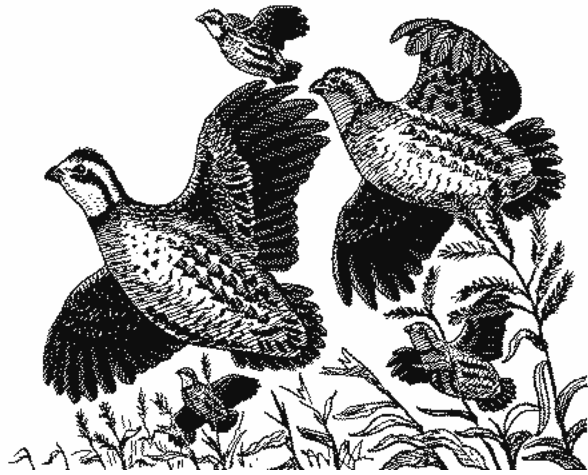


APPENDIX L

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 disced 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 benefitted...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. Any time 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:

1) Should managers be concerned with improving conditions for single species or entire "systems"? *Comprehensive habitat planning and management will support more wildlife diversity.*



2) Can Conservation Reserve Program (CRP) land be managed for game and nongame wildlife? *Absolutely. See appendix entitled "Wildlife Considerations in the Management of CRP Lands" to understand how this works.*

3) 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? *Absolutely. It is what range management specialists refer to as the tool of rest.*

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

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