



Call for Abstracts

Wyoming Chapter of The Wildlife Society Annual Meeting April 12 - 14 Jackson, WY

Submission Deadline: **February 22, 2022**

The Wyoming Chapter of The Wildlife Society is pleased to announce an in-person conference this year at the **Lodge at Jackson Hole**, Jackson WY during April 12 - 14. A link to reserve a hotel room at the special conference rate will be available shortly on the WY-TWS website. Rooms will be \$129/night + \$15 nightly fee (includes buffet breakfast) + tax.

Online registration can be found here: <http://wytwsconference.org/register/>. Registration will open on February 15. Please be sure to register by **March 11th** to obtain the early bird rate (\$185 professionals, and \$115 student).

Presentations on any pertinent wildlife or habitat-related issue will be considered, and submissions by individuals at all career stages are encouraged. The conference committee will make every effort to accommodate all oral and poster presentation requests, but may have to be selective depending on space and demand. Some oral presentations may be recommended for poster presentations. Presentations focused on completed analyses will be given preference for talks compared with work that is still in the early stages.

Submitters will be notified about the status of their abstracts by **March 4, 2022**, and will then have one week to confirm that they still intend to attend the conference and present.

ABSTRACT FORMAT: 300-word limit, single paragraph, with the title in all caps. Note that the online submission platform does not allow for special formatting (e.g. italics) or characters. Please refer to the last pages of this document for an example abstract to guide formatting. Please submit your abstract electronically on the conference website: <http://wytwsconference.org/abstract-submissions/>. Only submissions that are formatted correctly and received via the online submission portal will be considered.

ORAL PRESENTATIONS will be limited 15 minutes in length, including questions. Please limit your talk length to approximately 12 minutes to accommodate Q & A.

POSTER PRESENTATIONS Can be up to 5 feet wide by 4 feet tall. Posters will be presented on the evening of Tuesday April 12. We encourage anyone who is currently developing a research project or presenting preliminary data to present a poster rather than a talk.

STUDENT PRESENTATION AWARDS: This year, WY-TWS will be awarding four student presentation awards: Best poster; and best undergraduate, Master’s student and doctoral oral presentation awards. Judges’ feedback (excluding scores) will be provided to students. If you wish to be considered for an award, please make sure to check the student box in the online application form.

TRAVEL FUNDS: There are funds available for travel awards to help offset conference costs. Both students and professionals are eligible. Award application instructions will be posted on the conference website (<http://wytwsconference.org>). Applications are also due by **February 22**.

COVID CONSIDERATIONS: The leadership of WY-TWS acknowledges the fluid situation in terms of the on-going COVID pandemic, and want to offer an in-person conference experience with which participants feel safe and comfortable. Please check the website for updates related to COVID safety and conference policies.

EXAMPLE ABSTRACT SUBMISSION

Responses to questions

1. Name of presenting author (last, first): Sawyer, Hall
2. Is the presenting author a student? No
3. Email address for presenting author: hsawyer@west-inc.com
4. Phone number for presenting author: Phone
5. Preferred presentation format (select one): Oral full-length (15 min)

Title

A FRAMEWORK FOR UNDERSTANDING SEMI-PERMEABLE BARRIER EFFECTS ON MIGRATORY UNGULATES

Author names

Hall Sawyer (1), Matthew J. Kauffman (2), Arthur D. Middleton (3,4), Thomas A. Morrison (3), Ryan M. Nielson (1), Teal B. Wyckoff (3,5)

Affiliations

- (1) Western Ecosystems Technology, Inc., Laramie, WY
- (2) US Geological Survey, Wyoming Cooperative Fish and Wildlife Research Unit, Department of Zoology and Physiology, University of Wyoming, Laramie, WY
- (3) Wyoming Cooperative Fish and Wildlife Research Unit, Department of Zoology and Physiology, University of Wyoming, Laramie, WY
- (4) Program in Ecology, University of Wyoming, Laramie, WY
- (5) Wyoming Geographic Information Science Center, University of Wyoming, Laramie, WY

Main text

Impermeable barriers to migration can greatly constrain the set of possible routes and ranges used by migrating animals. For ungulates, however, many forms of development are semi-permeable, and making informed management decisions about their potential impacts to the persistence of migration routes is difficult because our knowledge of how semi-permeable barriers affect migratory behavior and function is limited. Here we propose a general framework to advance the understanding of barrier effects on ungulate migration by emphasizing the need to: 1) quantify potential barriers in terms that allow behavioral thresholds to be considered, 2) identify and measure behavioral responses to semi-permeable barriers, and 3) consider the functional attributes of the migratory landscape (e.g., stopovers) and how the benefits of migration might be reduced by behavioral changes. We used global position system (GPS) data collected from two subpopulations of mule deer (*Odocoileus hemionus*) to evaluate how different levels of gas development influenced migratory behavior, including movement rates and stopover use at the individual level, and intensity of use and width of migration route at the population level. We then characterized the functional landscape of migration routes as either stopover habitat or movement corridors, and examined how the observed behavioral changes affected the functionality of the migration route in terms of stopover use. We found migratory behavior to vary with development intensity. Our results

suggest that mule deer can migrate through moderate levels of development without any noticeable effects on migratory behavior. However, in areas with more intensive development, animals often detoured from established routes, increased their rate of movement, and reduced stopover use, while the overall use and width of migration routes decreased.