Eric J. Chameroy

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Education

Master of Science in Biological Sciences

University of Nevada, Las Vegas

Bachelor of Science in Ecology and Evolutionary Biology

University of Connecticut

Research Interests

Using 3D scanning technologies for documentation, preservation, and analysis of archaeological, historical, and paleontological specimens. Drone mapping. Botany and plant ecology.

Experience

Staff Research Scientist

Desert Research Institute, Las Vegas, NV

- Assisted with field drone mapping, including photogrammetric processing of images, producing 3D models, point clouds, digital elevation models (DEMs), and orthomosaic images.
- Generated species distribution models (SDMs) using the R programming language.
- Used structure-from-motion (SfM) photogrammetry and Agisoft Metashape to create color scans of 74 sediment core cross-sections for colormetric analysis.
- Wrote Python scripts to analyze color scans of sediment core cross sections and generate colormetric profiles.
- Processed GIS data associated with sediment coring projects to produce figures and maps using ArcGIS Pro.

Photogrammetry Data Processor

Desert Research Institute, Las Vegas, NV

- Assisted with geoarchaeological investigations for US Department of Defense projects at MCAGCC in Twentynine Palms, CA.
- Processed over 240 3D rock art models associated with the investigations at MCAGCC using structure-frommotion (SfM) photogrammetry and Agisoft Metashape.
- Wrote automation scripts for Agisoft Metashape using the Python programming language.
- Assisting with geoarchaeological investigations for US Bureau of Reclamation projects in Central and Northern California.

Graduate Teaching Assistant

University of Nevada Las Vegas, Las Vegas, NV

- Supervised a range of laboratory courses both in-person and on-line covering subjects including biology, geology, and physical geography for class sizes up to 25 students, up to 50 students a semester.
- Created slide presentations using Microsoft PowerPoint and Google Slides.
- Communicated important lesson concepts to students and graded assignments.
- Maintained grades using the online Canvas Learning Management System.

Environmental Technician II

Fuss & O'Neill EnviroScience, LLC, Manchester, CT

- Performed inspections for asbestos-containing building materials, lead-based paint hazards, and indoor air quality in schools, businesses, hospitals, and private residences.
- Monitored and documented the progress of abatement projects to ensure compliance with state and federal regulations.
- Prepared reports documenting the results of inspections and projects for distribution to clients.
- Assisted with groundwater, soil, and sediment sampling.

Seasonal Resource Assistant

Connecticut Department of Environmental Protection, Hartford, CT

- Assisted with fish population sampling: identified species, collected scale samples, and measured body length.
- Processed fishing tournament permit applications.
- Resolved tournament reservation conflicts through communications with fishing club directors.

December 2015

May 2024 – Present

May 1999

August 2023 – May 2024

August 2012 - May 2023

December 2007 – August 2012

March 2005 - September 2005

- Monitored fishing tournaments at Candlewood Lake in western CT to ensure compliance with state • regulations.
- Participated in removal harvesting of invasive water chestnut (Trapa natans) from waterways. •

Field Research Assistant

Central Connecticut State University, New Britain, CT

- Assisted with a peatland ecological study in northern Alberta, Canada.
- Collected measurements/sample collecting for variables including water pH, peat depth, soil nutrient/bulk • density/biomass, and estimated percentage plant species coverage.
- Acknowledged in the publication: Nicholson, B.J., S.E. Bayley, and H.E. Whitehouse. 2006. Inferred history of a boreal pond from sediment and vegetation characteristics. Canadian Journal of Soil Science 86: 335-47.
- Data collected from this field work was used to examine how plant communities in the peatlands responded over time in response to changing wet and dry conditions.

Research Projects

Master's Thesis Project

University of Nevada Las Vegas, Las Vegas, NV

Title: Assessing the importance of nurse plant associations to the growth of pre-reproductive Yucca brevifolia

- Designed a field-based plant removal experiment involving 144 pairs of pre-reproductive Joshua tree (Yucca brevifolia) and spiny hopsage (Grayia spinosa) to examine the importance of nurse plant associations to the survival of pre-reproductive Joshua tree and how these associations may change over time.
- Conducted in Dry Lake Valley, Lincoln County, Nevada under a Bureau of Land Management permit.
- Assessed reallocation of resources following plant removal by sampling soil and leaf material and recording plant measurements.
- The study did not detect a reallocation of resources, however, did suggest that nurse plant associations provide ٠ small, pre-reproductive plants protection from herbivory.

Volunteer Experience

Las Vegas Natural History Museum, Las Vegas, NV

July 2020 - May 2023 Assisted with study involving historic-age bovid remains excavated from Carson City, NV in June 2020. Performed field excavation in Carson City, NV and fossil reconstruction at the Las Vegas Natural History Museum.

Created three-dimensional models of Mammuthus columbi molars for use in an on-line lesson plan that instructs • on how to use mammoth molars to age individuals and understand population demographics. Models were created using Structure-from-Motion (SfM) photogrammetry and Agisoft Metashape.

Additional Information

Publications

- Lancaster, JD, Chameroy, E., Harrow, A., and Skaar, E., 2024. An extended phase I geoarchaeological • investigation, Compact Bypass Channel Project. Prepared for ASM Affiliates, Bakersfield, CA. Unpublished report.
- Lancaster, JD, Whitley, D.S., Chameroy, E., 2024. Specialized recordation of the Foxtrot Petroglyph Site, Twentynine Palms, CA: Project end report. Prepared for the Department of the Navy, Naval Facilities Engineering Systems Command Southwest. Unpublished report.
- Pereira, T., Lancaster, JD, Stefanova, T., and Chameroy, E. 2024. An ensemble model for Las Vegas Bearpoppy . (Arctomecon californica) with UAS and traditional surveys - final report. Prepared for the Bureau of Land Management, Arizona State Office. Unpublished report.
- Rowland, S.M., Whitworth, T.L., Jones, M., Dooley, J., Chameroy, E., and Gordon, T. 2023. The bison and the blow fly: Using puparia of the black blow fly (Phormia regina: Diptera, Calliphoridae) to constrain the season of death and taphonomic history of an early-historic-age bison, Carson City, Nevada, USA: Palaios. Vol. 38, No. 1, doi: 10.2110/palo.2021.039.

Invited Presentations

Facilitation and competition in Yucca brevifolia - Grayia spinosa nurse plant associations, Nevada Native Plant Society, Henderson, NV, March 3, 2013

Departmental Presentations

August 2012 – December 2015

July 2003 - August 2003

- Facilitation and competition in *Yucca brevifolia Grayia spinosa* nurse plant associations, University of Nevada, Las Vegas, School of Life Sciences, October 23, 2013
- Facilitation and competition in *Yucca brevifolia Grayia spinosa* nurse plant associations, University of Nevada, Las Vegas, School of Life Sciences, March 11, 2015

Professional Presentations

• Rowland, S.M., Jones, M., **Chameroy, E.J.**, and Gordon, T.R., 2023, The bison and the blow fly: using blow fly puparia to constrain the season of death and taphonomic history of an early-historic-age bison, Carson City, Northern Nevada, Geological Society of America Abstracts with Programs. Vol. 55, No. 4, doi: 10.1130/abs/2023CD-387433.

Poster Presentations

- Rowland, S.M., Caputo, M.V., and **Chameroy**, **E.J.**, 2024, Silicified bones, invertebrate burrows, and eolian adhesion structures in the Pennsylvanian Wescogame Formation, Supai Group, Grand Canyon, Arizona; Geological Society of America Abstracts with Programs. Vol. 56, No. 5, doi: 10.1130/abs/2024AM-404589.
- **Chameroy, E.J.**, Rowland, S.M., and Caputo, M.V., 2023, Photogrammetric documentation of some known, yet undescribed late Pennsylvanian (Wescogame Formation) tetrapod trackways of Grand Canyon National Park, Arizona, USA; Geological Society of America Abstracts with Programs. Vol. 55, No. 4, doi: 10.1130/abs/2023CD-387397.
- **Chameroy, E.J.**, Rowland, S.M., and Caputo, M.V., 2022, Hidden in plain sight: revisiting some known tetrapod trackways of the Wescogame Formation (Late Pennsylvanian) of Grand Canyon National Park, Arizona, USA: Geological Society of America Abstracts with Programs. Vol. 54, No. 2, doi: 10.1130/abs/2022CD-374002.
- **Chameroy, E.J.** and Rowland, S.M., 2021, A potential new canid track ichnospecies from the mid-Miocene Thumb Member of the Horse Spring Formation, Lake Mead region, southern Nevada: Geological Society of America Abstracts with Programs. Vol. 53, No. 6, doi: 10.1130/abs/2021AM-370030.
- Rowland, S.M., Gordon, T.R., and **Chameroy**, **E.J.**, 2021, An early-historic-age bison and pronghorn skinning and butchering site in the Carson Valley of northern Nevada: Geological Society of America Abstracts with Programs. Vol. 53, No. 6, doi: 10.1130/abs/2021AM-368980.
- **Chameroy, E.J.** and Rowland, S.M., 2021, A mid-Miocene canid trackway from the Thumb Member, Horse Spring Formation of the Lake Mead region of southern Nevada: Geological Society of America Abstracts with Programs. Vol. 53, No. 4, doi: 10.1130/abs/2021CD-363081.
- Rowland, S.M., Gordon, T.R., and **Chameroy**, **E.J.**, 2021, The Gordon bison site: a Native American butchering site of early historic age in the Carson Valley of northern Nevada: Geological Society of America Abstracts with Programs. Vol. 53, No. 4, doi: 10.1130/abs/2021CD-363077.
- Taylor, W.J., **Chameroy, E.J.**, Ely, R.M., Konkright, K.J., Medema, J., Peck, A.M., and Rafferty, K.C., 2017, Seismic hazard and paleoseismicity in southern Nevada: the California Wash Fault: Geological Society of America Abstracts with Programs, v. 49, no. 6, p. 314, doi: 10.1130/abs/2017AM-300654.

Grants and Fellowships

- GPSA Sponsorship Fund (University of Nevada, Las Vegas Research Grant, Fall 2014), \$1,250
- GPSA Sponsorship Fund (University of Nevada, Las Vegas Research Grant, Summer 2014), \$900

Conferences Attended

- Geological Society of America, Cordilleran Section, Reno, NV, May 2023
- Geological Society of America, Cordilleran Section, Las Vegas, NV, March 2022
- Geological Society of America, Portland, OR, October 2021
- Geological Society of America, Cordilleran Section, Virtual, March 2021
- Society of Vertebrate Paleontology, Albuquerque, NM, October 2018
- Botanical Society of America, Albuquerque, NM, August 2001
- Botanical Society of America, Portland, OR, August 2000
- Botanical Society of America, Baltimore, MD, August 1998

Technology & Skills

Certificate in Computer Information Systems, Manchester Community College, Manchester, CT

May 2007

- **Programming:** Python, R
- **GIS:** ArcGIS Pro, QGIS
- **Productivity:** Google Workspace, Microsoft Office
- Image and 3D Model Processing: Adobe Camera RAW, Adobe Photoshop, Blender, CloudCompare, DxO

Photolab, MeshLab

• **Photogrammetry:** Metashape, RealityCapture, 3DF Zephyr