

FACT SHEET

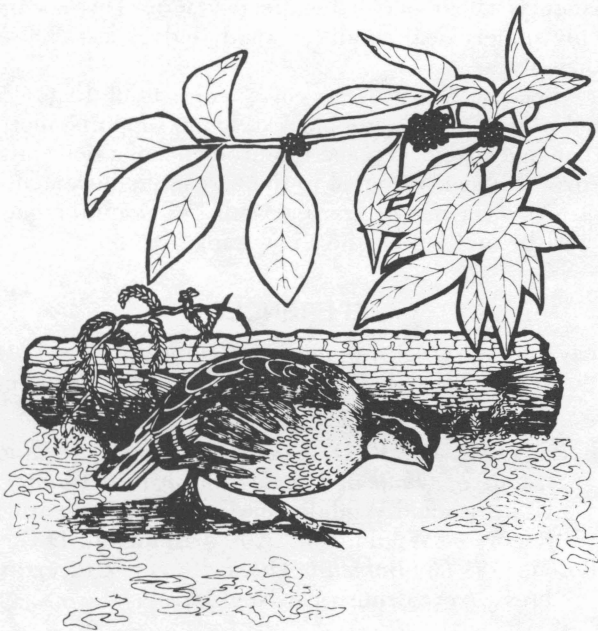
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HABITAT FOR EAST TEXAS QUAIL

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All wildlife species need food, cover, water and space. These elements must be furnished by their habitat — the forest or farm. In East Texas, food and cover are important elements regulating quail numbers.

Habitat requirements of bobwhite quail are much more exacting than those of any domestic livestock. While bare ground is recognized readily as unsuited to bobwhites, too much brush or thick grass also is unsuitable. Brushy, grassy areas may be barren of available quail foods and unsuitable for quail cover.



Food and cover also must occur in a compatible relationship for quail habitat. The distance between a source of ample food and adequate cover must not be greater than bobwhites can negotiate with safety. Ideally, escape cover should be linked to food supplies with continuous screening cover. The screening cover, however, must not be so dense that it obstructs the bobwhite's short-legged gait. Without suitable space relationships, a range will not be habitable for bobwhites regardless of the quality or amount of food and cover present.

The farm of fifty years ago provided ideal quail habitat. Small fields of mixed crops created endless miles of edges, or borders, between fields and woodlands. Fence rows were filled with weeds and shrubs, and fall plowing was uncommon. Quail abounded in this kind of habitat. Today, forestry and farming have changed significantly to the detriment of quail. To have quail now, management must intentionally provide those elements which were once a byproduct of the prevailing land use.

Quail Food

Bobwhites usually fare well during spring and summer months. A food supply of ripening seeds is supplemented by insects and green plant material. From the time of the first killing frost, however, the quail's food supply diminishes. All fall and winter, other birds and rodents compete with the bobwhite for the summer's seed production. Weathering also depletes the supply.

Seeds from a variety of trees and shrubs are important sources of food for quail in forests, and seeds from herbaceous plants are major contributors in green areas. Maintenance and enhancement of a great diversity and abundance of food-producing, woody plants should receive attention where multiple-use forest and range are desired.

Forest and range management practices that work toward less complex plant communities or single species units eliminate some important sources of food for quail within the habitat type and within covey ranges, particularly those produced by woody plants.

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Judicious use of fire, establishment of fire lanes, plowing and disking are appropriate management practices to encourage quail food production. Planted food plots have a place in intensive quail management. They aid in hunting birds in brushy habitat, but are less dependable for providing winter food than previously mentioned practices.

Major species of winter quail food include the following plants:

- Beautyberry (*Callicarpa americana*)
- Oak (*Quercus* spp.)
- Pine (*Pinus* spp.)
- Sweetbay (*Persea borbonia*)
- Sweetgum (*Liquidambar styraciflua*)
- Bush clover (*Lespedeza virginica*)
- Common and Kobe lespedeza (*Lespedeza striata*)
- Crotonopsis (*Crotonopsis linearis*)
- Doveweed or goatweed (*Croton* spp.)
- Nutrush (*Scleria ciliata*)
- Panic grass (*Panicum* spp.)
- Partridge pea (*Cassia fasciculata*)
- Paspalum grass (*Paspalum* spp.)
- Tick trefoil (*Desmodium* spp.)
- Trailing wild bean (*Strophostyles* spp.)
- Wild bean (*Rhynchosia* spp.)

Woody Cover

Forests usually provide adequate woody cover by having enough quantity to compensate for any lack of quality. Birds look at range from a level about 4 inches above ground. Tall trees provide no security; quality cover is thick above and open below. Quail love to loaf and dust and move freely under woody cover which protects them from above.

Livestock sometimes browse woody plants so heavily that cover is useless for quail. A plum thicket that is sparse enough to see through is inadequate for quail. Fence cattle away from key cover spots in areas of limited cover. Where larger blocks of cover are damaged seriously by cattle (as in forests with shrubs stripped as high as a cow can reach), reduce the number of cattle. Cattle often eliminate quail food, woody cover, grassy roosting and nesting cover. Where cover is excessively thick, however, some cattle grazing may help to open it.

Quail need woody cover for daytime protection and open areas of thick grass cover for night roosting. A quail covey forms a close circle at nightfall with each bird facing out in readiness to fly. Members of the covey huddle together and share the task of listening for possible danger. When anything approaches too closely, each bird in the covey flies a

different direction. Such night flying requires roosting in a fairly open spot to reduce hazards of collision with trees or other objects. Extensive forests often lack sufficient openings. Row thinnings of pine plantations and small, hardwood cuttings create openings.

Leaving spots of native cover and food, rather than completely clearing a pasture, is probably the most practical first step in producing quail in combination with livestock. No more than 1/10 acre is needed per site. Use of herbicides, fertilization and mowing to control weeds in improved pastures must be modified to preserve quail areas.

Nesting Requirements

For nesting, quail need some tall, old grass. When nest building starts in late April and May, new grass alone is not suitable for nesting. Areas burned or grazed closely the previous fall and winter are unsuitable. Bobwhite nests are built on the ground and enclosed on the top and sides with dead grass except for a side entrance.

Location of nests often is near the edge of a rough grass area, which permits chicks to be led to thinner cover for feeding and movement. Edges of roads, fence rows or firelanes are favorite nesting spots. Although needed for nesting and roosting, excessive amounts of tall, old grass hinder movement and restrict food supply.

Acreage Requirements

Bobwhites require much more acreage than their small size would indicate. Maximum bobwhite population is about one bobwhite per acre. This occurs only under ideal conditions and seldom lasts more than a year.

Because the average covey consists of 10 to 15 bobwhites, a 15-acre block seldom supports more than one covey. Acreage requirements of a bobwhite covey are at least equal to the acreage requirements of a cow on native grazing lands. All requirements must be met within the covey range.

REFERENCES

- Lay, D. W. *Quail Management Handbook for East Texas*. Texas Parks and Wildlife Dept. Bulletin 34, Austin, Texas.
- Reid, V. H. and P. D. Goodrum. *Winter Feeding Habits of Quail in Longleaf-Slash Pine Habitat*. U.S. Fish and Wildlife Service. Special Scientific Report — Wildlife No. 220. Washington, D.C.
- Rosene, W. *The Bobwhite Quail*. Rutgers University Press, New Brunswick, New Jersey.

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