Title
Ledges to nowhere—structure to habitat transitions

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LEDGES TO NOWHERE—STRUCTURE TO HABITAT TRANSITIONS

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Abstract

The purpose of this poster is to call attention to problems that are being encountered in the design and construction of wildlife crossing structures that significantly undermine their usefulness to wildlife.

The problem

Three roadway projects nearing completion in Florida Department of Transportation (FDOT) District 5 (east central Florida) include modifications to existing bridges and culverts that add ledges for the passage of small wildlife. In all three projects, the ledges ended abruptly at the ends of the structures, with no transition and even significant obstacles between the ledges and the surrounding habitat. Each of the roadway projects was designed independently by a different engineering firm, so the lack of awareness was not limited to one individual designer or firm.

(Expensive) solutions

The design engineers for each project have produced corrected drawings. Modifications are completed or underway, except at one structure, for which the roadway contractor declined to bid on the changes. A second project to correct the problem will be needed.

Recommendations

Small oversights during design and construction can virtually eliminate the usefulness of wildlife passages included in structures. Engineers and biologists should collaborate throughout the design process. Biologists should monitor these accommodations during and after construction.

Biographical Sketch: Stephen Tonjes has a B.S. in zoology from the University of Michigan and a M.S. in oceanography from Oregon State University. He served three years in the U.S. Coast Guard, then taught for a year at Seacamp in the Florida Keys. He worked two years managing the Coast Guard bridge permit program in Juneau, Alaska, and worked a year in the Office of Endangered Species of the U.S. Fish and Wildlife Service in Washington, D.C. Since 1986, he has worked with the Florida DOT District 5 Environmental Management Office writing and reviewing NEPA documents, applying for permits, managing mitigation contracts, coordinating commitment compliance, moving or mitigating for gopher tortoises, assessing trees, moving bats, and doing a few other things.
Wildlife Fear Factor
(Why Engineers Need Biologists)
Do-Overs

Temporary Fix
(Why Biologists Need Engineers)

Permanent Fix

Permanent Fix
But where is the fence going?
Wildlife Fence Factor

Animals traveling along the fence may be lured by a direct path across the road and an open sky, rather than take a detour through a dark tunnel; therefore, fences need to lead directly to the passage and block the way to the road without leaving gaps for escape.

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Ledges to Nowhere - Structure to Habitat Transition

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