Scaled Quail (*Callipepla squamata*)
Colorado NRCS March 2001

General Information:
Scaled quail, *Callipepla squamata*, is a common resident of southeastern Colorado's plains and mesas. It can be found as far north as Cheyenne and southern Lincoln and El Paso Counties and as far west as the foothills. A few birds are also found on the West Slope in La Plata and Montezuma Counties. Sand sagebrush rangeland mixed with cropland is the most common habitat where scaled quail are found although they may occur in piñon-juniper woodland and shrublands. Other places they frequent are disturbed areas where forbs dominate, and near farmsteads in the winter (Andrews and Righter 1992).

Foods consumed include insects and a variety of plant foods. Insects comprise a significant part of a quail's diet during the summer months. Annual forbs, green leaves, and grains are consumed during winter.

Habitat Requirements (Snyder 1967 and Rutherford and Snyder 1983):
Scaled quail need nesting, brood rearing, and winter cover; food; and dusting and display sites to meet their essential habitat needs. These habitat components need to be available in the quail's home range, thought to be from 40-80 acres.

Nesting Cover:
Scaled quail use sand sagebrush, yucca clumps, and weeds for nesting cover. These plants are usually abundant in quail range, so no additional measures are commonly needed to improve nesting cover. Nesting cover is not normally a limiting factor for scaled quail in southeastern Colorado.

Brood Rearing Cover:
Brood rearing cover consists of shrubby rangelands with abundant forbs. If forbs are sparse, brood cover may be improved by tilling narrow, 5-12 foot wide strips at 30-50 yard intervals through shrubby rangeland. Sunflowers, millets, or buckwheat may be seeded in these strips to improve their food value. Strips may be managed on a rotational basis to sustain different stages of plant succession. Maintaining shrubby cover adjacent to the food strips is essential for escape cover.

Winter Food and Cover:
Improving brood rearing cover as described above will also provide much of the winter food needed by quail. The exception is when blizzards and sustained snow cover bury the usual plant foods. Food plots of millet, milo, and sorghum in 1/3 to 1 acre plots, if located near escape and resting cover will help bring a covey through a severe winter. Other tall, non-lodging plants may also be used in winter food plots.

The most frequent element missing from winter quail cover is adequate shrub cover. Birds often move to shelterbelts, abandoned machinery and farmsteads, and debris piles to escape the elements in winter. Artificial shelter/cover in the form of brush piles may be placed every 200 to 500 yards to improve winter cover for quail. Old fenceposts, branches, and tree trunks piled over a frame work well for brush piles. These shelters should allow movement underneath, should conceal the users from raptors, and should be oriented with

the opening away from prevailing winds. Additional openings should be provided to allow escape from predators.

Several other methods of providing shelter may also work. Where water is available, small shrub thickets may be planted and irrigated. Wild plum and skunkbrush are recommended species. Cholla cactus may be used to form thickets and to make travel lanes through open areas. Guzzler aprons/catchment canopies may be used by quail for shelter if the apron is at least a foot above the ground and is protected on the north and west. Half-cutting trees is another technique that causes a tree to put out basal shoots. The cut limbs can be piled around the trunk to further expand the size of the shelter.

Dusting and Display Sites:
Dusting and display sites are usually not limiting factors to Colorado scaled quail populations.

Water:
Scaled quail do not require free water however they will use water if it is available. Green, succulent vegetation will meet the water needs of scaled quail if available throughout the year.

General Management:
Sandsage, cholla, and yucca rangelands have the most potential for quail management. If cropland sites are to be managed for quail, the cropland must be adequately interspersed with shrubby rangelands. Habitat developments adjacent to arroyos, gullies, windmills, abandoned headquarters, in areas where cropland and rangeland are intermixed, and in rangeland along roads should be targeted for scaled quail improvements. Most common adaptations are adding feeding areas and winter cover to these sites.

Some goals for a managed unit are to provide (Rutherford and Snyder 1983):

1) well distributed shrubby vegetation with canopy coverage of 5-15% (shrubs)
2) well distributed seed producing annuals comprising 10-25% of the rangeland
3) resting cover (brush piles, thickets, etc.) less than 1%

A moderate amount of grazing appears to be compatible with quail habitat management. Grazing may be used as a habitat management tool to prevent herbaceous vegetation from becoming overly dense, thus precluding quail use. Grazing systems should be designed to encourage forb seed production with fall-winter grazing preferred to spring-summer (Rutherford and Snyder 1983). Intensely managed quail food production sites (e.g. planted areas, tilled strips, etc.) should not be grazed or, if they must be grazed, should be grazed for a short period in late winter. These areas should be fenced to protect quail food sources. Lesser prairie chicken habitat needs must be incorporated into management plans where prairie chicken and quail habitat overlap.

References:

Andrews R. and R. Righter. 1992. Colorado birds. Denver Museum Nat. Hist. Publ. Denver, CO. 442 pp.

DeGraaf, R.M., V.E. Scott, R.H. Hamre, L. Ernst, and S.H. Anderson. 1991. Forest and rangeland birds of the United States. Agriculture Handbook 688. 625 pp.

Rutherford, W.H. and W.D. Snyder. 1983. Guidelines for habitat modification to benefit wildlife. Colorado Div. Wildlife Publication Code DOW-R-M-83, Colo. Div. Wildlife, Denver, CO 194 pp.