



## Massachusetts Division of Fisheries & Wildlife

## Northern Bobwhite *Colinus virginiana*

State Status: **None**  
Federal Status: **None**

**SPECIES DESCRIPTION:** Northern Bobwhite is a small to medium-sized quail, averaging about 8 to 10 inches long. Males are slightly heavier than females. The tail is rounded and contains 12 retrices. Adult males have brown uppers, barred with tan and black, a white forehead and triangular patch on throat and chin. The breast, sides, and flanks are barred with black and some chestnut. Adult females are similar but with buff areas on the head instead of white.

**DISTRIBUTION AND ABUNDANCE:** Historically in Massachusetts, Northern Bobwhite probably occupied coastal areas and possibly up some of the major eastern river systems, as well. However, after significant land use change associated with colonial settlement, these quail were likely distributed nearly statewide. Their peak abundance occurred during the extensive land clearing in the 1820s to 1840s, when upwards of 80% of Massachusetts was in some form of agricultural production. Several very severe winters greatly reduced this statewide distribution of quail. Severe winter storms between the 1870s and 1898 wiped out all quail between Cape Cod and New Hampshire. After another severe winter in 1903-04, quail may have greatly reduced statewide, but quickly rebounded in southeastern Massachusetts where winters were milder and plenty of suitable agricultural and brushy habitat existed. By the 1960s, though, rapid development and “cleaner,” more efficient farming practices were greatly altering the availability of suitable habitat for quail, and consequently populations began to plummet. At present, quail breed regularly only in Barnstable, Bristol, Dukes, Nantucket, and Plymouth counties. Significant numbers of farm-raised quail are introduced/stocked each year across the state for hunting, restoration, and dog training purposes, but none of these stockings have yielded viably reproducing quail populations, primarily because of the game farm stock.

**HABITAT DESCRIPTION:** Northern Bobwhites require early successional habitats among a wide variety of vegetation types. These include small agricultural fields with brushy hedgerows, small warm-season

species dominated grasslands or pastures, oak/pine savannahs with shrub and herbaceous ground cover, and mixed areas of grass and brushlands. The best habitats include a mosaic of small patches of field, forest, and crop lands which are protected from habitat succession by grazing, burning, or active management. In all cases, because quail are a ground feeding bird, they need open space on the ground to forage for insects, seeds, and fruits, but close access to brushy escape cover to avoid predation.

**THREATS:** Northern Bobwhite populations have been declining substantially for 40 years. These losses are principally attributed to loss and alteration of early successional, grassland, and, most importantly, agricultural habitats at both the local and landscape level. Severe storms and other climatic events have greatly affected bobwhite recruitment and survival and thus ultimately distribution in the past, and will likely do so into the future, as quail in Massachusetts exist at the extreme northern boundary of the geographic range. The consequence of increased development has not only greatly influenced available habitat, but also has indirectly led to increased predator levels. Often, populations of skunks, raccoon, and opossums are higher in developed areas; these nest predators can be devastating to quail nesting and production. Other predator populations including fox, fisher, weasel, and birds of prey can be impact adult quail and their chicks.

### REFERENCES:

- Brennan, L.A. 1999. Northern bobwhite (*Colinus virginianus*). In *The Birds of North America*, No. 397. (A. Poole and F. Gill, eds.) The Birds of North America, Inc., Philadelphia, Pa., 28pp.
- Guthery, F.S., M.J. Peterson, and R.R. George. 2000. Viability of northern bobwhite populations. *Journal of Wildlife Management* 64: 646-662.
- Williams, C.K., F.S. Guthery, R.D. Applegate, and M.J. Peterson. 2004. The northern bobwhite decline: scaling our management for the twenty-first century. *Wildlife Society Bulletin* 32: 861-869.

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*A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan*

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