

BIOGRAPHICAL SKETCH

A. Astrid N. Schwalb, Ph.D., Assistant Professor

B. Role in project: PI, Supervision of MS student.

C. Professional Preparation

Ph.D. Integrative Biology, University of Guelph, ON. 2010
Thesis - Host infection strategies determine dispersal abilities in freshwater mussels (Bivalvia: Unionidae).

M.Sc. Biology, University of Potsdam, Germany. 2004
Thesis - Horizontal and vertical movements of unionid mussels in the River Spree.

B.Sc. Biology, University of Konstanz, Germany. 2001

D. Appointments

Assistant Professor 2014-present
Department of Biology, Texas State University, TX.

Postdoctoral Fellow 2013 – 2014
Department of Biological Sciences, University of Lethbridge, AB.

Postdoctoral Fellow 2010 – 2012
Department of Biology, University of Waterloo, ON.

Research Assistant - Ecotoxicological research 2005
Integrative Biology, University of Guelph, ON.

Research Assistant – Aquatic Biomonitoring 2002, 2003
Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany.

E. Products

(i) Five products most closely related to the proposed research project

Schwalb, A. N., T.J. Morris, and K. Cottenie. 2015. Dispersal abilities of riverine freshwater mussels influence metacommunity structure. *Freshwater Biology* 60:911-921.

Schwalb, A.N., T.J. Morris, N.E. Mandrak, and K. Cottenie. 2013. Distribution of unionid freshwater mussels depends on the distribution of host fish on a regional scale. *Diversity and Distributions* 19:446-454.

Schwalb, A.N., M.S. Poos, K. Cottenie, and J.D. Ackerman. 2011. Dispersal limitation of unionid mussels and implications for their conservation. *Freshwater Biology* 56: 1509-1518.

Schwalb, A.N., M. Garvie, and J.D. Ackerman. 2010. Dispersion of freshwater mussel larvae in a lowland river. *Limnology and Oceanography* 55:628-638.

Gillis, P.L., R.J. Mitchell, **A.N. Schwalb**, G.L. Mackie, C.M. Wood, and J.D. Ackerman. 2008. Sensitivity of the glochidia (larvae) of freshwater mussels to copper: Assessing the effect of water hardness and dissolved organic carbon on the sensitivity of endangered species. *Aquatic Toxicology* 88:137-145.

(ii) Other significant products

- Schwalb, A.N.,** M.S. Poos, and J.D. Ackerman. 2011. Movement of logperch: Implications for dispersal of endangered snuffbox mussels via its obligate host fish. *Aquatic Sciences* 73:223-231.
- Schwalb, A. N.,** and J.D. Ackerman. 2011. Settling velocities of juvenile Lampsilini mussels (Mollusca: Unionidae): The influence of behavior. *Journal of the North American Benthological Society* 30:702-709.
- Schwalb, A.N.,** and M.T. Pusch. 2007. Horizontal and vertical movements of unionid mussels (Bivalvia: Unionidae) in a lowland river. *Journal of the North American Benthological Society* 26:261-272.

F. Examples of ESA, FWS or NMFS standards and practices

Appointed member of COSEWIC's (Committee on the Status of Endangered Wildlife in Canada) Molluscs Species Specialist Subcommittee, Canada. 2012 – 2015

Funding for unionid mussel research:

- 2015-2018. Texas Department of Transportation. Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies. (PI: **A Schwalb**, co-PIs: D Rodriguez, MRJ Forstner, TB Hardy, collaborator: MC Barnhart).
- 2015-2017. US Army Corps of Engineers. Developing quantitative-based approaches for determining impacts of navigation and ecosystem restoration projects on endangered freshwater mussels in the navigable waters of the United States (PI: **A Schwalb**, co-PI: TB Hardy).
- 2015-2017. Wildlife Research Grant. Dispersal and migration of freshwater mussels. (PI: **A Schwalb**, co-PI: D Rodriguez).
- 2015-2016. Texas Department of Transportation. Grant. Cost effective Mitigation Strategy for State Listed Freshwater Mussels. (co-PI with CR Randklev, TAMU and NB Ford, UT Tyler).
- 2008-2009. Fisheries and Oceans Canada's Species at Risk program. Investigating the early life stages of the Endangered Wavyrayed Lampmussel (*Lampsilis fasciola*). (co-PI with Dr. T. Morris, DFO)

Award for endangered mussel research:

2007. NABS Graduate Student Conservation Research Award

Reports of endangered mussel research:

- Hart, M., C. Charles, J. Dickson, N. Ford, B. Hernandez, and **A.Schwalb**. 2016. A literature review of Freshwater Mussel Survey and Relocation Guidelines. Texas Department of Transportation, Project Number: 06865
- Woolnough, D.A., K.A. McNichols, **A.N. Schwalb**, J.D. Ackerman and G.L. Mackie. 2007. Endangered unionid mussels in Ontario. 2007 Final Report (2007-ESRF-1350-a) Endangered Species Recovery Fund.
- McNichols, K.A., **A.N. Schwalb**, G.L. Mackie, and J.D. Ackerman. 2006. Fish host identification and rearing of juvenile unionid species at risk in recovery habitat in Southern Ontario Rivers. 2005/2006 Final Report (2006-ESRF-1094) Endangered Species Recovery Fund.