

Brandon Semel

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Education

- Current Virginia Tech, PhD Candidate (Advisor: Sarah Karpanty)
- 2013 – 2015 Northern Illinois University, Anthropology MA: “A Multi-Species Approach to Elucidating the Ecological Function of Primate Geophagy” (Advisor: Mitchell T. Irwin)
- 2009 – 2013 Duke University, Evolutionary Anthropology (BS with Distinction) & Environmental Science (BS): Senior honors thesis, “Effects of a Forest Edge: Altered Diet & Behavior of Silky Sifaka (*Propithecus candidus*)” (Advisors: Ken Glander & Stuart Pimm)

Honors Awarded

- 2015 Outstanding Graduate Student Award
- 2014 Second Place NIU Sigma Xi Graduate Poster Competition
- 2009-2013 Fall Dean’s List with Distinction, Spring Dean’s List, Spring Dean’s List with Distinction

Fellowships & Assistantships

- 2018 Burd Sheldon McGinnes Graduate Fellowship (\$2,000)
- 2017 Interfaces of Global Change Fellowship (\$42,000)
- 2017 Dwight Chamberlain Graduate Wildlife Fellowship (\$2,000)
- 2016 Georgia-Pacific Corporation Scholarship (\$1,075)
- 2014 National Science Foundation Graduate Research Fellowship (\$32,000 & tuition waiver/yr; 3 yrs)
- 2014-2015 NIU University Fellowship (\$9,000)
- 2013-2014 Teaching Assistantship (\$12,000 & tuition waiver/year)
- 2009-2013 Hadden Fellowship (\$2,500 per year)

Grants & Scholarships

- 2018 Margot Marsh Biodiversity Foundation Grant (\$15,000)
- 2018 Cleveland Metroparks Zoo Grant (\$3,500)
- 2018 Fulbright US Student Program Grant to Madagascar (Alternate Candidate)
- 2017 IDEA Wild Equipment Grant (\$1,200)
- 2017 Primate Conservation Inc. Grant (\$2,700)
- 2017 Greenville Zoo Conservation Grant (\$1,000)
- 2017 Sigma Xi Grants in Aid of Research (\$1,000)
- 2017 Explorers Club Washington D.C. Group (\$4,200)
- 2017 Riverbanks Zoo Grant (\$5,000)
- 2017 VT Inclusion & Diversity Grant for The Wildlife Society (TWS) & Minorities in Agriculture, Natural Resources, & Related Sciences (MANNRS) guest speaker event (\$450)
- 2016 Conservation International: Primate Action Fund (\$2,000)
- 2016 International Primatological Society Alison Jolly Lemur Conservation Grant (\$1,412)
- 2016 American Primatological Society Grant (\$1,500)
- 2016 Graduate Research Development Program Grant, Virginia Tech (\$1,000)

2016	Cleveland Metroparks Zoo Grant (\$3,000)
2015	NIU Anthropology Foundation Funds for Travel & Research (\$700)
2014	Primate Conservation Inc: "A Multi-Species Approach to Elucidating the Ecological Function of Primate Geophagy" (\$1,500)
2014	NIU Graduate Dean's Fund & Anthropology Funds for Travel & Summer Research (\$1,700)
2010	Margot Marsh Biodiversity Foundation: "Long-term Population Trends of Mongoose Lemurs (<i>Eulemur mongoz</i>)" (\$2,000)

Publications

- Semel, BP**, Baden, AL, Salisbury, RL, McGee, EM, Wright, PC, Arrigo-Nelson, SJ. (*in review*) "Testing Hypotheses for Geophagy in a Malagasy Rainforest Lemur."
- Semel, BP**, Karpanty, SM, Vololonirina, FF, Rakotonanahary, AN. (*in review*) "Eyes in the sky: Assessing the feasibility of unmanned aerial vehicles to directly monitor primate populations."
- Semel, BP**, Irwin, MT, King, RB, Konen, M, Porter, L, Keeley, MA. (*in prep.*) "A multi-species approach to elucidating the ecological function of primate geophagy."
- Semel, BP**, Irwin, MT, Raharison, J, Chapman, CA, Rothman, JM, & King, R. (*in prep.*) "A nutritional analysis of geophagy in diademed sifakas (*Propithecus diadema*)."
- Semel, BP** & Ferguson, B. 2013. "Ring-tailed lemurs (*Lemur catta*) using cliffs as sleeping sites." *Lemur News* 17: 4-6.

Professional Presentations (U Denotes undergraduate student mentored)

- 2018 **Semel, BP**; Karpanty, SM; Andrianiaina, FA; Rasolomanana, DV; & Lipford, KA^U. "Ten-year population assessment of critically-endangered golden crowned sifaka (*Propithecus tattersalli*) in northern Madagascar." International Primatological Society Meeting. Nairobi, Kenya.
- 2018 Schulte, R^U; **Semel, B**; Ferguson, B. "Golden crowned sifaka (*Propithecus tattersalli*) population estimates of forest fragments in Daraina region in northeastern Madagascar." Undergraduate Research Symposium. Drake University.
- 2018 **Semel, BP**; S. M. Karpanty; F. A. Andrianiaina; K. A. Lipford^U; & D. V. Rasolomanana. "Population trends in northern Madagascar's endangered and critically endangered lemurs: Should we be concerned?" Interfaces of Global Change Graduate Research Symposium. Blacksburg, VA.
- 2017 **Semel, BP** & Karpanty, SM. "How are we doing? Estimating lemur abundance in northern Madagascar." Interfaces of Global Change (IGC) Research Symposium. Virginia Tech.
- 2016 **Semel, BP** & Karpanty, SM. "Eyes in the sky: First reported use of drones to survey lemurs." The Wildlife Society. Raleigh, NC.
- 2016 **Semel, BP** & Karpanty, SM. "Eyes in the sky: First reported use of drones to survey lemurs." Joint meeting of the International Primatological Society & American Society of Primatologists. Chicago, IL.
- 2016 **Semel, BP**; Irwin, MT; Keeley, MA; Konen, M. "Ecological function of soil consumption by two lemur species in eastern Madagascar." Joint meeting of the International Primatological Society & American Society of Primatologists. Chicago, IL.
- 2016 **Semel, BP**; Irwin, MT; Keeley, MA; Konen, M. "A multi-species approach to elucidating the ecological function of primate geophagy." American Association of Physical Anthropologists Annual Meeting. Atlanta, GA.
- 2015 **Semel, BP**. "A Multi-Species Approach to Elucidating the Ecological Function of Primate Geophagy."

NIU Sigma Xi Research Event. Northern Illinois University, IL.

- 2014 **Semel, BP**; Irwin, MT; Raharison, J; Chapman, CA; Rothman, JM. "More Fiber Means More Dirt? The Role of Geophagy in Diademed Sifakas." *American Association of Physical Anthropologists* V 153 Special Issue Supp 58: 236. Calgary, Canada.
- 2013 **Semel, BP**; Ferguson, B; Irwin, MT; Rhodes, K; Donati, G. "Pointing & counting: A better method for determining the densities of western sifakas?" Midwest Primate Interest Group. Iowa State University, IA.
- 2013 **Semel, BP**; Ferguson, B; & Mahamaro, TH. "Evaluating methods for determining abundance: Implications for remote sensing of western sifakas." International Prosimian Congress. Ranomafana, Madagascar.

Research & Work Experience

- 2017-2018 **PhD Research**; Nine months of field research in Daraina, Madagascar. Used line transects to estimate 4 lemur and >20 bird species densities. Led two teams of 10 Malagasy field techs, 4 Malagasy graduate students, & 2 American undergraduate student. Collected fecal material for genetic analysis and vegetation data using standard methods.
- 2017 **National Geographic Student Expedition Leader**; Guided ~20 high school students around central & southern Madagascar, teaching them about the history, culture, & biodiversity of the island & engaging in service projects around Ranomafana National Park.
- 2016 **PhD Research**; Three month field research in Daraina, Madagascar. Used unmanned aerial vehicle (UAV) and walking transects to estimate 4 lemur and >20 bird species densities. Led team of 5 Malagasy field techs, 2 Malagasy graduate students, & 1 American undergraduate student. Collected fecal material for genetic analysis and vegetation data using standard methods.
- 2014 **Masters Student**; Field research in Tsinjoarivo, Madagascar. Investigated ecological function of geophagy in two lemur species. Led team of 9 Malagasy & 1 American research assistants & camp staff during two-month remote field study. Collected over 800 hours of feeding & behavioral data as well as fecal, botanical, & soil samples for parasite & nutrient lab analyses.
- 2011 **Independent Research**; One-month field research in Makira Conservation Zone, Madagascar. Remote field study of critically endangered silky sifaka (*Propithecus candidus*) diet, behavior, & habitat. Compared altitudinal, geographic, & forest quality differences between several habituated lemur groups. Coordinated with Dr. Erik Patel.
- 2011 **Research Coordinator, Earthwatch Institute**; Dr. Luke Dollar; Organized/directed research teams in Ankarafantsika National Park, Madagascar; transects documenting fossa (*Cryptoprocta ferox*) abundance & live trapping supplementing long-term studies. Conducted vertebrate surveys & evaluated roads impacts on fauna inhabiting the largest tract of dry deciduous forest in Madagascar. Assisted with school construction & exotic species management.
- 2009-2013 **Duke Lemur Center, Primate Care Technician**; Assisted in management of world's largest collection of lemurs. Facilitated animal care & enrichment. Provided special educational tours & managed volunteer work days.
- 2009 **Applied Ecological Services, Field Ecologist**; Surveyed rare plants & plant communities with top botanists in the state; identified & documented state-listed endangered & threatened species, used GPS & GIS to map high quality natural areas for Illinois Natural History Survey & Illinois Natural Areas Inventory.

2005-2009 **Illinois Dedicated Nature Preserve, Natural Area Steward;** Restoration & management of a rare calcareous fen & surrounding sedge meadow & mesic prairie. Used chemical & manual techniques, as well as fire, to remove exotic & invasive species.

Mentorship & Teaching Experience

I supported the independent research of 2 Virginia Tech undergraduate students in Madagascar summer 2016 & fall 2017. I currently am supervising 3 undergraduate students working in my lab. I mentored 1 junior as part of the Virginia Tech chapter of The Wildlife Society graduate mentorship program.

- 2017 **National Geographic Madagascar Student Expedition Leader;** Co-led 16 high school students on a community service & wildlife discovery trip across southern Madagascar.
- 2016 **Stanford/SIT Study Abroad Invited Lecturer;** Lectured 20 students on primate field research methods and lemur conservation and ecology. Interpreter on field trips.
- 2015 **Intro to Archaeology (ANTH 210);** Managed discussions, wrote test questions, assisted students with learning.
- 2014 **Intro to Anthropology (240 Honors);** Wrote test questions, assisted students with learning
- 2014 **Intro to Anthropology (120) & Rise of Civilizations (ANTH 102);** Lectured, managed lab, wrote test questions, graded assignments, assisted students with learning.
- 2013 **Intro to Physical Anthropology (ANTH 240) & Cultural Anthropology (ANTH 220);** Managed lab, wrote test questions & weekly assignments, graded assignments, led class discussions.
- 2012 & 2013 **Lemur Research Team Leader, Operation Wallacea;** Instructed international students in primate population estimate & behavioral ecology field study methods in Mandrare Valley, Madagascar. Lectured on lemur evolution, ecology, behavior, & ongoing research efforts. Documented key taxonomic groups (avian, herpetofauna, & small mammals) as foundational data in developing a Climate, Community, & Biodiversity Alliance report to support Biosphere Reserve application.

Service

- 2018 **Bird Banding;** Banded >300 royal tern (*Thalasseus maximus*) chicks as part of the Virginia Tech Shorebird Group's efforts to monitor the impacts of nesting habitat destruction by an infrastructure improvement project in Virginia's Hampton Bay.
- 2018 **Fisheries Field Assistant;** Surveyed local streams for endemic fish species including the near threatened candy darter (*Etheostoma osburni*).
- 2018 **SEEDS Blacksburg Nature Center Earth Day Volunteer;** Instructed the construction of bird feeders & on the proper seed use for local birds to children & adult participants.
- 2016-2018 **Christmas Bird Count;** Yearly citizen science event to monitor migratory birds across the United States. Volunteered at several locations in northern Illinois.
- 2017 **Tazewell Kids;** Natural resource education and plant identification outreach for 4th grade students from Tazewell County, VA, which is historically under-represented in higher education.
- 2016-2017 **Strouble's Creek Restoration;** Planted trees and shrubs and cleared the stream of garbage as part of Virginia Tech's ongoing restoration efforts.
- 2016-2017 **FIWGSA Treasurer;** Organized fundraising opportunities, secured grants, and managed the budget for the Fish & Wildlife Graduate Student Association events and professional support for

students.

- 2016-2017 **TWS Graduate Student Liaison;** Mentored undergraduates in Virginia Tech's TWS chapter, planned meetings, organized speakers, and facilitated networking opportunities between undergraduate and graduate students. Radford/Virginia Tech TWS BioBlitz for long-term wildlife monitoring at the Selu Conservancy, VA.
- 2016-2017 **Stadium Woods Restoration;** Cleared invasive ivy species crowding out native ephemerals in one of Virginia's oldest remnant woodlands.
- 2016 **Camera Trapping;** Collected camera trap data to support long-term species monitoring efforts at the Mountain Lake Biological Station in partnership with TWS Virginia Tech chapter.
- 2016 **Virginia Science Festival;** Engaged in interactive educational outreach related to habitat loss/degradation, invasive species, pollution, disease, and climate change as part of the Interfaces of Global Change program at Virginia Tech.
- 2016 **Science Fair Judge;** Judged scientific merit of dozens of high school science fair projects for Grace Academy in Charlotte, NC.
- 2014-2015 **Nachusa Grasslands Restoration;** Cleared invasive brush, collected and planted native seeds, and assisted with prescribed fires as part of The Nature Conservancy's efforts to restore Illinois prairie and reintroduce bison since their statewide extirpation *ca.* 1830.
- 2013-2015 **Anthropology Graduate Student Council, President;** Co-founder of organization, represented students at faculty meetings, organized workshops & faculty/student research symposiums.
- 2012-2013 **Duke/UNC Roots & Shoots, Vice President;** Organized & secured funding for transportation for free student Lemur Center tours & volunteer workdays.
- 2012 **National Geographic's Big Cats Initiative, Volunteer Researcher;** Conducted literary reviews of scientific material as supporting documentation to BCI Board for determining distribution of grant monies & top priority issues for *in situ* big cat conservation.

Membership in Professional Societies:

The Wildlife Society
 International Primatological Society
 American Society of Primatologists
 American Association of Physical Anthropologists
 Sigma Xi Scientific Research Society, Associate Member

Skills & Certifications:

Language: French (conversational, written proficiency), Malagasy (basic)
 Computer: ArcGIS 10.1, SPSS, Program R, DISTANCE, MARK
 PADI Open Water Diver
 Certified Tracker (CyberTracker North America): Level 1
 S-130 & S-190 Wildland Fire Training Certified