

PAUL M. LIECHTI

June 2014

BORN: June 9, 1947
St. Joseph, Missouri

DEGREES: B.S., Biology, Central Missouri State University, 1970
M.A., Entomology, University of Kansas, 1974

PROFESSIONAL POSITIONS:

1969-1971 Laboratory Technician, Gulf Chemical Company, Merriam, KS.

1972-1974 Research Assistant, Dept. of Entomology, Univ. of Kansas.

1974-1975 Research Assistant, Hall Mammalian Genetics Laboratory,
Univ. of Kansas.

1975-1978 Biological Technician, Herbarium, Univ. of Kansas.

1978 (Jan-June) Research Assistant, Kansas Biological Survey.

1978 - present Assistant Director, Kansas Biological Survey.

RESEARCH EXPERIENCE

(Grants & Contracts)

1978-79. Technical and field assistance - Effects of ammonia on stream organisms. Kansas Water Resources Research Institute. Carl Burkhead P. I.

1979 - Research Coordinator. Effects on and recovery of Jacob Creek Lyon/Chase Counties, Kansas following an oil spill. Williams Pipeline Company. R. L. McGregor, P. I.

1980-81. Technical and field assistance - Effects of changing agricultural practices on the stream ecology of Soldier Creek Jackson/Nemaha Counties, Kansas. Kansas Dept. of Health and Environment. D. G. Huggins, P. I.

1983 - Research Coordinator. Population study of Pomatiopsis lapidaria (Say), a small amphibious snail of endangered status in Kansas. Kansas Fish and Game Commission. L. C. Ferrington, P. I.

- 1985-86 - Technical and field assistance. Biological assessment of selected water quality parameters of Prairie Creek and associated contact springs. Stinson, Mag & Frizzell for Waste Management Inc. D.G. Huggins, P.I.
- 1985-86 - Technical Advisor - Environmental Assessment of Cheyenne Bottoms Wildlife Management Area. Kansas Fish and Game Commission. E.A. Martinko, P. I.
- 1985-86 - Technical and field assistance. Development of and maintenance of a Kansas biotic index. Kansas Dept. of Health and Environment. D.G. Huggins, P.I.
- 1987-88 - Technical and field assistance. Field evaluations of the assessment value of a Kansas biotic index on nonpoint source agricultural pollution. Kansas Dept. of Health and Environment. D.G. Huggins, P.I.
- 1988-89 - Project Coordinator - Establishment of empirical relationships between land-use/land-cover and non-point source pollution stream effects within an ecoregion. U.S. EPA Region VII. J.W. Merchant, P.I.
- 1991-94 - Technical and Field Assistance - A regionalized assessment of the influence of rural nonpoint source pollution on the ecological integrity of stream ecosystems and an evaluation of associated pollution control practices, Frank deNoyelles, P.I.
- 1992 - Technical Advisor - South Lawrence trafficway Santa Fe mitigation site. Howard, Needles Tammen & Bergendoff. W.H. Busby, PI.
- 1992-93 - Technical Advisor - Riparian Studies in the Delaware River Basin. USEPA Region VII. D.G. Huggins, PI.
- Oct. 1992 - Sept. 1993 - Neosho Watershed Impact Study. Kansas Water Office. P.M. Liechti, PI
- Oct. 1993 - June 1995 - Solomon Basin Ecosystem Study. Kansas Water Office. P.M. Liechti, PI
- Apr. 1994 - June 1995 - Neosho Vegetation Inventory Study. Kansas Water Office. P.M. Liechti, PI, J. Whistler, Co-PI.
- Jan. 1995 - June 1995 - Neosho Resources Information Compilation. Kansas Water Office. P.M. Liechti, PI.
- Apr. 1995 - Sept. 1997 - A Systematic Survey of Protected and Rare Animals and Plants and the Identification of Riparian Natural Communities Along the Republican River in North-Central Kansas; C. Freeman, PI, P. Liechti & B. Busy CoPIs. Bureau of Reclamation, Grand Island.

- May 1, 1998 - Aug. 31, 1998. Kansas Nonpoint Education for Municipal Officials Initiation Project. Kansas Water Office. P.M. Liechti PI.
- Oct. 1, 2000 - Sept. 30, 2001. Upper Wakarusa River Volunteer Water Quality Sampling. Frank deNoyelles, PI, (Managed all grant activities.)
- Oct. 1, 2000 - Dec. 31, 2001. Watershed Management Plan for Stranger Creek. Donald G. Huggins, PI. Coordinated and participated in 3 biological sampling events on Stranger Creek, and coordinated high school student water quality sampling of Stranger Creek and it's tributaries.
- Jan. 1, 2000 - Jun. 30, 2004. Environmental Assessment & Critical Areas Identification Technical Assistance. P. M. Liechti PI.
- Aug. 1, 2002 - Dec. 31, 2003. Watershed Management Plan for Wolf Creek. Leavenworth County. Paul M. Liechti, PI
- Jan. 1, 2003 – June 30, 2004. Data Mangement and Support for Statewide Surveys of Fish and Macroinvertebrates. KS Dept. Wildlife and Parks. Ed Wiley & Paul M. Liechti, coPIs
- March 3, 2003 - March 2, 2007. A Watershed Classification System for Tiered Diagnosis of Biological Impairments: A Scalable, Central Plains Focus with National Applicability. E. Martinko, J. Thorp, M. Jakubauskas, D. Huggins, J. Whistler, F. deNoyelles, J. Dobson, P. Liechti, and K. Price.
- July 1, 2004 - June 30, 2005. Data Mangement and Support for Statewide Surveys of Fish and Macroinvertebrates. KS Dept. Wildlife and Parks. Paul M. Liechti, PI; Donald G. Huggins, coPI
- Jan. 1, 2005 - June 30, 2005. Interjurisdictional water quality planning. KS Dept. of Health and Environment. Paul M. Liechti, PI
- Aug. 1, 2005 - June 30, 2006. Data Management and Support for Statewide Surveys of Fish and Macroinvertebrates. KS Dept. Wildlife and Parks. Paul M. Liechti, PI; Donald G. Huggins, coPI
- Aug. 1, 2006 - June 30, 2007. Data Management and Support for Statewide Surveys of Fish and Macroinvertebrates. KS Dept. Wildlife and Parks. Paul M. Liechti, PI; Don Huggins, coPI
- Oct. 1, 2006 – June 30, 2007. Development of an Index of Biological Integrity for Fish for the Lower Kansas. Kansas Water Office. Paul M. Liechti, PI; Don Huggins, Scott Campbell, coPIs.
- Oct. 1, 2010 – Dec. 31, 2010. Response of Phytoplankton Composition to Fish Removal in Marion Reservoir. Kansas Dept. Wildlife and Parks. Paul M. Liechti, PI, Frank deNoyelles, co-PI.

Oct. 23, 2013 - Dec. 18, 2013. – Technical and Field Assists. Post-bank stabilization fish monitoring on Neosho River. Kansas Water Office. Donald G. Huggins PI, D. Baker co-PI.

SERVICE

Professional:

Local arrangements chairman for North American Benthological Society Meeting held in Lawrence, Ks. May 1986.

Co-organizer of Symposium on Kansas Natural Areas held in conjunction with Kansas Academy of Science Meeting at Wichita State University, April 1987.

Program Committee, Biological Sections - Kansas Academy of Science Meeting, KU Lawrence, April 1988.

Student Awards Committee and Paper Presentation Judge - Kansas Academy of Science Meeting, KU Lawrence, 7 April 1988.

Member, Blue Ribbon Task Force - Kansas Advisory Council for Environmental Education, November 1990.

Technical Advisor & Trainer - Kansas Stream Teams - Sponsored by Kansas Wildlife Federation and Kansas Department of Health and Environment. Initiated in Fall of 1993.

University: (partial)

Guest Lecturer in - Entomology, Geography, Environmental Studies, Urban Planning and Architecture.

Museum of Natural History Education Program.

Graduate student consultations on aquatic research design and data analysis.

Aquatic specimen identifications for faculty and students.

Unit Custodian for Biological Survey.

Biological Survey representative for "Campus Watch" KUPD.

Biological Survey Laboratory Safety Officer.

Senator - University Unclassified Senate (2005 - 2009).

Biological Survey Building Technical Liaison (BEL)

State: (partial list)

KBS Representative - Black Vermillion Drainage Area Task Force -Division of Water Resources lead agency.

KBS Representative - Cross Creek Drainage Area Task Force - Division of Water Resources lead agency.

KBS Representative - Riparian and Wetland Protection Committee - State Conservation Commission lead agency.

KBS reviewer for Water Projects Environmental Coordination Act - Division of Water Resources lead agency. 1987 - present

KBS Point Contact - Interagency review of federally funded construction projects.

KBS representative on Interagency Work Group on Non-point Source Water Quality - USDA Soil Conservation Service lead agency.

KBS representative on Non-point source Targeting Work Group - KDHE lead agency.

KBS Representative on KDHE Non-point Source Pollution Reduction Work Group

KBS Representative on Comprehensive State Ground-water Protection Program - U.S. EPA Region VII lead agency.

KBS Representative on Wetland and Riparian Area Project - Kansas Water Office/Dept. of Wildlife and Parks lead agencies.

KBS Representative on Stream Survey Monitoring Consortium - Dept. of Wildlife and Parks lead agency.

KBS Representative on Interagency Project Advisory Committee - Kansas Water Office lead agency.

KBS Representative on Interagency Advisory Committee for review and revision of Kansas Field Office Technical Guide - USDA Soil Conservation Service

KBS Representative at State Fair Booth on Water Quality in Kansas sponsored by Kansas Dept. of Health & Environment Nonpoint Source Pollution Program, Sept. 1993

KBS Representative on Interagency Team for revision of water quality subsections of the Kansas Water Plan, 1994-1995.

KBS Representative assisting Delaware Watershed Joint District No. 10 to develop plan for Spring/Straight Creek and North/South Cedar Creek watersheds. Holton, KS. March 23, 1995 & May 22, 1995.

KBS Representative Kriwin/Webster Reservoir Technical Advisory Committee 1997-1998.

KBS Representative Topeka Wastewater Treatment Plant Technical Advisory Committee 1998 to 2002.

KBS Representative Johnson County Wastewater Treatment Plant Technical Advisory Committee
1999-2002.

KBS Representative Kaw Valley Heritage Alliance Steering Committee, Executive Board
Member & Treasurer, 1997 to present.

KBS Representative Kansas Wetland and Riparian Alliance, Steering Committee. 2001 - present.

KBS Representative on KWO In-stream Flow Needs Tech. Advisory Workgroup 2004

KBS Representative on KDHE/KWO Watershed Restoration and Protection Strategy Workgroup.
2004 - present.

KBS Representative on KWO Kansas River Degradation Technical Advisory Committee. 2005 -
2008.

KBS Representative on KDHE Triennial Review of State Water Quality Standards Focus Group
2009-2010.

PRESENTATIONS

Professional:

1976. Kansas Academy of Science - Status of Unionid mussels in Kansas.

1980. Kansas Academy of Science - Effects of a 24 hour ammonia injection on stream drift and
benthic standing crop.

1986. North American Benthological Society - Mayflies of the Kansas High Plains with
notes on the distribution of other taxa in the State.

1986. U.S. Fish and Wildlife Service, Endangered Species Listings Workshop, Denver -Status of
certain Kansas endangered and threatened species.

1987. Natural Areas Symposium, Kansas Academy of Science - Natural areas in Kansas.

1988. KU Geography Colloquium - Utilization of GIS in northeast Kansas nonpoint source
pollution research.

1993. Macroinvertebrate Sampling for stream monitoring. Workshop for Ks. Wildlife and Parks
Fisheries Biologists.

1993. Neosho Watershed Impact Study. Neosho Basin Advisory Committee meeting, Council
Grove, Ks.

1994. Kansas Academy of Science - Symposium on Phreatophytes and Water Resources of River
Valleys in Kansas - Solomon River Riparian Ecosystem Study.

- 1998. NEMO in the Midwest. Martinko - Sixth Annual Nonpoint Source Pollution Management Workshop.
- 2001. Kansas House of Representatives, Environment Committee, Rep. Freeborn Chair.; provided testimony on behalf of KBS on Sub. Senate Bill 204
- 2004. Kansas Lower Republican Basin Advisory Committee, Impacts of Urban Development on Waterways.
- 2004. Water and Future of Kansas Conference, Lawrence. Watershed Restoration and Protection Strategy for the Upper Wakarusa River Watershed
- 2006. Watershed Restoration and Protection Strategy, Ann. Confr. Water Quality in Your Watershed.
- 2008. Mid-America Association of Conservation Districts workshop. Natural Resources Inventory: Value and Use in Conservation; and You Are the Steward.

Private organizations and community: (partial list)

- 1980. Kansas Aquatic Invertebrates. Invited speaker Kansas Fisheries Society annual meeting.
- 1986. Terrestrial Insects. Ottawa Middle School field day.
- 1987. Kansas Natural Heritage Inventory. Invited speaker Kansas Fisheries Society annual meeting.
- 1991. Nonpoint source pollution research. Flint Hills Soil and Water Conservation Society.
- 1991. Activities of the Kansas Biological Survey. Wildlife Society/Kansas State University.
- 1991. Monitoring streams using aquatic invertebrates. Pony Express Soil and Water Conservation Society.
- 1992. Demonstration of stream sampling techniques. Pony Express Soil and Water Conservation Society.
- 1994. Feb. 27, Presentation on aquatic invertebrate sampling techniques and identification to Kansas High School Monitoring Project participants. Sponsored by Ks. Dept. Health & Environment. Salina, Ks.
- 1994. Stream Team Training Workshop. Sponsored by Kansas Wildlife Federation & Kansas Department of Health & Environment.
- 1998. Berryton Kiwanis.

1999. Urban Watershed Protection and Planning. Dept. Of Ag., Division of Water Resources - Structures Div. Permit Applications Workshop.
1999. Urban Watershed Protection and Planning. Kansas Association Sanitarians Ann. Confr.
2001. Riparian Buffers & using GIS in conservation Planning; Hillsdale Water Quality Workshop
2001. Lake Olathe Watershed Planning; Nonpoint Source Pollution Technical Seminar
2001. Urban Planning in Water Quality Protection; Quad Counties Planning Forum, Hutchinson, KS
2001. Water Quality in the Upper Wakarusa River Watershed; TMDL Workshops, Winchester, KS & Shawnee Heights, KS
2001. Aquatic Insects in Kansas; Free State High School Biology Club
2001. Urban Planning in Water Quality Protection; Wichita Planning Dept. seminar series
2001. Nonpoint Source Education for Municipal Officials; Lawrence Neighborhood Association
2001. Urban Planning in Water Quality Protection; Kansas Chapter of American Planning Association, Annual Meeting
- 2002-2004. Lake Olathe Watershed Protection Advisory Board, multiple presentations
- 2002 & 2004. Kansas State University, Environmental Ed. Class, Impact of Urban Development on Waterways
2005. Kansas Alliance for Wetlands and Streams, I-70 Chapter, The Kansas GAP Analysis Program.
2006. Kansas Alliance for Wetlands and Streams. Kansas Wetlands.
2007. Kansas Environmental Architects. Land Use and Water Quality.
2007. Blue Valley High School Water Quality Summit. What is a Watershed?
- 2008 - 2011. Lawrence/Douglas County Health Board member.

PUBLICATIONS

1975. (with W. J. Bell). Brooding behavior of the Cuban burrowing cockroach Byrsotria fumigata (Blaberidae, Blattaria). *Insect Sociaux*, 22(1): 35-45.

1976. (with D. G. Huggins & D. Roubik). Species accounts of certain aquatic macroinvertebrates from Kansas. Tech. Publ. State Biol. Surv. Kansas, 1: 13-77.
1977. (with G. Mackie). Sphaeriidae records from Kansas. Tech. Publ. State Biol. Surv. Kansas, 4: 15-16.
1977. (with D. G. Huggins). Unionacean mussels of Kansas. Tech. Publ. State Biol. Surv. Kansas, 4: 17-30.
1977. (with D. G. Huggins). Records of Megaloptera in Kansas. Tech. Publ. State Biol. Surv. Kansas, 4: 45-50.
1977. Preliminary list of Kansas Mayfly Genera. Rpts. State Biol. Surv. Kansas, 16: 1-6.
1978. Stenonema Mayfly records from Kansas. Tech. Publ. State Biol. Surv. Kansas, 6: 53-58.
1979. Caenis Mayfly records for Kansas. Tech. Publ. State Biol. Surv. Kansas, 8: 12-14.
1980. Baetis Mayfly records for Kansas. Tech. Publ. State Biol. Surv. Kansas, 9: 15-19.
1981. Kansas mayfly records for the genera Potamanthus, Pentagenia, Ephemera, Ephoron, and Tortopus. Tech. Publ. State Biol. Surv. Kansas, 10: 52-56.
1981. (with D. G. Huggins & L. C. Ferrington), eds. Guide to the Freshwater Invertebrates of the Midwest. Tech. Publ. State Biol. Surv. Kansas, 11: 1-221.
1982. Five additional Ephemeroptera genera from Kansas. Tech. Publ. State Biol. Surv. Kansas, 12: 13-16.
1983. Siphonurus (Ephemeroptera, Siphonuridae) in Kansas. Tech. Publ. State Biol. Surv. Kansas, 13: 34-37.
1984. Effects on and recovery of Jacob Creek Lyon/Chase counties, Kansas Following an Oil Spill. KBS Rpt. 27: 1-32.
1984. Population study of Pomatiopsis lapidaria (Say), a small amphibious snail of endangered status in Kansas. KBS Rpt. No. 28: 1-18. Submitted to Kansas Fish and Game Commission.
1985. (with D. G. Huggins and L. C. Ferrington). Guide to the Fresh-water Invertebrates of the Midwest. KBS Tech. Publ. No. 11 (revised edition 1986).
1986. (with D. G. Huggins, G. W. Welker and T. D. Fraizer). Biological assessment of selected water quality parameters of Prairie Creek and associated contact spring. Rpt. No. 30. Kansas Biol. Survey.
1988. Proceedings of the Symposium Natural Areas of Kansas. Liechti, P.M., D.O. Whittemore

- and D.A. Distler, eds. *Trans. Kansas Acad. Sci.* 91(1-2): 1-62.
1988. Introduction. *in* *Proceedings of the Symposium Natural Areas of Kansas*. Liechti, P.M., D.O. Whittemore and D.A. Distler, eds. *Trans. Kansas Acad. Sci.* 91(1-2):4-6.
1988. Overview of Natural and Scientific Areas in Kansas. *in* *Proceedings of the Symposium Natural Areas of Kansas*. Liechti, P.M., D.O. Whittemore and D.A. Distler, eds. *Trans. Kansas Acad. Sci.* 91(1-2): 11-13.
1988. Overview of University and College Natural Areas. *in* *Proceedings of the Symposium Natural Areas of Kansas*. Liechti, P.M., D.O. Whittemore and D.A. Distler, eds. *Trans. Kansas Acad. Sci.* 91(1-2): 19-23.
1988. (with D. G. Huggins and T. M. Anderson). Field evaluations of the assessment value of a Kansas Biotic Index on Nonpoint Source Agricultural Pollution. Rpt. No. 37. Kansas Biological Survey.
1990. (with D.G. Huggins, M. Johnson, T. Anderson, S. Meador, J. Whistler). Establishment of empirical relationships between land use/land cover and nonpoint source pollution stream effects within an ecoregion. Final Report to EPA Region VII. 69 pages.
1991. Liechti, P.M. and D.G. Huggins. Selected aquatic insects of the Kansas Ecological Reserves. *in* *Kansas Academy of Science Multidisciplinary Guidebook 4*, W.D. Kettle & D.O. Whittemore, eds. Kansas Geological Survey Open-file Report 91-35, Oct. 5, 1991.
1994. Liechti, P.M. Neosho Watershed Impact Study. Final Report to Kansas Water Office. KBS Report No. 61. 54 pages.
1994. Liechti, P.M., A. Clements, D. Baumgartner and J.A. Ezeilo. Solomon River Ecosystem Study: Riparian Resources along the North and South Forks of the Solomon River, alluvial floodplain land use and land cover, and summary of available information. Phase I Report submitted to Kansas Water Office. 20 pages, 2 appendix.
1995. Liechti, P.M., J.L. Whistler, A. Clements and J. Dunham. Neosho Vegetation Inventory Study. Final Report submitted to Kansas Water Office. KBS Rpt. No. 66. 22 pages.
1996. Liechti, P.M., A. Clements, K. Kindscher, M. Mehaffey. Solomon River Riparian Ecosystem Study: Final Report to the Kansas Water Office. KBS Report No. 68.
1998. Freeman, C.C., Busby, W.H., Lauver, C.L. and Liechti, P.M. A Systematic Survey for Protected and Rare Species and the Identification of Riparian Natural Communities along the Republican River in North-Central Kansas. Open-file Report No. 85.
1998. Liechti, P.M., Freeman, C.C., Busby, W.H., Lauver, and C.L. A Systematic Survey for Protected and Rare Species and the Identification of Riparian Natural Communities along the Solomon River in North-Central Kansas. Report No. 91.

1998. NEMO in the Midwest. Martinko, E.A. and Liechti, P.M. *in* Proceedings Sixth Annual Nonpoint Source Pollution Management Workshop. Pp. 187-188.
2003. Baker, D., Coleman, J., Liechti, P., Brinkman, D., Fizell, J., Stamer, S., Musick, D., Wilson, R., and Ogle, P. Upper Wakarusa Watershed - Watershed Restoration and Protection Strategy (WRAPS). Kaw Valley Heritage Alliance. 62 pp.
2003. Liechti, P. M. and A. Dzialowski. Assessment of the Ecological Integrity of Wolf Creek (Leavenworth County, Kansas). KBS Report No. 118, 58 pp.
2004. Liechti, P. M. Data Management and Support for Statewide Surveys of Fish and Macroinvertebrates. Final Rpt. to Ks. Dept. Wildlife and Parks, 8 pp.
2005. Liechti, P. M. Data Management and Support for Statewide Surveys of Fish and Macroinvertebrates. Final Rpt. to Ks. Dept. Wildlife and Parks, 8 pp.
2007. Liechti, P. M. Proposed Index of Biological Integrity and Sampling Strategy for Fish for the Lower Kansas River. Final Rpt. to Kansas Water Office, KBS Rpt. No. 144, 19 pp.
2007. Dzialowski, A. R., N.C. Lim, P. Liechti, and J. Beury. Internal Nutrient Recycling in Marion Reservoir. KBS Rpt. No. 145. 17 pp.
2011. Liechti, P.M., J. deNoyelles, and L. Bennett, *Response of Phytoplankton Composition to Fish Removal in Marion Reservoir*. KBS Rpt. #169