Burrowing Owls on Florida Cattle Ranches

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• Private Land-owners and Ranchers

Athene cunicularia floridana

Photo by Li Haoyu
Burrows

• 1.5 to 4 meters long
• Up to 1 meter deep

Burrow decoration

Photo by Dustin Angell
Where are Burrowing Owls found?

- Burrowing
- Nesting
- Watercraft
Where do burrowing owls live?

Range expansion

• Airports
• Golf Courses
• Open or vacant land
What do they eat?

“Anything they can kill and carry”

Past research

• Focused on urban populations in SW Florida
• Statewide surveys found the most owls in these coastal cities
• Most rural owls found of grasslands used to graze cattle
Current project

- Use Burrowing Owls as a means to study how animals adapt to living in cities
- Fill in rural Florida Burrowing Owl Knowledge gaps

Study sites
Urban vs. Ranch Owls

Photo by Li Haoyu

 Territory density

- Owl density varies more from site to site than by habitat type
- Some ranches have higher owl densities than urban sites

Onset of breeding

- Ranch pairs have a median egg-laying date of March 18
- Urban pairs start two weeks earlier on average
Distribution of nightly maximum distances from nest

These farthest trips tend to occur during dusk and dawn
Urban males have a shortened nighttime foray window.

What is driving these differences?

Photo by Li Haoyu.
Urban space use

Owl density increases with increasing development
Area utilized decreases with increasing development.

The Future of Florida

2010 Baseline

2070 Projected
Ranch study sites

Photo by Wes Anderson

Ranch Wetlands

Photo by Wes Anderson

Ranch Wetlands
Owl movements farther away from the nest are more likely to be in and around wetlands.

Wetlands may be important sources of resources for breeding owls.

Burrowing Owls also need dry ground for burrowing and nesting.
Variation in reproductive success among ranch populations

Flooding can force nestlings out of the burrow, exposing them to predation and weather.
Older broods are more likely to survive flooding.

Owls placed nests on higher ground after a wet winter.
Wetlands are a potentially important source of resources for Burrowing Owls breeding on ranches. The presence of slightly elevated ground can help flood-displaced juveniles.

Photo by Catherine Haase
Urban and rural Florida Burrowing Owls are different, and need to treated as such.

Cattle ranches contain productive Burrowing Owl populations, and are likely crucial for long-term survival.

Thank You!

Questions?