

**WILDLIFE CONSIDERATIONS
IN SEASONAL GRAZING OF RIPARIAN ZONES**

by

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A riparian system can be defined as the relatively mesic vegetative community occurring between aquatic areas and more xeric uplands. Riparian systems have been referred to as the "aortas of ecosystems" because of their significance to the perpetuation of water, fish, wildlife, rangeland and forest resources. In western states, riparian vegetation usually occurs as narrow belts, or zones, of vegetation along streams and rivers from alpine sites in the Rocky Mountains to below sea level in California. The vegetation is usually dominated by a variety of willows, cottonwoods, and alders. Riparian zones are most conspicuous in prairie, shrub-steppe, and desert regions.

Riparian zones are considered the West's most important habitats for migratory birds. Although an estimated 0.2 percent of all land is covered by riparian vegetation, up to 82 percent of all species of birds occur in these zones, regionally. In addition, the zones provide critical nesting and wintering cover for some game birds, plus cover and food for ungulates such as moose and deer.

Grazing by livestock is considered the West's universal cause of deterioration of woody riparian vegetation as potential wildlife habitat. Native ungulates use riparian zones primarily for food and water but spend most time loafing away from the bottoms. In contrast, cattle concentrate their activities in the vicinity of healthy riparian vegetation when it is available.

Studies at the Denver Wildlife Research Center during the last 5 years have evaluated grazing impacts upon riparian vegetation as wildlife habitat -- especially for migratory birds. Investigations in northcentral and northeastern Colorado have evaluated wildlife habitat values of riparian communities by measuring the horizontal

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and vertical structure, vigor, and species composition of the vegetation. Cattle significantly alter the vertical and horizontal plant structures and the extent (width) of riparian zones. The size, shape, leaf volume, and number of live vs. dead branches on a bush vary significantly with grazing practices. Pastures that are grazed by cattle during winter generally contain healthier, more vigorous woody stands which provide avian habitat. Pastures that are traditionally grazed in the summer contain woody vegetation that is comparatively decadent. At higher elevations (summer ranges), severely damaged pastures typically contain willow bushes that have shapes that resemble an inverted cone (i.e., mushroom-like) rather than the natural global shape of a bush.

From our studies we conclude that 10-12 years is insufficient time for a riparian community to recover from a history of excessive grazing. Management programs to improve a damaged or poor-condition riparian community will be more difficult to develop than programs to maintain a health community during grazing. In contrast to studies that indicate that fish habitats respond quickly to changes in grazing practices (i.e., introducing or removing cattle) terrestrial habitats respond slowly. Riparian vegetation seems to tolerate heavy grazing pressures well initially, but shows slow recovery when damaged. Winter grazing of riparian zones is far more compatible with wildlife resources than is summer grazing. Damaged riparian communities may benefit by prescribed burning; such research is planned for the near future.