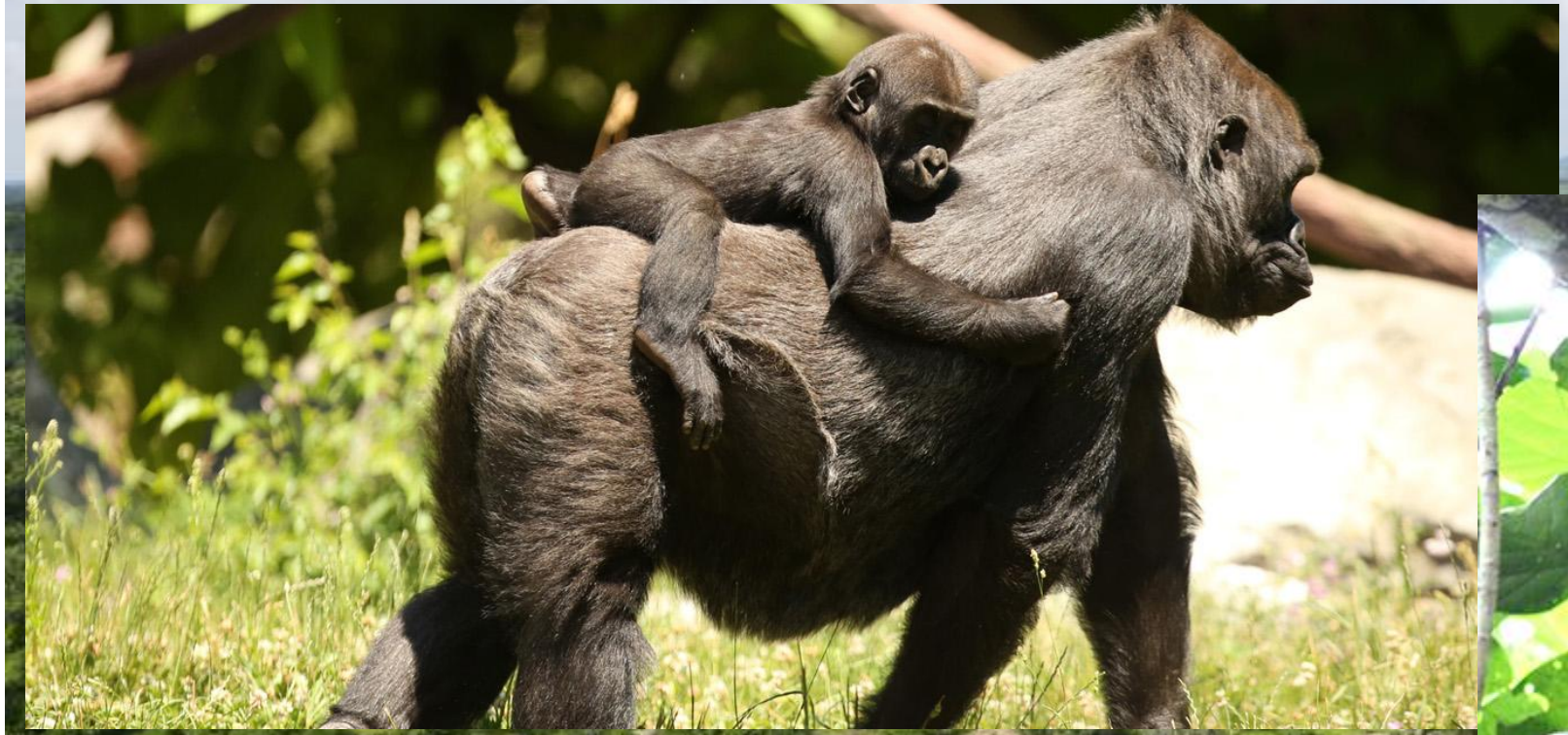
Our Urban Wildlife: Coyotes, Bats, Rats, and Other Critters

Seth Magle, Ph.D.
Director
Urban Wildlife Institute



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FOR WILDLIFE. FOR ALL.


Google

Why do we study urban wildlife?

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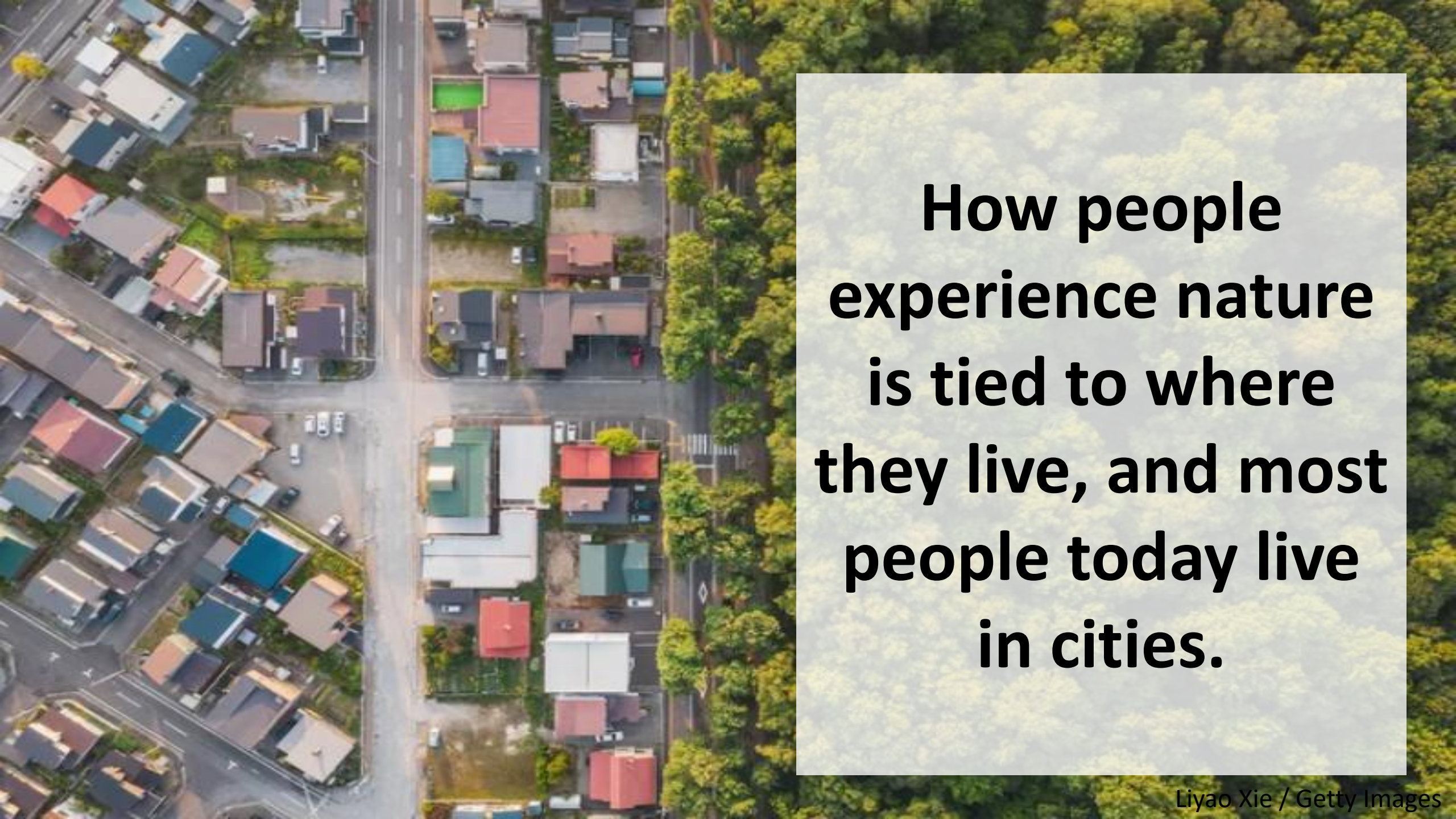

How people experience nature is tied to where they live, and most people today live in cities.

Liyao Xie / Getty Images

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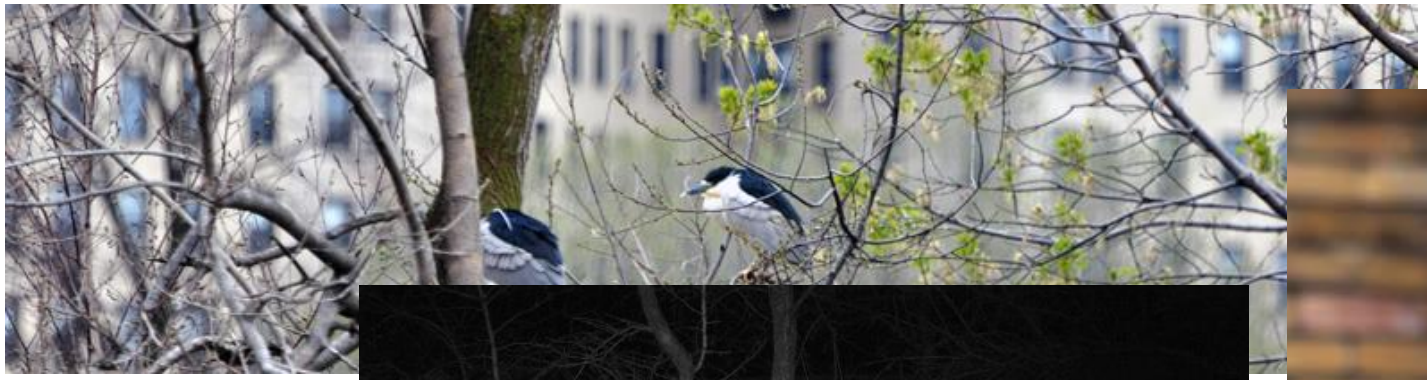
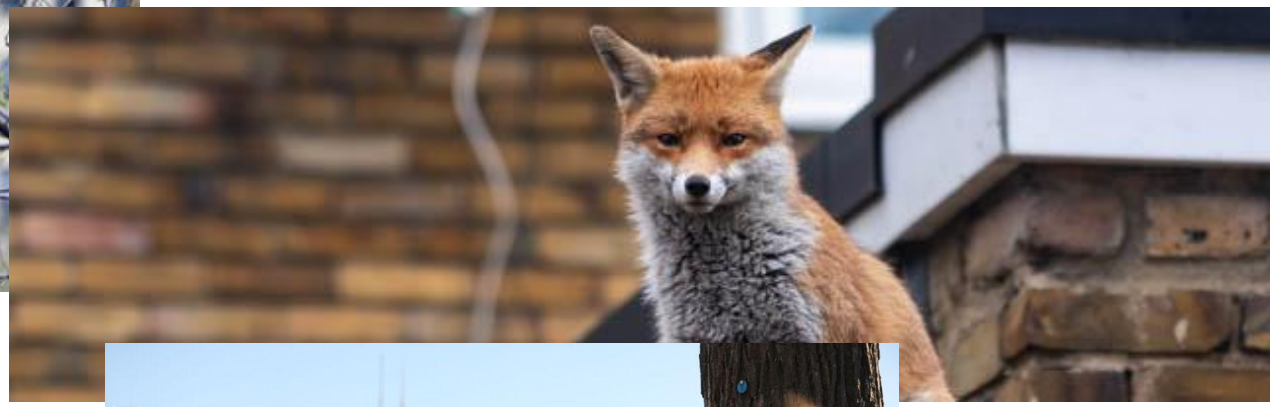
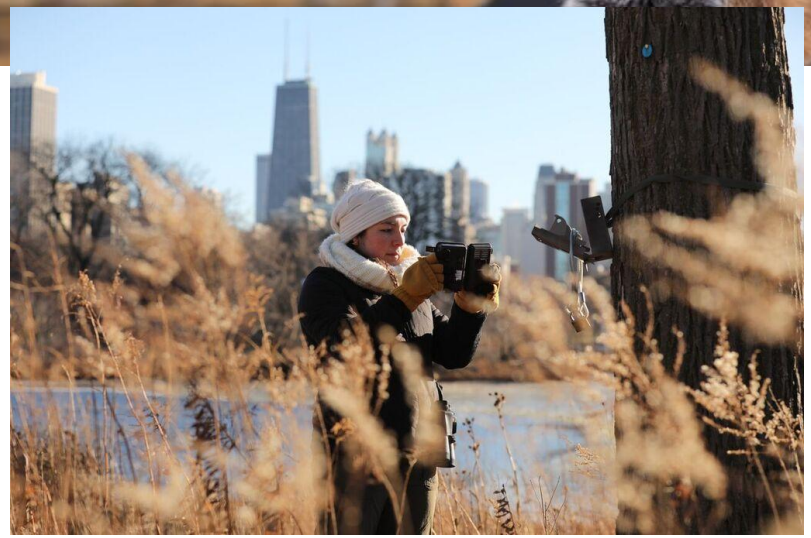






The Aldi Coyote

SCIENCE & NATURE

Coyote Captured Looking for Love in Chicago Aldi's Refrigerator Aisle

Patty Wetli | January 13, 2025, 6:50 pm

And its predecessor…

The Quizno’s Coyote!

Chonkasaurus!

urban wildlife information network
LINCOLN PARK ZOO.

Monty and Rose


04-12-2013 11:56

Some photos!


Bushnell
02-09-2012 14:09:57


Bushnell
01-24-2011 17:35

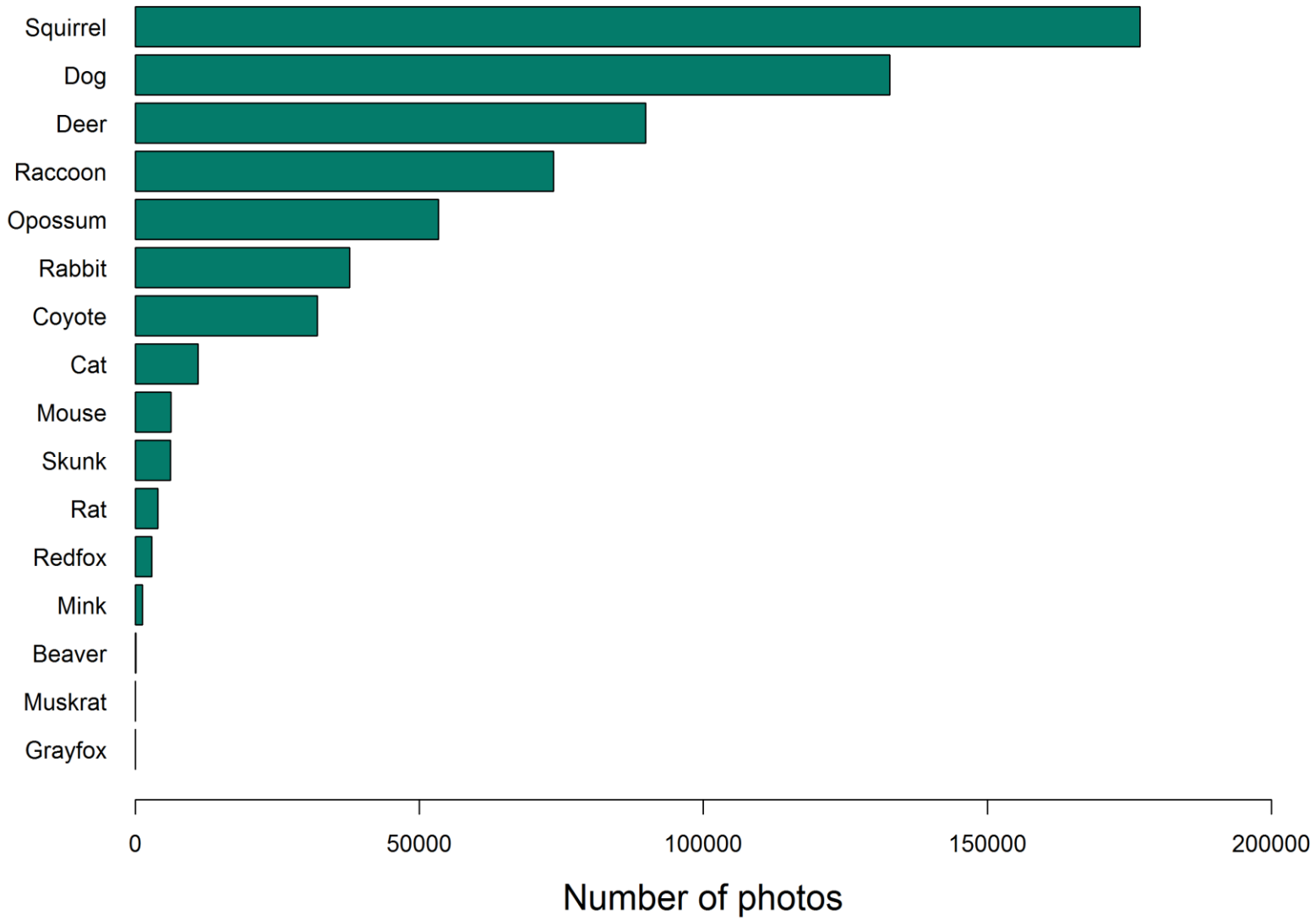

Bushnell
07–19–2016 07:17:03


Bushnell
10–20–2010 22:06


Bushnell
01-28-2012 03:21:38


Bushnell
10-23-2011 04:28:05

Record Breaking Science



Total photos: > 4,000,000

Seasons sampled: 46

Miles driven: ~100,000

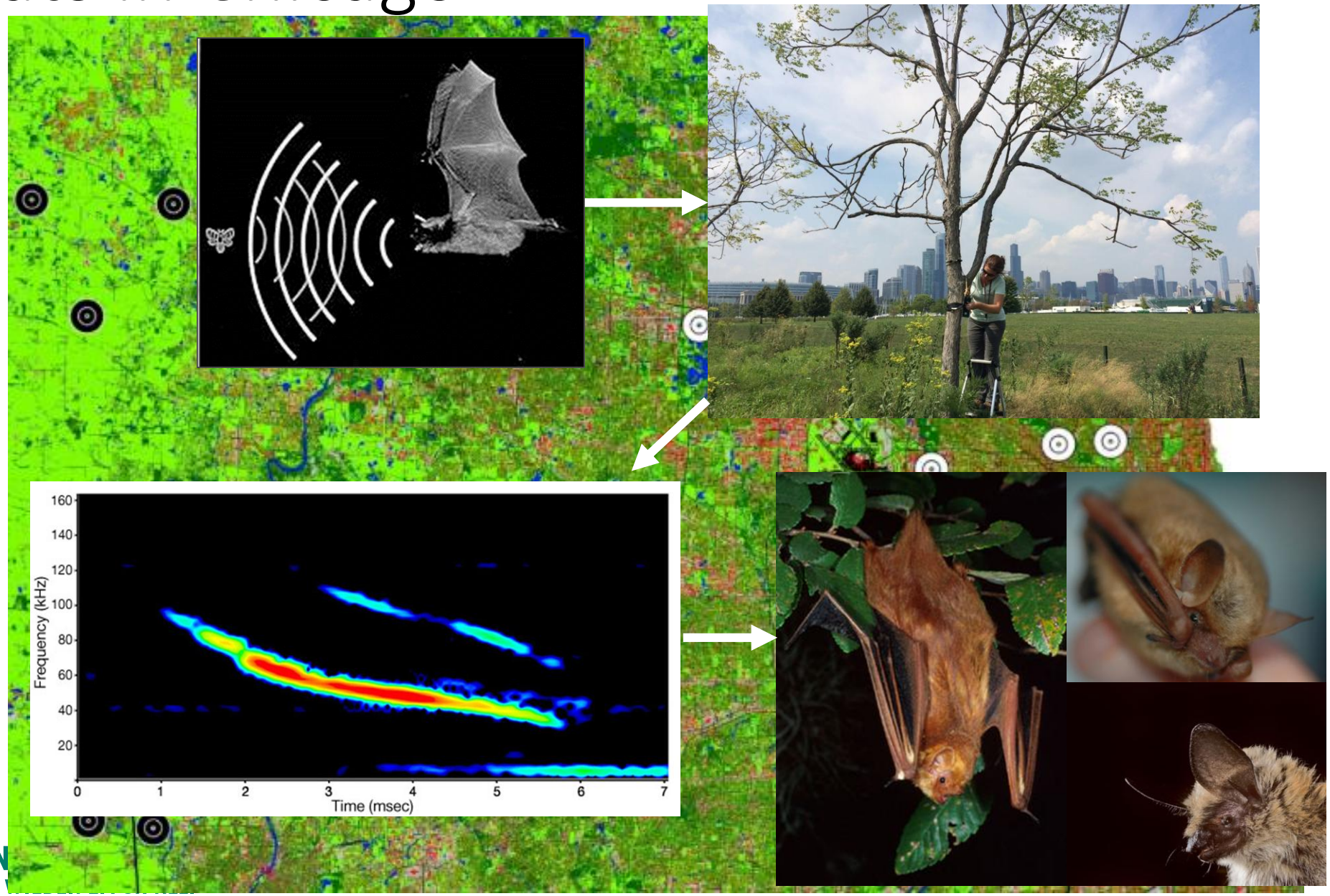
Cameras stolen: 35

Sites monitored: > 150

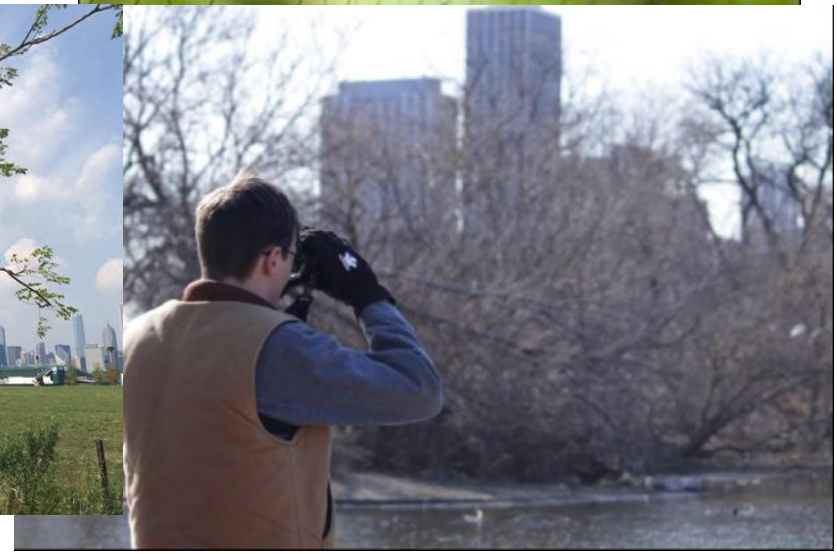
Interns: > 50

Collaborations: 25+

Bats in Chicago



And even more!



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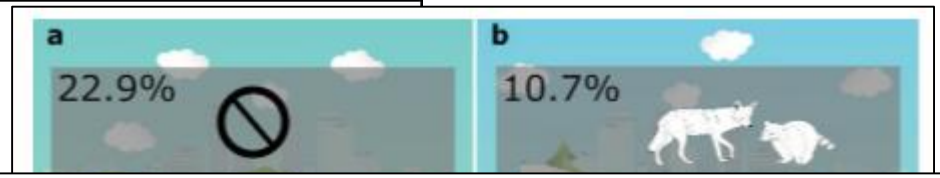
Am. Midl. Nat. (2016) 175:155–167



RESEARCH ARTICLE

Journal of Animal Ecology

BRITISH ECOLOGICAL SOCIETY

Urbanization alters predator-avoidance behaviours

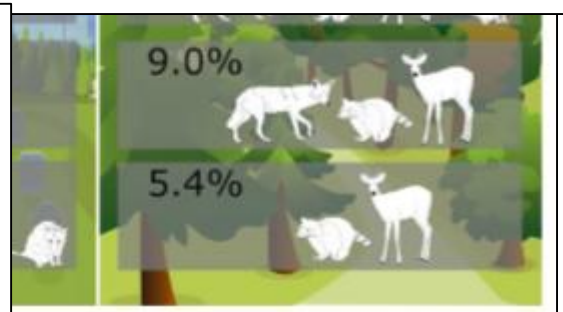
Travis Gallo† | Mason Fidino† | Elizabeth W. Lehrer | Seth Magle

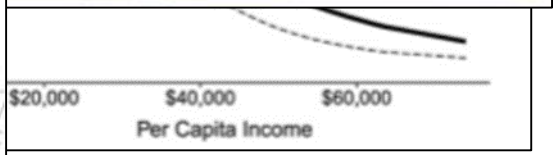
Animal C

Urban mesopredator di
effects of landscape ar

S. B. Magle, E. W. Lehrer & M. Fidino

Urban Wildlife Institute, Department of Conservation a





Ecological Applications, 0(0), 2017, pp. 1–
© 2017 by the Ecological Society of Amer

Mammal diversit
spaces: im

Travis Gal

Lincoln Park

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Connecting with the Public

Partners in Fieldwork


CHICAGO
WILDLIFE WATCH
Classify
Profile
About
Education
Blog
Press
Talk
Looks like...
Search
Coat
Tail
Build
Beaver
Horse
Raccoon
Bird
Human
Rat
Cat, Domestic
Livestock
Skunk
Chipmunk
Mink
Squirrel, Flying
Coyote
Mouse
Squirrel, Fox
Deer
Mower
Squirrel, Gray
ChicagoWildlifeWatch.org
See something? Animals you identify will appear here...
Nothing here
FINISH
Need some spotting tips? Check out these blog posts!
Site Intro
Tutorial
Education Mode
Clear filters
The Zooniverse is a collection of web-based citizen science projects that use the efforts of volunteers to help researchers deal with the flood of data that confronts them.
PRIVACY POLICY
SOURCE & BUGS

Urban Planning


Image by DBOX

City of **Chicago** | Mayor Lori E. Lightfoo

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Chicago Wildlife Manage
Coexistence Plan

Prepared by Chicago Animal Care and Control & the Lir
Wildlife Institute

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How Chicago Is Helping Residents Coexist With Urban Wildlife

By pairing animal profiles with education and information, the city's Wildlife Management and Coexistence Plan is designed to help residents and urban wildlife peacefully live next to each other.

CINNAMON JANZER APRIL 27, 2022


Chicago, IL
Image NOAA
Image Landsat
Google earth


UWIN
urban wildlife information network
CREATED BY LINCOLN PARK ZOO.

Chicago and beyond..

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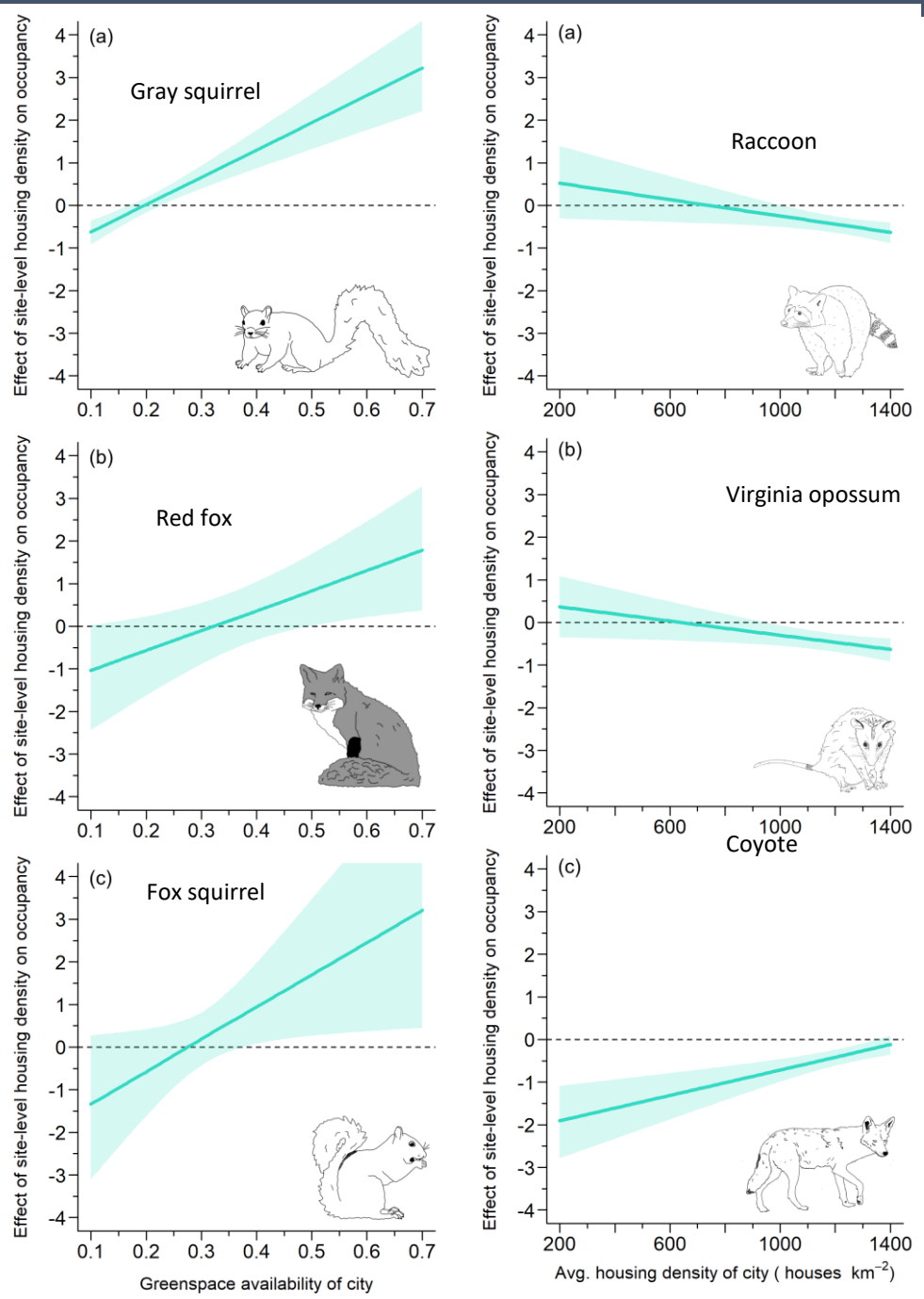
City-specific responses to urbanization



Finally, we can truly understand urban wildlife across the nation—all species!

Fidino et al. 2021, *Ecological Applications*

Wealth and urbanization shape medium and large terrestria mammal communities

- Begins investigations into social factors
- 20 North American UWIN cities
- Testing luxury effect—hypothesis of higher diversity in richer neighborhoods
- This is a theory long divisive in the literature

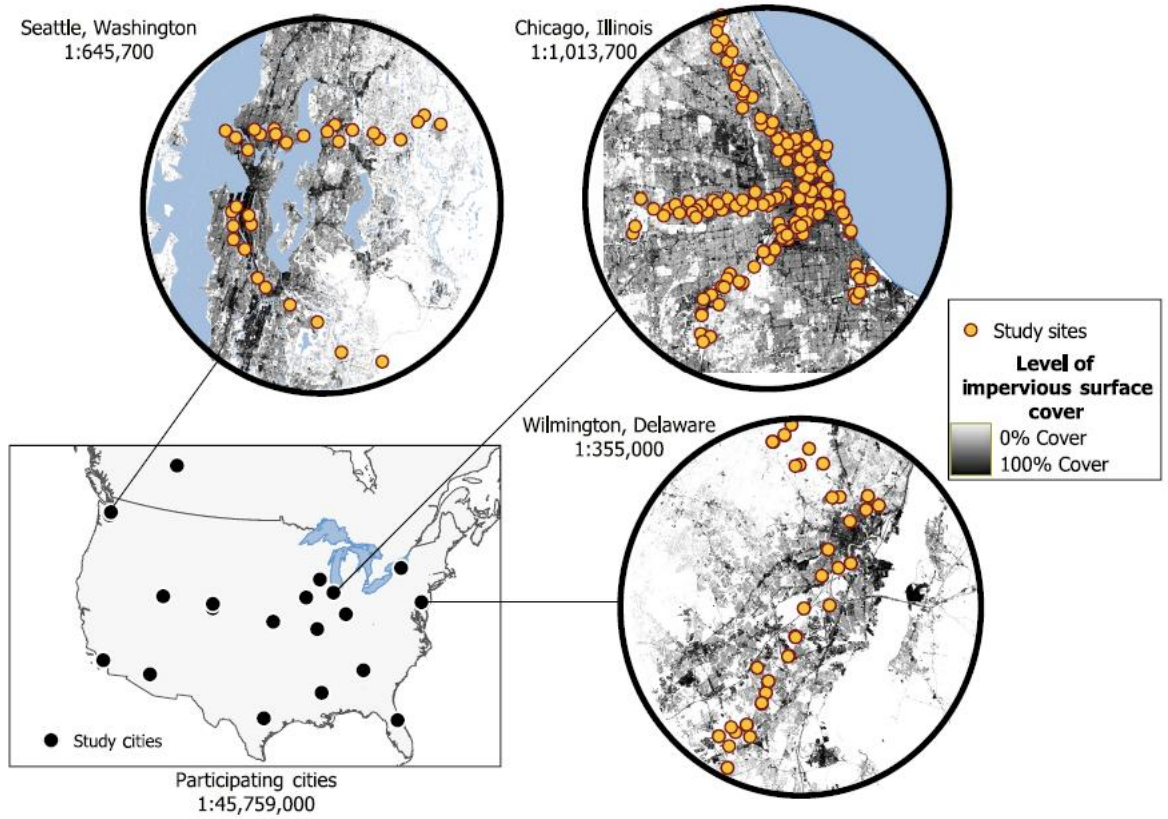


FIGURE 1 Map of the distribution of the 20 cities across North America that contributed data for this analysis (bottom left) as well as three representative examples of the distribution of camera trapping study sites along each city's respective urbanization gradient. Points for Tacoma, Washington and Seattle, Washington are partially overlapping, as are points for Denver, Colorado and Fort Collins, Colorado. For a map with the study sites for all cities see Figure S1

Magle et al. 2021, Global Change Biology

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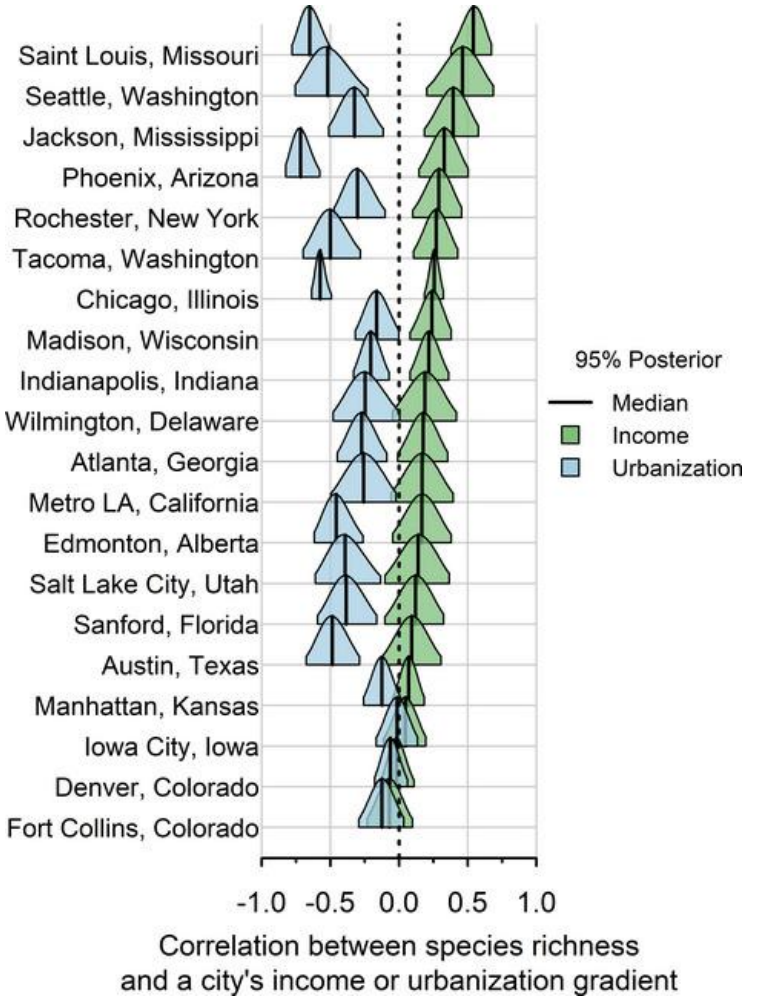
Luxury Effect

- We detected a luxury effect in about half of the 20 UWIN cities.
- Urban intensity had a stronger effect
- Economic factors play an important secondary role to structural / ecological ones



Magle et al. 2021, Global Change Biology

Most recently… Gentrification Drives Patterns of Alpha and Beta Diversity in Cities

PNAS RESEARCH ARTICLE | ECOLOGY

Gentrification drives patterns of alpha and beta diversity in cities

Mason Fidino[a,1], Heather A. Sander[b], Jesse S. Lewis[c], Elizabeth W. Lehrer[a], Kimberly Rivera[a], Maureen H. Murray[a], Henry C. Adams[a], Anna Kase[a], Andrea Flores[a], Theodore Stankowich[d], Christopher J. Schell[e], Carmen M. Salsbury[f], Adam T. Rohnke[g], Mark J. Jordan[h], Austin M. Green[i], Ashley R. Gramza[j], Amanda J. Zellmer[k,l], Jacque Williamson[m], Thilina D. Surasinghe[n], Hunter Storm[o], Kimberly L. Sparks[p], Travis J. Ryan[f], Katie R. Remine[q], Mary E. Pendergast[r], Kayleigh Mullen[s], Darren E. Minier[t], Christopher R. Middaugh[p], Amy L. Mertl[u], Maureen R. McClung[v], Robert A. Long[q], Rachel N. Larson[b], Michel T. Kohl[w], Lavendar R. Harris[w], Courtney T. Hall[x], Jeffrey D. Haight[y], David Drake[z], Alyssa M. Davidge[aa], Ann O. Cheek[bb], Christopher P. Bloch[n], Elizabeth G. Biro[cc], Whitney J. B. Anthonysamy[dd], Julia L. Angstmann[ee], Maximilian L. Allen[ff], Solny A. Adalsteinsson[cc], Anne G. Short Gianotti[gg], Jalene M. LaMontagne[a,hh], Tiziana A. Gelmi-Candusso[ii], and Seth B. Magle[a]

Edited by Karen Seto, Yale University, New Haven, CT; received October 24, 2023; accepted January 30, 2024

While there is increasing recognition that social processes in cities like gentrification have ecological consequences, we lack nuanced understanding of the ways gentrification affects urban biodiversity. We analyzed a large camera trap dataset of mammals (>500 g) to evaluate how gentrification impacts species richness and community composition across 23 US cities. After controlling for the negative effect of impervious cover, gentrified parts of cities had the highest mammal species richness. Change in community composition was associated with gentrification in a few cities, which were mostly located along the West Coast. At the species level, roughly half (11 of 21 mammals) had higher occupancy in gentrified parts of a city, especially when impervious cover was low. Our results indicate that the impacts of gentrification extend to nonhuman animals, which provides further evidence that some aspects of nature in cities, such as wildlife, are chronically inaccessible to marginalized human populations.

alpha diversity | beta diversity | camera trap | gentrification | mammals

Significance

To increase environmental equity in cities, it is imperative to better understand social–ecological disparities in biodiversity. Our analysis demonstrates that gentrification, coupled with variation in impervious cover, shapes mammal distributions across US cities such that gentrified parts of cities have 1 to 2 more species on average

Where do we go from here?

Plans for Coexistence!

Received: 23 April 2021 | Accepted: 20 October 2021
DOI: 10.1002/pan3.10283

PERSPECTIVE

Barriers to building wildlife-inclusive cities: Ins
deliberations of urban ecologists, urban plann
designers

Cria A. M. Kay[1] | Adam T. Rohnke[2] | Heather A. Sander[3]
Theodore Stankowich[4] | Mason Fidino[1] | Maureen H. Murr
Jesse S. Lewis[5] | Ilanah Taves[6] | Elizabeth W. Lehrer[1] | Ar
Christopher J. Schell[9] | Seth B. Magle[1]

[1]Department of Conservation and Science, Urban Wildlife Institute, Chicago, IL, USA; [2]Central Mississippi Research
University, Raymond, MS, USA; [3]Department of Geographical and Sustainability Sciences, University of Iowa, Iowa
Sciences, California State University, Long Beach, CA, USA; [5]College of Integrative Sciences and Arts, Arizona State
Geography, University of Cambridge, Downing Site, Cambridge, UK; [7]Department of Biology, Occidental College, L
Conservancy, Pasadena, CA, USA and [9]Department of Environmental Science, Policy, and Management, University

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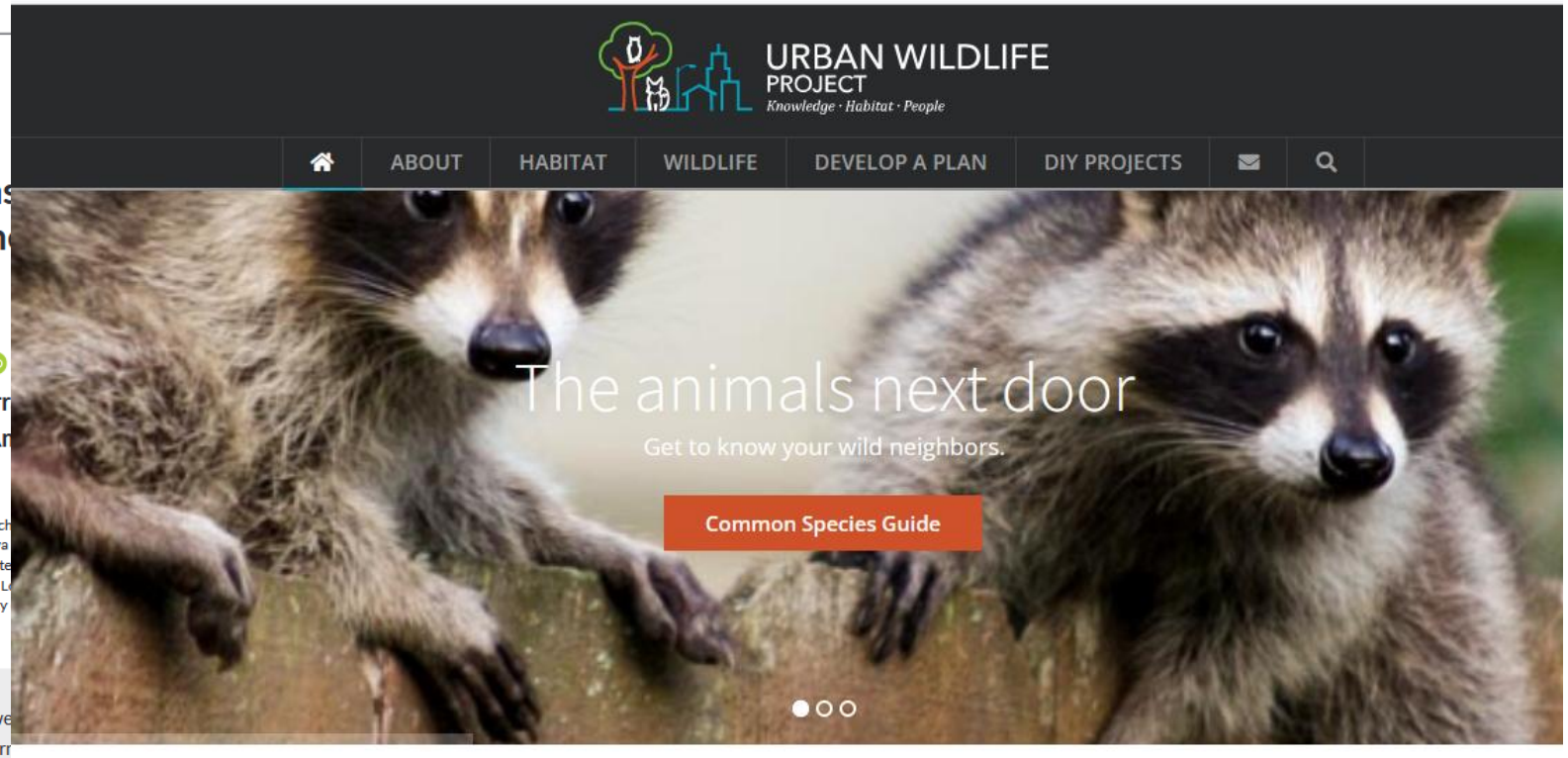
Funding information
Grainger Foundation; EJK Foundation

Handling Editor: Darryl Jones

Abstract

1. Cities are seen as quintessentially human; howe
habitat to many plants, animals and other forr
ecosystems.
2. As urban areas expand to house more of the glo
natural habitat for wildlife, the need for wildlife
sign becomes increasingly pressing.
3. The 2019 Urban Wildlife Information Network
connecting a group of 80 scientists, urban plan
role of cities in combating the global biodiversit
4. The Summit focused on identifying and addre
work between these communities, such as di



Welcome to the Urban Wildlife Project!

By working together, individuals, neighbors and communities can ensure a vibrant future for our urban and suburban natural spaces and the urban wildlife species that call them home.

- Learn about wildlife habitat
- Identify common urban and suburban wildlife species
- Develop your own wildlife management plan
- Implement do-it-yourself projects on your property

About the Project

LINCOLN PARK ZOO
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Understanding Urban Birds Across The World

urban wildlife information network
LINCOLN PARK ZOO

A Truly Global Network

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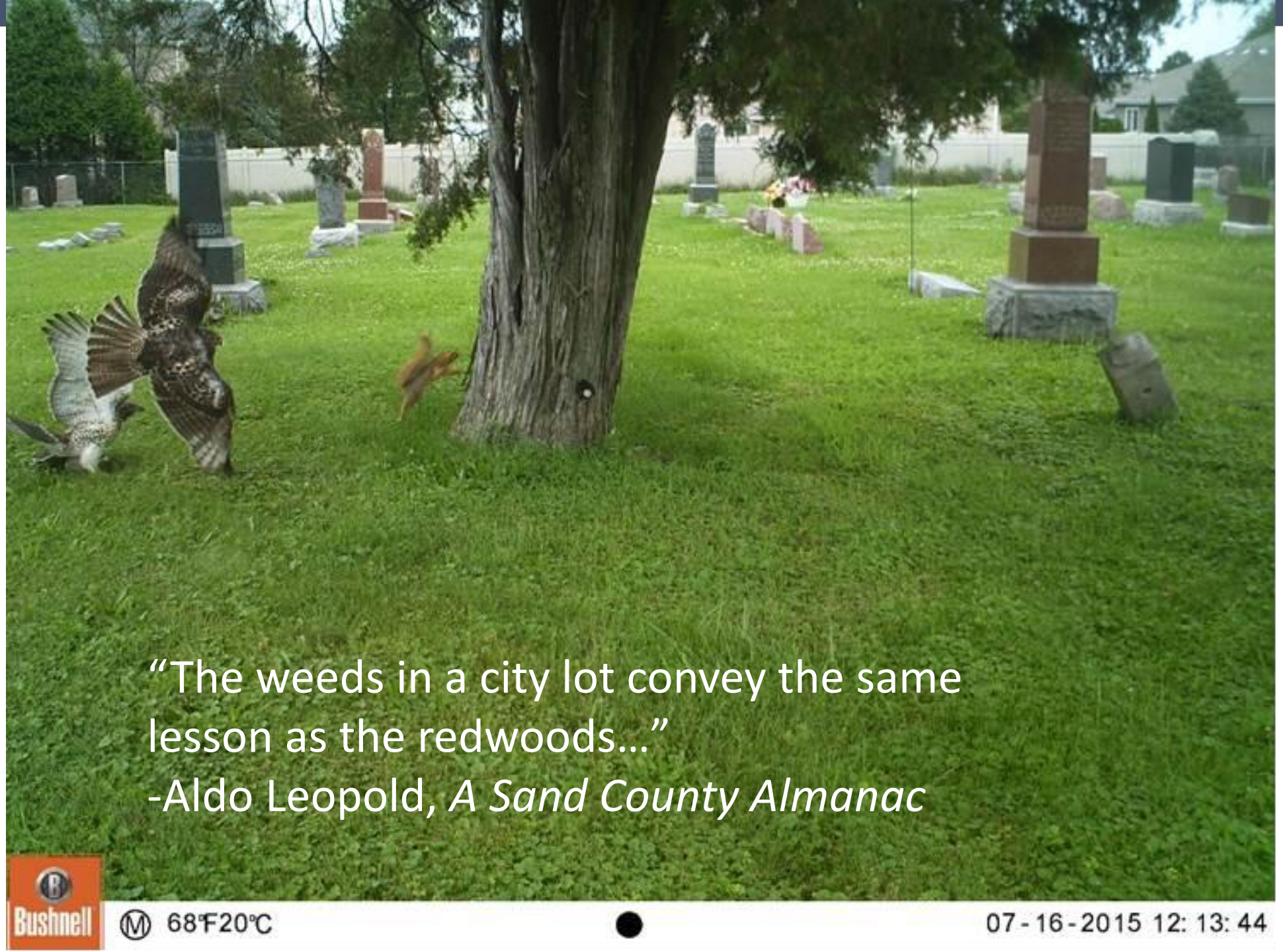
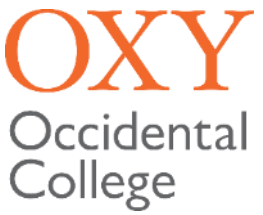

“The weeds in a city lot convey the same lesson as the redwoods…”
-Aldo Leopold, *A Sand County Almanac*
Bushnell
68℉20℃
07-16-2015 12: 13: 44

Thanks to the Partners of UWIN



Thank you!

urban wildlife information network

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?
www.urbanwildlifeinfo.org