

Interim Report - NMDGF Motus Tagging 2024

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Please let this serve as the interim report summarizing Bird Conservancy of the Rockies' (BCR) work under Professional Services Contract #25-5160000-00009 for our Share with Wildlife project titled "Filling in key knowledge gaps in the ecology of grassland birds that winter in New Mexico" for September 2024 - present.

Overview

Since 2019, Bird Conservancy has led the expansion of the Motus Wildlife Tracking System in the Great Plains and Western U.S. To date, this multi-funder effort has allowed us to install nearly 100 receiver stations and tag more than 300 individuals of priority grassland bird species.

Accomplishments

During the period of performance, we planned for and executed a successful field season and deployed 39 tags on two species of grassland birds in Eastern New Mexico. See Appendix 1 for a full summary of all accomplishments.

Future plans

We are presently analyzing detection data for the tagged birds and will provide an in-depth final report by August 31, 2025. This report will highlight over-wintering detections, spring migration departure dates, stopover locations, migration paths, and breeding season arrival dates.

Sincerely,

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Appendix 1: Motus Tag Deployment

Field Season Planning and Preparation

Between September and December 2024, BCR staff prepared for the winter field season. We coordinated with staff at the two study sites, Bitter Lake National Wildlife Refuge and The Nature Conservancy's Milnesand Prairie Preserve. Each study site hosts one of BCR's many Motus receiver stations, GPCD Milnesand Prairie Preserve (<https://motus.org/data/receiverDeployment?id=10150>), and GPCD Bitter Lake (<https://motus.org/data/receiverDeployment?id=9827>). We also interviewed and hired three field technicians, inventoried supplies, and revised protocols and datasheets.

Motus Tag Deployment

Between December 2024 and February 2025, BCR field technicians were onsite in eastern New Mexico. At Bitter Lake National Wildlife Refuge, the crew scouted suitable grassland areas but were unable to capture any of the target species. At Milnesand Prairie Preserve, the crew successfully deployed 39 tags on two species of grassland birds (Table 1). After scouting for the best locations to capture birds, technicians were able to capture and tag 38 Chestnut-collared Longspurs (Figure 1) and one Grasshopper Sparrow at the preserve. We deployed a mixture of hybrid-powered (i.e., solar and battery) tags manufactured by Cellular Tracking Technologies (CTT; n=28) and battery-powered tags (model # NTQB2-5-1) manufactured by Lotek Wireless, Inc. (n=11). We subsequently detected 24 of the tagged individuals at various Motus receivers maintained by BCR and our partners (Figure 3).

For a complete breakdown of tags deployed, including species, tag type, date of deployment, and number of receivers by which the tag has been detected as of June 1, 2025, please see Table 1 or visit the Motus website at <https://motus.org/data/projectTags?id=747>.

Data Analysis and Reporting

From March 2025-present, we have been downloading, filtering, and analyzing detection data from the tagged individuals. The results from this analysis will be provided in a final report summarizing over-wintering detections, spring migration departure dates, stopover locations, migration paths, and breeding season arrival dates for Chestnut-collared Longspurs wintering in eastern New Mexico.

Table 1. 39 tags deployed on grassland birds at Milnesand Prairie Preserve, Milnesand, New Mexico, between December 2024 and February 2025. Data can be viewed at <https://motus.org/data/projectTags?id=747>

ID#	Mfg ID	Latest deployment	Days detected	Receivers detected by
82978	554B522A	ID# 61668, 2025-02-17, Chestnut-collared Longspur	7	1
84085	397	ID# 61667, 2025-02-16, Chestnut-collared Longspur	1	2
84160	562	ID# 61666, 2025-02-16, Chestnut-collared Longspur	1	2
84113	27	ID# 61665, 2025-02-16, Chestnut-collared Longspur	3	6
84061	87	ID# 61664, 2025-02-16, Chestnut-collared Longspur	1	1
84084	396	ID# 61663, 2025-02-16, Chestnut-collared Longspur	0	0
82982	4B663466	ID# 61662, 2025-02-16, Chestnut-collared Longspur	17	4
84076	102	ID# 61661, 2025-02-16, Chestnut-collared Longspur	0	0
82733	55665555	ID# 61660, 2025-02-16, Chestnut-collared Longspur	0	0
82740	2D4C5578	ID# 61659, 2025-02-16, Chestnut-collared Longspur	13	2
84110	24	ID# 61658, 2025-02-16, Chestnut-collared Longspur	0	0
83253	334C3434	ID# 61657, 2025-02-16, Chestnut-collared Longspur	0	0
82899	4C610778	ID# 61656, 2025-02-16, Chestnut-collared Longspur	19	4
82742	612A344C	ID# 61655, 2025-02-16, Chestnut-collared Longspur	14	4
84162	564	ID# 61654, 2025-02-16, Chestnut-collared Longspur	0	0
83367	33522D1E	ID# 61632, 2025-02-10, Chestnut-collared Longspur	0	0
84124	38	ID# 61622, 2025-02-09, Chestnut-collared Longspur	0	0
82780	1E78611E	ID# 61621, 2025-02-09, Chestnut-collared Longspur	1	2
82793	2D612A34	ID# 61620, 2025-02-09, Chestnut-collared Longspur	2	3
83242	551E5555	ID# 61605, 2025-02-08, Chestnut-collared Longspur	0	0
82744	4C782A2A	ID# 61604, 2025-02-08, Chestnut-collared Longspur	8	6
84088	400	ID# 61594, 2025-02-04, Grasshopper Sparrow	0	0
83044	19666661	ID# 61593, 2025-02-04, Chestnut-collared Longspur	18	8
83035	2A07611E	ID# 61592, 2025-02-04, Chestnut-collared Longspur	10	4
83312	1E192A1E	ID# 61591, 2025-02-04, Chestnut-collared Longspur	5	4
82802	61611933	ID# 61590, 2025-02-04, Chestnut-collared Longspur	5	4
82797	34333461	ID# 61589, 2025-02-04, Chestnut-collared Longspur	6	4
82787	52070766	ID# 61588, 2025-02-04, Chestnut-collared Longspur	8	2
84122	36	ID# 61555, 2025-01-27, Chestnut-collared Longspur	0	0
82979	2D554C4B	ID# 61554, 2025-01-27, Chestnut-collared Longspur	4	1
82789	614C2A78	ID# 61553, 2025-01-27, Chestnut-collared Longspur	0	0
82782	2D192D4C	ID# 61552, 2025-01-27, Chestnut-collared Longspur	8	6
82776	1E4B5507	ID# 61551, 2025-01-27, Chestnut-collared Longspur	0	0
83252	4C1E3461	ID# 61549, 2025-01-26, Chestnut-collared Longspur	0	0
82785	4C2D552D	ID# 61548, 2025-01-26, Chestnut-collared Longspur	2	4
83247	2D55334B	ID# 61547, 2025-01-26, Chestnut-collared Longspur	8	4
83262	612A1E78	ID# 61546, 2025-01-26, Chestnut-collared Longspur	1	1
51776	2A336134	ID# 61545, 2025-02-14, Chestnut-collared Longspur	14	6
83264	1E782A4C	ID# 61520, 2025-01-23, Chestnut-collared Longspur	0	0



Figure 1. An adult male Chestnut-collared Longspur at Milnesand Prairie Preserve (photo by Alyssa DeRubeis).



Figure 2. An adult Grasshopper Sparrow (photo by Trenton Voytko).

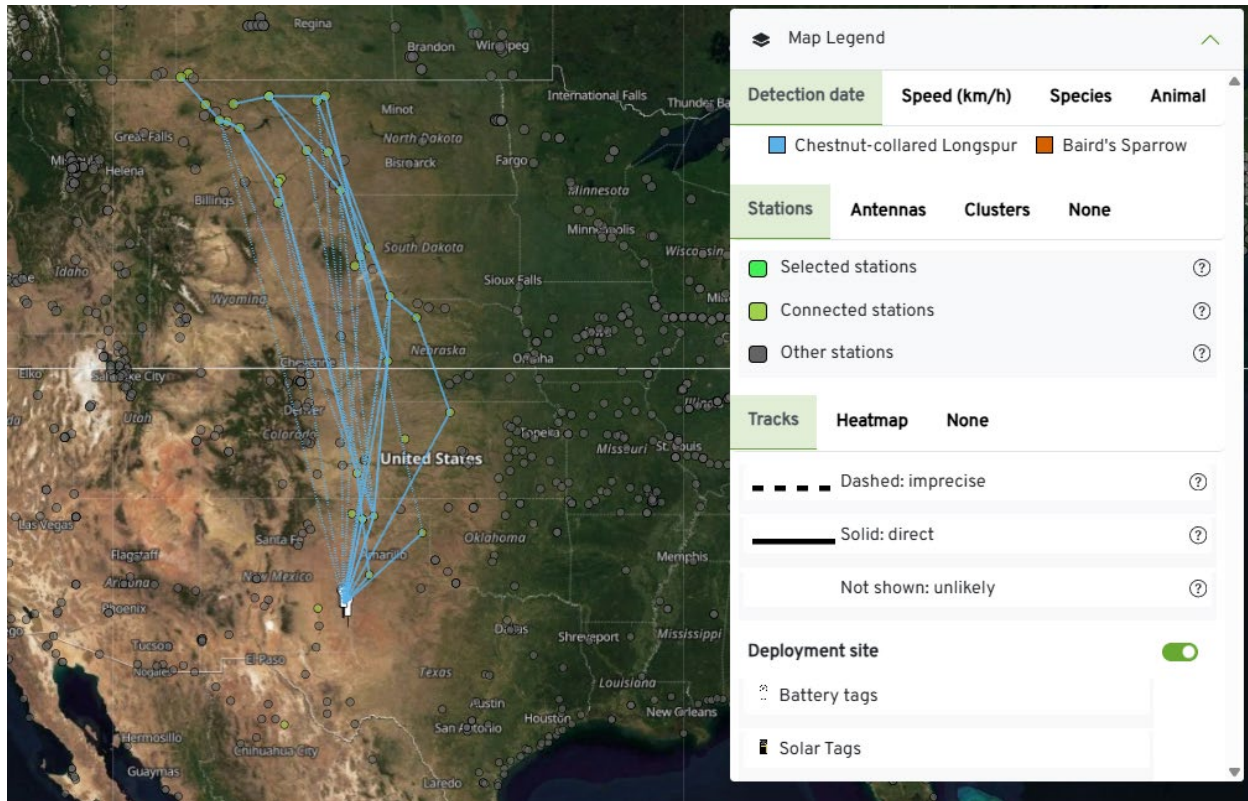


Figure 3. Map of tag detections of 39 grassland birds tagged in New Mexico (Motus project #747), between December 2024-February 2025. Map current as of June 3, 2025.

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