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**OPHISAUROUS VENTRALIS** (Eastern Glass Lizard). FIRE-INDUCED MORTALITY

Greg Kaufmann  
*Florida Department of Environmental Protection, Savannas Preserve State Park*

Henry T. Smith  
*Florida Department of Environmental Protection, Florida Park Service*

Richard M. Engeman  
*USDA-APHIS-Wildlife Services, richard.m.engeman@aphis.usda.gov*

Walter E. Meshaka Jr.  
*State Museum of Pennsylvania*

Ernest M. Cowan  
*Florida Department of Environmental Protection, Florida Park Service*

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OPHISISaurus Ventralis (Eastern Glass Lizard). Fire-Induced Mortality. Direct mortality to wildlife due to prescribed fire is of concern to land managers using fire as a manage-
ment tool. The ability of individual animals to escape fire is critical to the long-term survival of species inhabiting fire-maintained systems. Many wildlife species in Florida are both adapted to and dependent upon periodic fire to maintain suitable habitat (Myers and Ewel 1990. Ecosystems of Florida. University of Central Florida Press, Orlando, Florida. 765 pp.). However, species not adapted to survive in pyrogenic landscapes might suffer directly from fire-induced mortality; consequently fire might be a limiting factor. Long-term fire exclusion in many of Florida’s forests, habitats that historically burned regularly under natural conditions (lightning ignition), have undergone shifts in vegetation composition, fuel loads (higher), and leaf litter accumulation (higher), essentially altering the vegetative associations (Myers and Ewel, op. cit.). Likewise, the suite of wildlife species that inhabit these systems might also shift over time (Myers and Ewel, op. cit.). We hypothesize that one such change could favor fossorial species that utilize the litter for cover and foraging. Without normal woodland fire return intervals, non-fire adapted species may be able to augment their populations to a “pseudo-elevated” status resulting in denser populations than were historically present. However, data concerning historical population levels of many species are often lacking and the documentation of wildlife mortality as a result of fire can be difficult.

The benefits of prescribed fire to endangered species and other wildlife in Southeast Florida natural communities are well documented (Myers and Ewel, op. cit.), in particular for the many threatened and endangered species found in Savannas Preserve State Park (Marti et al. 2005. Endangered Species Update 22:18-28; Cowan 2005. Endangered Species Update 22:29–39). However, during post-burn evaluations following five prescribed burns and two wildfires, dead Eastern Glass Lizards (Ophisaurus ventralis) were observed within three distinct conservation areas in Southeast Florida (including Savannas Preserve) between January 2003 and March 2004. Burned areas were surveyed to characterize the fires and at the same time were canvassed for wildlife mortality. Ophisaurus ventralis was the only lizard species for which mortalities were observed. One dead O. ventralis was found on each of two prescribed fires conducted at J. W. Corbett Wildlife Management Area, Palm Beach County Florida, on 15–16 January 2003. Burn unit sizes were 14.2 ha and 4.0 ha, respectively. One dead specimen was also observed following a 32.4-ha prescribed burn conducted on the North Fork St. Lucie River Preserve State Park, St. Lucie County Florida on 28 January 2003. On 15 January 2004, search of a 12.1-ha prescribed burn on a separate parcel of land within the boundaries of the same park revealed 8 dead specimens. Three post-burn observations were made at Savannas Preserve State Park, Martin and St. Lucie Counties, Florida. On 26 November 2003 following a 6.1 ha prescribed burn, one dead lizard observed; 30 July 2003 following a 0.8 ha wildfire, one dead lizard observed; and, a single dead lizard was also found following a 87.4-ha wildfire on 22 March 2004. Unlike many other amphibians, reptiles, birds, and mammals in Southeast Florida adapted to and dependent upon fire (Cowan, op cit.; Marti et al., op cit.), these observations suggest that this species, often associated with dense herbaceous growth, appears susceptible to some level of fire-induced mortality. Therefore, it may be to this species’ benefit to apply patchy prescribed burns resulting in a mosaic of burned and unburned areas.

Submitted by GREG S. KAUFMANN, Florida Department of Environmental Protection, Savannas Preserve State Park, 9551 Gumbo Limbo Lane, Jensen Beach, Florida 34957, USA; HENRY T. SMITH, Florida Department of Environmental Protection, Florida Park Service, 13798 S.E. Federal Highway, Hobe Sound, Florida 33455, USA; RICHARD M. ENGEMAN, National Wildlife Research Center, 4101 LaPorte Ave., Fort Collins, Colorado 80521-2154, USA (e-mail: Richard.M.Engeman@aphis.usda.gov); WALTER E. MESHAKA, Jr., The State Museum of Pennsylvania, 300 North Street, Harrisburg, Pennsylvania, 17120-0024, USA; and ERNEST M. COWAN, Florida Department of Environmental Protection, Florida Park Service, 13798 S.E. Federal Highway, Hobe Sound, Florida 33455, USA.

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