Evan Hobson

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Education

Brigham Young University, Provo, Utah   2021 – Present
B.S. Wildlife & Wildlands Conservation   *Expected Graduation: April 2027*

Focus: Quantitative ecology, wildlife movement, spatial modeling

Selected Coursework: Geographic Information Systems; Wildlife Behavioral Ecology; Scientific Computing; Linear Algebra; Computational Linear Algebra; Data Structures; Introductory Computer Programming; Principles of Wildlife & Fishery Management

Research Interests

Movement ecology; decision-making during movement; habitat selection (RSF/SSF/SSA); biologging and accelerometer-based behavioral inference; applied conservation and management on working landscapes.

Research Experience

BYU Rangeland Ecology Lab   **Provo, UT**
Research Assistant   Sep 2025 – Present
- Lead analyst for GPS-collar study of cattle movement and grazing behavior using resource and step-selection functions (RSF/SSF)
- Designed and maintained reproducible spatial modeling pipeline (covariate generation, model fitting, validation, spatial prediction) in **R** and **ArcGIS**
- Analyzed GPS and accelerometer-linked telemetry from **35 collared cattle** on a 991-ha sagebrush steppe allotment in southeastern Idaho (5-min fixes in 2021; 7-min fixes in 2022)
- Produced management-relevant selection maps linking space use to topography, water access, annual grass (cheat-grass) cover, and weather covariates to inform targeted grazing strategies
- Awarded **BYU College Undergraduate Research Award (CURA; $4,000)** supporting analysis, manuscript preparation, and required conference presentation
- Re-established and advanced analysis of legacy feral horse telemetry datasets for manuscript development

BYU Wildlife Ecology Lab   **Provo, UT**
Research Assistant   Jul 2024 – Jul 2025
- Conducted field research on pygmy rabbit (*Brachylagus idahoensis*) ecology, including camera deployment, vegetation sampling, and habitat covariate collection
- Assisted with mule deer GPS collar retrievals, mortality investigations, and tissue collection
- Performed cementum annuli aging and microscopy-based laboratory workflows

Selected Research Projects

Cattle Resource Selection During Late-Fall Grazing on Sagebrush Steppe   2025 – Present
- Lead analyst for RSF/SSF modeling of late-fall cattle grazing behavior in southeastern Idaho
- Modeled selection relative to elevation, slope, aspect, terrain ruggedness, distance to water, annual grass cover (RAP), and weather covariates (station and PRISM)

- Implemented use–availability design, model selection, and spatial prediction to identify high-probability grazing areas
- Manuscript in preparation (lead author)

Feral Horse Movement and Space Use in Northwestern Nevada   2025 – Present
- Analyzed legacy GPS telemetry from 11 feral horses (30-min fixes; 2 months–2 years)
- Quantified daily distance traveled and daily space use using averaged daily minimum convex polygons (MCPs)
- Employed MCPs as a non-traditional, derived movement metric rather than for home-range inference
- Interpreted movement patterns relative to water availability and seasonal aridity
- Manuscript in preparation (lead or co-lead author)

Comparing RSF, SSA, and Accelerometer-Informed Inference   2025 – Present
- Methods-focused project comparing habitat selection frameworks using accelerometer-derived behavioral states
- Emphasis on how framework choice alters inference for decision-making during movement
- Project in advanced analysis; manuscript in preparation

Research Outputs

Manuscripts in Preparation (Lead or Co-Lead Author)
- Hobson, E., et al. *Cattle resource selection during late-fall grazing on sagebrush steppe in southeastern Idaho.*
- Hobson, E., et al. *Seasonal and monthly variation in feral horse movement and space use in northwestern Nevada.*
- Hobson, E., et al. *Comparing RSF, SSA, and accelerometer-informed inference for decision-making during movement.*

Other Scholarly Writing & Presentations

Hobson, E. *Permission to Feel, Power to Become: How emotional engagement can enable spiritual growth.*
BYU Student Religion Symposium; accepted for presentation and invited for submission to symposium proceedings (non–peer reviewed).

Additional Experience

Western North American Naturalist   Provo, UT
Assistant to Editor-in-Chief   Apr 2025 – Present
- Managed dispersal of **$10,000+** in grant funds supporting journal operations
- Coordinated **50+ peer reviewers**, improving review turnaround and editorial workflow efficiency
- Gained experience with peer review, editorial decision-making, and scientific publishing standards

BYU Mathematics I.T. Department   Provo, UT
Lead Student Computer Specialist   May 2023 – Dec 2023
- Led technical support for faculty and applied mathematics labs
- Supported Linux system administration and computational lab transitions

Technical Skills

Modeling & Inference: RSF, SSF, SSA, GLMs, use–availability designs, model selection, spatial prediction
GIS & Spatial Data: ArcGIS; raster/vector workflows; covariate derivation; cartographic outputs
Programming: R (primary); Python; Bash; Git; exposure to C++ and Julia through coursework
Telemetry & Field: GPS collars; accelerometers; vegetation sampling; camera trapping
Scientific Writing: Manuscript drafting; figures; peer-review workflows