

Stefanie A. Kroll, Ph.D.

Stream Ecologist, Aquatic Entomologist

EDUCATION

2012: Ph.D. in Ecology, State University of New York, College of Environmental Science and Forestry (SUNY-ESF), Syracuse, New York.

2009: Master's equivalent, Ecology, Department of Agronomic Engineering, University of Castilla-La Mancha (UCLM), Albacete, Spain.

2001: B.S. in Environmental and Forest Biology, SUNY-ESF.

TEACHING & MENTORING EXPERIENCE

9/2014-present: Adjunct Faculty: Insects and Water Quality, Biodiversity, Evolutionary and Environmental Science Department, Drexel University, Philadelphia, PA.

1/2015-present: Doctoral committee member, Boloroo Erdenee (Faculty advisor: Dr. Jon Gelhaus)

3/2013-present: Mentoring full-time staff, undergraduate part-time staff and cooperative learning employees in field work and research on stream ecology: Amanda Chan, Meghan O'Donnell, Kathryn Christopher, Alison Minerovic, Kevian Biallas, Dung Luong, Lia Domico, Nikita Shah

1/30/ 2013: *One-day course*: Ecology and taxonomy of aquatic macroinvertebrates, American Fisheries Society (NY Chapter), Watertown, NY. Co-instructors: Neil H. Ringler, Stephanie Johnson.

1/2012-5/2012: Adjunct Instructor: Insect Ecology, Biology Department, Colgate University, Hamilton, NY.

1/2011-5/2012: Supervision of 3 undergraduate students at SUNY-ESF in laboratory identification of aquatic macroinvertebrates, mentoring 1 student on stream ecology research paper.

9/2010-5/2012: Adjunct Instructor: General Biology I & II with laboratory, General Ecology, Introduction to Biology, Biology Department, Onondaga Community College, Syracuse, NY.

RECENT PROFESSIONAL EXPERIENCE

3/2013-present: Project Science Director, Academy of Natural Sciences of Drexel University:
Duties: Coordinate biomonitoring and research efforts for William Penn Foundation's Delaware River Watershed Initiative:

Site selection using GIS and spatial data,
Planning and supervision of field work,
Program design,
Planning, consultation and quality assurance of monitoring by other program partners,
Communication of methods and results to funding organization, program partners and at conferences,

Grant proposal writing,
Supervision of undergraduate co-operative learning employees and 2 full-time staff,
Hiring and supervision of seasonal staff;
Collaboration with researchers within ANS and at partner institutions,
Development of research program for staff and undergraduates.

5/2012-3/2013: Postdoctoral Associate, Entomology Department, Cornell University with Dr. Ann Hajek: Behavior and ecology *Sirex noctilio* and native Siricidae of the U.S.

Duties: Refinement of experimental protocols for choice and non-choice studies on *Sirex* and fungal symbionts, insect dissections, preparation and maintenance of fungal cultures, supervision of undergraduates, data analysis, manuscript preparation.

4/2010-1/2011: Field Biologist, Onondaga Lake Ecosystem Recovery Project, Dr. Neil Ringler, SUNY-ESF/Honeywell Corporation, Syracuse, NY.

Duties: Study of fish, macroinvertebrate and aquatic macrophyte communities in Onondaga Lake and its tributaries, field work, identification of macroinvertebrates in gut contents of fish.

1/2003-9/2011: Interpreter, Translator, Editor (Spanish-English), Spain and Syracuse, NY.

Duties: translation and revision of business and technical documents, simultaneous and consecutive interpreting.

MAJOR RESEARCH FUNDING

\$2.89 million grant for the William Penn Foundation for the Watershed Protection Program/ Delaware River Watershed Initiative, February 2014- February 2017. Supports monitoring and research at ANS.

\$159,886 grant from Pennsylvania Department of Environmental Protection's Growing Greener Program, July 2015 – December, 2018. Supports monitoring past restoration projects for evaluation of their success.

\$6 million grant for the William Penn Foundation for the Delaware River Watershed Initiative, July, 2015- July, 2018. Supports research by Drexel colleagues and competitive, national research regranting programs.

PEER REVIEWED PUBLICATIONS

Kroll, S.A., E.E. Morris, S.J. Long, A.E. Hajek, 2013. Parasitism of *Sirex noctilio* by non-sterilizing *Deladenus siricidicola* in northeastern North America. *Biological Control* 67: 203-211.

Kroll, S.A., N.H. Ringler, J. De las Heras, J.J. Gómez-Alday, A. Moratalla, R.D. Briggs, 2012. Changes in stream water quality and macroinvertebrate communities in response to flow regulation and inter-basin transfer: The Segura River Basin (SE Spain), *Ecobydrology* 6(5): 878-888.

Kroll, S.A., C. Navarro, M.C. Cano, J. De las Heras, 2009. The influence of land use on stream water quality and macroinvertebrate biotic indices in rivers within Castilla-La Mancha (Spain). *Limnetica* 28(2): 203-214.

MANUSCRIPTS IN PREPARATION

Kroll, S.A., N.H. Ringler, J. De las Heras, submitted, *Aquatic Ecology*. Aquatic insect community response to predicted climate change in Castilla-La Mancha, Spain.

Kroll, S.A., D.H. Keller, R.J. Horwitz, J.K. Jackson, A.D. Minerovic, F. Acker, D. Velinsky. Monitoring to target conservation actions in the Delaware River Watershed: a transferable approach.

Wall, R.J., S.A. Kroll, D.H. Keller, R.J. Horwitz, K.A. Christopher, J.K. Jackson, A. Weinberg, N. Boon, R. Dawson, P. Howell, A. Johnson, C. Billet. The Delaware River Watershed Initiative: a collaborative model to improve conservation strategies aimed at water quality.

Kroll, S.A., U. Malvadkar, S.M. Haag. Stream network connectivity and biotic integrity in the Delaware River Watershed.

Kroll, S.A., B. Brown, D.H. Keller, R.J. Horwitz, J.K. Jackson, A.D. Minerovic. Using species co-occurrence to set restoration goals for aquatic community structure and function.

TECHNICAL REPORTS

Kroll, S.A., R. Abell, 2015. Points of Departure: Baseline Conditions in the Subwatershed Clusters of the Delaware River Watershed Initiative. Available January, 2016.

Kroll, S.A., L. Perez, 2014. Delaware River Watershed Initiative: Cluster Characterization Report, Academy of Natural Sciences of Drexel University, 34 pp.
<http://www.ansp.org/research/environmental-research/projects/watershed-protection-program/>

Kroll, S.A., L. Perez, K. Christopher, 2014. Coordinated Monitoring Plan for the Delaware River Watershed Initiative, Academy of Natural Sciences of Drexel University, available online soon.

Navarro-Llacer, C., S. Kroll, J. de las Heras, 2009. Ecological status of rivers of Castilla-La Mancha: Relationships with land use, flow regulation and ecological flow criteria. University of Castilla-La Mancha, Regional Center for Water Studies, Submitted to the Castilla-La Mancha Ministry of the Environment.

RECENT PARTICIPATION IN CONFERENCES

May, 2015: Society for Freshwater Science, Milwaukee, WI.

Presentation: Multiple indicator analysis of streams throughout the Delaware River Watershed (S.A. Kroll, R.J. Horwitz, D.H. Keller, A.D. Minerovic, J.K. Jackson)

January, 2015: Partnership for the Delaware Estuary Summit, Cape May, NJ.

Presentation: Macroinvertebrate communities in the eight subwatershed clusters of the Delaware River Watershed Initiative (S.A. Kroll, J.K. Jackson)

October, 2014: 2nd Annual Delaware River Watershed Forum, Bethlehem, PA.

Presentation: Coordinated monitoring for the DRWI. (S.A. Kroll, R.J. Horwitz)

November, 2014: American Water Resources Association, 50th Anniversary Conference, Vienna, VA.

Presentation: Monitoring to inform modelling for the DRWI. (S.A. Kroll, R.J. Horwitz)

Moderator: Watershed Protection Modeling I

May, 2014: Joint Aquatic Sciences Meeting, Portland, OR.

Presentation: Coordinated restoration and conservation actions and monitoring the Delaware Watershed Conservation Program. (S.A. Kroll, R.J. Horwitz, R. Wall)

Poster: Predicted effects of climate change on aquatic insect communities in the short-term in Castilla-La Mancha, Spain. (S.A. Kroll, N.H. Ringler)

February, 2014: Research Day (student posters), Drexel University, Philadelphia, PA

Poster: The effects of land use on water quality and benthic macroinvertebrate indices of biological integrity, a historical study of the Delaware River Basin (Luong, D., S.A. Kroll, *et al.*)

RELATED SKILLS

- Development of monitoring plans for measuring the effects of conservation actions.
- Consulting with citizen monitoring groups to tailor monitoring plans for outreach.
- Aquatic insect taxonomy.
- Algae, fish and macroinvertebrate sampling.
- Experience with 'R', SPSS, CANOCO and e-Primer statistical and ArcGIS software packages.
- Preparation of tissue samples for Stable Isotope Analysis.
- Completion of Supervisory Certificate Program (Drexel University).

- Fluent in Spanish, intermediate level in French.
- PCR, DNA isolation techniques.

PROFESSIONAL ACTIVITIES AND OTHER INTERESTS

- Monitoring Advisory Committee member, Raritan Headwaters Association (RHA)
- Volunteer, annual stream monitoring, RHA
- Member, Society of Freshwater Science (SFS) National and Mid-Atlantic Chapters
- Volunteer, Organizing Mid-Atlantic SFS Chapter Meetings
- Member, American Water Resources Association
- Member, American Fisheries Society National and Pennsylvania Chapters
- Member, Society for Ecological Restoration
- Member, Society of Women Environmental Professionals of Philadelphia
- Volunteer, Women in Natural Sciences Program, Academy of Natural Sciences
- Volunteer, Big Brothers, Big Sisters of Southeastern Pennsylvania
- Active hobbies, including swimming, running, snowshoeing, hiking, yoga, modern dance
- Songwriting and playing the ukulele