



EFFECTS OF QUAIL MANAGEMENT ON NONGAME SPECIES
Paraphrased from "Beef, Brush, & Bobwhites" by Guthery, pages 163-64:

"We studied response of nongame birds to bobwhite management on mesquite rangeland in the Rolling Plains. Management included disked strips, tepee and permanent brush shelters, half-cut mesquite and food plantings. For 1 year, we counted nongame birds on the managed site and on a similar site with no management. Nongame birds benefited...there were more species and higher densities on the managed than on the unmanaged site in 10 of 12 months. With management, we increased the availability of seeds for any bird that eats seeds, not just bobwhites. Anytime habitat diversity is increased, there is likely to be an increase in the number of species using the habitat...because the changes are made on a relatively small scale, you should lose no bird species. On the other hand, recommendations on grazing and brush management favor some species of nongame, but *do not* favor others. Birds or mammals that require dense brush are not adapted to the more open areas preferred for bobwhites. Birds or mammals that require high condition rangeland may not inhabit pastures in the lower condition required for bobwhites."

Paraphrased from "Interaction of Range Management or Nonmanagement with Wildlife Habitat and Wildlife" by Kozicky and Fulbright, pages 221-222:

Livestock Grazing: Researchers found that eastern meadowlarks were more numerous under moderate than under heavy grazing. Long-billed curlew numbers are significantly correlated with spring and fall grazing intensity. Arizona researchers stated that a grazed area supported significantly higher numbers of birds in summer, while densities did not differ in winter. Grazing appeared to favor birds as a class over rodents. In a study of four grazing treatments, bird species richness was highest under heavy short duration grazing (HSDG) and HSDG was the only system to show an increase in bird species diversity between years.

Brush Management: Researchers observed no difference in bird density, species diversity, or species richness...between untreated sites and sites later sprayed with herbicides to control mesquites. The density of mockingbirds was lower on treated than untreated areas, but no other species was affected. Habitat management to favor mourning doves and bobwhite quail was associated with a 54% increase in combined density of nongame birds. A researcher found that, as habitats changed from brush to clearings, tree-foraging birds were replaced by ground-foraging species. Clearing brush at any intensity decreased total bird density but improved species richness and diversity relative to untreated areas.

Prescribed Burning: Researchers stated that the absence of the deliberate use of fire to control vegetation succession has done untold damage to prairie wildlife. Research found that ground-nesting lark sparrow nests were more numerous in the most recent burns and declined with increasing litter build-up.

Food for thought and discussion:

1) Should managers be concerned with improving conditions for single species or entire "systems"?

Thinking "comprehensively" to manage habitat systems will lead to greater wildlife diversity.

2) Can Conservation Reserve Program (CRP) land be managed for game and nongame wildlife?

Yes, if tracts are established using a diverse, native (to the region and particular site) cover mixture.

3) Can you manage forestlands for quail and red-cockaded woodpeckers at the same time?

Yes, use of prescribed fire and a timber harvesting system that provides for different seral stages within the forest can lead to greater abundance and diversity of wildlife.

4) Can you manage quail and Texas horned lizards at the same time?

Yes, with the common denominator being appropriate amounts of bare ground, woody cover, and native forbs, legumes, and grasses.

5) The axe, fire, plow, cow, and gun are tools for the wildlife manager. Is "no manipulation" of habitat for a specified time a *management option*?

Yes, it is the part of prescribed grazing systems that wildlife and range managers call "rest" and is a necessary management tool for healthy rangelands.

Parting thought: The strength of the traditional wildlife habitat management approach is that it explicitly uses and enhances *natural processes* to perpetuate populations and habitats upon which they depend.

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