

## **Scaled Quail (*Callipepla squamata*)**

NMPIF level: Species Conservation Concern, Level 2 (SC2)

NMPIF assessment score: 15

NM stewardship responsibility: Moderate

National PIF status: Watch List, Stewardship in the Southwest Avifaunal Biome

New Mexico BCRs: 16, 18, 34, 35

Primary breeding habitat(s): Plains-Mesa Grassland, Chihuahuan Desert Grassland

Other habitats used: Great Basin Desert Shrub, Plains-Mesa Sand Shrub, Chihuahuan Desert Shrub, Agricultural

### **Summary of Concern**

Scaled Quail is an upland gamebird of desert grasslands and shrublands. It has declined across its range, although data from New Mexico suggest more stable populations here. It is dependent on healthy grassland habitat and may be adversely affected by grazing when compounded by drought.

### **Associated Species**

Burrowing Owl, Greater Roadrunner, Chihuahuan Raven (Stewardship), Western Kingbird, Cassin's Sparrow (SC2), Eastern Meadowlark, Western Meadowlark

### **Distribution**

Scaled Quail occurs from southern Colorado and southwest Kansas south through central Mexico, and from central Arizona east to west Texas and the Texas panhandle. The species range generally conforms to Chihuahuan Desert and adjacent desert grasslands (Johnsgard 1973).

In New Mexico, Scaled Quail is fairly common in deserts and arid plains across most of the state. It is most common on the eastern plains, and rare in the northwest and north-central regions (Parmeter et al 2002).

## Ecology and Habitat Requirements

Scaled Quail occupy a variety of habitats including brushy arroyos, cactus flats, sagebrush or mesquite plains, desert grasslands, Plains grasslands, and agricultural areas. Good breeding habitat has a diverse grass composition, with varied forbs and scattered shrubs such as yucca, fourwing saltbush, sandsage, and various cacti (Schemnitz 1994). In Arizona and New Mexico, desert grasslands that receive  $\geq 150$  mm of rainfall during the summer provide optimum habitat (Brown et al. 1978). In Texas, the species occupies shrubland that is not too densely vegetated (Oberholser and Kincaid 1974). Preferred habitats in Arizona are open plains, rolling hills, and low ridges and mesas (Brown 1989); in Colorado, sand-sage grasslands, often interspersed with agricultural areas, and often in disturbed areas having an abundance of annual forbs (Andrews and Righter 1992).

In the Chihuahuan Desert, areas with a mixture of late and mid-seral plant communities provide the best habitat (Saiwana et al. 1998, Joseph et al. 2003). Shrubs provide important cover for night-roosting, loafing and escape (Schemnitz 1994). Scaled Quail populations follow a “boom and bust” pattern with periodic widespread reproductive failure, possibly owing to inadequate rainfall and a resulting lack of food. Breeding activity begins as early as March and continues through August. Nests are located on the ground, in forbs or under low shrubs. Diet consists of seeds of forbs, shrubs, and grain; insects and herbaceous leaves are consumed on a seasonal basis (Schemnitz 1994). Scaled Quail form large coveys in winter.

## Conservation Status

### Species Assessment

DISTRIBUTION	3
THREATS	4
GLOBAL POPULATION SIZE	3
LOCAL POPULATION TREND	2
IMPORTANCE OF NEW MEXICO TO BREEDING	3
<b>COMBINED SCORE</b>	<b>15</b>

Scaled Quail is a Species Conservation Concern, Level 2 species for New Mexico, with a total assessment score of 15. It receives high vulnerability scores of 4 from PIF for threat to breeding habitat. Scaled Quail is a national PIF Watch List species.

## Population Size

Total population for the state is unknown. PIF estimates a species population of 1,200,000, and that New Mexico holds about 15.3% of the species population, or about 185,000 birds.

## Population Trend

Scaled Quail achieves Watch List status nationally in part due to sharply negative population trends, particularly in Texas and Oklahoma. The New Mexico population has been more stable. BBS data for 1966-2004 are:

	Annual Trend (%)	P-value	Number of Routes
New Mexico	0.3	0.80	49
FWS Region 2	-1.2	0.20	134
Western BBS	0.0	0.98	77
Survey-wide	-1.2	0.19	153

## Threats

Hunting may have relatively little effect on populations (Campbell et al. 1973). Moderate grazing by cattle (30–40% use of grasses) favors good food and cover conditions (Saiwana 1990) but heavier grazing may reduce grass cover and food availability. During drought conditions in Texas, quail were more abundant on high intensity, short duration grazed pastures, which had a greater abundance of forbs and grass cover, than on pastures grazed year-round (Campbell-Kissock et al. 1984). Similarly in southern New Mexico, moderate grazing during drought may adversely affect Scaled Quail by depleting perennial grass cover (Joseph et al. 2003).

## Management Issues and Recommendations

Management for Scaled Quail should focus on maintaining grassland habitat with a varied forb component and scattered shrubs.

## NMPIF Recommendations

- Consider needs of Scaled Quail in grazing management. Under drought conditions, make appropriate adjustments in grazing intensity to try to maintain adequate grass cover and food supply.

## **Species Conservation Objectives**

### **PIF Objectives**

The PIF North American Landbird Conservation Plan places Scaled Quail in the conservation action category Management. It sets a population objective of increasing the current population size by 50% over the next 30 years.

### **NMPIF Objectives**

- Maintain or increase the present breeding population.

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