



Wintering Grassland Birds of the Rio Grande Basin

Article by
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A **LOGGERHEAD SHRIKE** (aka, butcher bird) sits atop a mesquite limb as it scans the desert grassland below for unsuspecting prey.

If you take a walk during the winter season through the countryside that surrounds the towns of Marfa, Fort Davis, Marathon and Alpine, you may at first have a feeling of being absolutely alone with only the grass and chill of the wind for company. But if you look deep enough, you may be surprised to see how this large expanse of land hosts different species of birds such as the Horned Lark, Eastern and Western Meadowlark, Sprague's and American Pipit, and 19 different species of sparrows. On rare days, it is possible to find astonishing birds of prey like the Golden Eagle, Ferruginous Hawk, Swainson's Hawk or even, with a little bit of luck, the almost disappeared Aplomado Falcon, looking for prey as it perches from a yucca.



ROADRUNNERS utilized a variety of habitats in the Chihuahuan Desert, including the desert grasslands.





SAVANNAH SPARROWS (left) and Rufous-crowned Sparrows are some of the more common grassland birds that frequent the desert grasslands of West Texas.

Grassland birds are not characterized by conspicuous colors or melodious songs; on the contrary, these birds are secretive and elusive, with pale colors and patterns that try to imitate the dry vegetation of the desert. These birds are especially drab and quiet during the winter season, when more than 60 different species of birds migrate to the arid grasslands of West Texas, New Mexico, and Arizona or even further south to Central and Northern Mexico.

Unfortunately grassland birds, as a group, have declined more than any other group of birds according to the Breeding Bird Survey which is conducted annually by the U.S. Geological Survey. This decline is primarily due to loss of habitat, including fragmentation and deterioration of grasslands.

Researchers with the Borderlands Research Institute and the Rio Grande Research Center at Sul Ross State University in Alpine have partnered with the Rocky Mountain Bird Observatory and have spent the past three years monitoring the wintering habits of grassland birds in the Rio Grande Basin. During that time, we have visited 25 properties in West Texas and the Mexican state of Chihuahua, studying where each species of grassland birds spend the winter and trying to determine why.

Grassland birds have special preferences selecting for different grassland structure and different grass species. They are also very susceptible to changes in weather patterns. Variables like precipitation and temperature have a large impact on their migration path and wintering grounds. There may be hundreds of them one year but only a dozen the next, right in the same area.

Because of these preferences, some birds have been found to be good indicators of habitat condition. For example, species like Baird's Sparrow and Sprague's Pipit are usually found in very well-managed grasslands dominated by blue grama. These two species are rare, and their populations have been reduced by 90 percent in recent years. The extensive grasslands found north in Marathon Basin are important for the Sprague's Pipit since its numbers there have been higher than in other grasslands within their winter range. Other species like Grasshopper Sparrows and Eastern and Western Meadowlarks are also indicators of grasslands in good condition.

You may also see Chestnut-collared and McCown's Longspurs, which have characteristics similar to sparrows. They usually travel in large flocks and have been observed in great numbers in the grasslands that surround Marfa and Fort Davis. The density of Chestnut-collared Longspurs in this region is one of the highest ever recorded for that species in its winter range. Unfortunately, the Rockhouse wildfire that occurred this year burned thousands of acres of grassland, and may affect the occurrence of Longspurs in coming years.

On the other hand, there are birds that indicate an increase in shrubs in grassland, like the Black-throated Sparrow and Pyrrhuloxia. These species prefer shrub land areas, and their presence in open grasslands may indicate that shrubs are encroaching. Other species, like the Horned Lark are commonly found in short grasslands and areas with bare soil. Their ideal habitat can often be associated with high levels of livestock or wildlife grazing.

The populations of grassland birds also followed some of the common theories associated with island biogeography. Our research illustrates that larger areas of grassland tend to have higher number of species than small patches. This means that keeping large contiguous grasslands is important and the fragmentation of grasslands not only reduces the habitat availability for grassland birds, but also affects the species diversity.

The Rio Grande Basin may be considered a part of a huge corridor for wintering migrant grassland birds, and the conservation of these grasslands is vital. Desert grasslands are used like an oasis in the desert for hundreds of migratory birds, especially the grasslands in Brewster, Jeff Davis and Presidio counties in West Texas and La Perla in Chihuahua. This region is one of the largest wild areas in Southwestern United States and Northern Mexico where urbanization has not impacted the wilderness.

Because of the ecological importance, the Commission for Environmental Cooperation and the Nature Conservancy created the Marfa Grassland Priority Conservation Area (GPCA) in 2005. It has an area of 3,123 km² and is centered in Presidio, Brewster



and Jeff Davis counties. This area was home to a large herd of pronghorn. And, until the early 1990s, it hosted a breeding population of Mountain Plover. There are currently no significant threats to this region, as most landowners manage livestock with conservative stocking rates.

Across the border in Mexico, it is not the same story for the area dominated by rolling hills and valleys known as the La Perla grasslands. This area is located in Northeast Chihuahua and has been proposed to be included in the GPCAs, since it has one of the last herds of pronghorn in Mexico and there are records of Aplomado Falcon. Unfortunately, one of the main threats of this region is a shift to cultivated agriculture. Large patches of grasslands have become monocultures in recent years. If this change continues, a large amount of habitat for grassland birds will soon be lost.

Using grassland birds as bio-indicators may be a good solution for drawing



WITH THE HELP of the Peregrine Fund and partnering landowners, populations of Aplomado Falcons have been increasing in the Marfa Grassland and surrounding regions.



BURROWING OWLS are strongly associated with prairie dog colonies found through the desert grasslands.

attention to grassland birds and promoting the interest of land managers, landowners, resource professionals, politicians and the general public on bird conservation. The success and survival of these birds depend on the corridors of grasslands that connect Canada, the United States and Mexico. An international effort to maintain native grasslands through this corridor for grassland birds, that doesn't recognize political boundaries, is essential for their future. 🌱



SPRAGUE'S PIPIT are one of the more rare species found in the desert grasslands on the Rio Basin.

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