

# Fire, farming and grassland birds



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Current burning and grazing practices in South Africa's grasslands are destroying the preferred habitat of many grassland birds.

The distributions of many bird species are tied to particular habitat types. Human-induced changes to the landscape can benefit some species; for example, plantations of exotic trees have extended the range of forest-dwelling species such as the Black Sparrowhawk and Black-headed Oriole. But, equally, habitat changes can be detrimental to other species.

Some of South Africa's most threatened birds are grassland species. Endangered species such as the White-winged Flufftail and Wattled Crane enjoy mature wetland systems within the grassland, the Yellow-breasted Pipit occurs only in ungrazed montane grassland habitat, while Botha's Lark, the Blue Crane and Bald Ibis are more common on sparsely vegetated grasslands that are heavily grazed.

Changes to grassland habitat are primarily a result of grazing and burning practices.

Grasslands are burnt at the onset of the summer rains to promote sweetveld grazing for domestic stock. Over the years, continuous burning and grazing pressures change the nature of the grassland ecosystem: there are changes in vegetation height, cover and plant species composition. Food for insectivorous and granivorous birds becomes scarcer as the diversity of foodplants diminishes and insect numbers are reduced through defoliation of the grassland. Birds that are shy in nature and require thick grass cover, such as the Yellow-breasted Pipit and Red-wing Francolin, leave the area in search of greener pastures.

In a study conducted by the Percy FitzPatrick Institute and funded by the African Gamebird Research Education and Development Trust (AGRED) and WWF-SA, the greatest diversity of endemic and threatened grassland birds were found in habitats that were neither burned

annually nor intensively grazed. Many of these semi-conserved environments were on trout farms. Here, the waters are acquired to promote trout fishing and the surrounding grassland is indirectly conserved because it is not stocked with domestic animals. Sometimes, however, wetlands are flooded to construct trout dams, which has a direct negative impact on birds such as Striped and White-winged flufftails that depend on well-vegetated wetlands.

One element of this research project, undertaken in the high mountain grasslands around Dullstroom in Mpumalanga, concentrated on the Red-wing Francolin *Francolinus levaillantii*, a cryptic grassland gamebird characteristic of 'sour' grasslands. Research findings suggest that habitat modification, as a result of intensive grazing and burning grassland management, is the primary factor responsible for

the decrease of this species on commercial pasture farms. Radio-tracking showed that the birds are associated with areas where food and cover are abundant, such as around wetlands and among rocky outcrops. However, they avoid habitats that have been heavily grazed and extensively burnt. Early in the breeding season, nesting cover and an abundance of insects are essential for the Red-wing Francolin hens and their chicks. But the breeding season coincides with the burning season and, as a result, breeding success is severely reduced.

Current grassland management does not provide suitable habitat for all grassland bird species, but favours those that enjoy open, sparse grassland. If management practices were modified to produce habitat mosaics by varying burning and grazing regimes, the conservation status of many grassland bird species would be substantially improved. If management continues as it is today, many of these species face an uncertain future. □



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Yellow-breasted Pipit.

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