

UPDATE

YOUR SOURCE FOR CAMPUS NEWS

Study Shows Climate Affecting Avian Breeding Habits

BY: KATHLEEN TUCK PUBLISHED 9:48 AM / NOVEMBER 22, 2016

SHARE | EMAIL | PRINT



A kestrel carries a vole home for dinner. Rob Palmer photo.

Milder winters have led to earlier growing seasons and noticeable effects on the breeding habits of some predatory birds, according to research by Boise State biologists Shawn Smith and Julie Heath, in collaboration with Karen Steenhof, and The Peregrine Fund’s Christopher McClure. Their work was recently published in the Journal of Animal Ecology under the title “Earlier nesting by generalist predatory bird is associated with human responses to climate change.”

Smith and his co-authors studied the American kestrel (*Falco sparverius*), also known as a sparrow hawk, because the bird is widespread and responsive to environmental change. Their question was whether the warming climate had led to changes in prey abundance and a corresponding change in when the birds nested.

Their study looked at kestrels that nested in both non-irrigated shrub and grasslands and those that nested in irrigated crops and pastures. Using data from remote satellites to determine the greenness of different types of vegetation they were able to determine the start of the growing season for different areas. That is important because peaks in vegetation greenness correspond with peaks in kestrel prey, like small mammals and insects. They then looked at how that matched up with kestrel nesting patterns.

Results show that over the period of 1992-2015, the greenness on irrigated lands occurred earlier because of earlier planting of crops following relatively warm winters, but there has not been a change in green-up on non-irrigated lands. Kestrels seemed to “track” the changes in irrigated lands and were nesting 15 days earlier than they used to nest. Although this might not seem like much of a shift, the earliest nesting kestrels can now raise two broods per year instead of one.

“Kestrels may preferentially track prey in irrigated lands over non-irrigated lands because of higher quality prey on irrigated lands,” Smith said. He noted that the earlier availability of prey could also be overcoming former constraints on early nesting, such as seasonal declines in natural reproductive rates or competition for high-quality mates.

The study is one of the first concrete examples of an association between human adaptation to climate change and shifts in breeding cycles of wildlife. “Moving forward, we need to consider that animals will be affected by both climate change and our own adaptations to a warming planet,” McClure said.

For more information, contact Heath at julieheath@boisestate.edu or (208) 426-3208.

TODAY IS TUESDAY, NOVEMBER 29, 2016

SUBSCRIBE TO DAILY UPDATE

Email

Subscribe

FACULTY & STAFF IN ACTION

- VANESSA FRY
- NANCY NAPIER
- ED MCLUSKIE
- GREG HAMPIKIAN
- GREG HILL AND VANESSA FRY

EVENTS

Nov. 28: Faculty Artists Series Recital – Sarah Paradis, trombone, and Alex Noppe, trumpet with Peggy Purdy, piano

Nov. 29: Junior Recital – Alyssa Bistline, piano

Nov. 28: Student Chamber Music Recital

Nov. 11-Dec. 5: Fall 2016 BFA Exhibition

Nov. 7-Dec. 19: Fine Arts Gallery Presents ‘Complex Ecosystems’

[View All Events](#)

CATEGORIES

Select Category



PHOTO OF THE WEEK

THIS WEEK

@ Boise State University

ACCOUNTS

[myBoiState](#)
[Blackboard](#)

GATEWAYS FOR

[Current Students](#)
[Future Students](#)
[Parents & Families](#)
[Faculty & Staff](#)
[Alumni](#)
[Donors](#)

COMMUNITY

[Boise State Public Radio](#)
[Morrison Center](#)
[Taco Bell Arena](#)
[Boise State Tickets](#)

SERVICES

[Albertsons Library](#)
[BroncoAlert](#)
[Campus Recreation](#)
[Campus Security](#)
[Health Services](#)
[Housing & Res Life](#)
[Office of the Registrar](#)
[Student Union Building](#)
[Transportation & Parking](#)

EMPLOYMENT

[Career Opportunities](#)
[Human Resources](#)
[BroncoJobs](#)
[Career Center](#)

SHOP

[BroncoShop](#)
[Bookstore](#)
[Broncos Photo Store](#)
[Scholarship Auction](#)



GO.BOISESTATE