

## **DR. GRACE L. PARIKH**

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### **PRIMARY RESEARCH INTERESTS**

Conservation biology, wildlife ecology, wildlife-habitat relationships, conservation physiology, interactions between landscape processes and wildlife

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### **ACADEMIC APPOINTMENTS**

#### **Postdoctoral Associate**

**January 2022-Present**

Principle Investigator, Dr. James Cain, New Mexico State University, College of Agriculture, Consumer, and Environmental Sciences, Fisheries, Wildlife and Conservation Ecology (FWCE)

Conducting research on southwestern ungulate ecology

Instructor for wildlife ecology courses

#### **Postdoctoral Research Associate**

**August 2019-December 2021**

Principle Investigator: Dr. John Vucetich, Michigan Technological University, College of Forest Resources and Environmental Science (CFRES)

Conducted research on historical and contemporary trends in winter diet of moose

Supervised undergraduate and graduate student workers in laboratory activities

Developed laboratory protocols for preparation of archival specimens

Coordination of animal bone curation project in collaboration with National Park Service

Instructor for field and lecture-based courses

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### **EDUCATION**

#### **Doctor of Philosophy in Forest Science**

**August 2019**

Michigan Technological University, CFRES

Research advisors: Dr. John Vucetich and Dr. Christopher Webster

Dissertation: *Spatiotemporal trends in winter severity: consequences for white-tailed deer populations and habitat sustainability*

#### **Master of Science in Applied Ecology**

**May 2015**

Michigan Technological University, CFRES

Research advisor: Dr. John Vucetich

Thesis: *The influence of diet composition, plant defensive chemicals and diet composition on the nutritional condition of a free-ranging, generalist herbivore*

**EDUCATION (continued)****Bachelor of Science in Biology with Natural History minor**

University of Minnesota Duluth

Senior seminar: Fisheries Management in the Great Lakes

**May 2011****PUBLICATIONS**

Hoy, S.R., Forbey, J.S., Melody, D., Vucetich, L.M., Peterson, R.O., Koitzsch, K., Koitzsch, L., Von Duyke, A., Henderson, J.J., **Parikh, G.L.**, Vucetich, J.A. 2022. The nutritional condition of moose co-varies with climate, but not with density, predation risk, or diet composition. **Oikos** 1.

**Parikh, G.L.**, Webster, C.R., Vucetich, J.A. A microhistological investigation of White-tailed Deer winter diets in relict Eastern Hemlock stands, Upper Peninsula of Michigan, USA. **Northeastern Naturalist**, Volume 28, Issue 3: 296-310.

**Parikh, G.L.** and Webster, C.R. 2019. Press-pulse *Odocoileus virginianus* herbivory in relict *Tsuga canadensis* stands. **Forests**, Volume 10, Issue 6, 496:  
<https://doi.org/10.3390/f10060496>

**Parikh, G.L.**, Webster, C.R., Vucetich, J.A., Durocher, J.J., Bump, J.K. 2018. Does persistent snowpack inhibit degradation of fecal stress indicators? **Conservation Physiology**, Volume 6, Issue 1, <https://doi.org/10.1093/conphys/coy071>

**Parikh, G.L.**, Forbey, J.S., Robb, B., Peterson, R.O., Vucetich, L.M., and Vucetich, J.A. 2017. The influence of diet composition, plant defensive chemicals, and winter severity on the nutritional condition of a free-ranging, generalist herbivore. **Oikos** 126: 196-203.

**Parikh, G.L.**, Webster, C.R., Vucetich, J.A., Durocher, J.J., and Bump, J.K. Evidence for an adaptive stress response by white-tailed deer to winter severity. *Submitted*.

**TEACHING EXPERIENCE****Mammalogy Instructor****January 2022-present**

New Mexico State University, FWCE (FWCE 431, 4 credits)

10 undergraduate students

Developed and deliver lectures

Guide laboratory exercises in mammal identification

Facilitating camera-based field project and manuscript development

**TEACHING EXPERIENCE (continued)****Natural History of Vertebrates Instructor****January 2022-present**

New Mexico State University, FWCE (FWCE 330, 4 credits)  
 38 undergraduate students  
 Develop and deliver lectures  
 Guide laboratory exercises in comparative zoology

**Mammalogy Instructor****August 2020-December 2020**

Michigan Technological University, CFRES (FW 4240 4 credits)  
 11 undergraduate students  
 Provided synchronous in-person and virtual instruction for both lecture and laboratory  
 Facilitated camera trap survey project and data analysis  
 Guided students in developing a research manuscript

**Woody Plants of North America Lab Instructor****August 2018- December 2019**

Michigan Technological University, CFRES (FW 5020- 2 credits)  
 7-10 graduate students  
 Continual training in plant ecology to improve knowledge for teaching  
 Taught field lab for 7-10 graduate students  
 Led outdoor labs in plant identification  
 Administered weekly plant identification quizzes  
 Consistent revision in accordance with current plant taxonomy

**Biometrics Teaching Assistant****January 2019-May 2019**

Michigan Technological University, CFRES (FW 3200- 4 credits)  
 46 undergraduate students  
 Graded student lab reports and prepared laboratory exercises  
 Supervised lab component and assisted students in statistical analysis exercises

**Field Techniques Co-instructor****September-December 2018**

Michigan Technological University, CFRES (FW 2051- 2 credits)  
 76 undergraduate students  
 Co-taught lecture component of introductory natural resources field techniques  
 Delivered lectures on wildlife and ecology techniques  
 Maintained gradebook and administered online quizzes  
 Administered materials for a flipped classroom with 75 students

**Wildlife Habitat Instructor****July 2016-2018**

Michigan Technological University, Ford Forestry Center (FW 3600, 3 credits)  
 15-18 undergraduate students, 1-4 graduate students as part of Integrated Field Practicum  
 Delivered lectures and guided field data collection and analysis exercises  
 Guided students in preparing a multi-faceted forest management plan

**TEACHING EXPERIENCE (continued)**

- Mammalogy Instructor** **Fall 2015 and Fall 2017**  
 Michigan Technological University, CFRES (FW 4240, 4 credits)  
 15-18 undergraduate students per term  
 Prepared and delivered lectures  
 Guided laboratory exercises on species identification and mammalian ecology  
 Guided students in literature review projects
- Vegetation of North America Teaching Assistant** **September 2016-2018**  
 Michigan Technological University, CFRES (FW 2010, 4 credits)  
 15-20 undergraduate students per lab section  
 Laboratory instructor for undergraduate vegetation identification course  
 Led outdoor labs in plant identification and ecology  
 Proctored plant identification quizzes and lecture exams  
 Prepared laboratory manuals
- Integrated Field Practicum Teaching Assistant** **June 2016-August 2018**  
 Michigan Technological University, Ford Forestry Center  
 15-20 undergraduate students, 1-4 graduate students  
 Provided feedback on student work  
 Equipment inventory  
 Facilitated field exercises  
 Liaison between students and Ford Center staff
- Ornithology Teaching Assistant** **January-May 2014**  
 Michigan Technological University, CFRES (FW 3610, 4 credits)  
 Responsible for grading student work and writing exams  
 Prepared bird identification practice exercises  
 Facilitated field labs

**FELLOWSHIPS AND GRANTS**

- Doctoral Finishing Fellowship- Michigan Technological University-** \$9500 **Summer 2019**
- Michigan Technological University, Ecosystem Science Center Grant-** \$600 **March 2019**
- Student Travel Award- Michigan Chapter of The Wildlife Society-** \$200 **March 2018**
- National Service Fellowship- Michigan Technological University-** \$17,700 **2013-2017**
- Michigan Technological University, Ecosystem Science Center Grant-** \$750 **April 2017**

## HONORS

**Graduate Student Service Award- Michigan Technological University** Summer 2018

**Outstanding Graduate Teaching Award-Michigan Technological University** Spring 2016

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## PRESENTATIONS

**Michigan Technological University Ecosystem Science Center-** Houghton, MI April 2019

Poster: Parikh, G.L., Webster, C.R., Vucetich, J.A., Maclean, A.L. Extreme weather events affect winter habitat fidelity by white-tailed deer

**Michigan Chapter of The Wildlife Society Annual Meeting-** Gaylord, MI March 2019

Oral presentation: Parikh, G.L., Webster, C.R., Vucetich, J.A., Maclean, A.L.  
Spatiotemporal trends in white-tailed deer diet: does winter severity affect diet composition?

**The Wildlife Society- Annual Conference-** Cleveland, OH October 2018

Oral presentation: Parikh, G.L., Webster, C.R., Vucetich, J.A., Durocher, J.J., and Bump, J.K. Stress Profiles for White-Tailed Deer Wintering in the Western Upper Peninsula of Michigan

**Michigan Technological University Ecosystem Science Center -** Houghton, MI April 2018

Poster: Parikh, G.L., Webster, C.R., Vucetich, J.A., Durocher, J.J., and Bump, J.K. Stress Profiles for White-Tailed Deer Wintering in the Western Upper Peninsula of Michigan

**Michigan Chapter of The Wildlife Society Annual Meeting-** Gaylord, MI March 2018

Oral presentation: Parikh, G.L., Webster, C.R., Vucetich, J.A., Durocher, J.J., and Bump, J.K. Stress hormones in weathered fecal samples: Can snowpack prolong sample viability?

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## RESEARCH PROJECTS

**Diet composition of moose in Isle Royale National Park** September 2013-present

Ongoing microhistological analysis of moose fecal pellets and plant matter from teeth to determine historical and contemporary winter diet composition of moose.

**Genetics of white-tailed deer in the western Upper Peninsula of Michigan** 2019-2020

A collaboration with Drs. Kristin Brzeski, Carsten Kulheim, and Christopher Webster, which applies molecular genetics to questions pertaining to relatedness of regional white-tailed deer herds, as well as microbiome communities and diet using DNA metabarcoding.

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## PROFESSIONAL DEVELOPMENT

<b>Virtual Instruction Training</b> Michigan Technological University, CFRES	<b>Summer 2020</b>
<b>Conservation Genetics Laboratory Techniques</b> Michigan Technological University, CFRES	<b>Spring 2020</b>
<b>Advocates and Allies</b> NSF ADVANCE initiative for supporting underrepresented groups in STEM Michigan Technological University	<b>Oct 2019</b>
<b>Safe Place LGBTQ Ally Training</b> Michigan Technological University	<b>March 2018</b>
<b>Enzyme-linked Immunosorbent Assay Training</b> Michigan Technological University, College of Sciences and Arts	<b>June 2017</b>
<b>Applied Spatial Statistics Course</b> Michigan Technological University, CFRES	<b>Spring 2016</b>
<b>Pitching Your Research</b> Michigan Technological University, CFRES	<b>January 2015</b>
<b>Responsible Conduct in Research</b> Michigan Technological University	<b>May 2014</b>
<b>Microhistological Analysis Training</b> Michigan Technological University, CFRES	<b>September 2013</b>
<b>Bird Bander Training Course</b> Braddock Bay Bird Observatory	<b>May 2013</b>
<b>Type 2 Wildland Firefighter</b> Minnesota Interagency Fire Center	<b>March 2012-March 2013</b>

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## AFFILIATIONS

The Wildlife Society  
Michigan Chapter of the Wildlife Society  
Ecological Society of America

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## OUTREACH AND ENGAGEMENT

**Conservation Physiology**

**Reviewer**

**August 2019-present**

**Michigan Technological University**

**Unscripted Research Blog**

**August 2019**

“The Prettiest Poop You’ll Ever See” by Kelley Christensen

Featured in an article about microhistology with science communicators

**Seminar Coordinator**

**January 2016-Spring 2019**

Advertisement and planning for regular CFRES seminars and forums

**Undergraduate Research Symposium**

**Spring 2015 and 2018**

Judge for undergraduate research posters at university-wide symposium

**Graduate Student Representative, Dean Search Committee**

**Fall 2017-Spring 2018**

CFRES

**Graduate Student Representative, Wildlife Faculty Search Committee**

**Fall 2017**

CFRES

**Graduate Student Representative, School Council**

**Fall 2017-Spring 2018**

CFRES

**Graduate Student Mentor**

**Fall 2017-Spring 2018**

Houghton High School

Guided students conducting ecological research in school forest

**Hawk Ridge Bird Observatory**

**June 2011-August 2013**

Interpretive assistant

Songbird banding

Raptor banding assistant

**Great Lakes Aquarium**

**January 2010-August 2013**

Animal husbandry

Exhibit interpreter

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**PREVIOUS EMPLOYMENT**

**Field Technician**

**May 2015-August 2015**

**Michigan Technological University, CFRES**

**Drs. Christopher Webster and Yvette Dickinson**

Vegetation regeneration surveys

Herbaceous vegetation surveys

Overstory tree surveys

Estimation of fine-scale deer habitat use by fecal pellet counts  
Collected fecal pellets for diet analysis

**AmeriCorps Field Crew Member**

**February-December 2012**

**Conservations Corps Minnesota and Iowa-Moose Lake, MN**

Invasive plant mapping (GIS) and control (chemical and mechanical)

Suppressed 756 acres of wildfire

Planted 22,319 trees for erosion control purposes and reforestation

Park and recreation area maintenance

Streambank stabilization

Assisted research on ecological effects of logging at University of Minnesota

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