Chestnut-collared Longspur (*Calcarius ornatus*)
Conservation Status Rank Summary

October 9, 2024

For details on assessment and ranking methodology, see: *Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species*

Rarity and Trends

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Rarity					
Range Extent	2024-04-23	S: 254055.2 km²	4.710	MTNHP Range Maps	None
Area of Occupancy			-		**Factor not used in ranking.**
Number of Occurrences	2024-10-09	4777	5.500	MTNHP Databases	None
Population Size			-		**Factor not used in ranking.**
# of Occurrences in Good Condition	2024-04-23		0.000	MTNHP Data	Threats are likley impacting or have potential impact on much of the species range as indicated by declining trend
% of Area Occupied in Good Condition			-		**Factor not used in ranking.**
Environmental Specificity	2011-12-20	Narrow	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Narrow Specialist. Dependent on shortgrass prairie (grass height less than 12 inches with less than 8 inches probably ideal for nesting). This species is found to prefer double the density of grass that McCown's Longspur did at North Valley County monitoring points. | Methodology: NS (2003) | Original Score: B
Rarity is calculated by averaging weighted factor scores: **((4.71 × 1) + (5.50 × 1) + (0.00 × 2)) / 4 = 2.55**					
Trends					
Short-term Trend	2023-12-20	-12.7%	-0.070	IMBCR	IMBCR trend in population estimates for Montana. "-Point Estimate"
Long-term Trend	2011-12-20		-0.140	MTNHP Species Rank Data Table	Grassland habitats have been heavily impacted since European arrival and species has probably declined by 25-50% over this time period. | Methodology: NS (2003) | Original Score: D
Trends score is calculated by summing weighted short and long-term trend scores: **((-0.07 × 2) + (-0.14 × 1)) = -0.28**					

Threats

Rank Factor	Date Assessed	Value	Score	Data Source	Comments
Threats					
Overall Threat Impact		High	1.830		None
Intrinsic Vulnerability	2011-12-20	Not intrinsically vulnerable	-	MTNHP Species Rank Data Table	**Factor not used in ranking.** Not Intrinsically Vulnerable. Species matures quickly, reproduces frequently, and/or has a high fecundity such that populations recover quickly (5 years or 2 generations) from decreases in abundance. Species has good dispersal capabilities such that extirpated populations generally become reestablished through natural recolonization. | Methodology: NS (2003) | Original Score: C
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: **(1.83) = 1.83**					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Agriculture & Aquaculture	None	High	Pervasive	Serious	High	Warning: Auto-rolled multiple Level 2 threats to Level 1
Pollution	2024-10-09	Low	Large	Slight	High	Pesticide application may have impacts to invertebrate prey and minor impacts from direct exposure
Climate Change & Severe Weather	2024-10-09	Medium	Pervasive	Moderate	High	Extreme weather can impact breeding and nest success. As storms increase in severity with climate change, future impacts are likely but their ultimate impact is unknown
Threat Tally: 0 - Very High, 1 - High, 1 - Medium, 1 - Low Overall Threat Impact* = High						

*See Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species for calculation of Overall Threat Impact based on the number and impact of individual threats.

Conservation Status Rank Calculation

Raw score

Rarity: (2.55 × 70%) + Threats: (1.83 × 30%) + Trends: (-0.28) = 2.06

Calculated Rank: S2

Accepted Rank	S2B
Date Approved	2011-12-20
Approval Authority	Montana Species of Concern Committee
Rank Justification	Species is widely distributed across grassland habitats east of the continental divide. It is currently declining and faces significant threats from degradation and fragmentation of native habitat through agricultural practices, declining prey abundance due to pesticide application, and increase risk of sever weather with impacts to nest success.

Supplementary Information

Montana Natural Heritage Program. 2021. Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species. 18 p.
https://mtnhp.mt.gov/docs/Montana_State_Rank_Criteria_20211201.pdf

Montana Field Guide Species Account:
https://fieldguide.mt.gov/speciesDetail.aspx?elcode=ABPBXA6040

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=ABPBXA6040

Information Needs

Information needs are assessed by considering the availability of factors used to assess species status as well as the quality of these assessments. Current information availability and quality to inform Conservation Status Rank for this species are highlighted.

Rank Factor	Assessment Category	Value	Criteria
General Status	Status Quality	Adequate	Calculated rank has low uncertainty and is represented by a single rank (e.g. S3); accepted rank may be adjusted to a range rank (e.g. S2S3)
		Poor	Rank assessed as SU or calculated rank has notable uncertainty and corresponds to a range rank with 2 or more values (e.g. S2?, S1S3, or S4S5)
Rarity	Range Quality	Adequate	Range polygon adequately represents area of probable occupancy and does not include substantial unoccupied areas; range may be adequately defined and still include areas of unsuitable habitat (e.g. mountain ranges for plains species)
		Marginal	Range polygon defined, but may include or exclude notable areas where the species may or may not occur on the landscape
		Poor	Range polygon not defined
	Habitat Quality	Adequate	Species-habitat relationship is well-defined (e.g. relevant literature or robust habitat model available)
		Marginal	Understanding of species-habitat relationship is adequate among some but not all habitats (e.g. literature covers similar habitats outside of Montana or habitat model performance is only somewhat adequate)
		Poor	Species-habitat relationship is not well understood
Threats	Threat Quality	Adequate	Threat Impact is a single value (including "Unthreatened")
		Marginal	Threat Impact assessed at more than one value (e.g. "High - Medium")
		Poor	Threat Impact is Unknown but Intrinsic Vulnerability is assessed
		Unknown	Threat Impact is Unknown and Intrinsic Vulnerability is not assessed
Trends	Recency	Current	Short-term Trend assessment date less than 10 years old
		Out of Date but Adequate	Short-term Trend assessment date is more than 10 years old or Unknown, but species is Unthreatened
		Out of Date	Short-term Trend assessment date more than 10 years old
		Not Available	Short-term Trend data are not available
	Trend Quality	Sufficient	Short-term Trend assessed at a single value or multiple values with a minimum trend greater than -10% (stable or increasing)
		Unknown but Sufficient	Short-term Trend is Unknown, but species is Unthreatened
		Poor	Short-term Trend is less than -10% (in decline) with two or more values selected
		Unknown	Short-term Trend is Unknown

Summary of Information Availability

Species is well studied and all categories have sufficient data to inform status ranking efforts.

Summary of Information Needs

No additional information needs are recognized at this time. To monitor declines and inform management actions and recovery, monitoring of populations should continue.