# Valerie Jo Stull, PhD, MPH

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#### Education

### Doctor of Philosophy, Environment and Resources (2018)

Nelson Institute for Environmental Studies, University of Wisconsin-Madison

- Dissertation: Improving Global Health Through Insects: The Feasibility, Acceptability, and Potential Impact of Small-Scale Minilivestock Farming, with a Case Study of Zambia
- Advisors: Drs. Jonathan Patz & Michael Mayerfeld Bell
- Research Areas: Food Security, Food Sovereignty, Sustainable Agriculture & Climate Change, Global Health & Human Nutrition, Edible Insects, Health Impact Assessment

### Master of Public Health, Emphasis: Human Nutrition (2009)

Kansas State University, Manhattan, Kansas

■ Thesis: Agriculture Programs Impacting Food Security in Two HIV/AIDS-affected Kenyan and Zambian Communities

#### Bachelor of Arts, English and Nutritional Science [Minor] (2007)

Colorado State University, Fort Collins, Colorado

Cum laude and University Honors Scholar

#### Selected Grants & Awards

- Title: **Fulbright U.S. Student Research Award** (Zambia) for dissertation research Agency: Fulbright Amount: \$23,000 Date: 2015-2016
- Title: Climate Quest Competition award for research on climate change and edible insects Agency: UW-Madison Amount: \$125,000 Date: 2015
- Title: Center for Integrated Agricultural Systems (CIAS) Mini-Grant Agency: CIAS, UW-Madison Amount: \$2,000 Date: 2014
- Title: **Agriculture Innovation Prize** for team project and business plan Agency: Howard G. Buffet Foundation Amount: \$26,000 Date: 2014
- Title: Global Stewards in Sustainability Prize for insect cultivation project design Agency: UW-Madison Amount: \$10,000 Date: 2014
- Title: **Student Abstract Winner** for research on breastfeeding behaviors in Kenya Agency: Society for Nutrition Education Conference Date: 2010
- Various Scholarships & Fellowships:

Dissertation Completion Fellowship, University of Wisconsin-Madison (2017) International Service Scholarship, Kansas State University (2008 & 2009)

Nutrition Education Scholarship, Kansas State University (2009)

Nina M. Browning Memorial Scholarship, Kansas State University (2007-2008)

National Science Foundation International Experience Award, Peru (2007)

#### **Publications**

Submitted and under review: Stull, V., Finer, E., Bergmans, R., Febvre, H., Longhurst, C., Manter, D., Patz, J., Weir, T. (2018) "What's Hopping? Edible Cricket (Gryllodes sigillatus)

- Consumption and Gut Microbiota in Healthy Adults, a Double-blind Crossover Trial. Scientific Reports.
- Submitted and under review: **Stull, V.**, Kersten, M., Bergmans, R., Patz, J., Paskewitz, S. (2018). "Growth Performance and Nutritional Value of Tenebio molitor Reared on Agricultural Byproduct from Maize Production." PLOS-One.
- Submitted and under review: Stull, V., Wamulume, M., Mwalukanga, M., Banda, A., Bergmans, R., Bell, M. (2017) "Edible Insects as Totems: Entomophagy and Food Security in a Zambian Village." Agriculture and Human Values.
- Stull, V., Nkunika, P., and Bergmans, R. (2016) "The New Protein: Benefits of Insect Foods." Science Tech. News. Volume 12, No. 1, pgs. 9-12.
- Stull, V., Bell, M., and Newadi, M. (2016) "Environmental Apartheid: Eco-Health and Rural Marginalization in South Africa." Journal of Rural Studies.
- Stull, V. and Patz, J. (2015) "Agriculture Policy." In Climate Change and Public Health, edited by B. Levy and J. Patz, 1st edition. Oxford; New York: Oxford University Press.
- Stull, V., Norris, T., and Matthews, M. (2010) Data Sets, Data Platforms, Data Utility: Resource Compendium. Oakland, CA: Public Health Institute.
- Weir, T., Bais, H., Stull, V., Callaway, R, Thelen, G., Ridenour, W., Bhamidi, S., Stermitz, F, and Vivanco, J. (2006) "Oxalate contributes to the resistance of Gaillardia grandiflora and Lupinus sericeus to a phytotoxin produced by Centaurea maculosa." Planta 223: 785-795
- Weir, T., Stull, V., Badri, D., Trunck, L., Schweizer, H., Vivanco, J. (2008) "Global Gene Expression Profiles Suggest an Important Role for Nutrient Acquisition in Early Pathogenesis in a Plant Model of Pseudomonas aeruginosa Infection." Applied & Environmental Microbiology 74 (18): 5784-94

## **Selected Press Coverage**

- Invited Interview: Lake Effect, WUWM Milwaukee Public Radio, with Mitch Teich. <u>How</u> Insects Could Help Solve Global Food Challenges, August, 2017.
- University of Wisconsin News. Could squirmy livestock dent Africa's Protein Deficit? February, 2015.

# Research Experience

Principle Investigator & Co-Founder, The Mission to Improve Global Health Through Insects (MIGHTi), UW-Madison

June 2016 – Present

- Investigating potential impacts of edible insect cultivation using Health Impact Assessment
- Utilizing both qualitative and quantitative analysis to assess environmental, social, and health outcomes from insect production and consumption
- Writing original manuscripts and review papers, and speaking at public and university events
- Managing interdisciplinary team with multiple projects including ethnographic field study, clinical trial, entomological laboratory tests, and policy review

Fulbright Researcher – Institute for Economic and Social Research, University of Zambia, Lusaka, Zambia September 2015 – June 2016

- Conducted ethnographic field research on social perceptions of edible insect consumption in rural Zambian village
- Investigated food safety of edible insects processed using traditional methods
- Enumerated community surveys, evaluated agricultural practices, and assessed soil fertility

Researcher—The Livelihood, Agroecology, Nutrition, and Development (LAND) Project, Eastern Cape, South Africa, Center for Integrated Agricultural Systems (CIAS), UW-Madison January 2013 – July 2014; January – June 2015; June – August 2016

- Wrote grants and coordinated collaborative research on sustainable agriculture and livelihood development in the Engcobo district of the Eastern Cape, South Africa
- Assisted in strategic project planning, health integration, and project evaluation
- Investigated environmental apartheid impacts on health and well-being in the Eastern Cape

Graduate Program Assistant – Department of Medical History and Bioethics, UW-Madison August 2014 – Dec 2014

- Assisted with historical and archival research on medical history and bioethics on various
- Processed mail and provided support for other office organization tasks

Research Assistant – Urban Gardens & Community Development, Kansas State University, Manhattan, KS January 2010 – May 2010

- Developed and coordinated household survey of community members in Wyandotte County, Kansas City, Kansas regarding attitudes and perceptions of community, environment, health, diet, and various socioeconomic variables as baseline measurements for sociological and public health research
- Designed training materials for community enumerators and organized data collection

Program Evaluator – Comfort the Children International Community Garden Project, Maai Mahiu, Kenya June 2009 – July 2009

- Conducted individual surveys of garden participants, focus group discussions, and interviews to evaluate agriculture and nutrition program after 1 year of implementation
- Recommended improvements for program moving forward

June 2008 – August 2008

Program Evaluator, Intern – HelpMercy International, Macha, Zambia

- Conducted household surveys to evaluate the uses and usefulness of various seeds and seed types distributed to HIV-positive beneficiaries in the Macha catchment
- Completed post-survey report of recommendations for future intervention projects in Zambia

Research Intern – National Science Foundation, Medicinal Plants Project, Tambopata, Peru August 2007

- Research team member for collaborative program exploring biodiversity in the Amazon
- Established experimental sites for monitoring allelopathic chemical interactions between plants, plant-insect interactions, and general chemical ecology in the neotropics

Research Assistant – Dr. Jorge Vivanco's Laboratory, Colorado State University Department of Agriculture, the Center for Rhizosphere Biology, Fort Collins, Colorado June 2004 – August 2007

- Assisted post-doctoral and graduate student researchers with preparation of laboratory experiments in microbiology, biochemistry, and rhizosphere biology
- Set-up and conducted cell culture, nematode populations, HPLC analysis, NMR analysis, extraction and purification of root exudates, analysis, and experimentation
- Edited scientific papers for journal submission

## Teaching and Tutoring Experience

Co-Instructor – "The Agroecology of Health: Water, Food, and Wellbeing, South Africa." Inter-Ag and Nutritional Sciences 421, Global Health Field Experience. UW-Madison, Department of Nutritional Sciences Fall & Jan-term: 2014, 2015, & 2017

- Coordinated, taught, and led 2-3 week undergraduate field course to the Gauteng and the Eastern Cape Provinces, South Africa for 10-15 undergraduate global health students
- Developed curriculum combining agroecology, food security, and health for an interdisciplinary approach to global environmental health

Graduate Teaching Assistant – "Climate Change Policy and Public Health" MOOC. Nelson Institute for Environmental Studies, UW-Madison

August 2014 – August 2015

- Coordinated and developed curriculum for Massive Open Online Course (MOOC) taught by Dr. Jonathan Patz using Coursera online platform
- Managed course technical content and assisted with course plan for online assignments, videos, student communications, and guest participants for course open to students around the globe

Graduate Teaching Assistant – Nelson Institute for Environmental Studies, UW-Madison August 2012 - May 2013, January 2014 - May 2014

- Responsible for organizing online material, student grades, and course content for graduatelevel survey course "Health Impact Assessment of Global Environmental Change"
- Worked with University Education Experts to design innovative "flipped classroom" model for course
- Managed course schedule and coordinated guest lecturers & coordinated client-based student projects

#### August 2013 – December 2013

Graduate Teaching Assistant – Department of Community and Environmental Sociology, UW-Madison

- Facilitated and taught three discussion sections for undergraduate students taking the course, "Nature, Faith, and Community" CES541 combining issues of social justice and environmentalism with religion and politics
- Responsible for grading and basic discussion organization

Graduate Teaching Assistant – Department of Medical History and Bioethics, UW-Madison January 2012 – May 2012

- Facilitated and taught four discussion sections for undergraduate students taking the course, "Global Environmental Health: An Interdisciplinary Introduction"
- Coordinated and graded student assignments in collaboration with course professor
- Prepared, presented, taught course lectures, and managed grades for classes of 20+ students

Graduate Research Assistant – Leasure Hall Tutoring Center, Kansas State University August 2009 – December 2009

- Hired, trained, assisted, and managed over 50 undergraduate tutors
- Tutored undergraduate and graduate students in English and composition (grammar, organization structure)

Graduate Teaching Assistant – Department of Human Nutrition, Kansas State University August 2007 – May 2009

- Created, organized, and graded student assignments and exams for Basic Nutrition Course
- Coordinated internet based assignments, due dates, and managed course grades for both on campus and distance education sections of the course
- Prepared, presented, and taught course lectures to classes of 200+ students
- Managed online course website using K-State Online system

Academic Tutor – Student Services for Intercollegiate Athletic, Academic Learning Center, Kansas State University August 2008 – December 2009

- Served as an academic mentor for student athletes
- Provided academic tutoring, assistance, and support for English and basic science courses to student athletes individually and in groups

## **Professional Experience**

Associate, Middle East Region on "United States Agency for International Development (USAID) Palestinian Health Sector Reform and Development Project" (Flagship), Chemonics International Inc., Washington, DC 2010 - 2012

- Oversaw daily project administration and management via field office communication, travel logistics, budget analysis, consultant backstopping, and subcontractor relations
- Provided technical and editorial support to project staff
- Spearheaded project knowledge sharing of best healthcare practices through health conference participation and presentations (e.g., American Public Health Association)
- Scripted proposal sections, reviewed and edited proposal components, engaged in new business recruitment (proposal areas included: health, education, and energy with projects in India, Jordan, Ethiopia, and Zambia)
- Assisted with Chemonics' practice networks, including Health Practice Group
- Served as resource and core team member of Nutrition Task Force

Nutrition Consultant for USAID, Chemonics International, Washington, DC and Ramallah, West Bank June 2011 – December 2011

Provided short-term technical assistance to "Palestinian Health Sector Reform and Development Project"

- Assisted in project work planning and technical activities related to clinical nutrition and preventative health
- Collaborated with stakeholders to draft a Nutrition and Food Services Policy for use at Ministry of Health (MOH) clinics in the West and integrated with Project's Health Information System, food safety standards, and nutrition care policies

Independent Project Consultant with following organizations: July 2009 – July 2010

Kansas State University Extension, Expanded Food and Nutrition Education Program (EFNEP): June 2010-August 2010

- Research assistant, conducted quality of life surveys of EFNEP professionals, paraprofessionals, and community partners
- Transcribed survey responses for qualitative coding and cleaned data

Tyler Norris, Creating Healthy Communities, Boulder, Colorado: January 2010-July 2010

- Edited and developed presentation materials for Healthy Communities conferences
- Developed the "Data sets, Data platforms, Data utility: Data Utility Resource Compendium" in collaboration with Tyler Norris for the Public Health Institute

Public Health Institute, California: May 2010-July 2010

- Coordinated 20+ health data/public health organizations to develop web-based resource for "Data sets, Data platforms, Data utility: Data Utility Resource Compendium"
- Edited and organized sources for user-friendly accessibility of web-resource

WPM Consulting, LLC, Boulder, Colorado: July-November 2009

- Led team on LiveWell Colorado project to develop a statewide Food Policy Blueprint to guide healthy food and healthy eating advocacy efforts
- Researched, organized, and condensed blueprint to analyze food, nutrition and agricultural data to develop comprehensive statewide food policy strategy

Intern – Gender, Mother & Child Health Services: United Nations World Food Programme (WFP), Rome, Italy June 2006 - August 2006

- Compiled key messages for target groups for distribution to WFP Country Offices focused on nutrition and breastfeeding practices, pregnancy & lactation, critical ages for growth, malnutrition (complementary feeding), HIV/AIDS prevention, hygiene, treatment and feeding during illness, and malaria prevention
- Prepare country summary documents related to gender, nutrition, and HIV/AIDS rates for use United Nations meetings and discussion groups

Laboratory Technician and Quality Control Assistant: Paxis Pharmaceuticals, Boulder, Colorado June 2003 – February 2004

- Performed laboratory product quality control evaluations related to cGMP pharmaceutical manufacturing
- Edited, filed, and routed quality control documentation

#### **Invited Talks**

- Invited Keynote Speaker, "Chitin and the Human Gut Biome," Montana State University. Presentation Title: What's Hopping? Edible Cricket Consumption and Gut Microbiota in Healthy Adults, a Double-blind Crossover Trial. February 2018.
- Invited Speaker, "Wisconsin Union Directorate Culinary Group," University of Wisconsin-Madison. Presentation Title: Keep Calm and Take a Bite of Your Cricket Cookie. November 2017
- Invited Speaker, "Food Science & Human Nutrition Seminar," Colorado State University. Presentation Title: Let them Eat Bugs! Insects & the Search for Sustainable Protein (MIGHTi Research Synopsis). February 2017.
- Invited Speaker, "Representing research in International Development Organizations: A Panel on Bridging Gaps," University of Wisconsin-Madison. April 2017.
- Invited Speaker, "Climate, People, and the Environment Program Seminar." University of Wisconsin-Madison. Presentation Title: Let them Eat Bugs! Insects and the Search for Sustainable Protein. The MIGHTi Research Project. November 2016.
- Invited Speaker, "Seminar, Institute for Social and Economic Research," University of Zambia. Presentation Title: Understanding Edible Insect Consumption in Zambia: the Case for Future Farming. May 2016.
- Invited Speaker, "University of Wisconsin Undergraduate Entomology Club." Presentation: Farmed Insects and Sustainable Protein. March 2015.
- Invited Speaker, UW Course, "Health Impact Assessment of Global Environmental Change." Presentation Title: Food Security, Agriculture, & Climate Change. March 2015.
- Invited Speaker, "International Agriculture Colloquium," University of Wisconsin-Madison. Presentation Title: Agriculture, Food Security, & Society: Insights from South Africa. April 2014.

# **Conference Participation**

- Speaker, "American Public Health Association Conference." Presentation Title: What's Hopping? Impact of Edible Crickets on Human Gut Bacteria. November 2017.
- Speaker, "American Association of Geographers." Presentation Title: Edible Insects in Society, Do They Have a Future?: a Rural Zambian Case Study. April, 2017.
- Speaker, "American Public Health Association Conference." Presentation Title: Insect Farming and Public Health. November 2015.
- Speaker, "UW Global Health Symposium 2015: Advancing Health in an Interconnected World." Presentation Title: Farmed Insects as a Sustainable Protein Source in Zambia. April, 2015.
- Speaker, "Earth Day Conference, University of Wisconsin-Madison." Presentation Title: Let them Eat Bugs! Insects and the Search for Sustainable Protein. April 2015.
- Poster Presenter, "University of Wisconsin Ninth Annual Global Health Symposium, 2013." Poster Title: A small-scale agriculture program impacting food security in one HIV/AIDS-affected Zambian community: Analyses and Improvements. April 2013.
- Poster Presenter, "American Public Health Association Conference." Poster Title: A smallscale agriculture program impacting food security in one HIV/AIDS-affected Zambian community: Analyses and Improvements. November 2010.
- Poster Presenter, "Society for Nutrition Education Conference." Poster Title: Breastfeeding behaviors and attitudes in Maai Mahiu, Kenya. July, 2010.

 Speaker, "African Issues Symposium." Presentation Title: Kansas to Kenya: The Nutrition and Health Improvement Team. April 2009.

#### Leadership & Service

Volunteer – Kidlinks World (non-profit), Madison, Wisconsin and Johannesburg, South Africa September 2014 – Present

- Providing administrative and organizational support for fundraising, project planning, organization, and outreach
- Coordinating field-projects for US volunteers and students

Volunteer Conference Planner – "Eating Insects Athens" upcoming edible insects conference (2018) November 2017 – Present

- Assisting planning team with website development and design
- Supporting event coordination and planning

Technical Assistant – Village Makeover, Cyanika, Rwanda May 2012 - Present

- Assess and develop programs including school garden, rabbit breeding project, and potato storage systems for farming cooperatives, community demonstration farm
- Provide technical support and assistance to in-country volunteers and program funders
- Develop monitoring and evaluation plan for programs, organize training sessions

Co-Leader – International Agriculture Colloquium (IAC) Student Organization – UW-Madison May 2014 – May 2016

- Coordinated "Community Solutions: the Agroecology of Development in Africa" a public symposium that brought 5 African leaders to speak at UW-Madison in May, 2015.
- Managed events and volunteer activities to encourage frank and constructive discussion on development and food security, convening students and experts across disciplines
- Co-led student team and secured funding for events from departments and grants

Mentor – Nelson Institute for Environmental Studies Mentor Match Program, UW-Madison January 2013 – May 2014; September 2016 – May 2017

- Mentored undergraduate students in the Nelson Institute for Environmental Studies
- Met bi-monthly to discuss mentee's academic progress, career plans, and provide resources

Intern – TeachAIDS

May 2012 - May 2014

- Provided outreach and delivery support to TeachAIDS (http://teachaids.org/)
- Supported administrative staff, assisted with curriculum distribution to eligible beneficiaries
- Wrote project blog articles and transcribed interviews with HIV-prevention advocates

June 2012

Volunteer – Kansas to Kenya Community Team, Maai Mahiu, Kenya

- Supported community team to provide support and training for internally displaced people
- Provided culturally appropriate nutrition education to women, mothers, and caregivers

Volunteer – Village Makeover, Butete School Garden Project, Cyanika, Rwanda September 2011

- Planned, managed, and implemented school garden project to increase diet diversification for primary and secondary school children
- Facilitated collaboration between Kenya-based NGO and Village Makeover
- Provided nutrition education to garden beneficiaries

Volunteer Race Coordinator & Founder – "Fair-trade Awareness, Africa's Sustainability. Together." FAAST 5K Race and Fundraiser, Manhattan, Kansas January 2009 - April 2010

- Organized, managed, and implemented annual 5k fundraiser race on university campus
- Developed event website, designed promotional materials, managed race registration
- Coordinated race day proceedings, managed 20+ volunteers, liaised with 130+ participants

Volunteer—Comfort the Children International Medical Team, Maai Mahiu, Kenya July 2008 and 2009

- Provided culturally appropriate nutrition education to women, mothers, and caregivers
- Disseminated information on breastfeeding, complementary feeding, nutrition, HIV/AIDS, diet diversification, and oral hygiene to women and children in the Maai Mahiu community
- Developed and utilized culturally-competent educational flip-chart for community nutrition education and afterschool sessions written in English and Swahili

## Other Recent Community Volunteer Experience

- Garden Club Coordinator, Project PLANTS, a community-based nutrition, gardening, and physical activity club for elementary students, August - January 2009
- Jardine Community Center Academic Tutor, Manhattan, Kansas, August 2008 May 2009
- Manhattan Parks and Recreation Department Coach, 6<sup>th</sup> grade girls, spring recreational soccer season, February – April 2008
- Writing Facilitator, "Speak Out! Women's Writing Workshop," assisting incarcerated women through the Center for Community Literacy in Fort Collins, Colorado, January – May 2007
- Childcare Provider—Inkululeko Babies Home, Vryheid, South Africa May-June 2005

## Language & Technical Skills

- Intermediate Spanish, Beginner Nyanja, Swahili, Kinyarwanda
- Statistical Languages: R, SPSS, NVivo
- Geospatial Programs: ENVI, ArcGIS
- General: MS Office (Word, Excel, PPT), Qualtrics, Wordpress
- Learning Platforms: Canvas, Desire2Learn, Moodle, Coursera
- Design: Illustrator, Photoshop

# **Professional Society Memberships**

- American Public Health Association (APHA): 2015 Present
- American Association of Geographers (AAG): 2016 Present