

Abstracts-Plenary Session

NOU Fall 2026 Meeting

Kearney, NE 9/11-12/2026

Not a trap but not forever: Piping Plovers at sandpits in the lower Platte River system

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In the northern Great Plains, USA, the federally threatened Piping Plover (*Charadrius melodus*) uses a variety of nesting habitats including natural river sandbars and human-created sandpit sites in the lower Platte River system, Nebraska. Off-river sandpit sites (i.e., sand and gravel mines, transition sites, and lakeshore housing developments) are not managed to prioritize nesting and are often considered inferior habitat to sandbars. Most Piping Plovers in the lower Platte River system nest off river when sandbar habitat is limited, yet, the quantity of habitat provided at off-river sites is predicted to decline. Therefore, evaluating vital rates among different off-river nesting habitats will inform future conservation efforts.

We evaluated nest and adult survival of Piping Plovers at sandpit nesting sites in the Lower Platte River system from 2008-2023 using a long-term monitoring dataset collected by the Tern and Plover Conservation Partnership. We found that nest survival did not differ among off-river habitat types or between off-river sites and sandbars. Breeding season adult survival was higher at lakeshore housing developments than at mines and transition sites, but overall annual survival of adults and hatch-years was similar to other breeding areas in the northern Great Plains population. Our results support prior research suggesting that off-river nesting sites may boost Piping Plover persistence in the Lower Platte River System when river sandbar conditions are unfit for nesting. However, the unsustainability of off-river habitat necessitates that managers consider the recovery implications of uncertain habitat availability both on and off river for the continued persistence of Piping Plovers in the region.

Relating Male Plumage, Song, and Genetic Ancestry Across the *Passerina* Bunting Hybrid Zone

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Hybrid zones between closely related taxa have long been recognized as fruitful systems for investigating the origin and maintenance of reproductive isolation, as they allow for focused studies aimed at disentangling the complex relationships between traits important in mate choice and reproductive isolation. The hybrid zone between the Indigo Bunting (*Passerina cyanea*) and the Lazuli Bunting (*Passerina amoena*) is a particularly interesting system for examining such topics, as both parental species distinctly differ from one another, both in their song and their plumage- two traits that are particularly important to mate choice. Past work in this contact zone has documented significant female mate preference towards conspecific males, as well as greater female reliance on plumage over song to express this preference. However, little is known about patterns of variation in traits important in female mate choice. This study aims to identify the relationships between song and male plumage, as well as their independent respective relationships to genetic ancestry among *Passerina* males across their hybrid zone. By identifying and quantifying these relationships, we can better understand how these traits contribute to reproductive isolation between the species and improve understanding of how hybridization dynamics will evolve in the face of continued environmental change.

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