

HUNTER STANKE

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29264 Maystead Rd, Burr Oak, MI 49030

EDUCATION

BS Forestry, Michigan State University	<i>May 2019</i>
MS Forestry, Michigan State University	<i>May 2020</i>
Graduate Certificate, Spatial Ecology, Michigan State University	<i>May 2020</i>

RESEARCH EXPERIENCE

Graduate Research Assistant, Geospatial Analysis Laboratory, *December 2018 - Present*
Department of Forestry, MSU

- Thesis Title: Assessing the status and trend in forest condition along the Appalachian National Scenic Trail (AT) and neighboring lands
- Development the 'rFIA' R Package. rFIA was designed to improve accessibility to the design-based spatio-temporal estimation capacity of the national Forest Inventory and Analysis Database by allowing users to easily produce space-time indexed summaries of forest variables within user-defined population boundaries in a widely used, open-source programming language.
- Implement spatially-enabled model-assisted estimators to improve small area estimation and assess the influence of disturbance history on stand structural development and forest population dynamics across the Appalachian region of the US.

Research Assistant, Boone and Crockett Quantitative *August 2016 – December 2018*
Wildlife Center, Department of Fisheries and Wildlife, MSU

- Designed agent-based & network-based models to assess functional connectivity of disparate white-tailed deer (*Odocoileus virginianus*) populations affected by Chronic Wasting Disease in Southern Michigan.
- Designed novel least cost path modelling framework to assess anisotropy in landscape connectivity in a fragmented agricultural- forest matrix. Model results used to inform management of Chronic Wasting Disease in Michigan white-tailed deer populations.
- Assist in capture, sedation, and GPS collaring of adult white-tailed deer using clover traps, drop-nets, and suspended net launchers. Data collected will be used to compare space use and movement patterns in suburban and agricultural landscapes and inform disease management strategies in Southern Michigan.

RESEARCH EXPERIENCE (Continued)

Research Assistant, Watershed Hydrology & Engineering Group, HJ Andrews Experimental Forest, Oregon State University *June 2018 - August 2018*

- Implement conservative solute tracer tests, fluorescent dye tracer tests, and Hvorslev slug tests to describe solute transport behavior and hyporheic exchange in mountain headwater streams of the Western Cascades.
- Application of hierarchical models and machine learning techniques to assess influence of three-dimensional structural heterogeneity of streambeds on solute transport behavior in mountain headwater streams.

Research Assistant, Walters Silvicultural Laboratory, Department of Forestry, MSU *September 2016 – January 2017*

- Layout of experimental silvicultural treatments in sugar maple (*Acer saccharum*) dominated Northern Hardwoods stands in Michigan. Treatments include single tree selection, shelterwood, and seed tree methods.
- Independent field navigation and operation in remote terrain and inclement weather. Application of GPS, field computer, and SoloForest technologies.

LEADERSHIP EXPERIENCE

Founder/ Owner, H & S Ecological Consulting, Burr Oak, MI *March 2017 – Present*

- Provide clients with technical services and expertise related to natural resource planning and ecological restoration. Services include: native prairie design and implementation; timber sale preparation and administration; reforestation planning and monitoring; development of long-term property management plans.

President, Michigan State Forestry Club, East Lansing, MI *December 2017 – December 2018*

- Provide financial services and expertise related to general account management and fundraising activities. Provide leadership in the design and implementation of new fundraising events including an annual Christmas tree sale and Spring seedling sale.

Forests Forever Scholar, Department of Forestry, MSU *August 2016 – Present*

- Provide leadership and marketing expertise in Department of Forestry and collaborating organizations. Aid in outreach and recruiting efforts at MSU and local high schools.

Founder/ Owner, Prairie River Christmas Tree Farm, Burr Oak, MI *August 2015 – Present*

- Coordinate and lead production, sales and marketing of wholesale and retail Christmas trees, wreaths, and related seasonal products. Establish and maintain client relationships and supervise three seasonal employees.

LEADERSHIP EXPERIENCE (Continued)

**Founder/ Owner, The Good Earth Furniture Company,
Burr Oak, MI**

August 2015 – Present

- Coordinate and lead production, sales and marketing of log furniture and crafts, and supervise one seasonal employee. Establish and maintain customer relationships and manage donations to conservation efforts.

**River Cleanup Volunteer Coordinator, St. Joe H₂O,
Centreville, MI**

April 2015 – May 2016

- Coordinated and lead volunteer groups to remove anthropogenic debris from river systems in St. Joseph County, MI. Lead a total of 45 volunteers and collectively treated over 50 miles of river systems within the course of 12 months.

PUBLICATIONS

Stanke, H.D., Walters, B., Domke, G., Finley, A.O. (2019, April). rFIA: An R package for estimating forest attributes with the Forest Inventory and Analysis Database. Manuscript in preparation. (Targeted Journal: Environmental Modelling and Software).

Stanke, H.D., Cook, J., Christensen, S.A., Porter, W.F., & Williams, D.M. (2017, September). Connecting the Dots: Investigating the landscape connectivity between points of Chronic Wasting Disease detection in Michigan. Manuscript in Preparation. (Submission to Landscape Ecology October 2019)

PRESENTATIONS

Stanke, H.D., Weed, A., Macfarlane, D., Finley A.O. (2019, February). Assessing the Status & Trend in Forest Condition Along the Appalachian National Scenic Trail. 2019 MSU Department of Forestry Graduate Student Symposium.

Stanke, H.D., Wondzell, S., Jones, J., Ward, A. (2018, August). Vertical Stream Concavity as a Predictor of Solute Transport Behavior in Mountain Headwater Streams. 2018 Symposium of the Ecosystem Informatics Summer Institute.

Stanke, H.D., Cook, J., Christensen, S.A., Porter, W.F., & Williams, D.M. (2018, March). Connecting the Dots: A Landscape Approach for Michigan CWD. Oral presentation at the 2018 Annual Meeting of the Michigan Chapter of The Wildlife Society.

PRESENTATIONS (Continued)

Stanke, H.D., Cook, J., Christensen, S.A., Porter, W.F., & Williams, D.M. (2017, November). Connecting the Dots: A Landscape Approach for Michigan CWD. Oral presentation at the 2017 Boone and Crockett Quantitative Wildlife Center Annual Partners Meeting, Jackson, Michigan.

Stanke, H.D., Cook, J., Christensen, S.A., Porter, W.F., & Williams, D.M. (2017, September). Investigating the Effects of Landscape Connectivity on the Detection of Chronic Wasting Disease in Michigan. Poster presentation at the 24th International Annual Meeting of The Wildlife Society, Albuquerque, New Mexico. **(Received Best Student Poster Presentation Award)**

Stanke, H.D., Christensen, S.A., Cook, J., & Williams, D.M. (2017, April). Connecting the Dots: A Landscape Approach for Michigan CWD. Oral presentation at the 19th annual University Undergraduate Research and Arts Forum, East Lansing, Michigan.

AWARDS & HONORS

- National Science Foundation Graduate Research Fellow (2019) (\$138,000)
- Goldwater Scholarship Honorable Mention, MSU (2018)
- Udall Scholarship Nominee, MSU (2018)
- Best Student Poster, 24th International Meeting of The Wildlife Society, Albuquerque, NM (2017)
- Distinguished Presenter, Red Cedar Undergraduate Research Journal, Honors College, MSU (2017)
- Humphrey Scholarship (Merit), Department of Forestry, MSU (2017)
- Sanctuary Essay Award (Merit), Rajendra Neotropical Migrant Bird Sanctuary Endowment, East Lansing, MI (2017)
- Academic All- American Award (Merit & Athletics), National High School Coaches Association (2016)
- Emil Schmeling Award (Merit), Cass County Conservation Club, Union, MI (2016)
- STATE Scholarship (Merit), Honors College, MSU, (2016)
- Senior of the Year (Valedictorian), Sturgis High School, Sturgis, MI (2016)
- Dean's List, MSU (Fall 2016, Spring 2017, Fall 2017, Spring 2018)
- Professorial Assistantship, Honors College, MSU (2016- 2018)
- Honors College Member, MSU (2016 – Present)

TEACHING EXPERIENCE

Teaching Assistant, Forestry Field Studies, Department of Forestry, MSU

Summer 2019

WORK EXPERIENCE (NON-RESEARCH)

Nursery/Landscape Technician , The Idriss Company, Sturgis, MI	<i>Jul. 2016 – June 2018</i>
Automotive Repair Technician , Smith & Stanke Auto Sales, Nottawa, MI	<i>Aug. 2014 – June 2018</i>
Forestry Intern , Bureau of Land Management, Cottonwood, ID	<i>May 2017 – Aug. 2017</i>
Wildlife Assistant , Michigan Department of Natural Resources, Jones, MI	<i>May 2016 – Aug. 2016</i>

SERVICE ACTIVITIES

Michigan Future Farmers of America, Forestry Skills Volunteer	<i>2018 - Present</i>
<ul style="list-style-type: none">• Organized and lead inaugural Forestry Bootcamp to help prepare high school and junior high school students competing for the Michigan FFA Forestry Skills Contest• Assisted in leading the 2019 Michigan FFA Forestry Skills Contest (250+ students in high school/junior high)	
The Wildlife Society Working Groups Member	<i>2017 – Present</i>
<ul style="list-style-type: none">• Biometrics Working Group• Forestry-Wildlife Working Group• Spatial Ecology and Telemetry Working Group	
Volunteer Consultant/ Technician, Fenner Nature Center East Lansing, MI	<i>2016 – Present</i>
<ul style="list-style-type: none">• Provide technical assistance and student leadership in habitat improvement projects and treatment of invasive species.	

MEDIA COVERAGE

Senior's conservation efforts span from MSU across the country. (May 30, 2018). MSU TODAY. <https://msutoday.msu.edu/news/2018/seniors-conservation-efforts-span-from-msu-across-the-country/>

Undergrad aims to make an impact in ecology & conservation. (May 16, 2018). MSU CANR News. <https://www.canr.msu.edu/news/undergrad-hunter-stanke-aims-make-an-impact-in-ecology-and-conservation>

MEDIA COVERAGE (Continued)

NatSci student nominated for elite national scholarship. (March 23, 2018). MSU College of Natural Science News. <https://natsci.msu.edu/news/natsci-student-nominated-for-elite-national-scholarship/>

Four students nominated for national stem scholarship. (January 30, 2018). Fox 47 News, Lansing and Jackson. <https://www.fox47news.com/news/local-news/four-students-nominated-for-national-stem-scholarship>

Student research project: CWD spreads east in Michigan. (November 28, 2017). The Wildlife Society. <https://wildlife.org/student-research-project-cwd-spreads-east-in-michigan/>

SKILLS

Informatics & Programming

- Spatial statistics
- Database manipulation
- Model-assisted survey estimation
- Bayesian Hierarchical modeling
- Agent-based model development
- Program R (programming & package development)
- Python
- ArcGIS
- QGIS
- STELLA
- PHREEQC
- Machine learning & optimization
- Microsoft Office Suite
- Linux Command Line

Field Ecology & Forest Management

- Forest Inventory & Mensuration
- Silviculture/ Harvest Planning
- Timber sale preparation & administration
- Prescribed Burn Planning & Operations
- Vegetation identification
- Ecological Restoration Operations – Tall grass prairie, oak- hickory forest, and oak savanna
- Invasive Species Management
- Chainsaw/ Logging operations (S- 212 Certified + Experience)
- Heavy equipment operation
- Pesticide Application (MI Certified Applicator)
- Wildland Firefighting (S-130 & S-190 Certified)
- GPS collaring of white-tailed deer
- Waterfowl banding

SELECT UNIVERSITY COURSEWORK

- Spatial Data Analysis * +
- Landscape Ecology * +
- Forest Science Research +
- Applied Ecology: Silviculture *
- Forest Ecology *
- Restoration Ecology *
- Forest Biogeochemistry and Global Climate Change * +
- Forestry Field Methods *

- Fundamentals of Soil Science
- Fundamentals of Fisheries and Wildlife *
- Renewable Wood Products *
- Insects and Pathogens of Forest and Shade Trees *
- Forest Resource Economics and Management
- Global Risks, Conservation and Criminology ⁺
- Forest Carbon Policy, Economics and Finance ⁺
- Geosimulation * ⁺
- Conservation Ethics
- Natural Resource Policy
- Human Dimensions of Forests
- Wetland Ecology and Management
- Hydrogeology
- Environmental Geochemistry *

* *Includes lab component*

⁺ *Graduate Level Course*

REFERENCES

- Julia Jones *geojulia@comcast.net*
 - Professor
 - College of Earth, Ocean, and Atmospheric Sciences
- Andrew Finley *finleya@msu.edu | (517) 432 - 7219*
 - Associate Professor
 - Department of Forestry, MSU
- David Williams *dmwill@msu.edu | (517) 432 - 0804*
 - Associate Director/ Associate Professor
 - Boone and Crockett Quantitative Wildlife Center, MSU
- Mike Walters *mwalters@msu.edu | (517) 355 - 1762*
 - Associate Professor
 - Department of Forestry, MSU