

Golf Courses as Hotspots for Biodiversity in the Desert Southwest

Michele Zwartjes
US Forest Service

Objectives:

1. Evaluate the possible role of golf courses in mitigating the loss of riparian habitats for resident and migratory birds.
2. Determine how the type and distribution of vegetation on golf courses may influence its value as habitat for resident and migratory birds.

Start Date: 2000

Project Duration: 3 years

Total Funding: \$86,400

Riparian habitats in the desert southwest serve as a fundamental resource for many wildlife species. Natural riparian habitats are quickly disappearing, however, due to the demands of a growing human population on these areas for water, recreation, and development. In addition, the increased need for water for municipal and agricultural uses has led to numerous political conflicts over water rights and the loss of critical wildlife habitat in the Southwestern U.S.

Golf courses in the desert southwest have an unusual opportunity to contribute to regional wildlife conservation and to demonstrate responsible water usage practices. Golf courses are open spaces that typically have access to reliable water supplies, and are capable of supporting vegetation reminiscent of natural riparian areas. These attributes create the potential for golf courses to provide important habitats for wildlife in the desert southwest.

Field studies were recently initiated in July, 2000, on five golf courses and five control areas in the Albuquerque, New Mexico, area to determine their role in mitigating the loss of riparian habitats for resident and migratory birds. Participating golf courses include the Albuquerque Country Club, Four Hills Country Club, Paa-ko Ridge Golf Club, Paradise Hills Country Club, and University of New Mexico Championship Course.

These courses all vary in overall size, shape, type of vegetation, and presence of standing water. Each of these courses has been paired with a natural control area, an area of nearby open space that as closely as possible represents the natural habitat



Some golf holes in the desert have minimal impact on the existing vegetation.

that existed at each course site prior to the construction of the course. Bird surveys by point counts are being conducted at each site once a month throughout the year over a period of two years.

In addition, mist-net surveys are being conducted at three of the courses and their comparison sites to gain further data on species of migratory birds utilizing the sites. Mist-netting also provides information that is not available through visual or auditory surveys, such as data on the number of young birds produced, or the physical condition of the birds (inferred by evaluation of fat levels on the birds).

Extensive measures and analyses of the types of vegetation on each of the courses and the correlation of these measures with bird diversity will provide managers with valuable insight as to how to best manage their courses to enhance bird habitat.

If bird diversity is well correlated with the extent of native vegetation on the courses, particularly shrubby vegetation, management for bird habitat through increasing the coverage of native plants and shrubs

should also result in significant water savings for the courses.

The trend in our surveys so far indicates that most of the golf courses support a greater number of unique bird species than do their counterpart control areas. If this trend is supported over the coming years of data collection, then golf courses may indeed offer birds an unusually rich habitat in the desert environment, similar to that offered by riparian areas.

Summary Points

- Field studies were recently initiated in July, 2000, on five golf courses and five control areas in the Albuquerque, New Mexico, area to determine their role in mitigating the loss of riparian habitats for resident and migratory birds.
- Mist-net surveys are being conducted at three of the courses and their comparison sites to gain further data on species of migratory birds utilizing the sites.
- The trend in our surveys so far indicates that most of the golf courses support a greater number of unique bird species than do their counterpart control areas.