Heather Govenor

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Education

PhD Candidate Biological Systems Engineering; Virginia Tech **2014**
Cunningham Doctoral Scholar Award
Interfaces of Global Change Interdisciplinary Graduate Education Program Fellow

MS Entomology; Specialization Ecology and Evolutionary Biology; Michigan State **1998**
USEPA Science to Achieve Results Graduate Research Fellow
Paul E. Wooley Award: Excellence in Masters of Science Program

BS Biology; Mathematics minor; Penn State **1995**
cum laude, University Scholar, Honors in Ecology; Behrend College Honors Certificate

Professional Experience

Risk Assessor; EnSafe *Memphis, TN* 2013-present

Ecological and human health risk assessment. Technical report review and copyediting.

Environmental Specialist; Michael Baker Corporation *Moon Township, PA* 1999-2012

Ecological Risk Assessment. Application of federal and state risk assessment guidance (projects in Environmental Protection Agency [EPA] Regions I, II, III, IV, VII, and VIII). Execution of all aspects of terrestrial and aquatic screening-level and baseline risk assessments for Comprehensive Environmental Response Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), and state program sites contaminated with organic compounds, PAHs, PCBs, pesticides, herbicides, explosives, and metals in soil, water, and sediment. Problem formulation, field study design, sample collection, data analysis, and reporting. Development of corrective action objectives. Clear communication of complex technical concepts to clients and the public. Training of junior employees.

Human Health Risk Assessment. Support of human health risk assessments including problem formulation, dose table calculations, statistical background calculations, and quality assurance / quality control of completed reports.

Environmental Data and Reporting. Full suite of CERCLA and RCRA reporting, duties ranging from report lead to editorial / technical review: Site Investigation, Phase I RCRA Facility Investigations, Remedial Investigations, Work Plans, Health and Safety Plans, Corrective Measures Studies, Feasibility Reports, Site Closeout Reports, Records of Decision, Data Quality Assurance / Quality Control Summary Reports. Statistical support including descriptive statistics, ANOVA, multivariate regression analysis. Long-term groundwater monitoring and monitored natural attenuation plans; field sampling, data management and analysis.

Software. Microsoft Office; SADA software; ECOSAR Class Program; ProUCL, Scout, and NCSS statistical software

Field Equipment. Soil, groundwater, surface water, and sediment sampling for volatile and inorganic constituents and toxicity testing; YSI multimeter (water quality); HACH field test kit (natural attenuation: ferrous iron, alkalinity, chloride); ENSYS™ test kits (field soil PCB)

Research Experience

Field Assistant; Virginia Tech, Blacksburg, VA 2013-present
Environmental sampling and transportation support for Krometis Research Group.

Visiting Student Researcher; University of Georgia Marine Institute, Sapelo Island, GA 1997
Assisted with reconstituted feeding assays to examine wharf crab's dietary preference among eight salt marsh grass species across a latitudinal gradient
Extracted hydrophilic and organic chemicals from a variety of salt marsh grass species

Visiting Scholar; Ohio Agricultural Research and Development Center, Wooster, OH 1997
*Examined delayed resistance of paper birch (*Betula papryifera*) and sugar maple (*Acer saccharum*) induced by prior seasons' defoliation, shade, and nutrient stress (continuing MS research)*

Research Assistant; The Dow Gardens, Midland, MI 1996
MS thesis research: "Light, nutrient availability, and defoliation effects on resource acquisition, resource allocation, and herbivore resistance of paper birch and sugar maple"
Monitored growth, carbon assimilation, and foliar chemistry and morphology of experimental trees
Reared and measured nutritional indices of multiple insect species

Research Experiences for Undergraduates; Penn State Univ., University Park, PA 1995
Designed and carried out independent research on importance of midgut alkalinity to gypsy moth
Trained new employees on all aspects of laboratory operation and safety
Measured gut pH and redox potentials on a variety of insect larvae

Research Assistant; Penn State University, University Park, PA 1994
Collected data for independent research on insect resistance to chemical foliar defenses
Censused insect populations to monitor seasonal dynamics
Analyzed foliar protein and phenolic levels with spectrophotometric assays and HPLC

Teaching Experience

Ecology/ Evolution/ Conservation Biology Tutor; Radford, VA 2010
One-on-one instruction for senior undergraduate Biology major at Radford University

GED Instructor; New River Community College, VA 2005-06
Small-group instruction for social service clients and self-enrolled students aged 17 and older
Responsible for placement testing and lesson plans for General Educational Development

Integrative Studies in Biology Teaching Assistant; Michigan State University, MI 1996
Lecturing (class size 200), grading, and one-on-one tutoring to undergraduates

GED/ABE Tutor; State College Area School District, PA 1995
One-on-one tutoring for students aged 15 to 60 in general educational development subjects

Speaking Practical English for Adults & Kids (SPEAK!) Program Coordinator;
Penn State University, PA 1994
Led small groups of ESL students in basic communication and skills development
Responsible for program recruitment and lesson plan development

Calculus I, Calculus II Grader; Penn State University Behrend College, PA 1992-93
Responsible for grading homework and exams, and providing written feedback to students

Diehl Elementary School Enrichment Program Coordinator; Erie, PA 1992-93
Organized college volunteers for monthly visits to fourth grade class/ presented lessons.

Publications

Siegert, P.Y., **H.L. Govenor**, and N.W. Siegert. 2008. A unique role-playing game examining plant-insect interactions for elementary and middle school students. *Entomology Notes Published by the Michigan Entomological Society*. No. 31, 2p.

Appel, H.M., **H.L. Govenor**, M. D'Ascenzo, E. Siska, and J.C. Schultz. 2001. Limitations of folin assays of foliar phenolics in ecological studies. *Journal of Chemical Ecology*. 27(4):761-778.

Govenor, H.L., J.C. Schultz, and H.M. Appel. 1997. Impact of dietary phenolics on gypsy moth (*Lymantria dispar*: Lepidoptera) success: importance of midgut alkalinity*. J. Insect Physiol*. 43: 1169-1175.

Posters/Presentations

Govenor, H. and J. Malinowski. 2008. Development of a Food Web Model to Evaluate Risk to the Endangered West Indian Manatee. Society of Environmental Toxicology and Chemistry– Chesapeake Potomac Regional Chapter, Spring Meeting. Shepherdstown, West Virginia.

Appel, H.M., **H.L. Govenor**, M. D'Ascenzo, E.Siska, and J.C. Schultz. 2000. True-blue, or blue and untrue? Use and misuse of Folin assays of polyphenols in ecological studies. Annual Meeting of the Ecological Society of America, Snowbird, Utah.

Rowe, H.C., **H.L. Govenor**, and C.M. Bristow. 1999. Succession of the ant community of jack pine forests in the presence of *Formica exsectoides*, a dominant species. Annual Meeting of the Michigan Entomological Society, Roscommon, MI.

Rowe, H.C., **H.L. Govenor**, and C.M. Bristow. 1998. Succession of the ant community of jack pine forests in the presence of *Formica exsectoides*, a dominant species. XIII International Congress of the International Union for the Study of Social Insects, Adelaide, Australia.

Govenor, H.L. and D.A. Herms. 1998. Physiological responses of paper birch and sugar maple to spatial and temporal variation in resource availability. Annual meeting of the Ecological Society of America, Baltimore, MD.

Govenor, H.L. 1998. What's bugging the trees?: abiotic factors alter paper birch and sugar maple resistance to chewing folivores. Environmental Protection Agency Third Annual Science to Achieve Results (STAR) Graduate Fellowship Conference, Arlington, VA.

Appel, H.M., **H.L. Govenor**, M. D'Ascenzo, E. Siska, and J.C. Schultz. 1998. Folin follies: limitations of folin phenolic assays. Gordon Research Conference on Plant Herbivore Interaction, Ventura, CA.

Govenor, H.L. and D.A. Herms. 1998. Light and nutrient availability alter constitutive resistance of paper birch (*Betula papyrifera*) and sugar maple (*Acer saccharum*) to chewing folivores . Gordon Research Conference on Plant Herbivore Interaction, Ventura, CA.

Govenor, H.L. and D.A. Herms. 1997. Effects of light, fertilization and defoliation on paper birch and sugar maple secondary chemistry and herbivore resistance: testing the carbon/nutrient balance hypothesis. Annual meeting of the Michigan Entomological Society, Midland, MI.

Giroux, P.Y. and **Govenor, H.L.** 1997,1998. Bug wars: the world of plant-insect interactions. Ingham County Math and Science Conference for Girls, East Lansing, Michigan.

Posters/Presentations (Continued)

Govenor, H.L. and D.A. Herms. 1996. Impact of light, soil nutrients, and defoliation by forest tent caterpillar on resistance of paper birch and sugar maple to gypsy moth. Annual meeting of the Entomological Society of America, Louisville KY.

Govenor, H.L. 1995. Tolerating oak tannins: multiple strategies for combating seasonally variable defenses. Penn State University College of Agricultural Sciences Undergraduate Research Fair; 3rd place.

Professional Involvement

Society of Environmental Toxicology and Chemistry (SETAC) (2000+)
SETAC-Chesapeake Potomac Regional Chapter (2008+), BOD ('09-'12), Treasurer/Web Editor ('12-'13)
Ecological Society of America (1997+)
Radford Army Ammunition Plant Restoration Advisory Board (2011+)
Reviewer for *Tropical Ecology* (2009)

Occupational Certificates / Training

Certificate in Copyediting, University of California San Diego Extension (2011)
Certified Ecologist, Ecological Society of America (2008)
Certified Associate Ecologist, Ecological Society of America (2003)
Army Corps of Engineers Wetland Delineation and Management Training (2001)
40-hr HAZWOPER General Site Worker; Confined Space Entry (1999)