

## **Jason "Jackson" A Gross**

6316 NW Bernie Dr. Vancouver, WA 98660

Mobile: 406 600 9368

Email: [obstumps@yahoo.com](mailto:obstumps@yahoo.com), [jgross@smith-root.com](mailto:jgross@smith-root.com)

### EMPLOYMENT

#### **Smith - Root Incorporated**

14014 NE Salmon Creek Dr Vancouver, WA 98686 United States

**Aquatic Nuisance Species Division Manager/Research Scientist, Supervisor:** Jeff Smith (360 573 0202 x110)

#### **09/2012 - Present**

##### Duties:

Include developing new technologies to suppress aquatic invasive species through the investigation of the effects of biological, physical and chemicals approaches on target and non-target species.

Investigate the life history and ecology of aquatic invasive species to identify impacts of aquatic invasive species and evaluate ecological and physiological differences from native fish species that may be exploited to limit or control aquatic invasive species populations.

Evaluate the use of technologies for the conservation of threatened and endangered fish.

Development of protocols and study planning for work; disseminate research results to technical (research, management, or regulatory agencies) and lay audiences.

Function as the principal investigator or as a co-investigator and as a provider of technical assistance to natural resource managers in applying scientific information to solve management problems. Major responsibilities are to plan, conduct, and report on results of scientific research in aquatic ecology, with emphasis on the stressors of aquatic organisms. This involves maintaining current knowledge of scientific advances in the field, identifying fruitful areas of investigation in consultation with scientists and managers, enlisting and collaborating with co-investigators, supervising biologists and technicians, providing technical assistance to natural resource managers, and developing reports for scientific and technical audiences.

Duties related to conduct of studies include: (a) procurement and management of funds and equipment and other resources to meet the goals of the study effectively and efficiently, adherence to established study design and protocols or amendment of them if the incumbent deems it necessary, (b) maintenance of regular contact with partners and stakeholders while studies are underway.

**US Geological Survey BRD Northern Rocky Mountain Science Center** Bozeman, MT United States

**04/2012 - 08/2012**

**Biologist, Supervisor:** Bob Gresswell (406 994 7085)

Duties:

Include developing new technologies to suppress aquatic invasive species through the investigation of the effects of biological, physical and chemicals approaches on target and non-target species.

Investigate the life history and ecology of aquatic invasive species to identify impacts of aquatic invasive species and evaluate ecological and physiological differences from native fish species that may be exploited to limit or control aquatic invasive species populations.

Development of protocols and study planning for work; disseminate research results to technical (research, management, or regulatory agencies) and lay audiences.

Function as the principal investigator or as a co-investigator on officially approved studies, and as a provider of technical assistance to natural resource managers in applying scientific information to solve management problems. Major responsibilities are to plan, conduct, and report on results of scientific research in aquatic ecology, with emphasis on the stressors of aquatic organisms including amphibians of the Northern Rocky Mountain region. This involves maintaining current knowledge of scientific advances in the field, identifying fruitful areas of investigation in consultation with scientists and managers, enlisting and collaborating with co-investigators, supervising biologists and technicians, providing technical assistance to natural resource managers, and developing reports for scientific and technical audiences.

Duties related to conduct of studies include: (a) procurement and management of funds and equipment and other resources to meet the goals of the study effectively and efficiently, adherence to established study design and protocols or amendment of them if the incumbent deems it necessary, (b) maintenance of regular contact with partners and stakeholders while studies are underway.

Duties related to communication include: (a) development of informative materials and presentations concerning the application of scientific findings for technical assistance to federal and state natural resource management agencies, (b) preparation of annual progress reports and completion reports for cooperating agencies and other partners, (c) preparation of technical reports, posters, and papers for submission to scientific journals or for presentation in scientific meetings, workshops and conferences, and (d) preparation of internal reports.

## ACCOMPLISHMENTS

2010 USGS Central Region Diversity Award in the Supervisory Category

**Montana State University 10/2008 - 04/2009** Bozeman, MT United States

**Research Scientist, Supervisor:** Molly Webb (406 994 9907)

Duties:

Include developing new technologies to suppress invasive aquatic organisms through the investigation of the effects of biological, physical and chemicals approaches on target and non-target aquatic organisms.

Investigate the life history and ecology of invasive aquatic species to identify physiological differences from native aquatic species that may be exploited to limit or control invasive aquatic species populations.

Develop and refine approaches to limit, control, and contend with invasive aquatic vertebrates and invertebrates.

Development of protocols and study planning for work; disseminate research results to technical (research, management, or regulatory agencies) and lay audiences.

Other duties include grantsmanship, manuscript preparation, supervising undergraduate research, outreach and presentations.

**Southern California Coastal Water Research Project 08/2007 - 10/2008**

Costa Mesa, CA United States

**Ecotoxicologist/Aquatic Toxicologist, Supervisor:** Ken Schiff (7147553202)

Duties:

Develop new methodology to assess sediment contaminants and biological effects in marine and estuarine birds, fish and invertebrate wildlife. This provides a regulatory framework for ecotoxicology studies of emerging contaminants such as pharmaceuticals and endocrine disrupting compounds, while developing better methods such as toxicant identification evaluation (TIE's) and microarray methods to determine direct and indirect effects of sediment contamination on environmental health. The research is both field survey and laboratory based. Laboratory studies of outfall effluents use flatfish, echinoderms, bivalves, and polychaetes to link field conditions with laboratory exposures.

Perform duties as a research scientist in the toxicology department. Duties consist of staff management, experimental design, laboratory coordination, field sampling and handling, external and internal communications, report and manuscript preparation, grantsmanship, and database management.

## ACCOMPLISHMENTS

I have designed and implemented enhancement projects for coastal species, habitats and ecosystems at Ballona Creek and estuary with the City of Los Angeles. Studies at Ballona creek and estuary, an impacted wetland receiving Los Angeles urban run-off in Marina del Rey California are directed at determining the cause of sediment/soil toxicity using traditional and Toxicant Identification Evaluation (TIEs) methodology, assessing Total Maximum Daily Loading into the creek through sampling, and identifying resource needs and conservation action required to maintain and remediate the habitat for the City of Los Angeles. I have also directed intensive sampling efforts to evaluate sediment chemistry and toxicity in the Port of Los Angeles and San Diego Bay and the US Navy shipyard using TIEs and sediment water interface tests.

I have also designed special study site selection criterion to conduct large scale (politically and scientifically complex) monitoring efforts to evaluate the effects of public outfall contaminants on biological effects in fish from coastal habitats throughout the entire Southern California Bight. This work is in conjunction with partners and grantors such as California Environmental Protection Agency, City of Los Angeles, Los Angeles County Sanitation District, Orange County Sanitation District, the US Navy (SPAWAR San Diego), and California Fish and Game.

Provided editorial support and prepared guidance documents, (Field Sampling, Toxicity testing, Sediment chemistry, and Benthic community condition) for the State of California's Water Resources Control Board's Sediment Quality Assessment Framework.

Build, operate, and facilitate knowledge transfer for operation of continuous flow exposure system.

## RELATED SKILLS

SOFTWARE: Microsoft Office Suite, Microsoft Access, Sigma Stat statistical software

### **San Diego State University 01/2008 - 09/2008**

San Diego, CA United States

**Adjunct Faculty, Supervisor:** Ann De Peyster Ph.D. (619 594 3690)

Adjunct Faculty, Department of Environmental Health / Toxicology, Graduate School Of Public Health, San Diego State University, California USA.

DUTIES: Mentor graduate students, serve on graduate committees, lecturer.

**Louisiana State University System 08/2006 - 08/2007** Baton Rouge, LA United States

**National Institutes of Health Postdoctoral Fellow**

Postdoctoral Fellow, Pennington Biomedical Research Center, Louisiana State University, Baton Rouge Louisiana USA

**DUTIES**

Conduct molecular and physiological studies on the impact of dietary methionine restriction on the enhancement of food intake, increased energy expenditure, and decreased adiposity.

**ACCOMPLISHMENTS**

Awarded a U.S. National Institutes of Health T32 Postdoctoral Fellowship, One year fellowship renewable up to 3 years to explore complex interactions between genetic, molecular, physiological, and behavioral aspects of obesity.

Instructor, Project Management Seminar (Fall 06), Aquaculture Research Station, Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station, Baton Rouge Louisiana USA. Taught seminar course on principles of project management for scientists.

**RELATED SKILLS**

FACSCalibur Flow Cytometry Training Course BD Biosciences, San Jose, California.

**University of Wisconsin - Madison / 06/2001 - 07/2006**

**Department of Wildlife Ecology** Madison, WI United States

**Environmental Protection Agency Predoctoral Fellow, Supervisor:** Bill Karasov Ph.D. (608 263 9319)

Graduate Teaching and Research Assistant; Departments of Wildlife Ecology, University of Wisconsin – Madison, Wisconsin USA. Prepared and managed budgets, hired and managed staff, selected vendors, and laboratory maintenance and accreditation. grantsmanship, and prepared manuscripts.

Dissertation Title: Effects of Cadmium and Methylmercury on Amphibian Growth and Development. Advisors: William H. Karasov and Ralph M. Albrecht

Instructor: Terrestrial Vertebrate Ecology (Spring 06, Laboratory), Principles of Wildlife Ecology / Ecological Principles Applied to Wildlife (Fall 03 & 05 Laboratory), Introduction to Wildlife Research (Spring 04 Lecturer), Introductory Biology (Research mentor),

Independent Study Mentor (01 – 06), Undergraduate researchers participated in laboratory experiments on amphibian ecotoxicology, the aquatic life history of an amphibian parasite, and developed standard operating procedures for continuous flow mini dilution exposure systems.

Students presented work at scientific meetings and undergraduate research symposia. Twenty students mentored.

Undergraduate Research Scholars Program (03 – 06; Research mentor) Undergraduate scholars in minority / disadvantaged student research program. Students developed independent projects and participated in scientific meetings. 10 students mentored.

#### ACCOMPLISHMENTS

8/03 – 8/06 US Environmental Protection Agency Science to Achieve Results (STAR) Graduate Fellowship, Three year fellowship to study the effects of heavy metals on amphibian reproduction and development. \$107,000.00

4/06 Graduate Student Mentor Award Graduate Student Collaborative University of Wisconsin - Madison

2/06 Travel Award Wisconsin Agricultural and Life Sciences Alumni Association

9/05 Travel Award Society of Environmental Toxicology and Chemistry 26th Annual Meeting

6/05 Travel Award Teratology Society 45th Annual Meeting

4/05 Travel Award Society of Toxicology 44th Annual Meeting

10/04 Southern and Northern California Chapter Meeting of the Society of Toxicology, San Diego California, First place for student poster presentation.

2/04 Travel Award Society of Environmental Toxicology and Chemistry Midwest Regional Chapter 12th Annual Meeting.

4/03 & 4/02 Zoological Society of Milwaukee County, Two grants awarded for research studying the effects of heavy metals on amphibians of Horicon National Wildlife Refuge. \$2000.00

#### RELATED SKILLS

Technical Consultant, Wisconsin State Laboratory of Hygiene, Madison. Designed amphibian exposure systems for hazard assessment of waste water effluents.

03 - 04, At Horicon National Wildlife Refuge, Horicon Wisconsin, I evaluated nutrient loading into the wetland and made recommendations for hydrological manipulations for resource needs and conservation actions for local amphibian populations. Studies included amphibian monitoring plans, US F&G Amphibian malformation surveys, and in situ exposure studies. .

**Pet Emergency and Specialty Center 05/1997 - 08/2001** La Mesa, CA United States

**Emergency Veterinary Technician**

Fulfilled duties as veterinary technician in an emergency clinic. Proficient at venipuncture, monitoring anesthesia, histology, biopsy and tissue collection, pathology, fecal analysis, surgical and laceration repair.

**San Diego State University 08/1999 - 06/2001** San Diego, CA United States

**Graduate Teaching Assistant, Supervisor:** Ann De Peyster Ph.D. (619 594 3690) M.S. in Public Health, Environmental Health/Toxicology Emphasis, Graduate School Of Public Health, San Diego State University, California USA.

Thesis Title: Exploration of glutathione (GSH) reduction in male gonad from *Pisaster ochraceus*, the Ochre Sea Star, as a new model to evaluate impacts of marine pollutants. Advisor Ann De Peyster

Graduate Teaching Assistant; Biology Department, San Diego State

**Education:**

University, San Diego, California USA. Instructor Gross Human Anatomy (Laboratory)

Colgate-Palmolive-Society of Toxicology Award Visiting Professor Workshop San Diego State University, California. Learned in vitro techniques for male reproductive toxicity testing and evaluated biochemical and morphological endpoints for spermatogenesis and assessment of testicular function. Visiting scientist Dr. Robert Chapin

8/99-5/00 Instructor Health Career Occupation Program (HCOP) Biology Department, San Diego State University, San Diego, California USA.

**ACCOMPLISHMENTS**

3/02 Society of Toxicology Annual Meeting, In Vitro Specialty Section Student Awards, Third Place for 1,3-Dinitrobenzene Induced GSH Reduction Studied in the Male Gonadal Tissue from *Pisaster ochraceus*, the Ochre Sea Star.

5/01 John Hanlon Award Graduate School of Public Health, San Diego State University, California. Awarded for the most outstanding graduate student in the Graduate School of Public Health

5/01 Outstanding Graduate Student San Diego State University, College of Health and Human Services, California. Recognition for the most outstanding graduate student within the College of Health and Human Services.

6/00 Colgate-Palmolive-Society of Toxicology Award for Student Research Training in Alternative Methods. Training on sea star gametogenesis and culture at the University of New Hampshire with Dr. Charles W. Walker professor of zoology. \$2500.00.

**Project Wildlife 03/1996 - 09/1998** San Diego County, CA United States **Hours per week: 15**  
**Care Facility Assistant Manager** Fulfilled duties as manager in a wildlife rehabilitation triage facility.

**University of Wisconsin - Madison** Madison, WI United States Doctorate 07/2006

**Credits Earned:** 61 Semester hours **Major:** Animal Sciences **Minor:** Endocrine and Reproductive Physiology **Relevant Coursework, Licenses and Certifications:**

RELEVANT COURSEWORK:

Diseases of Wildlife, Practicum in Wildlife Ecology Teaching, Emerging Wildlife Diseases, Aldo Leopold and the Growth of Conservation Thought, Toxicants in the Environment, Immunotoxicology, Toxicology, Ecotoxicology: Toxic Effects on Ecosystems,

**San Diego State University** San Diego , CA United States Master's Degree 08/2004

**Credits Earned:** 48 Semester hours **Major:** Public Health / Toxicology **Minor:** Environmental Health **Relevant Coursework, Licenses and Certifications:** RELEVANT COURSEWORK

Epidemiology, Biostatistics, Hazardous Waste Management, Principles of Toxicology, Methods of Toxicity Testing, Environmental Health Risk Assessment, Mechanisms of Toxicants, Water Quality Investigation, Ecology of the Colorado Delta Region, Environmental Protection

**San Diego State University** San Diego , CA United States Bachelor's Degree 05/1999

**Credits Earned:** 180.3 Semester hours **Major:** Biology / Zoology **Relevant Coursework, Licenses and Certifications:** RELEVANT COURSEWORK

Quantitative Biology, Ornithology, Chemistry, Embryology, Organic Chemistry, Genetics and Evolution, Marine Invertebrate Biology, Biochemistry, Cell and Molecular Biology, Environment and Natural Resource Conservation, Ecology and the Environment, Animal Physiology, General Biology I&II, Microbiology, Introduction to Organic Chemistry and Biology, Intro to Biological Sciences I&II, Northern Studies Field Course, Avian Preparation and Anatomy, Avian Morphology and Anatomy Studies.

Undergraduate Teaching Assistant (2 Semesters) Principles of Biology

TRAINING

A significant portion of job related work and training involves evaluating the effects of heavy metals, priority pollutants, and emerging contaminants such as pesticides, pharmaceuticals and personal care products and endocrine disrupting compounds (EDCs) in terrestrial and aquatic organisms. While my resume is centered on biological effects contaminants and pathogens in amphibians, I have considerable experience with, invertebrates, fish, waterfowl (ducks, cormorants, herons, egrets) and mammalian organisms from marine, estuarine and freshwater environments. I have also conducted laboratory studies using emerging contaminants, EDCs,



sediment, and effluent exposures (static and flow through experimental design) in aquatic organisms such as flatfish, bivalves, oligochaetes and amphibians.

10/06 FACSCalibur Flow Cytometry Training Course BD Biosciences, San Jose, California

11/2003 Short Course: Statistical Analysis of Ecotoxicity Test Data, Society of Environmental Toxicology and Chemistry Annual Meeting

8/02-11/02 Wisconsin Student Hunting Project, Wisconsin Department of Natural Resources, University of Wisconsin –Madison, Wisconsin. Hunting program for non-hunting university students and resource management agency employees, to strengthen and train wildlife professionals by exposing them to the history, values and the role of hunting in wildlife conservation and modern society.

Received training from US EPA Mid-continent Division in construction and operation of continuous flow dilution technology. Contact Sigmund Degitz Ph.D.

Technical Consultant, 11/04 – 3/06 Wisconsin State Laboratory of Hygiene, Madison. Designed amphibian exposure systems for hazard assessment of waste water effluents.

#### PEER REVIEWER

Toxicological Sciences,

Environmental Toxicology and Chemistry,

Environmental Science and Technology.

Comparative Biology and Physiology

#### PROFESSIONAL PUBLICATIONS

Stewart-Malone A, Misamore M, Wilmoth S, Reyes A, Wong WH, Gross JA, 2014, The effect of UV-C exposure on larval survival of the Dreissenid quagga mussel, Biofouling (Accepted)

Layhee M, Yoshioka M, Farokhkish B, Gross JA, Sepulveda AJ, 2014, Toxicity of traditional molluscide to Asian clam veligers, Journal of Fish and Wildlife Management 5(1):xx-xx; e1994-687X, doi: 10.3996/042013-JFWM-032

Jackson A. Gross, Kathryn M. Irvine, Siri Wilmoth, Tristany L. Wagner, Patrick A. Shields, and Jeffrey R. Fox, (2013), The Effects of Pulse Pressure from Seismic Water Gun Technology on Northern Pike Transactions of the American Fisheries Society 142:1335–1346

Sepulveda, A. J., Rutz, D. S., Ivey, S. S., Dunker, K. J. and Gross, J. A. (2013), Introduced northern pike predation on salmonids in southcentral Alaska. Ecology of Freshwater Fish, 22: 268–279. doi: 10.1111/eff.12024

Sepulveda, Adam, Andrew Ray, Robert Al-Chokhachy, Clint Muhlfeld, Robert Gresswell, Jackson Gross and Jeff Kershner. 2012. Aquatic Invasive Species: Lessons from Cancer Research. American Scientist. 100 (234-242).

Gross, J. A., Johnson, P.T.J., Prahl, L. K., and Karasov, W.H. (2009) Critical period for effects of chronic cadmium exposure on growth and development in northern leopard frog (*Rana pipiens*) tadpoles. Environmental Toxicology and Chemistry. 28:1227-1232

Chen, T-H, Gross, J. A., and Karasov, W.H. (2009) Chronic exposure to pentavalent arsenic of larval leopard frogs (*Rana pipiens*): bioaccumulation and reduced swimming performance. Ecotoxicology. 18(5):587-593

Johnson, P. T. J., Chase, J. M., Dosch, K. L., Hartson, R. B, Gross, J. A., Larson, D., Sutherland, D. R. and S. R. Carpenter. (2007) Aquatic eutrophication promotes pathogenic disease in amphibians. Proceedings of the National Academy of Science 104 (40):15781-15786.,

Gross, J. A., Chen, T-H, and Karasov, W.H. (2007) Effects of cadmium on development in northern leopard frog (*Rana pipiens*) tadpoles. Environmental Toxicology and Chemistry, 26:1192-1197.,

Chen, T-H, Gross, J. A., and Karasov, W.H. (2007) Adverse effects of chronic copper exposure in larval northern leopard frogs (*Rana pipiens*). Environmental Toxicology and Chemistry, 26:1470-1475.,

Chen, T-H, Gross, J. A., and Karasov, W.H. (2005). Sublethal effects of lead on northern leopard frog (*Rana pipiens*) tadpoles. Environmental Toxicology and Chemistry, 25:1383-2389.,

#### Technical Reports:

Gross J.A., Farokhkish B., Gresswell R.E., Webb M.A.H., Guy C.S., and Zale A.V. (2010) Techniques for Suppressing Invasive Fishes in Lacustrine Systems: A Literature Review. Draft Final Report to the National Park Service, Yellowstone National Park, Wyoming RM-CESU H1200040001

Gross J.A., (2010) Gavin's Point National Fish Hatchery Site Assessment for Control of Asian Clams. Draft Final Report to US Fish and Wildlife Service Region 6 Headquarters, Denver Colorado

STUDENTS- 1 Masters Candidate, Land Resources and Environmental Sciences, Montana

State University- 2 Post Baccalaureate, Land Resources and Environmental Science, Montana State University

## RECENT PRESENTATIONS

Impulsive Sound as an Invasive Aquatic Species Suppression Strategy, Gross JA, Upper Colorado River Recovery Program Researchers Meeting, January 2014.

Forays into Dreissenid Mussel Control Western Regional Panel of the Aquatic Nuisance Species Task Force Portland Oregon, December 2013

Effects of Seismic Airguns on Pallid Sturgeon and Paddlefish, Popper AN, Calson TJ, Gross JA, Hawkins, AD, Zeddies D, Powell L, Young, J 2013 Effects of Noise on Aquatic Life 3<sup>rd</sup> meeting, Budapest Hungary, August 2013

The effect of UV-C exposure on larval survival of the Dreissenid quagga mussel, Stewart-Malone A, Misamore M, Wilmoth S, Reyes A, Wong WH, Gross JA Aquatic Ecosystems Conference Victoria, Canada. June 2013 Poster

The effect of UV-C exposure on larval survival of the Dreissenid quagga mussel, Stewart-Malone A, Misamore M, Wilmoth S, Reyes A, Wong WH, Gross JA. WA-BC Chapter Meeting of the American Fisheries Society Lake Chelan, WA. Won best student poster. March 2013 Poster

Interagency Quagga Mussel Meeting Mitigation Strategies for Some Common Invaders of the Lower Colorado River System: Northern pike, bullfrogs and quagga mussels. Las Vegas NV APR 2013

## LEADERSHIP ACTIVITIES

11/10 Chaired session: A Highwire Performance: Balancing Aquatic Invasive Species Control Under the (ESA) Endangered Species Act, at the annual meeting for the Society of Environmental Toxicology and Chemistry, Portland, OR.

11/09 Chaired session: invasive species eradication symposium at the annual meeting for the Society of Environmental Toxicology and Chemistry, New Orleans, LA.

9/09 – present American Indian Research Opportunity program, Montana State University, Bozeman MT.

Graduate School of Public Health Student Council 2000-2001, San Diego State University, President.,