

JOHN W. LOWER

2607 Vista Larga Ave NE, Albuquerque, NM 87106
(802) 989-2325 jlower@unm.edu

EDUCATION

University of New Mexico

Albuquerque, NM

- **PhD (*in progress*)**, Evolutionary Anthropology (Fall 2020 – Present)
- **Academic Advisor:** Professor Martin Muller, Ph.D.
- **Affiliations:** Kibale Chimpanzee Project, Comparative Human and Primate Physiology Center
- **Additional Roles:** Graduate Student Researcher, Teaching Assistant in Human Behavioral Ecology
- **Relevant Coursework:** Hormones & Behavior, Primate Evolution, Human Physical Activity
- **Research Interests:** Primate ecology, ethology, endocrinology, and evolution related to dominance, aggression, competition, cooperation, and reproduction of common chimpanzees (*Pan troglodytes*) and other hominids.

Middlebury College

Middlebury, VT

- **Bachelor of Arts**, Neuroscience major, Italian minor (May 2016)
- **Academic Advisor:** Professor Mark Spritzer, Ph.D.
- **Affiliations:** Spritzer Laboratory, Ernstrom Laboratory, Men's Varsity Soccer Team, Page One Literacy Project, DREAM
- **Honors:** *cum laude* graduate, GKA National Italian Honor Society, All-Academic athlete (2), College Scholar (2), Dean's List (3)
- **Relevant Coursework:** Animal Behavior, Animal Physiology, Physiological Psychology, Environmental Psychology, Ecology & Evolution, Tropical Ecology, Sexual Selection, Cell Biology & Genetics, Chemistry, Statistics, Calculus II

Non-degree Coursework

- **University of Vermont**, Biological Anthropology (Summer 2018); **Boston University**, General Chemistry II (Fall 2016)

RESEARCH

Peer Reviewed Publications

- Jaeger, E.C.B., Miller, E.L., Goins, E.C., Super, C.E., Chyr, C.U., **Lower, J.W.**, Honican, L.S., Morrison, D.E., Ramdev, R.A., & Spritzer, M.D., 2020. Testosterone replacement causes dose-dependent improvements in spatial memory among aged male rats. *Psychoneuroendocrinology* 113, 104550. <https://doi.org/10.1016/j.psyneuen.2019.104550>.

Senior Research Project & Symposium Presentation

- **Lower, J.W.**, 2016. Effect of Testosterone on Spatial Memory in Aged Male Rats. *Middlebury College*.

FIELDWORK EXPERIENCE

Kibale Chimpanzee Project

Kibale National Park, Uganda

Research Associate/Photographer (Fall 2017 - Spring 2018)

- Spent +60 hrs/wk in the field photographing and collecting data on the anatomy and behavior of wild Eastern chimpanzees as part of a long-term research project organized and funded by Harvard, Tufts, and the University of New Mexico.
- Imported, edited, cataloged, and categorized mass quantities of photographic, photogrammetric, and videographic data.

Bottlenose Dolphin Research Institute

O Grove, Spain

Research Assistant/Intern (Winter/Spring 2017)

- Assisted with observation and collection of behavioral/environmental data surrounding marine cetacean and bird species at sea
- Conducted various data analyses, using photo ID, GIS, bioacoustic and statistical programs, to better understand the behavioral ecology, social structure, and conservation of bottlenose dolphin populations along the Atlantic coast and Arousa Firth of Spain.

LABORATORY EXPERIENCE

Department of Biology/Program in Neuroscience, Middlebury College

Middlebury, VT

Independent Researcher (Spring 2016)

- Ran, coordinated, and presented a study on the Effects of Testosterone on Spatial Memory in Aged Male Rats to investigate its pharmaceutical potential in restoring age-related memory loss and associated hypogonadism.
- Performed daily injections, habituation, husbandry, behavioral testing, enzyme-linked immunosorbent T-assays, and surgical procedures, such as bilateral castration and postmortem brain extraction over a 5-month period of independent research.

The Neuroscience Institute at NYU School of Medicine

New York, NY

Research Assistant/Intern (Summer 2015)

- Characterized the chemical composition and synaptic connectivity of hippocampal interneurons associated with certain behaviors, such as head direction, in genetically-modified mice.
- Washed, sliced, and stained mouse brains using immunohistochemistry for visualization and analysis involving intracellular recording and electrical stimulation of targeted neurons.

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Center for Neural Science at New York University

New York, NY

Research Assistant/Intern (Winter 2015)

- Administered and supervised striatal, hippocampal, and cortical-dependent neuropsychological tasks on human subjects in order to investigate the effects of long-term exercise on memory, cognition, and spatial learning.
- Organized and analyzed data from a variety of behavioral, electrophysiological (EEG), and VO₂ max tests.

Department of Biology/Program in Neuroscience, Middlebury College

Middlebury, VT

Research Assistant/Lab Technician (Summer 2014)

- Participated on team of researchers in molecular neurobiology and genetics lab investigating the “Localization of Synaptic V-ATPhases in *Caenorhabditis elegans*.”
- Stocked solutions and maintained various *C. elegans* strains by methods of decontamination, sanitization, and selective breeding.

TEACHING & SERVICE EXPERIENCE

Department of Anthropology, University of New Mexico

Albuquerque, NM

Teaching/Graduate Assistant (Fall 2020 – Present)

- Assist Professor Martin Muller and other faculty in teaching and grading materials submitted by undergraduate students in the fall semester course on Human Behavioral Ecology.

Private Tutoring

Dedham, MA

Science Tutor (Fall 2018 – Present)

- Tutor 9th – 12th grade high school students in various scientific subjects, including regular and AP Biology, Chemistry, Biochemistry, Physics, etc. Sessions are performed in-person or via virtual video platforms, such as Zoom, FaceTime, Skype, etc.

Noble & Greenough School

Dedham, MA

Biology Teaching Fellow (Fall 2018 – Spring 2020)

- Taught honors-level courses in biology, biochemistry, and research methodology to high-school students, in addition to various other coaching, advising, residential, and extracurricular duties, responsibilities, and professional development in education.

Northfield Mount Hermon School

Gill, MA

Teaching Assistant/Intern (Summer 2017)

- Worked alongside a master teacher to help plan, prepare, and teach summer courses in Marine Biology and Science Skills.
- Independently taught a course in Astronomy, coached soccer, and acted as a residential advisor for boarding students, grades 7-9.

Camp Keewaydin Temagami

Temagami, Canada

Trip Leader & Guide (Summer 2013, 2014, & 2016)

- Co-led and supervised campers, ages 11-15, on canoe-trips of up to 21 days in length through the Canadian wilderness.
- Completed 80-hour Wilderness First Responder course (including CPR certification) and extensive staff training.

Page One Literacy Project

Middlebury/Salisbury, VT

Elementary School Tutor & Program Treasurer (Fall 2013 – 2015)

- Promoted literacy and early reading skills by tutoring and mentoring 1st– 5th grade students at local after-school programs.
- Managed finances for student organization’s expenses and annual budget.

Conservatorio Santa Maria degli Angeli

Florence, Italy

Teaching Assistant/Intern (Spring 2015)

- Taught English, science, math, and a variety of other subjects to children grades K-6 at a local catholic school in Florence.

Vermont Soccer School

Johnson, VT

Goalkeeper Coach/Counselor (Summer 2014)

- Assisted at Middlebury College soccer recruitment and development camp for prospective players, ages 13-18.
- Coached, refereed, organized drills, and performed demonstrations of effective goalkeeping techniques.

SKILLS

Computer Skills: SPSS, LoggerPro, Darwin, Spectrogram, Lightroom, Photoshop, iMovie, Zoom, Skype, Microsoft Office suite (Excel, Database, PowerPoint, Word, etc.), and all Google programs (Drive, Sheets, Slides, Docs, Forms, etc.)

Language Skills: Proficient in oral/written Italian; Basics in oral/written Spanish, French, and Rutooro (Uganda)