

ALEXANDRA M. HUDDALL

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EDUCATION

Columbia University

Ecology, Evolution, and Environmental Biology Ph.D. Student (anticipated graduation Spring 2021)

American University, *Magna Cum Laude*

Double Major: BA Economics and BA in International Studies: International Development

Fellowships: National Science Foundation Graduate Research Fellow

Columbia University Dean's Fellow

EXPERIENCE

Research Assistant, NSF Collaborative Research Award: Disrupted Nitrogen Cycles in the Brazilian Amazon (Co-PIs from University of Vermont and Woods Hole Research Center) January- August 2016

- Collect data in the field, analyze data, review primary literature, and assist writing publications for this award aiming to quantify Nitrogen transformation and transport pathways in natural and agricultural settings in Mato Grosso, Brazil, such as losses of nitrous oxide to the atmosphere and movement of soluble N to rivers and streams

Research Assistant, Duncan Menge Lab, Department of Ecology, Evolution, and Environmental Biology (E3B), Columbia University May-August 2015

- Assisting with National Science Foundation greenhouse and field biogeochemistry experiment aiming to determine regulation dynamics of symbiotic Nitrogen (N) fixation (SNF) in N-fixing trees spanning a latitudinal gradient
- Investigating on the rate of symbiotic nitrogen fixation in *Robinia pseudoacacia* across tree ages in the Northeast U.S using dendrochronology and stable isotope natural abundance techniques

U.S. Agency for International Development (USAID), Bureau for Africa May 2011 – January 2014

Economic Growth Program Specialist, Sudan and South Sudan Program Office

- Monitoring and Evaluation; Technical Analysis and Support
- Conducted cost-benefit analysis for \$73 million "Feed the Future" agriculture projects for South Sudan: featured at <http://nextbillion.net/blogpost.aspx?blogid=3470>
- Designed impact evaluation of agriculture program; procured evaluation services

Acting Program Manager, President Obama's Young African Leaders Initiative (YALI)

- Public-Private Partnership building with YALI partners—Microsoft, Cisco, Cargill, Ethiopian Airlines, the Mastercard Foundation, the Mo Ibrahim Foundation and others—to co-create a workforce development, seed funding, networking, and coaching program
- Program Design and Management: Helped design \$27 million program to implement President

Obama's new continent-wide Fellowship program

- Coordinated with staff in all of USAID Missions in Africa on recruitment and selection of Fellows and the design of post-fellowship activities

TechnoServe, Cost Analyst, West and Southern Africa

January 2014-November 2014

- Supported agricultural development projects in Mozambique, South Africa, Zimbabwe, Zambia, Ghana, and Malawi
- Designed, tested, and analyzed a cost metrics system from financial and performance data to test the efficiency and quantifiable impact of different program models
- Built budgets for new projects ranging from \$300k to multimillion dollars
- Monitored and tracked expenditures for regional staff and country projects
- Trained field staff from junior-level to Country Director on new budgeting and program management tools

Intel International Science and Engineering Fair Finalist

May 2008

- Independent Research project in Toxicology: Analyzed the effect of soil lead concentration on plant growth, and quantified plant uptake of lead

PRESENTATIONS

- Ecological Society of America August 2017 meeting: "Nitrogen losses from tropical agroecosystems."
- Intensification of the world's largest agriculture frontier: reconciling agricultural production and environmental integrity in a changing climate Meeting, May 2-3, 2017, University of Brasília: "Nitrogen cycling in tropical soils."
- Black Rock Forest Research Symposium in June 2015: "The N-fixing Tree *Robinia pseudoacacia* Maintains Higher Physiological Activity and Chlorophyll Content at the End of Growing Season Compared to Neighboring Non-fixers in a Northeastern Deciduous Forest."

GRANTS AWARDED

- Earth Institute Travel Award Fall 2018 **\$750**
 - National Science Foundation Graduate Research Opportunities Worldwide **\$5,000**
 - Vetenskapsrådet Graduate Research Opportunities Worldwide **\$17,000**
 - USDA Northeast SARE Graduate Student Research Grant (declined) **\$14,813**
 - National Science Foundation Graduate Research Fellowship **\$138,000**
 - USAID Brazil Research and Innovation Fellowship for Agriculture 2017 **\$6,500**
 - Earth Institute Travel Award Fall 2017 **\$750**
 - Columbia University E3B 2016 pre-dissertation grant **\$3,000**
 - Earth Institute Travel Award Fall 2016 **\$750**
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TECHNICAL COMPETENCIES

- Stable isotope techniques, Soil greenhouse gas flux measurement, Soil extraction for ammonium and nitrate concentrations using discrete analyzer, and Spectrophotometry
- Advanced statistics skills; proficient in *R* programming language
- Advanced proficiency in Spanish and Portuguese
- Field experience in Mexico, Brazil, South Sudan, Liberia, Mozambique, and South Africa