the Vice Chancellor for Research. \$141K.
- 2002-2003 Co-investigator. Multi-disciplinary approaches to diseases of aquatic animals. UI-CVM Venture Technology Program. \$18K
- 2002-2005 Co-Investigator. Establishment of an Upper Mississippi River Cooperative Ecosystem Studies Unit. US Department of Interior.
- 2002-2004 Co-Investigator. Great Lakes Fisheries Outreach Enhancement. Illinois-Indiana Sea Grant Program. \$68K.
- 2002-2005 Co-Principle Investigator. Database Management and Analysis of Fisheries in Illinois. Illinois Department of Natural Resources. F-69-R. \$1,437K.
- 2001-2002 Co-Principle Investigator. Critical evaluation of conservation success in restoring James River Shad. Submitted to US Fish and Wildlife Service. \$76K.
- 2000-2001 Co-Principal Investigator. Symposium on hybridization in fishes. National Fish and Wildlife Foundation, Trout Unlimited, VCU Center for Environmental Studies, and the American Fisheries Society. \$16K.
- 2000-2001 Co-Principal Investigator. Construction of a microsatellite DNA library for bluegill ecological studies. VCU Grant-in-Aid Program. \$5K.
- 1998-2000 Co-Principal Investigator. Conservation genetics of blackbanded sunfish in Virginia. VA Department of Game and Inland Fish. \$24K.
- 1998-1999 Co-Principal Investigator. Critical tests for the restoration of American shad in James River, Virginia. NOAA. \$165K.

- 1996-1999 Principal Investigator. National assessment on artificial propagation and biodiversity. Packard, Education, and Weedon Foundations. \$180K.
- 1996 Co-Principal Investigator. Single and multi-locus probes for salmon fisheries management. MSU Biotechnology Research Board. \$13K.
- 1995-1996 Principal Investigator. Chinook salmon population dynamics in Michigan's waters of the Great Lakes. Michigan Department of Natural Resources. \$55K.
- 1994-1996 Principal Investigator. Stock identification and evaluation of genetic diversity in *Oncorhynchus* spp. in hatchery versus wild populations from Lake Michigan. Michigan Department of Natural Resources. \$20K.
- 1993 Co-Investigator. A comparison of population-level variation among multiple 1993 genetic techniques. VCU Grant-in-Aid Program. \$4K.

PUBLICATIONS

- 2003 EPIFANIO, J.M. with 7 co-authors. Genetic considerations for bull trout restoration in the lower Clark Fork River. *Fisheries*. 28(8):10-24.
- 2003 Hallerman, E.J. B.L. Brown, and J.M. EPIFANIO. Genetic variation: classical markers; Chapter 1. Pp. 3-22. *In* Hallerman, E.J. (ed.). *Genetic Principles and Practices for Fisheries Scientists*. American Fisheries Society, Bethesda, Maryland, USA.
- 2003 Brown, B.L. and J.M. EPIFANIO. Genetic variation: nuclear DNA; Chapter 5. Pp. 101-126. *In* Hallerman, E.J. (ed.). *Genetic Principles and Practices for Fisheries Scientists*. American Fisheries Society, Bethesda, Maryland, USA.
- 2003 Hallerman, E.J. and J.M. EPIFANIO. Mutation; Chapter 6. Pp. 127-140. *In* Hallerman, E.J. (ed.). *Genetic Principles and Practices for Fisheries Scientists*. American Fisheries Society, Bethesda, Maryland, USA.
- 2002 Philipp, D.P., J.E. Claussen, T.W. Kassler, and J.M. EPIFANIO. 2002. Mixing stocks of largemouth bass reduces fitness through outbreeding depression. Pages 349-364 in Philipp, D.P. and M.S. Ridgway, editors. *Black Bass: Ecology, Conservation, and Management*. American Fisheries Society Symposium 31, Bethesda, Maryland, USA.
- 2002 Utter, F. and J. EPIFANIO. Marine aquaculture: genetic pitfalls and potentialities. *Reviews in Fish Biology and Fisheries* 11:59-77.
- 2001 EPIFANIO, J. and J. Nielsen. The role of hybridization in the distribution, conservation, and management of aquatic species. *Reviews in Fish Biology and Fisheries* 10:245-251.
- 2001 EPIFANIO, J. and D. Philipp. Simulating a general model of genetic extinction: the effects of fitness, initial proportions of parental taxa, and mate choice. *Reviews in Fish Biology and Fisheries* 10:339-354.
- 2001 EPIFANIO, J., F. Utter, and D. Philipp. The effects of fish stocking on genetic level biodiversity. Pp. 23-64. *In* Nalbone, J. and E.L. Michael (ed.s). *Taking Stock of Our Future*. Great Lakes United Conference Proceedings. Great Lakes United, Buffalo, NY.
- 2000 EPIFANIO, J. A status report of coldwater fishery management in the U.S. – an overview of state programs. *Fisheries*. 25(7):13-27.
- 2000 Waters, J. M., J. M. EPIFANIO, T. Gunter, and B. L. Brown. Homing behaviour facilitates subtle genetic differentiation among river populations of *Alosa sapidissima*: microsatellite and mitochondrial DNA. *Journal of Fish Biology*. 56:622-636.
- 2000 Brown, B. L., J. M. Waters, T. Gunter, and J. M. EPIFANIO. Restoration genetics of American shad in the James River, Virginia (USA): evaluation of captive release. *Conservation Biology*. 14(1):294-303.
- 1999 EPIFANIO, J. M., M. Hooe, D. H. Buck, and D. P. Philipp. Reproductive success and assortative mating among *Pomoxis* species and their hybrids. *Transactions of the American Fisheries Society*. 128:104-120.
- 1999 Brown, B., P. Smouse, J. EPIFANIO, and C. Kobak. 1999. MtDNA mixed stock analysis of American shad: coastal harvests are dynamic and variable. *Transactions of the American Fisheries Society*. 128:977-994.
- 1998 Brown, B., J. EPIFANIO, C. Kobak, and P. Smouse. Critical tests for variation indicate mtDNA characters are powerful for mixed stock analysis. Pages 396-404, *In* Hancock, D. A., D. C. Smith, A. Grant, and J. P. Beumer, editors. *Developing and sustaining world fisheries resources: the state of science and management*. Proceedings of the Second World Fisheries Congress. CSIRO Publishing, Collingwood, Victoria, Australia.

- 1997 EPIFANIO, J. M., and D. P. Philipp. Sources for misclassifying genealogical origin in mixed hybrid populations. *Journal of Heredity* 88:62-65.
- 1996 EPIFANIO, J. M., J. B. Koppelman, M. A. Nedbal, and D. P. Philipp. Genetic variation in paddlefish, *Polyodon spathula*. *Transactions of the American Fisheries Society* 125:546-561.
- 1996 Brown, B., J. EPIFANIO, C. Kobak, and P. Smouse. Assessing temporal stability in mitochondrial DNA variation in American shad. *Canadian Journal of Fisheries and Aquatic Sciences* 53:2274-83.
- 1995 EPIFANIO, J., P. Smouse, C. Kobak, and B. Brown. Assessing mitochondrial DNA variation in American shad: how much is enough for mixed stock analysis? *Canadian Journal of Fisheries and Aquatic Sciences* 52:1688-1702.
- 1995 Hallerman, E. and J. EPIFANIO. Human dimensions in biological diversity. Pages 199-212 in Philipp, D., J. EPIFANIO, and J. E. Marsden, J. E. Claussen, and R. Wolotira, editors. *Protection of Aquatic Biodiversity. Proceedings of the World Fisheries Congress.* Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- 1995 Philipp, D., D. Burkett, J. EPIFANIO, and J.E. Marsden. Protecting aquatic biotic diversity: will we meet the challenge. Pages 1-10 in Philipp, D., J. Epifanio, and J. E. Marsden, J. E. Claussen, and R. Wolotira, Jr., editors. *Protection of Aquatic Biodiversity. Proceedings of the World Fisheries Congress.* Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- 1994 EPIFANIO, J. M. and D. P. Philipp. Gene regulation and expression in *Pomoxis* (Pisces: Centrarchidae). *Developmental Genetics* 15:119-128.
- 1993 EPIFANIO, J. M. and D. P. Philipp. Gene linkage analysis of ten loci in the genus *Pomoxis* (Pisces: Centrarchidae). *Journal of Heredity* 84:116-121.
- 1993 Philipp, D. P., J. M. EPIFANIO, and M. J. Jennings. Conservation genetics and current stocking practices – are they compatible? *Fisheries* 18:14-16.
- 1992 EPIFANIO, J. M. Gene linkage, ontogeny of gene expression, and reproductive isolation in *Pomoxis annularis*, *P. nigromaculatus*, and their hybrids. Doctoral Dissertation. University of Illinois.
- 1989 EPIFANIO, J. M. The Illinois Fisheries Genetics Program. *Illinois Natural History Survey Reports* 287:1-2.
- 1986 EPIFANIO, J. M. Genetic stock identification of bloater, *Coregonus hoyi*, from western Lake Michigan. M.S. Thesis. University of Wisconsin.

MANUSCRIPTS SUBMITTED

Weeder, JM, AR Marshall, and JM EPIFANIO. Assessment of population genetic variation in chinook salmon, *Oncorhynchus tshawytscha*, from seven Michigan rivers 30 years after introduction. Submitted to *North American Journal of Fisheries Management*.

TECHNICAL REPORTS

- 2003 EPIFANIO, J.M. Genetic analysis of Tennessee sport fisheries (2000-2003: largemouth bass, smallmouth bass, rainbow trout, and brown trout. Final report to Tennessee Wildlife Resources Agency. Nashville, TN.
- 2003 Stein, JA, RF Illyes, L Miller-Ishmael, B Carroll, J Claussen, J EPIFANIO, and DP Philipp. Database management and analysis of fisheries in Illinois. *Aquatic Ecology Technical Report 03/03.* Illinois Department of Natural Resources, Springfield, IL.
- 2002 Stein, JA, RF Illyes, B Carroll, L Miller-Ishmael, J Claussen, T Kassler, J EPIFANIO, and DP Philipp. Database management and analysis of fisheries in Illinois. *Aquatic Ecology Technical Report 02/04.* Illinois Department of Natural Resources, Springfield, IL.
- 2002 Brown, B. L., and J. M. EPIFANIO. Genetic Assessment of blackbanded sunfish in Virginia. *DJ Project Completion Report.* Virginia Department of Game and Inland Fisheries. Richmond, VA.
- 2001 Spruell, P., J. EPIFANIO, G. Haas, K. Pratt, B. Rieman, C. Stockwell, and F. Utter. Genetic considerations for bull trout restoration in the Lower Clark Fork drainage, Idaho and Montana. *Idaho and Montana Bull Trout Management Team.*

- 2000 Brown, B. L., J. M. EPIFANIO, T. Gunter, J. G. Travelstead, and J. M. Waters. Critical Evaluation of Conservation Success in Restoration of James River and Ocean Run American Shad. Final Report to NOAA (Saltonstall/Kennedy).
- 2000 Brown, B. L., and J. M. EPIFANIO. Conservation Genetics of the Blackbanded Sunfish in Virginia. Technical Report to Virginia Department of Game and Inland Fisheries.
- 1999 EPIFANIO, J. Status and trends of New Hampshire's coldwater fishery Resources. Trout Unlimited Technical Report.
- 1999 EPIFANIO, J. The scientific basis of Washington state's Wild Salmonid Policy. Trout Unlimited Technical Report.
- 1998 EPIFANIO, J. 1997 inland trout stocking data across the U.S. TU Technical Fact Sheet.
- 1998 EPIFANIO, J. M., E. Schnabel, and E. Stockinger. Genetic diversity and gene flow in feral and propagated Lake Michigan steelhead (*Oncorhynchus mykiss*) populations. DJ Project Completion Report to Michigan DNR.
- 1998 EPIFANIO, J. and W. Fosburgh. A status report of coldwater fishery management in the U.S. – an overview of state programs. Trout Unlimited Technical Report.
- 1998 EPIFANIO, J. and W. Lindloff. Status and trends of Wisconsin's coldwater fishery Resources. Trout Unlimited Technical Report.
- 1997 EPIFANIO and D. Nickum. Fishing for answers: status and trends in Colorado coldwater fishery management. Trout Unlimited Technical Report.
- 1997 Weeder, J. A. and J. EPIFANIO. Genetic drift, genetic variability and Lake Michigan chinook salmon. DJ Project Completion Report to Michigan DNR.
- 1994 EPIFANIO, J. Testing genetic hypotheses for EMS. Technical abstract for the Great Lakes Fishery Commission workshop on *Early Mortality Syndrome*.
- 1994 Brown, B. and J. EPIFANIO. Mixed-stock analysis of American shad in Virginia's and Maryland's coastal intercept fisheries. DJ Project Completion Report to Virginia Marine Resources Commission.
- 1992 EPIFANIO, J. and D. P. Philipp. Gene linkage of *PGM-1** and *FH-1** in sunfishes. Isozymes Bulletin. Vol. 26.
- 1992 EPIFANIO, J., G. S. Whitt, and D. P. Philipp. Quantitative variation of *GPI-B** expression in *Pomoxis* spp. Isozymes Bulletin. Vol. 26.
- 1989 EPIFANIO, J., Nedbal, M. and Philipp, D.P. (1989) A population genetic analysis of paddle-fish (*Polyodon spathula*). Illinois Nat. Hist. Surv. Aquat. Biol. Tech. Rep. 90/13, 48 pp.
- 1989 EPIFANIO J. M. and D. P. Philipp. Reproductive success of spawning lake trout on Julian's Reef, Lake Michigan. Aquatic Biology Section Technical Report, INHS.
- 1987 EPIFANIO, J. M. and D. P. Philipp. Tissue recycling of mtDNA preparations for use in isozyme studies. Isozymes Bulletin. Vol. 21.
- 1986 Philipp, D. P., G. S. Whitt, J. B. Koppelman, J. E. Claussen and J. M. EPIFANIO. The establishment of a state fisheries genetics program in Illinois. Aquatic Biology Section Technical Report, INHS.
- 1982 Skelly, T. M. and J. M. EPIFANIO. Kankakee River Fishes of the Braidwood Aquatic Monitoring Area. Aquatic Biology Section Technical Report, INHS.
- 1982 Skelly, T. M. and J. M. EPIFANIO. The second year fishery of the Braidwood cooling pond. In R. W. Larimore and T. M. Skelly, Eds. Environmental Studies of Braidwood Cooling Pond, 1982. Aquatic Biology Section Technical Report, INHS.

INVITED PRESENTATIONS

- 2002 Philipp, D. and J. Epifanio. Management of biodiversity below the species level: stock transfers result in fitness losses through outbreeding depression. Indiana AFS/TWS Annual Meeting.
- 2001 EPIFANIO, J., D. Philipp, and J. Claussen. Hybridization in *Lepomis*. *Lepomis* Symposium. Midwest Fish and Wildlife Conference.
- 2001 EPIFANIO, J. Genetic diversity and viability in the US Forest Service. Workshop on Advanced Topics in Aquatic Ecology. US Forest Service.

- 2001 Spruell, P., J. EPIFANIO, G. Haas, K. Pratt, B. Rieman, C. Stockwell, F. Utter, and W. Young. Population genetics and management of bull trout in the Lake Pend Oreille - lower Clark Fork River system. Montana AFS Annual Meeting.
- 2000 Philipp, D., J. Claussen, W. Persons, S. Morgensen, and J. EPIFANIO. Rainbow trout in the Grand Canyon: Part 1, distribution of genetic variation. Symposium on Ecology and Management of Tailwaters in the United States. Lake Powell, Arizona.
- 2000 EPIFANIO, J., J. Claussen, W. Persons, S. Morgensen, and D. Philipp. Rainbow trout in the Grand Canyon: Part 2, genetic approaches to understanding recruitment. Symposium on Ecology and Management of Tailwaters in the United States.
- 2000 EPIFANIO, J. Genetic approaches to evaluating American shad restoration in the Mid-Atlantic US. Center for Aquatic Ecology. Illinois Natural History Survey.
- 2000 EPIFANIO, J. Evaluation of genetic diversity associated with American shad restoration: a model for propagation-assisted recovery. Department of Biology. Florida Atlantic University.
- 2000 EPIFANIO, J. Evaluation of genetic diversity associated with American shad restoration: a model for propagation-assisted recovery. Wisconsin Cooperative Fishery Research Unit. University of Wisconsin at Stevens Point.
- 2000 Utter, F. and J. EPIFANIO. Defining the varied uses of fish culture is key to understanding risks and benefits. World Aquaculture Society, Nice, France.
- 2000 EPIFANIO, J. Evaluation of genetic diversity associated with American shad restoration: a model for propagation-assisted recovery. Department of Fisheries and Wildlife. Virginia Polytechnic Institute & State University.
- 2000 EPIFANIO, J. Genetic risks associated with captive breeding. Biology Department. Virginia Commonwealth University.
- 1999 EPIFANIO, J. Genetics and propagation. Taking Stock – a workshop on the uses of fish culture in the Great Lakes. Great Lakes United.
- 1999 EPIFANIO, J. Evaluation of genetic diversity associated with American shad restoration: a model for propagation-assisted recovery. Department of Fishery and Wildlife Biology, Colorado State University.
- 1999 EPIFANIO, J., and D. Philipp. Population heterogeneity within the hybrid swarm. AFS Annual Meeting. Hybrid Fishes Symposium.
- 1999 EPIFANIO, J. Mixed-stock fisheries and hybrid swarms – estimating the composition of complex populations. Marine Sciences Research Center, SUNY at Stony Brook.
- 1998 EPIFANIO, J. Genetic risks from mixing species and populations -- a review of concepts and evidence. Introduced Aquatic Species Workshop, Virginia AFS.
- 1997 EPIFANIO, J. and J. Weeder. Fecundity as a genetic trap: genetic drift and the effects of variable reproductive success associated with supportive breeding. symposium on incorporating genetic concepts into fisheries management. Midwest Fish and Wildlife Conference.
- 1997 EPIFANIO, J. East coast American shad: where do they come from, where do they go? Presentation to Maryland Department of Natural Resources.
- 1997 EPIFANIO, J. and D. Duff. Wilderness stocking: what are we trying to conserve? AFS Annual Meeting.
- 1997 EPIFANIO, J. Artificial propagation in Puget Sound: what are we restoring? Washington Council of Trout Unlimited.
- 1996 EPIFANIO, J. The National Fish Hatchery Review: artificial propagation and sustainable coldwater fisheries. Trout Unlimited Annual Convention.
- 1995 EPIFANIO, J. Burnham-Curtis, T. Todd, and J. Weeder. Workshop on Genetics in Fisheries Research and Management. Michigan Department of Natural Resources.
- 1995 EPIFANIO, J. Genetic applications to hatchery broodstock management. Wisconsin Department of Natural Resources Training Seminar Series.
- 1995 EPIFANIO, J. Estimating the origins of complex mixtures: a population genetics approach. Ecology and Evolutionary Biology Program (MSU) Seminar Series.
- 1994 Brown, B. and J. EPIFANIO. Uncovering American shad origins. AFS Annual Meeting. Genetics Section Symposium on Applying Mixed-Stock Analysis to East Coast Problems.
- 1994 EPIFANIO, J. Estimating population admixtures from genetic data. Queens University Biological Station Summer Seminar Series.
- 1994 EPIFANIO, J. Testing hereditary hypotheses for *Early Mortality Syndrome*. Early Mortality Syndrome Workshop, Great Lakes Fishery Commission.
- 1993 EPIFANIO, J. Uncovering the origins of ocean-run American shad. Illinois Natural History Survey.

- 1993 EPIFANIO, J. Uncovering the origins of ocean-run American shad with Genetic Markers. Department of Fisheries and Wildlife, MSU.
- 1992 EPIFANIO, J. Formation of a fish genetics information network. Food and Agriculture Organization Expert Consultation on Utilization and Conservation of Aquatic Genetic Resources, Grottaferrata, Italy.
- 1992 EPIFANIO, J. Hybridization in sunfishes. Department of Biology Seminar Series, VCU.
- 1992 EPIFANIO, J. and E. Hallerman. Human and biological dimensions in biological diversity. World Fisheries Congress, Athens, Greece.
- 1992 EPIFANIO, J. The Nonindigenous Aquatic Nuisance and Control Act of 1990: a legislative history. Illinois River Basin Zebra Mussel Workshop.
- 1991 EPIFANIO, J. A view from the "Hill": a legislative perspective on aquatic resources. Illinois AFS.
- 1989 EPIFANIO J., M. Nedbal, and D. Philipp. Population genetic analyses of the paddlefish: a tool for better management. AFS Annual Meeting.

PRESENTATIONS – CONTRIBUTED

- 2003 J. EPIFANIO. Hybridization in Fishes. UI/NRES 399.
- 2003 Dolan, C. and J. EPIFANIO. The Great Lakes Fisheries Outreach Enhancement Program. Illinois Chapter of the American Fisheries Society.
- 2002 Hanson, K., T. Kassler, J. Claussen, J. EPIFANIO, and D. Philipp. Genetic identification and assessment of genetic variation in *Oncorhynchus mykiss* and *Salmo trutta* within the Colorado River. Howard Hughes Undergraduate Research Fellows Poster Session.
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DISCUSSION PANELS

- 2000 Issues and Opportunities for Managing and Conserving Black Basses. Panel Moderator at the Black Bass 2000 Symposium. AFS Annual Meeting.
- 1998 Native fish and trout hatchery programs. Trout Unlimited Annual Convention.
- 1998 The sciences in biodiversity programs. Maryland Conservation of Biological Diversity Conference.
- 1997 Integrating genetics and fisheries management. Midwest Fish and Wildlife Conference.
- 1997 Fish stocking in wilderness. AFS Annual Meeting.
- 1994 Conservation genetics and current hatchery practices: are they compatible? Northeast Fish and Wildlife Conference.
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