

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.

RECENT PROFESSIONAL EXPERIENCE

9/2017-present: Head of Watershed Ecology Section, Patrick Center for Environmental Research (PCER), Academy of Natural Sciences of Drexel University (ANS).

9/2016-present: Assistant Research Professor, Department of Biodiversity, Earth and Environmental Sciences (BEES), Drexel University.

6/2016-present: Acting Head of Macroinvertebrate Section, PCER, ANS.

3/2013-present: Project Science Director, PCER, ANS:

Duties: Coordinate biomonitoring and research efforts for William Penn Foundation's Delaware River Watershed Initiative, supervise colleagues and staff on monitoring and communications, perform outreach to citizen science programs and practitioners.

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.

PEER REVIEWED PUBLICATIONS

Kroll, S.A., N.H. Ringler, J. De las Heras, 2017. Macroinvertebrates on the front lines: projected community response to temperature and precipitation changes in Mediterranean streams. *Journal of Freshwater Ecology* <http://dx.doi.org/10.1080/02705060.2017.1349695>

Kroll, S.A., D.H. Keller, R.J. Horwitz, B.W. Sweeney, J.K. Jackson, L.B. Perez, in revision, *Journal of Freshwater Science*. Monitoring large-scale conservation and restoration programs aimed at improving stream ecosystem integrity: The role of planning, goal setting, and data management

Hajek, A.E., P. Tobin, S.A. Kroll, S.J. Long, submitted March, 2017, *Agricultural and Forest Entomology*. Symbionts mediate oviposition behavior in invasive and native woodwasps.

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.

TECHNICAL REPORTS

Kroll, S.A., R. Abell, 2015. Points of Departure: Baseline Conditions in the Subwatershed Clusters of the Delaware River Watershed Initiative, Academy of Natural Sciences of Drexel University, 65 pp. <http://www.ansp.org/~media/Files/ans/research/pcer-other/Points%20of%20Departure.ashx?la=en>.

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, 50pp. <http://www.ansp.org/~media/Files/ans/research/pcer-other/Monitoringplan150728compressed.ashx?la=en>.

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

June, 2017: Society of Freshwater Science, Raleigh, NC.

Presentation: Connecting baseline conditions to potential recovery of macroinvertebrate and diatom communities due to restoration through the DRWI.

May, 2016: Society of Freshwater Science, Sacramento, CA.

Presentation: Planning and assessing restoration using multiple indicator monitoring and integrated data management in the Delaware River Basin.

April, 2016: National Conference on Ecological Restoration, Coral Springs, FL.

Presentation: Monitoring and data management to inform conservation in the DRWI.

May, 2015: Society of 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.*).

August, 2013: Society for Invertebrate Pathology, Pittsburgh, PA.

Presentation: Parasitism of *Sirex noctilio* by non-sterilizing *Deladenus siricidicola* in northeastern North America. (S.A. Kroll, E.E. Morris, S. Long, A.E. Hajek).

January, 2013: USDA Interagency Research Forum on Invasive Species, Annapolis, MD.

Poster: Parasitism of *Sirex noctilio* by non-sterilizing *Deladenus siricidicola* in northeastern North America. (S.A. Kroll, E.E. Morris, S. Long, A.E. Hajek).

April, 2011: North American Benthological Society (NABS) meeting, Providence, RI.

Presentation: The impact of hydroelectric dams on the macroinvertebrate community in two climates: Salmon River, USA and Segura River, Spain. (S.A. Kroll, N.H. Ringler, J. de las Heras).

June, 2010: NABS/Association for the Sciences of Limnology and Oceanography (ASLO) Joint Meeting, Santa Fe, NM.

Presentation: Changes in the macroinvertebrate community as a result of flow regulation and inter-basin transfer on the in the Segura River Basin, Spain. (S.A. Kroll, N.H. Ringler, J. de las Heras).

September, 2008: XIV Congress of the Iberian Limnological Association, Huelva, Spain.

Presentation & Poster: The influence of land use on stream water quality and macroinvertebrate biotic indices in rivers within Castilla-La Mancha. (S.A. Kroll, C. Navarro-Llacer, J. de las Heras).

Poster: Biological and hydromorphological effects of river regulation downstream three reservoirs of South Spain. (D. Baeza, C. Navarro-Llacer, S.A. Kroll, J. de las Heras).

RELATED SKILLS

- Development of monitoring plans for measuring the effects of conservation actions.
- Consulting with citizen monitoring groups to tailor monitoring plans for outreach.
- Knowledge of aquatic macroinvertebrate taxonomy (genus level) in Spain and NE USA.
- Experience performing and assigning various algae, fish and macroinvertebrate sampling techniques.
- 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).
- Completion of Drexel Leaders 2020 Program.
- Fluent in Spanish, intermediate level in French.
- Experience with PCR, DNA isolation, sterile technique.

PROFESSIONAL ACTIVITIES AND OTHER INTERESTS

- Georgia Sea Grant Technical Review Panel Member, 2017.
- Advisory Board Member, Tookany-Tacony-Frankford Watershed Partnership.
- Working groups: Metrics of forest health, Panel on land stewardship and water quality.

- Monitoring Advisory Committee member, Raritan Headwaters Association (RHA).
- Volunteer, annual stream monitoring, RHA.
- Member, Society of Freshwater Science (SFS) National and Mid-Atlantic Chapters.
- Member, American Water Resources Association.
- Member, American Fisheries Society: National and Mid-Atlantic Chapters.
- Member, Society for Ecological Restoration.
- Member, American Association for the Advancement of Science.
- Member, Society of Women Environmental Professionals of Philadelphia.
- Member, 500 Women Scientists, Philadelphia Pod.
- Volunteer, Women in Natural Sciences Program (engaging young women from underrepresented minorities in an out-of-school science program during high school), Academy of Natural Sciences.
- Mentor, Drexel Liberty Scholars Program (volunteering to mentor a student with full, need-based scholarship).
- Active hobbies, including swimming, running, snowshoeing, hiking, yoga, modern dance.
- Songwriting and playing the ukulele.