



Apr 9th, 9:00 AM - 10:00 AM

Winter Abundance of Red-Tailed Hawks (*Buteo jamaicensis*) and American Kestrels (*Falco sparverius*) in Human-Altered Landscapes in Northeastern and Central Illinois

Anna Groves
Illinois Wesleyan University

Vic Berardi, Faculty Advisor
Illinois Beach State Park Hawk Watch

Paul Sweet, Faculty Advisor
Illinois Beach State Park Hawk Watch

Angelo Capparella, Faculty Advisor
Illinois State University

Gretchen Knapp, Faculty Advisor
Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>
Illinois State University



Part of the [Environmental Sciences Commons](#)

See next page for additional authors

Groves, Anna; Berardi, Faculty Advisor, Vic; Sweet, Faculty Advisor, Paul; Capparella, Faculty Advisor, Angelo; Knapp, Faculty Advisor, Gretchen; and Harper, Faculty Advisor, Given, "Winter Abundance of Red-Tailed Hawks (*Buteo jamaicensis*) and American Kestrels (*Falco sparverius*) in Human-Altered Landscapes in Northeastern and Central Illinois" (2011). *John Wesley Powell Student Research Conference*. 10.
<https://digitalcommons.iwu.edu/jwprc/2011/posters/10>

This Event is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Presenter and Advisor Information

Anna Groves; Vic Berardi, Faculty Advisor; Paul Sweet, Faculty Advisor; Angelo Capparella, Faculty Advisor; Gretchen Knapp, Faculty Advisor; and Given Harper, Faculty Advisor

Poster Presentation P19

**WINTER ABUNDANCE OF RED-TAILED HAWKS (*BUTEO JAMAICENSIS*) AND
AMERICAN KESTRELS (*FALCO SPARVERIUS*) IN HUMAN-ALTERED LANDSCAPES IN
NORTHEASTERN AND CENTRAL ILLINOIS**

Anna Groves¹, Vic Berardi², Paul Sweet³, Janice Sweet³, Angelo Capparella⁴, Gretchen Knapp⁴,
and Given Harper^{*5}

¹Environmental Studies Program, Illinois Wesleyan University

²Hawk Migration Association of North America, Illinois Beach State Hawk Watch, Zion, IL

³Illinois Beach State Park Hawk Watch, Zion, IL

⁴School of Biological Sciences, Illinois State University, Normal, IL

⁵Department of Biology, Illinois Wesleyan University

Though Red-tailed Hawks and American Kestrels are among the most common raptors found across North America, no study has examined their winter abundance in Illinois since 1967. This study investigated their winter abundance using five years (2004-05 through 2008-09) of winter (December-March) automobile survey results (201 surveys) in northeastern and central Illinois using a standardized survey technique. In northeastern Illinois, red-tails were most abundant in 2004-05 (145.6 median/1000 km) and least abundant in 2006-07 (63.8); the highest number was observed in March and the lowest in February. In central Illinois, red-tails were most abundant in 2008-09 (228.3 median/1000 km) and least abundant in 2004-05 (112.4); the highest number was observed in February and the lowest in December. There were no significant effects of year (northeast, $P=0.14$; central, $P=0.44$) or month (northeast, $P=0.58$; central, $P=0.51$) on red-tail abundance in either region. Adults were observed 9.0 times more frequently than immatures. In northeast Illinois, kestrels were most abundant in 2006-07 (38.8 median/1000 km) and least abundant in 2004-05 (15.2); abundance was highest in January and lowest in March. In central Illinois, kestrels were most abundant in 2005-06 (88.8 median/1000 km) and least abundant in 2004-05 (35.5); abundance was highest in February and lowest in January. There was no significant effect of month (northeast, $P=0.87$; central, $P=0.40$) on kestrel abundance, or of year ($P=0.21$) in northeast Illinois. In contrast, there was a significant effect of year ($P=0.003$) on kestrel abundance in central Illinois. In all surveys males were observed 1.7 times more frequently than females