

Grassland Birds Under Threat

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Grassland Birds Under Threat: Insights from Kaziranga's Census

Context

In his recent *Mann Ki Baat* address, **Prime Minister Narendra Modi** highlighted a significant conservation initiative—the **first-ever Grassland Bird Census** undertaken in **Kaziranga National Park**, Assam. This effort is seen as a crucial step towards assessing and conserving **India's fast-depleting grassland bird species**, many of which are endangered or endemic to specific ecosystems like the **Brahmaputra floodplains**.

Introduction

Grassland birds are a unique group of species adapted to survive in **open, grassy ecosystems**. These birds not only reflect the health of grasslands but also face increasing threats from **habitat degradation, climate change, and land-use conversion**. The Kaziranga census stands out for its **scientific methodology**, especially the use of **acoustic monitoring**, and offers insights into the growing need for conserving these lesser-known but ecologically vital species.

Grassland Birds in India

- Grassland birds inhabit **open grasslands**, playing a vital role as **ecological indicators**.
- Their presence signals **healthy ecosystems** and balanced biodiversity.
- Notable species include the **Bengal Florican, Great Indian Bustard, Finn's Weaver, Indian Courser**, and **Jerdon's Babbler**.
- Many species are **globally threatened**, with shrinking populations due to **rapid habitat loss**.

- **Climate change** has worsened these threats by altering grassland ecosystems.
 - Conservation requires:
 - **Protection of grassland habitats**
 - **Scientific monitoring techniques** like acoustic surveys
 - **Focused policy interventions**
 - Species endemic to Indian grasslands are of **global conservation value**; their extinction would be irreversible.
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Kaziranga Grassland Bird Census: Objectives and Approach

- A dedicated **grassland bird census** was conducted in **Kaziranga National Park**, where **70% of the area consists of grasslands**.
- The effort was led by **forest officials, researchers, and conservationists**, inspired by the work of **Chiranjib Bora**, a researcher studying the **Black-breasted Parrotbill**.
- Supported by the **INSPIRE fellowship** from the **Department of Science and Technology**, the study aimed to:
 - Document the presence and distribution of **rare and elusive species**
 - Focus on **10 priority species** either **globally threatened** or **endemic to the Brahmaputra floodplains**, including the Bengal Florican, Swamp Francolin, and Finn's Weaver
 - Assess **species diversity and habitat preference**
- A total of **43 species were recorded**, including:
 - **1 Critically Endangered** species
 - **2 Endangered** species

- **6 Vulnerable** species (IUCN Red List)
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Innovative Use of Acoustic Monitoring

- Traditional visual surveys were ineffective for detecting **small, shy, and camouflaged birds**.
 - The team employed **passive acoustic recorders**, placed on tall trees in **29 locations** during the **breeding season (March-May)**.
 - Recorders captured bird calls over **three consecutive days**, generating large audio datasets.
 - **Spectrograms** and **BirdNet**, a machine learning-based tool, were used to analyze and identify species based on their vocalizations.
 - This method helped detect **elusive species** that might have gone unnoticed using conventional techniques.
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Key Findings and Ecological Significance

- The presence of various species confirms the **ecological richness** of Kaziranga's grasslands.
 - The most notable finding was a **breeding colony of the endangered Finn's Weaver**, including over **85 nests**, offering rare insights into its **nesting behavior and breeding ecology**.
 - The survey reaffirms the role of Kaziranga as a **critical habitat** for **grassland bird conservation** in India.
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Major Threats to Grassland Birds

- Assam has lost **approximately 70% of its grasslands** over the past **four decades**.
- Key drivers include:

- **Overgrazing** by livestock
 - **Conversion of grasslands** into agricultural land
 - **Ecological succession**, where grasslands transition into forests
- Species endemic to the **northeastern region** are at severe risk; extinction here would result in **global extinction**.
 - **Climate change** further compounds these threats, causing altered habitats and declining populations, as seen in the **Bengal Florican**.
 - There is a need for **long-term scientific monitoring** to understand these dynamics and inform conservation strategies.
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Conclusion

The **Kaziranga Grassland Bird Census** is a landmark initiative that blends **scientific innovation** with **urgent conservation needs**. By documenting rare species and employing advanced monitoring tools, it brings attention to the often-overlooked grassland ecosystems and the birds that inhabit them. Going forward, **sustained habitat protection, research investment, and strong policy support** will be crucial to secure the future of **India's grassland bird diversity**.

