

Curriculum Vita
(October 2017)

A. Ross Black, Ph.D.

Department of Biology, SCI 258

Eastern Washington University, Cheney, WA 99004

Office: (509) 359-4815, Fax: (509) 359-6867, e-mail: rblack@ewu.edu

Current Position: Professor of Biology

Born: 30 March, 1962, Seattle, Washington.

Education:

Ph.D.: December 1991, Department of Zoology, University of Wisconsin-Madison.

Dissertation Title: Predator-induced phenotypic plasticity in *Daphnia pulex*.

Specialty: Aquatic Ecology and Evolution

Advisor: Stanley I. Dodson

M.S.: May 1989, Department of Zoology, University of Wisconsin-Madison.

Specialty: Aquatic Ecology and Evolution.

Advisor: Stanley I. Dodson

B.S.: June 1985, School of Fisheries, University of Washington.

Specialty: Environmental Science, Marine Biology, Aquatic Ecology.

Professional Positions:

Professor of Biology, Eastern Washington University: September 2003 - present.

Associate Professor of Biology, Eastern Washington University: September 1998 - August 2003.

Assistant Professor of Biology, Eastern Washington University: Sept. 1993 - August, 1998.

Postdoctoral Research Associate, Water Resources Laboratory, University of Louisville: November 1991 - July 1993.

Research Assistant, Department of Zoology, UW-Madison: September 1986 - October 1991.

Fisheries Biologist, School of Fisheries, University of Washington: June 1985 - July 1986.

Fisheries Biologist, International Halibut Commission: April - May 1984.

Undergraduate Research Technician, School of Fisheries, University of Washington: June 1983 - June 1985.

Teaching and Course Development.

Dept. of Biology, Eastern Washington University, September 1993 - present (assistant, associate, and full professor): Non-majors Environmental Science, Introductory Biology I, II & III, Biological Investigation (Hypothesis Driven Inquiry), Evolution, Ecology, Ecology Laboratory, Aquatic Ecology, Population Biology, Field Ecology, Limnology, Graduate Biometry, Graduate Seminars in Ecology & Evolution, and Environmental Science Junior and Senior and Seminars.

Dept. of Biology, University of Louisville, Autumn 1992 (Post-doc): Population and Community Ecology.

Dept. of Zoology, UW-Madison, Autumn 1996 - Spring 1991 (Graduate Teaching Assistant): Plankton Ecology, Limnology, Introductory Ecology, Invertebrate Zoology, Introductory Zoology.

Curriculum Development:

Eastern Washington University: graduate program curriculum revision (1996 & 2010); undergraduate curriculum revision in general biology (1999); undergraduate degree program in environmental science (established in 2001, revised in 2012).

Research Mentoring:

Graduate Students:

- Stephen J. Lewis, 1996. *Ambystoma*-induced life history shifts in the water flea *Daphnia pulex*.
- Dean F. Ruud 1996. A comparison of the macroinvertebrate communities of a trace elements enriched lake and an uncontaminated lake in North Idaho: the effects of mine waste contamination in Coeur d'Alene Lake.
- Louise Wold. 1998. Predator-mediated life-history shifts in three *Daphnia pulex* clones in response to predatory odonate and dytiscid larvae.
- Matt Cooper. 1999. Planktonic secondary production estimation in Lake Roosevelt, Washington.
- George Barlow. 2000. Determining the fate of benthic and pelagic primary production in Lake Roosevelt, WA: a stable isotope analysis.
- Jannell Earle. 2002. Factors affecting the expression of a predator-induced phenotypic plasticity in *Daphnia pulex*.
- James Stegan. 2004. Ecology of the aquatic mite *Piona*.
- Joseph Smith 2005. Stable Isotope Assessment of Banks and Sullivan Lakes, Washington.
- Levi Bridges. 2011. The effects of non-native brook stickleback on wetland communities.
- Tamara Knudson 2011. Assessment of factors affecting rainbow trout (*Oncorhynchus mykiss*) productivity in 17 eastern Washington lakes.
- Steve Flanagan. 2012. Population genetics and host specificity of the salmon louse.
- Andrew Hodgson. 2013. Sensory exploitation and condition indication may explain red pelvic spines in the Brook Stickleback, *Culaea inconstans*.
- Michele Larson. 2013. Gastropods in the Lower Snake River and three of its tributaries and the effects of competition with the New Zealand mud snail (*Potamopyrgus antipodarum*).
- Renaë Reed. 2016. Chemically mediated prey responses: invasive brook stickleback induced changes in behavior and life history of larval long-toed salamanders.
- Adam Gilles. 2016. Impacts of the invasive brook stickleback (*Culaea inconstans*) on wandering garter snake (*Thamnophis elegans vagrans*).

Graduate committee member (only 2012-present are provided):

- Alix Blake. 2013. Assessment of the Hatchery Kokanee (*Onchorynchus nerka*) release program in Lake Roosevelt.
- Devin Sontag. 2013. Predation, turbidity, and other factors influencing juvenile salmonid survival in the lower Snake River.
- Conor Giorgi. 2014. Impacts of spawning sockeye salmon (*Onchorynchus nerka*) on the benthic macroinvertebrate production in the White River, Wash.
- Tyler Parsons. 2014. Wild kokanee tracking and movements in Lake Roosevelt.
- Janae Yri. 2016. Determining the effects of non-native brook stickleback on the lentic systems at Turnbull National Wildlife Refuge, Cheney, Wash.
- Ryan Reihart. 2016. Invertebrate drift in the upper Columbia River with implications for young-of-the-year white sturgeon.
- Sarah Hindle In progress. Benthic Macroinvertebrates in the upper Columbia River.

Undergraduate research mentoring:

Many, many students.

Service:**Internal (EWU)**

EWU Biology, Ecosystem Ecologist Search Committee Chair, 2015.
Program Director, Environmental Science, 2013-2015.

EWU Biology, Turnbull Committee, 2012-2014.
Co-Director Turnbull Laboratory for Ecological Studies, 1996 – 2012.
EWU Biology, Graduate Program Committee (managing admissions and fellowship awards), 1994-2012.
EWU Biology Indirect Cost Committee (member or chair): 2004 - 2009.
EWU Biology, Department Personnel Committee: 2004 – present (chair in 2010).
EWU Biology Department, Integrative Biologist Search Committee (member): 2005.
EWU Biology Department, Stream Ecologist Search Committee (Chair): 2006.
EWU Biology Department, Integrative Biologist Search Committee (member): 2007.
Proposal reviewer and panel chair, Northwest Institute Faculty Research Grants, EWU Foundation: 1997 - 2000.
Provost's Research and Scholarly Activity Committee (invited member), EWU: 2000-2001.
Environmental Studies Task Force and Co-Author of Program Preproposal and Proposal, EWU: November 1998 - May 2001.
EWU Faculty Senate (Biology Dept. Senator): 1996-1997, 2013-2015.
Several other *ad Hoc* committees within Biology (graduate program revision [1995-1996], introductory sequence laboratory revision [1998], undergraduate curriculum revision [1999]).

External

Resource Advisory Committee (member), Northwest Region, Bureau of Land Management: two three year terms; January 2008 – December 2014.
Inland Northwest High School Science Symposium, May 2007: One of 6 oral presentation and scholarship award judges.
Water Bug Days. All day show-and-tell featuring local aquatic invertebrates for elementary school children: 2004 - 2010, Betz Elementary, Cheney, Wash.
Aquatic Ecology Days at the Turnbull Laboratory for Ecological Studies. Day long introduction to aquatic ecology and the scientific method for local WA and ID high school classes, 1996 - present.
Inland Northwest Land Trust, Spokane, Washington. Volunteer limnological investigation of the Reardon Ponds and subsequent management suggestions. Spring and Summer 2006.
President, Northwest Scientific Association, 2002 - 2004.
Member, Board of Trustees, Northwest Scientific Association, 1995-2002.
Member, Board of Trustees, Washington Lakes Protection Association (WA affiliate of North American Lake Management Society), 1999-2001.
Associate Editor for Aquatic Biology, *Northwest Science* (journal of the Northwest Scientific Association) October 1998 - October 2000.
Co-representative for EWU (with Dr. Suzanne Bell) on the US EPA Region 10's GATE (Government and Academic Team for the Environment) - Northwest; 1996 - 1998.
Textbook reviewer for McGraw-Hill Publishers, and Garland Science (of Taylor and Francis Books).
Manuscript Reviewer for *Northwest Science, Ecology, Limnology and Oceanography, Hydrobiologia* and *the Canadian Journal of Fisheries and Aquatic Sciences*.
Proposal reviewer, Jeffress Memorial Trust, Virginia.
Proposal reviewer, USGS Water Resources Competitive Grants Program, May 2001.
Proposal reviewer, Washington State Water Research Center competitive grants program, Pullman, WA: 2000 - 2002.
Chair, Student Research Fellowship Selection Committee, Northwest Scientific Association: 1999-2002.
Grant Proposal Reviewer, Finnish Academy of Sciences. Five proposals for ecological research were reviewed January 1997.
Session Chair (Lake Roosevelt Fisheries), 2002 annual meeting of the Western and North Pacific chapters of the American Fisheries Society, April 27-30, Spokane, WA.
Session Chair (aquatic biology), 2001 annual meeting of the Northwest Scientific Association, Arcata, CA; March 2001.

Session Chair (lake ecology), annual meeting of the Ecological Society of America, Spokane, WA; August 1999.

Session Chair (aquatic biology), 1999 annual meeting of the Northwest Scientific Association, Tacoma, WA, March 1999.

Program Chair and Host, 1997 Annual Meeting of the Northwest Scientific Association, 26-28 March 1997, Spokane, WA.

Host and Organizing Committee Chair for the Tenth Annual Midwest Ecology and Evolution Conference; Madison, WI; April 14-16, 1989.

Financial Support for Research and Teaching:

PI for: "Limnological assesment of Leo, Frater, and Browns Lakes, Pend Oreille County, Washington. Kalispel Tribe of Indians. May. 2008 - Feb. 2009; \$10,000.

PI for: "Limnological assessment of the Little Pend Oreille Chain of Lakes, Washington." Kalispel Tribe of Indians. May 2007 - Feb. 2008; \$15,000.

PI for: "Identification of the environmental factors affecting the productivity of rainbow trout (*Oncorhynchus mykiss*) among 23 eastern Washington lakes." Northwest Institute for Advanced Studies, Eastern Washington University, Cheney, Washington.; \$10,000.

PI for: "Factors affecting the success of rainbow trout in eastern Washington lakes. Inland Empire Fly-Fishing Club, Spokane, Washington. \$7,000.

PI for: "Limnological assessment of the Pend Oreille River, Washington." Kalispel Tribe of Indians. May 2006 - Feb. 2007; \$10,000.

PI for: "Effects of the brook stickleback (*Culaea inconstans*) invasion on the aquatic communities of the Turnbull National Wildlife Refuge, Spokane Co., Washington." Northwest Institute for Advanced Studies, Eastern Washington University, Cheney, Washington; \$10,000.

PI for: "A stable isotope assessment of a northwestern regulated river: serial observations within a 90 km reach of the Pend Oreille River, Washington. Kalispel Tribe of Indians. March 2004 - Feb. 2005; \$25,000.

PI for: "Limnological assessment of the Pend Oreille River, Washington." Kalispel Tribe of Indians. May 2004 - Feb. 2005; \$5,000.

PI for: "A stable isotope analysis of the aquatic food web of Sullivan Lake, Washington." Kalispel Tribe of Indians. 1 August 2003 - 31 July 2004. \$5,500.

PI for: "Limnological assessment of three lakes in the Pend Oreille River Drainage" Kalispel Tribe of Indians. 1 July 2003 - 30 June 2004. \$10,000.

PI for: "Limnological assessment and stable isotope analysis of Banks Lake, WA." Washington Department of Fish and Wildlife and Bonneville Power Administration. 9/1/2002-10/31/2006. \$124,020.

PI: "A phenological test of turbidity and food limitation effects on the Lake Roosevelt zooplankton." M.J. Murdoch Charitable Trust: Partners in Science Program. 1 May 2002 - 30 April 2004, \$14,000.

PI for: "Laboratory analysis of Banks Lake limnological samples." Washington Department of Fish and Wildlife: 1 September 2001 - 30 August 2002: \$4,750.

PI: "Factors affecting the ecology of zooplankton in a large advective reservoir." EWU Foundation Faculty Research Grant, 1 July, 2002 - 30 June, 2003, \$10,000.

PI for: "Limnological assessment of four Pend Oreille River drainage lakes." Kalispel Tribe of Indians. 1 July 2002 - 30 June 2003: \$13,000.

PI "Chlorophyll and turbidity effects on Lake Roosevelt zooplankton: a phenological field test." EWU Foundation Faculty Research Grant, 1 July, 2001 - 30 June, 2002, \$7,500.

PI for: "Limnological assessment of seven Pend Oreille River Drainage Lakes." Kalispel Tribe of Indians. 1 July 2001 - 30 June 2002: \$19,000.

PI: "Secondary planktonic productivity: final analysis" Bonneville Power Administration and Spokane Tribe of Indians, 1 April 2001 - 31 March 2002: \$24,990.

Co-PI (W/ M.A. O'Connell): "Enhancing environmental education and research opportunities at the Turnbull Laboratory for Ecological Studies. Charlotte Martin Foundation gift of \$100,000, October 2000.

PI for: "Limnological assessment of Yocum and Half Moon lakes, Pend Oreille Co, Washington." Kalispel Tribe of Indians. 1 July 2000 - 30 June 2001: \$5,000.

PI for: "Secondary planktonic productivity in Lake Roosevelt: testing regulatory hypotheses." Bonneville Power Administration and Spokane Tribe of Indians, 1 April 2000 - 31 March 2001: \$114,556.

PI for: "Determining the food web fates of primary productivity in Lake Roosevelt." Bonneville Power Administration and Spokane Tribe of Indians, 1 April 2000 - 31 March 2001: \$11,914.

PI for: "A multivariate data analysis of a ten-year zooplankton composition and abundance data set." Bonneville Power Administration and Spokane Tribe of Indians, 1 April 2000 - 31 March 2001: \$21,978.

PI for: "Estimating planktonic secondary productivity in Lake Roosevelt" Bonneville Power Administration and Spokane Tribe of Indians. 1 April, 1999 - 31 March, 2000: \$105,364. BPA Contract # 96BP192246

PI for: "Carbon and Nitrogen stable isotope analysis of the Lake Roosevelt aquatic food web" Northwest Institute for Advanced Study, Eastern Washington University. 1 May, 1999- 30 April, 2000: \$5,000.

PI for: "Evaluation and determination of habitat availability for west slope cutthroat trout (*Oncorhynchus lewisi*) in Marshall Creek, WA. M.J. Murdoch Charitable Trust/Research Corporation. 1 May, 1999-30 April 2001: \$14,000.

Co-PI and Collaborator (with H. McKean (PI), B. Gibbs, L. McCollum, and E. Gilmour) for: "Improving the Teaching of Evolution." Eisenhower Professional Development Program, Office of Superintendent of Public Instruction, Washington State. July 1-31, 1998: \$19,313.

PI for: "Can predators modify genetic composition of natural *Daphnia pulex* populations?", EWU Foundation Faculty Research Grant. 1 July, 1998 - 30 June, 1999: \$7,285.

PI for: "Estimating planktonic secondary productivity in Lake Roosevelt" Bonneville Power Administration and Spokane Tribe of Indians. 1 June, 1998 - 31 March, 1999: \$121,373. BPA Contract # 94BL132148.

PI for: "Lake Roosevelt planktonic secondary productivity" Bonneville Power Administration and Spokane Tribe of Indians. 1 June, 1997 - 31 May, 1998: \$113,272.

PI for: "Investigating variation in the expression of Predator-induced phenotypic plasticity." Northwest Institute for Advanced Study, Eastern Washington University. 1 June, 1997 - 30 September, 1997; \$4,951.

PI for: "Improving an undergraduate program in field and experimental ecology." National Science Foundation Grant # DUE-9750920. 1 July, 1997 - 30 June, 1999: \$81,860.

PI for: "Lake Roosevelt Daphnia Demography." Bonneville Power Administration and Spokane Tribe of Indians: 1 October 1996 - 30 January, 1997; \$11,335. BPA Contract # 94BL132148.

PI for: "Enhancing DOS-based data analysis and professional presentation for the Graduate Students in Biology." EWU Foundation Mini-Grant (\$500 foundation, \$900 Dean CSM&T, \$1900 Dept. of Biology), February 1997. \$3,300.

PI for: "The Evolution of Predator-Induced Defenses." EWU Research Foundation: 1 July, 1995 to 30 June 1996; \$7,440.

PI for: "Yakima Ponds Biomanipulation: Zooplankton Analyses." WA Dept. of Wildlife, Inland Fisheries Division: 1 April, 1995 to 31 December, 1995; \$2,500.

Co-PI (with J.H. Thorp, J.E. Alexander, K.H. Haag, D.A. Howarth) for: Experimental analog and sensitivity modeling studies predicting influences of global climate change on introduced species." U.S. Environmental Protection Agency; October 1, 1993 - September 30, 1995; \$200,000. Subcontract to A.R. Black @ E.W.U.: \$52,000.

Co-PI (with J.H. Thorp) for: "Planktonic community ecology: a test of hypotheses in a large temperate river." National Science Foundation Grant #DEB-9307225; 1 July 1993-30 June 1994; \$49,989.

Co-PI (with JH Thorp and JE Alexander) for: "Reproduction and dispersal of zebra mussels in the Ohio River near Louisville, KY in 1993". Public Service Indiana; \$10,000.

Co-PI (with JH Thorp and JE Alexander) for: "Experimental evaluation of the threat to water delivery systems from the zebra mussel." Louisville Water Company; 1993; \$25,750.

Co-author and collaborator (with S.I. Dodson, PI) for: "Antipredator responses of *Daphnia pulex*." NSF grant #BSR-8805805 (\$133,000; 1988-1990).

PI for: "Predator-induced phenotypic plasticity in *Daphnia pulex*." Anna Grant Birge Summer Research Grant; UW-Madison Oceanography and Limnology Graduate Program; \$1,450; 1990-91.

Peer Reviewed Publications:

Larson, M.D., A.R. Black. 2015. Assessing interactions among native snails and the invasive New

Zealand mud snail, *Potamopyrgus antipodarum*, using grazing experiments and stable isotope analysis. *Hydrobiologia* DOI 10.1007/s10750-015-2396-z

Hodgson, A., A.R. Black, R Hull. 2013. Sensory exploitation and indicator models may explain red pelvic spines in the brook stickleback, *Culaea inconstans*. *Evol. Ecol. Res.* 15: 199-211.

Stegen, J.C, A.R. Black. 2011. Trophic ecology of an aquatic mite (*Piona carnea*) preying on *Daphnia pulex*: effects of predator density, nutrient supply and a second predator (*Chaoborus americanus*). *Hydrobiologia* 668: 171-182. (DOI: 10.1007/s10750-010-0454-x)

Black, A.R. and S.I. Dodson. 2003. Ethanol: a better preservation technique for *Daphnia*. *Limnology and Oceanography Methods*. 1: 45-50.

Scholz, A.T., B.Z. Lang, A. R. Black, H.J. McLellan, and R. L. Peck. 2003. Brook stickleback established in eastern Washington. *Northwest Science* 77(2): 110-115.

Black, A.R. G.W. Barlow, and A.T. Scholz. 2003. Carbon and nitrogen stable isotope assessment of the lake Roosevelt aquatic food web. *Northwest Science* 77(1): 1-11.

Thorp, J.H., A.R. Black, and J.J. Jack. 1996. Pelagic enclosures - modification and use for experimental study of riverine plankton. *Archives Fur Hydrobiologia Supplement* 113(10): 583-589.

Thorp, J.H., A.R. Black, K.H. Haag, J.D. Wehr. 1994. Zooplankton assemblages in the Ohio River: seasonal, tributary, and navigational dam effects. *Can. J. Fish. Aquat. Sci.* 51: 1634-1643.

Thorp, J.H., J.E. Alexander, K.S. Greenwood, A.F. Casper, R.K. Kessler, A.R. Black, W. Fang, A.F. Westin, R.B. Summers, T.W. Sellers, and B. Lewis. 1994. Predicting the success of riverine populations of zebra mussels (*Dreissena polymorpha*) - a case history of early colonization and microhabitat distribution in the Ohio River. In: E. Hansen (ed.), *Proceedings of the 4th international zebra mussel conference*. Univ. Wisconsin Sea Grant Institute, Madison, WI, USA. pp. 457-476.

Thorp, J. H., M. D. DeLong, and A. R. Black. 1992. Perspectives on biological investigations of large rivers: results and techniques from Ohio River studies. In, *Biological assessments in large rivers, proceedings of the 5th Annual Technical Information Workshop*, North American Benthological Society, p. 1-8.

Black, A.R. 1993. Predator-induced phenotypic plasticity in *Daphnia pulex*: life history and morphological responses to *Chaoborus* and *Notonecta*. *Limnol. Oceanogr.* 38(5):986-996.

Black, A.R. and S.I. Dodson. 1990. Demographic costs of *Chaoborus*-induced phenotypic plasticity in *Daphnia pulex*. *Oecologia* 83:117-122

Manuscripts in Review:

None at this time.

Technical Reports:

Black, A.R., J.C. Stegen, J.M. Smith. 2009. Zooplankton of the Pend Oreille River (Washington): phenologies and potential causal factors. Final project report prepared for Kalispel Tribe of Indians, Usk, Washington.

- Black, A.R. 2008. Limnological assessment of the Little Pend Oreille Chain of Lakes, Stevens Co., Washington. Final project report prepared for Kalispel Tribe of Indians, Usk, Washington.
- Black, A.R., J.M Smith, K. Crowley. 2007. A stable isotope assessment of a northwestern regulated river: serial observations within a 90 km reach of the Pend Oreille River, Washington. Prepared for Kalispel Tribe of Indians, Usk, Washington.
- Black, A.R. 2006. Limnological assessment of Banks Lake, Washington. Final project report prepared for Washington Department of Fish and Wildlife, Region 2 Office, Ephrata, WA.
- Black, A.R.. 2005. Limnological assessment of Banks Lake, Washington. Final project report prepared for Washington Department of Fish and Wildlife, Region 2 Office, Ephrata, WA.
- Black, A.R. 2004. Limnological assessment of Banks Lake, Washington. Final project report prepared for Washington Department of Fish and Wildlife, Region 2 Office, Ephrata, WA.
- Black, A.R., J.M. Smith, J. Stegen. 2003. Limnological assessment of Banks Lake, Washington. Final project report prepared for Washington Department of Fish and Wildlife, Region 2 Office, Ephrata, WA.
- Smith, J.M., A.R. Black. 2004. Stable isotope assessment of the Sullivan Lake aquatic organisms: determining trophic position and energy source utilization. Final project report prepared for the Kalispel Department of Natural Resources, Kalispel Tribe of Indians, Usk, WA.
- Black, A.R., J. Smith, J. Stegen. 2004. Biological Investigation of three lakes in the Pend Oreille River Drainage, Washington. Final project report prepared for the Kalispel Department of Natural Resources, Kalispel Tribe of Indians, Usk, WA.
- Black, A.R., J. Smith, J. Stegen. 2003. Biological Investigation of five Pend Oreille River Drainage Lakes. Final project report prepared for the Kalispel Department of Natural Resources, Kalispel Tribe of Indians, Usk, WA.
- Black, A. R., J. Smith, J. Stegen. 2002. Limnological assessment of seven lakes in the Pend Oreille River Drainage. Prepared for the Kalispel Department of Natural Resources, Kalispel Tribe of Indians, Usk, WA.
- Black, A.R., J. Smith. 2001. Limnological assessment of Yocum and Halfmoon lakes, Pend Oreille Co., Washington. Prepared for the Kalispel Department of Natural Resources, Kalispel Tibe of Indians, Usk, WA.
- Cooper, M.R., A.R. Black. 1999. Planktonic secondary production estimation in Lake Roosevelt. Final report submitted under Bonneville Power Administration Agreement # 94BL132148 to the Spokane Tribe of Indians.
- Black, A.R., and S.J. Lewis. 1997. Daphnia Demography in Lake Roosevelt. Final report submitted under Bonneville Power Administration Agreement # 94B132148 to the Spokane Tribe of Indians.
- Dumbald, B.R., D.A. Armstrong and A.R. Black. 1987. Distribution and abundance of dungeness crab, *Cancer magister*, in Grays Harbor, Washington, and the adjacent near-shore during the fall/winter 1985/1986. U.S. Army Corps of Engineers. Contract No. DACW67-85-0033; Final Report.

Published Abstracts:

Ruud, D.F., M. Ikramudin, A.R. Black. 1997. Benthic macroinvertebrate communities of mining impacted Coeur D' Alene Lake. *Journal of the Geological Society of America* 29(6): abstract # 10501.

Invited Presentations:

Black, A.R., L.A. Wold, S.J. Lewis. Predator-induced phenotypic plasticity in *Daphnia*: life history responses of *Daphnia pulex* to several visual predators. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society, June 6-11, 2010, Santa Fe, NM.

Black, A.R. J. Emerson, J. Harris, A.T. Scholz. "Investigation of the Potential Impacts of an invasive fish on aquatic wetland communities: brook stickleback (*Culaea inconstans*) and the Turnbull National Wildlife Refuge. Inland Northwest Aquatic Riparian and Wetland Symposium, Spokane, Washington. February 22, 2008.

February, 1998. "Predator-induced life histories: patterns and benefits" Department of Biology, Gonzaga University.

Lewis, S.J., A.R. Black. "*Ambystoma* induced life history responses in *Daphnia pulex*." 59th Annual Meeting of the American Society of Limnology and Oceanography, Milwaukee, WI, June, 1996.

February 1994. "Predator-induced phenotypic plasticities in *Daphnia pulex*. Washington State University, Zoology Department Colloquium Series.

February 1992. "Plastic life histories and morphologies of *Daphnia pulex* under a multiple predator scheme." The American Society of Limnology and Oceanography, 55th annual meeting, Santa Fe, NM.

October 1991. "Predator-induced phenotypic plasticity in *Daphnia pulex*. University of Wisconsin-Madison, Department of Zoology Colloquium Series.

March 1991. "Predator-induced phenotypic plasticity in *Daphnia pulex*: costs and cues. Department of Biology Seminar Series, Hiram College, Hiram, OH.

Professional Presentations:

Larson, M.D., A.R. Black. Genus richness and density of native gastropods and the occurrence of the invasive New Zealand mud snail (*Potomopyrgus antpodarum*) in the lower snake river and three tributaries. Annual meeting of the Western Society of Malacologists, June 2013, San Diego, California.

Black, A.R., L. Bridges, A. Hodgson. An investigation of the potential impact of an invasive fish (brook stickleback: *Culaea inconstans*) on aquatic wetland communities and waterfowl. Annual meeting of the Ecological Society of America, August 2012, Portland, Oregon.

Knudson, T.M., A.R. Black. Factors affecting rainbow trout growth and condition factor in eastern Washington lakes. Annual meeting of the Ecological Society of America, August 2012, Portland, Oregon.

Flanagan, S., A.R. Black, P Bhuta. Parasite load, morphology, fecundity, and genetic structure of the salmon louse (*Lepeophtheirus salmonis*) parasitizing three species of pacific salmon. Annual meeting of the Ecological Society of America, August 2012, Portland, Oregon.

Hodgson, A.G., A.R. Black. Prey color preference in brook stickleback (*Culaea inconstans*). Annual meeting of the Ecological Society of America, August 2012, Portland, Oregon.

Hodgson, A., A.R. Black. Both sensory exploitation and indicator models may explain red pelvic spines in the brook stickleback, *Culaea inconstans*. Seventh International Conference on Stickleback Behavior and Evolution. July 2012, Bainbridge Island, Wash.

Wooley A., A. Hodgson, A.R. Black. Electivity and functional response of brook stickleback (*Culaea inconstans*) for early spring macroinvertebrates. Seventh International Conference on Stickleback Behavior and Evolution. July 2012, Bainbridge Island, Wash.

Bridges, L.W., A. Hodgson, A.R. Black. The effects of a fish invasion on the invertebrate constituents of wetland communities. Joint meeting of the American Society of Limnology and Oceanography and the North American Benthological Society, June 6-11, 2010, Santa Fe, NM.

Mahoney, K., and A.R. Black. Stable isotope assessment of impacts upon rainbow trout ecology by aquatic community across the eastern Washington landscape. Inland Northwest Aquatic Riparian and Wetland Symposium, Spokane Washington, February 22, 2008.

Black, A.R., T. Knudson, K. Mahoney. Community constituency and rainbow trout productivity in eastern Washington lakes. September 2007. Inland Empire Fly-Fishing Club, Spokane Washington.

Smith, J.M., A.R. Black. Examining draw-down significance and ontogenetic shifts in trophic position and energy utilization using stable isotope analysis in two eastern Washington reservoirs. Annual Meeting of the Northwest Scientific Association, Corvallis, Oregon, March 2005.

Smith, J.M., A.R. Black. Determining trophic position and energy utilization using stable isotope analysis in two eastern Washington reservoirs. Pacific Ecology and Evolution Conference, Ellensburg, Washington, February 2005.

Black, A.R.. Zooplankton ecology in a large advective reservoir: composition and production dynamics across a riverine to lacustrine transition. Toward Ecosystem-Based Management: Breaking Down the Barriers in the Columbia River Basin and Beyond. Convened by the Lake Roosevelt Forum, Western Division and North Pacific Chapters of the American Fisheries Society, and the Sustainable Fisheries Foundation. April 2002, Spokane, WA.

Black, A.R. M.R. Cooper, J.E. Earle. Examining the importance of density-dependent and density-independent regulation of planktonic secondary productivity in a large advective reservoir. Ecological Society of America: 86th Annual Meeting, Madison, WI, August 2001.

Black, A.R. Ecology of zooplankton in a large advective reservoir. 27th International Kokanee Conference, Spokane, WA, April 2001.

Black, A.R. Factors affecting planktonic secondary productivity in a large advective reservoir. Annual meeting of the Northwest Scientific Association, Arcata, CA, March, 2001.

Black, A.R., M.R. Cooper. The potamoplankton conundrum: searching for regulatory factors in a large advective reservoir. Ecological Society of America: 85th Annual Meeting, Snowbird, Utah, August 2000.

Barlow, G.W., A.R. Black. Investigating the utilization of benthic versus pelagic primary production in Lake Roosevelt, WA: a stable isotope analysis. Ecological Society of America: 85th Annual Meeting, Snowbird, Utah, August 2000.

Barlow, G.W., A.R. Black. Is benthic production in Lake Roosevelt inhibited: a stable isotope analysis. Annual meeting of the Northwest Scientific Association, Moscow, ID, March, 2000.

Cooper, M.R., A.R. Black. Secondary planktonic productivity in a large reservoir: can enclosures beat the advection complication. 84th annual meeting of the Ecological Society of America, Spokane, WA, August 1999.

Earle, J.D., A.R. Black, M. Buchanan. Size specific predation rates and preferences of the mite *Forelia* preying on the water flea *Daphnia pulex*. Annual meeting of Northwest Scientific Association, Olympia, WA, March 1998.

Cooper, M.R., G.W. Barlow, A.R. Black. Planktonic secondary production estimation is aided by enclosures in large advective reservoirs. Annual meeting of Northwest Scientific Association, Olympia, WA, March 1998.

Earle, J.D., M. Buchanan, B. Krestian, A.R. Black. Prey size preferences of the aquatic mite *Forelia* consuming *Daphnia pulex*. 62nd annual meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February 1999.

Cooper, M.R., G.W. Barlow, A.R. Black. Using enclosures to estimate planktonic secondary productivity in Lake Roosevelt of the Columbia River. 62nd annual meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February 1999.

Earle, J.D., A.R. Black. The effects of *Chaoborus* and *Daphnia* density on the expression of neckteeth in *Daphnia pulex*. 61st Annual Meeting of the American Society of Limnology and Oceanography, St. Louis, MO, June 1998.

Wold, L, A.R. Black. Predator-induced phenotypic plasticity in three *Daphnia pulex* clones in response to predatory odonate and dytiscid larvae. 61st Annual Meeting of the American Society of Limnology and Oceanography, St. Louis, MO, June 1998.

Shields, J.P., A.R. Black. Estimating planktivorous secondary productivity in lake Roosevelt, WA using pelagic enclosures. Columbia River Ecosystem Conference, Castlegar, B.C., April 1998.

Black, A.R., L. Wold. Predator-induced life histories of three *Daphnia pulex* clones: chemical-induced responses to large-size selective predators. Annual meeting of Northwest Scientific Association, Olympia, WA, March 1998.

Earle, J.D., A.R. Black. The effect of ecological factors on the expression of neckteeth in *Daphnia pulex*. Annual meeting of Northwest Scientific Association, Olympia, WA, March 1998.

Shields, J.P., A.R. Black. A new technique for estimating planktonic secondary productivity: a field test conducted in Lake Roosevelt, Washington. 1998 annual meeting of Northwest Scientific Association,

Olympia, WA.

Ruud, Dean F., M. Ikramuddin, and A.R. Black. A comparison of the macroinvertebrate communities of a trace elements enriched lake and an uncontaminated lake: the effects of mine waste contamination in Coeur d'Alene Lake. 1997 Annual Meeting of the Geological Society of America.

Wold, L.A., A.R. Black. "Can *Anax* and *Hesperagrion* induce shifts in the life history of characters of *Daphnia pulex*?" Annual Meeting of the Northwest Scientific Association, Spokane, WA, March 1997.

Earle, J.D., T. Aalvik, and A.R. Black. "Is there variation in the expression of neckteeth among ten natural *Daphnia* populations?" Annual Meeting of the Northwest Scientific Association, Spokane, WA, March 1997.

Black, A.R., S.J. Lewis. "Examining the adaptive nature of predator-induced life histories." 60th Annual Meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February, 1997.

Wold, L.A., A.R. Black. "Predator-induced phenotypic plasticities in *Daphnia*: a test of *Anax*- and *Hesperagrion*-induced life histories in *D. pulex*." 60th Annual Meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February, 1997.

Earle, J.D., T. Aalvik, A.R. Black. "A comparison of the expression of a *Chaoborus*-induced phenotypic plasticity in *Daphnia* among 10 natural populations." 60th Annual Meeting of the American Society of Limnology and Oceanography, Santa Fe, NM, February, 1997.

Black, A.R., J.H. Thorp. "Testing for the presence of size selective predation in the plankton of a large river." 59th Annual Meeting of the American Society of Limnology and Oceanography, Milwaukee, WI, June 1996.

Black, A.R., S.J. Lewis, "Examining The Adaptive Nature of Predator-induced Life Histories." Annual meeting of the Northwest Scientific Association, Tacoma, WA, March, 1996.

Lewis, S.J., A.R. Black. "*Ambystoma*-induced phenotypic plasticity in *Daphnia pulex*." Annual meeting of the Northwest Scientific Association, Tacoma, WA, March, 1996.

Black, A.R., J.H. Thorp. "Zooplankton in a large temperate river: advection, production, and potential limiting factors. 56th Annual Meeting of the American Society of Limnology and Oceanography, Edmonton, Alberta, Canada, June, 1993.

Thorp, J.H., M.D. DeLong, A.R. Black. "Perspectives on biological investigations of large rivers: results and techniques from Ohio River studies." North American Benthological Society; 40th Annual Meeting, Louisville, KY, May, 1992.

Black, A.R. "Environmental context and *Chaoborus*-induced phenotypic plasticity in *Daphnia pulex*." The Ecological Society of America; Snowbird, UT, August, 1990.

Black, A.R. "Context-dependent Induction." American Society of Limnology and Oceanography; 53rd Annual Meeting, Williamsburg, VA, June, 1990.

Black, A.R., S.I. Dodson. "Demographic Costs of *Chaoborus*-induced Phenotypic Plasticity in *Daphnia pulex*." American Society of Limnology and Oceanography; 52nd Annual Meeting, Fairbanks, AK, June,

1989.

Black, A.R. "Demographic Consequences of expressing an anti-predator phenotype in *Daphnia pulex*." 10th Annual Midwest Ecology and Evolution Conference; Madison, WI, April, 1989.

Professional Organizations:

American Society of Limnology and Oceanography
Ecological Society of America

Honors:

Chair's Excellence Award for Research, College of Science, Mathematics, and Technology, Eastern Washington University, 2002.

CenturyTel Teaching Excellence Award, College of Science, Mathematics, and Technology, Eastern Washington University, 2000.

Dean's Annual Merit Award, College of Science, Mathematics, and Technology, Eastern Washington University. Academic years 94-99.

UW-Madison, Dept of Zoology: John Jefferson Davis Summer Research Fellowship, 1988, 1989, 1990, 1991.

UW-Madison, College of Letters and Science: William Freeman Vilas Graduate Fellow, 1989-90 academic year.