



Columbia Environmental Research Center

## Publication Brief

# Winter Ecology of Burrowing Owls in Southern Texas



Matthew Rowe

The western burrowing owl (*Athene cunicularia hypugaea*) currently is federally threatened in Mexico, federally endangered in Canada, and in the United States is considered a National Bird of Conservation Concern by the U.S. Fish and Wildlife Service.

Woodin, M.C., Skoruppa, M.K., and Hickman, G.C. 2007. Winter Ecology of the Western Burrowing Owl (*Athene cunicularia hypugaea*) in Southern Texas 1999-2004: U.S. Geological Survey Scientific Investigations Report 2007-5150, 33p.  
Online: <http://pubs.usgs.gov/sir/2007/5150/>

There is a substantial gap in information on the owl's life cycle during migration and non-breeding winter months; almost all previous research on western burrowing owls has been conducted during the breeding season.

This report represents the first comprehensive review of burrowing owl ecology in their winter months and paves the way for future conservation actions.

Reported here is the winter ecology of the western burrowing owl in five Texas counties surrounding Corpus Christi, in southern Texas. Topics reported include the owl's population status, effectiveness of public outreach, roost sites and use of culverts and artificial burrows, roost site fidelity, diet, contaminants in prey and regurgitated pellets, body mass, and ectoparasites.

Results of this five-year study, from 1999-2004, provide natural resource managers important information for conserving and protecting this unique grassland

species. Because the western burrowing owl exhibits strong fidelity for winter roost sites, managers (and private property owners who want to "adopt-an-owl") may increase survival of this species by placing artificial burrows in protected areas with high-quality habitat, such as grazed or mowed grasslands and farmlands with remaining tracts of grass that currently have, or had in the recent past, populations of this owl.

Together with research in Canada, the United States, and Mexico, a more complete understanding of the year-round needs of this migratory and declining owl is now available. In addition, the successful experiments with artificial burrows demonstrate that these owls can benefit from conservation efforts.

**For more information contact:**

Marc Woodin, Station Leader  
or Mary Kay Skoruppa, Biologist  
Texas Gulf Coast Field Research Station  
Columbia Environmental Research Center  
U.S. Geological Survey  
6300 Ocean Drive TAMU-CC  
USGS Unit 5838  
Corpus Christi, TX 78412-5838 USA  
[marc\\_woodin@usgs.gov](mailto:marc_woodin@usgs.gov)  
[mary\\_kay\\_skoruppa@usgs.gov](mailto:mary_kay_skoruppa@usgs.gov)  
phone: 361-985-6266

[http://www.cerc.usgs.gov/frs\\_webs/gulf\\_coast/](http://www.cerc.usgs.gov/frs_webs/gulf_coast/)