



Big Cypress fox squirrels are losing their native upland pine habitat in the face of rapid development of Southwest Florida. Sixty Naples-area golf courses will be studied as urban habitats for the threatened subspecies.

Photos taken on Royal Poinciana G.C. by Rebecca Ditgen

Golf courses with open park-like landscapes and a rich mixture of food and nesting trees can provide ideal habitat for these large and graceful squirrels.

Golf courses may hold key to survival of fox squirrels

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Fox squirrels (*Sciurus niger*) are beautifully colorful natives of the open, upland pine forests of Florida. They are easily recognized by their long, full tails, their varying color patterns of glistening black, chestnut and brilliant blond, and their long and bounding gait.

As fox squirrels frequently forage and travel on the forest floor, they prefer areas where the understory is kept open by fire, grazing or mowing. Golf courses with open, park-like landscapes and a rich mixture of food and nesting trees can provide ideal habitat for these large and graceful squirrels.

Big Cypress fox squirrels (*Sciurus niger avicennia*) are losing their native upland

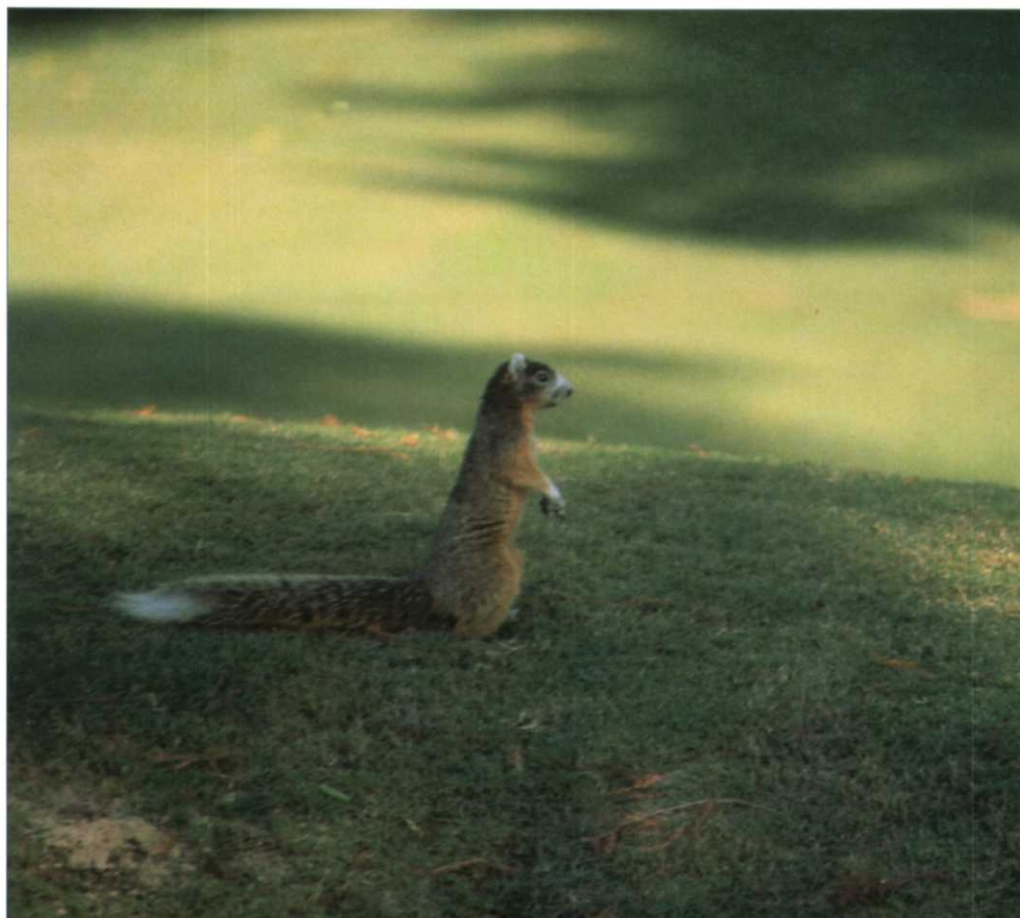
pine habitat in the face of rapid development of Southwest Florida.

Golf courses, with their relatively open forested landscapes, often provide habitat suitable for the threatened subspecies.

My study seeks to document the status and habitat use of the urban populations of Big Cypress fox squirrels on 60 golf courses in the Naples area of Southwest Florida and to provide guidelines for landscape design and management that favor the viability of these populations.

The study specifically considers the following attributes of landscape and golf course management as they relate to fox squirrels:

- tree species combinations that will provide forage throughout the year
- tree species suitable for nesting
- squirrel dependence on pines which are subject to die-off on courses in southwest Florida



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- ground cover treatment and management favorable to squirrel movement and travel

- suitable spacing and density of trees to create centers of activity

- size and configuration of courses and multiple course complexes that encourage larger populations and movement between smaller populations

The project has two components.

First, squirrel populations will be located through interviews with golf course superintendents. The number of individuals on each course will be estimated by censusing 3 times over the next 18 months.

During one census, landscape and vegetation attributes will be recorded for each course. Attributes favorable to fox squirrels will be identified using logistic regression analysis.

Second, two large populations on selected golf courses will be radio-collared and monitored for 18 months to determine their movements within the course and into adjoining habitats and to examine their use of specific habitats.

Location of all course populations will be mapped on a digital coverage created by the Florida GAP analysis of land cover and movement date of intensively studied populations will be mapped on digital coverage of those courses.

Big Cypress fox squirrels are a beautiful and colorful part of the native wildlife in Southwest Florida. Golf course management directed to their benefit may be critical to their survival in urban habitats.

I believe this study will add greatly needed information to golf course management efforts and landscape design, and thus increase the chances fox squirrels will remain in at least one major element of the urban landscape of the region.



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