

**SOUTH  
E  
X  
RANGELANDS  
S**

# Sexing and Aging The Northern Bobwhite

*Ben Koerth, Bill Kuvlesky, Jr. and Jack Payne\**

## Is it male or female ?

The sex of a northern bobwhite is relatively easy to distinguish by the coloration of the feathers on the head and neck of older birds. Males have a distinctive white eye stripe that extends from the bill through the top of the eye to the back of the neck, with brown to brownish black coloration above. The ear region has black to hazel brown feathers that extend backward below the white eye stripe and expands under the throat to form a blackish collar surrounding a white chin and throat. Females have buff-colored feathers in place of the white feathers of the males (Figure 1). These features are well-known and would be missed by few. However, other plumage characteristics also may be used to determine sex in young birds that are at least eight weeks old, when adult head plumage has yet to develop or when only a wing is available. Males have fine, sharply pointed markings on the middle wing coverts (see Figure 2 for names and locations of wing feathers), while females have wider, dull gray bands that do not contrast sharply with the rest of the feathers (Figure 3).

## How old is it ?

Molting patterns of certain feathers can reveal not only the difference between adult and young-of-the-year but can determine the age

of a quail in days or weeks up to about 150 days. To determine juveniles from adults you may simply look at the primary wing coverts. In adults, these feathers will normally be uniformly gray.

Juvenile birds will normally have buff-colored tips on these feathers (Figure 4). Also the outer primaries (#9 and #10) are not molted the first year. These feathers in



Figure 1. Typical feather coloration of a northern bobwhite male (a) and a female (b).

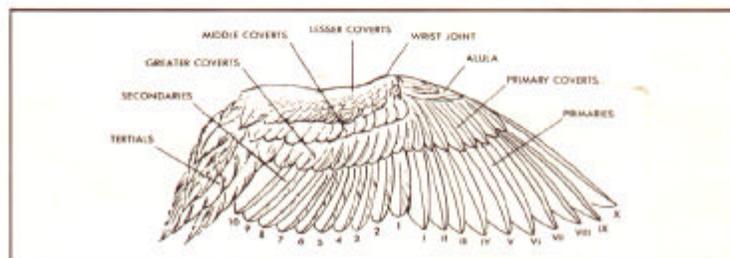


Figure 2. Names and positions of feathers on a typical bird wing.



Figure 3. Northern bobwhite wing showing fine, sharply pointed markings on middle coverts of males (a) and wide, dull markings of females (b).

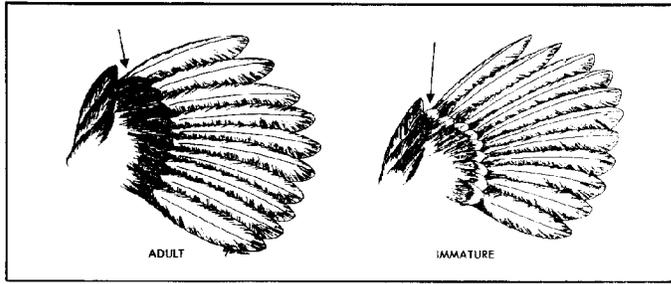


Figure 4. Primary coverts in adults are uniform in color while juveniles have light-colored tips.

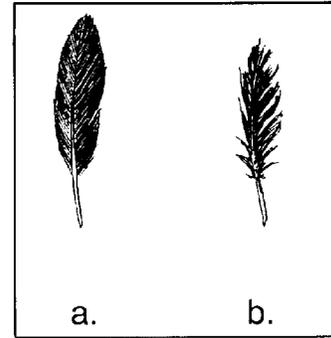


Figure 5. Seventh primary covert showing sleek appearance in adult (a) and ragged appearance in juvenile (b).

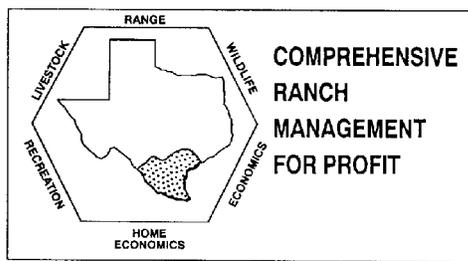
juveniles will be more pointed while the same feathers on adults will have rounded tips. Occasionally, some difficulty is encountered using these characteristics. For such cases, the shape of the primary wing covert #7 may be useful. In immature birds, this feather has a uniformly brown tint, is tipped buff, and the barbs and vanes separate easily giving the feather a scraggly appearance. In adults this feather holds together better giving the

feather a sleeker, darker appearance without tip markings (see Figure 5). The sequential molt and new growth of the primary feathers also allows determination of age in juvenile quail to weeks and even days since hatching up to about 150 days or 21 weeks. At this time, juveniles are considered fully fledged. Primary feather molt begins with primary #1 at about 28 days and proceeds regularly through primary #8,

which is dropped at about 100 days. To determine the age in weeks, it is sufficiently accurate to simply add three to the number of the primary being replaced until primary #7 is replaced. For example, if primary #6 is being replaced, the quail is about nine weeks old. Primary #8 is slower in growing and this method will not work at that point.

Finer distinction in age can be made by comparing the development of the regrowing primary with the accompanying table. Age in days is shown when primaries are shed and when fully grown.

Primary #	1	2	3	4	5
Days when shed	26 to 30	33 to 37	40 to 44	44 to 50	52 to 58
Days when grown	54 to 58	56 to 60	60 to 64	70 to 76	81 to 89
Primary #	6	7	8	9	10
Days when shed	58 to 62	69 to 77	97 to 105		
Days when grown	99 to 107	120 to 128	146 to 154	58 to 68	60 to 70



\*Ben Koerth is a Research Associate, Texas Agricultural Experiment Station, La Copita Research Center; Bill Kuvlesky, Jr. is a former faculty member, Wildlife and Fisheries Science Department, Texas A&M University; and Jack Payne is former Extension Wildlife Specialist, Texas Agricultural Extension Service.

*Educational programs conducted by the Texas Agricultural Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.*

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Zerle L. Carpenter, Director, Texas Agricultural Extension Service, The Texas A&M University System.