

Grant Application

Tim Greseth



Email : tim@myowf.org
Application ID : A11GT41
Custom Ref. : -

Application Start Date: 2021-08-19 20:46:51
Application Completed Date: 2021-08-24 00:41:23

1 Have you ever applied for an OWF grant before?

yes

1.1 What was the name of the project?

Multiple OWF Sponsored Initiatives

2 Have you ever been denied for an OWF grant before?

no

3 Project Title

Urban Wildlife Information Network 2021-22

4 Name of my Organization

Oregon Wildlife Foundation

5 If your organization is not a tax-exempt nonprofit, please list the name of your fiscal sponsor

-

If this does not apply to you, write N/A

NA

6 Project Manager Full Name

Hunter Storm

7 Project Manager Mailing Address

-

Please enter full address with city, state & zip

901 SE Oak Street, Suite 103, Portland, Oregon 97214

8	Project Manager Phone Number
	206-659-3150
9	Project Manager Email Address
	stormhun@pdx.edu
10	Please provide a brief biographical statement about yourself
	Hunter Storm is a Senior at Portland State University majoring in Biology with a focus on Environmental Science. She's also interning with Professor Olyssa Starry in her ecology lab at Portland State and is focusing on urban issues. Prior to joining UWIN Portland as the Project Coordinator, she was a UWIN volunteere for two field seasons and a great help to Erica Patterson (the previous Coordinator). With direct project experience, academic background, and professional interest in the field of urban ecology, Hunter will do a great job with UWIN Portland.
11	Provide any social media handles you use - Enter social handles or URLs such as instagram, facebook, twitter, youtube, etc. so that we can use to cross promote on our channels - if you do not have any, please place N/A
	@orwildlife; as an OWF-sponsored project, we'll be promoting it via our channels.
12	Please indicate if you are currently following Oregon Wildlife Foundation on our social media channels
	- None of these channels
13	Total estimated project cost
	11355.20
14	Funding that you are requesting from OWF - If you're request if for more than \$5,000, please contact Tim Greseth - tim@myowf.org before submitting your application.
	6096.2
15	What type of project are your proposing?
	Wildlife
16	Will your project address an Oregon Conservation Strategy habitat or species?
	no
17	Start date of project- Day/Month/Year
	27-09-2021

18	End date of project
	27-09-2022
19	Location of project
	Portland, Oregon
20	Has a local, state or federal biologist reviewed this project?
	yes
20.1	What is their name and contact info?
	Leslie Bliss-Ketchum, leslie@samarapdx.com, 503-481-6753
21	Have you already or will you obtain necessary permits from all requisite agencies as applicable to proposed project?
	yes
22	What will the requested funds be used for?
	A portion of the requested funds are compensation for the Project and Volunteer Coordinator. The balance will also be used to purchase, deploy, and maintain trail cameras. UWIN Portland seeks to develop a better understanding of urban wildlife trends and connectivity through the use of trail cameras placed across a gradient of urban density. This will be accomplished with the support of partners within the project's geographic scope. More broadly, UWIN Portland has joined 17 other cities across North America that are contributing to a database allowing for an examination of urban wildlife trends at a continental scale.
23	Provide a brief Project Summary
	UWIN Portland seeks to develop a better understanding of urban wildlife trends and habitat connectivity through the use of trail cameras placed across a gradient of urban density. This is being done with the support of community partners including Portland Audubon, Portland State University, Gresham, Portland, and Tualatin Parks & Recreation Departments. UWIN Portland will monitor the distribution, frequency, and abundance of mid to large sized urban wildlife e.g., raccoon, coyote, deer. Locally, data will provide research opportunities to undergraduate and graduate students at PSU and support ongoing conservation efforts including METRO's Regional Connectivity Strategic Action Plan.
24	Upload pre-project pictures or a video - By submitting these photos or video I warrant that I am the legal owner of this media and grant the Foundation permission to reproduce, exhibit, or publish them for all general purposes in relation to Oregon Wildlife Foundation's work. If you have questions about photo or video submissions please refer to myowf.org/grants for guidance.
	1 Document Uploaded
25	Fill out the budget

Project Revenue	Cash	In-Kind	Committed / Pending
Oregon Wildlife Foundation Request	6096.20		Pending
Portland State University		2700	Committed
Portland Audubon		2559	Committed
REVENUE	6096.20	5259.00	
		TOTAL PROJECT SUPPORT	11355.20
Project Expenses	Cash	In-Kind	Total
Equipment - Cameras	1950	160	2110.00
Equipment - Camera Boxes	299		299.00
Equipment - Cable Locks	179.85		179.85
Supplies - batteries, sd cards, scent lures, misc.	567.45		567.45
UWIN Coordination	2700	4100	6800.00
UWIN Volunteer Hours		998.90	998.90
Volunteer Event	400		400.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
		TOTAL PROJECT EXPENSES	11355.20
Balanced budget? This cell should read "0" ---->		NET	0.00

26 Upload your Project Narrative -
Please make sure your narrative is no more than 7 pages long, single spaced, 12 pt. font (Calibri preferred).

1 Document Uploaded

27 Upload letters of support

1 Document Uploaded

28 I understand that I am required to submit a Project Completion Report, copies of any publications or social media posts crediting the Foundation's support, and post-project pictures at the completion of my project

yes

Powered by **Submit.com**

— Grant Application

Tim Greseth

Application ID: **A11GT41**

1 Are the eligible?

No Answer Provided

UWIN Portland Project Narrative

Program Summary

UWIN Portland is a branch of the national Urban Wildlife Information Network, collecting data on wildlife in 35 different cities in the US and Canada. Wildlife monitoring at this scale allows for a comprehensive study of regional variation between different urban centers.

Our mission consists of three parts,

1. Contribute data to the national UWIN database and participate in regional and continent-wide research projects pertaining to urban wildlife.
2. Explore wildlife occupancy and distribution in Portland; create research questions and partner with students to expand our data collection and analysis.
3. Engage community members in scientific data collection and exposure to urban wildlife. Share project findings with public organizations concerned with the health and protection of wildlife.

2019 - Present Project Scope

After receiving a grant from the Oregon Wildlife Foundation in 2019, UWIN Portland has expanded its monitoring program and its educational and community involvement.

Camera Management

A total of 25 monitoring locations have been established, spanning from Hillsboro to Gresham and extending into the Portland city center. Camera locations take advantage of Portland's connected green space, including Tualatin Hills Nature Park, Hoyt Arboretum, Marquam Nature Park, and Springwater Corridor. The 25 camera locations create one transect, following the national UWIN protocol. Cameras are placed at least 1 km apart and fall within 2 km of the transect line. Cameras are deployed for one month during the spring, summer, and fall seasons. A winter season will be added this year.

The transect was completed in October of 2020, allowing for the following seasons of data collection; Fall 2020, Spring 2021, and Summer 2021. Monitoring data has been uploaded to the national UWIN database and may be accessed by various wildlife research projects at the discretion of UWIN Portland. One such research project is being conducted by the Lincoln Park Zoo in Chicago, comparing biodiversity in US cities to levels of gentrification. UWIN Portland has chosen to participate in this study, providing the aforementioned seasons and locations of camera trap data.

Data Analysis

Monitoring data will also be analyzed to explore the relationships between land-use types, geographic features, and occupancy of mammal species. The established camera transect will be expanded slightly to include an additional two cameras at each end. The additional four cameras will

provide rural and agricultural land use types for comparison to the suburban and urban camera locations. An informal spur transect will also be added, consisting of 6 cameras extending from the Portland city center to the Southwest, ending at the Tualatin Wildlife Refuge. This informal transect (‘informal’ meaning it will contain fewer cameras than an ‘official’ UWIN transect), will provide multiple additional land use types for comparison; including a wildlife refuge, a golf course, and a major highway crossing. We will use GIS (Geographic Imaging System) software to compare the site characteristics and determine patterns between the wildlife species occupancy and geographic and human development features.

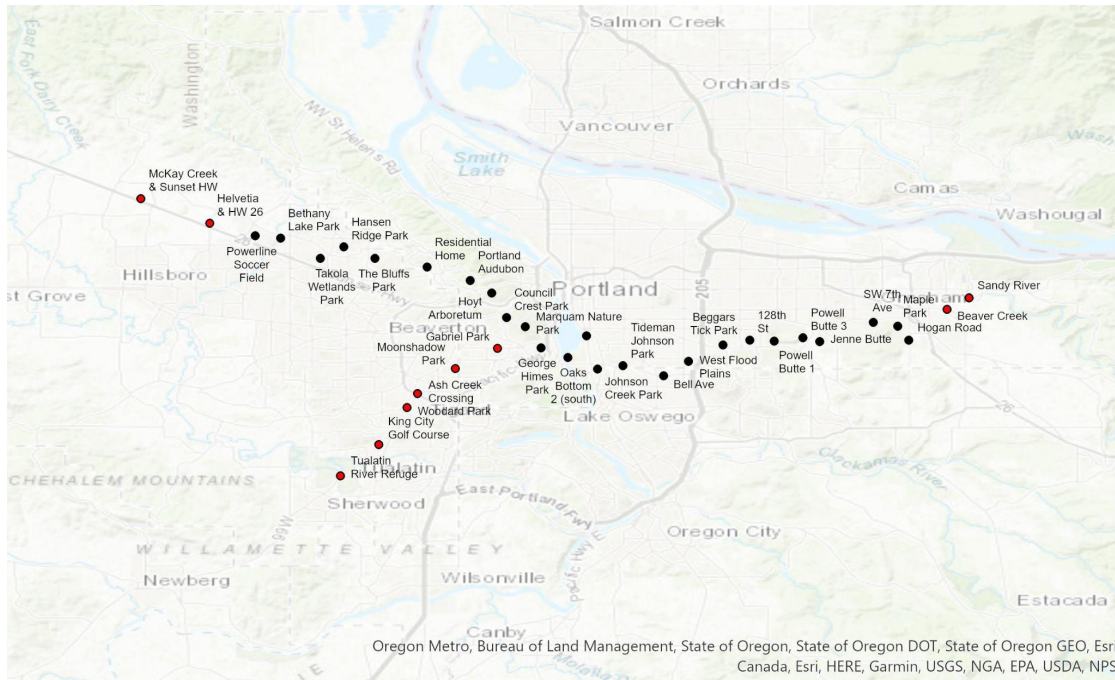


Figure 1. Map of the 25 existing camera locations with proposed 4 extension locations and proposed new informal transect consisting of 6 locations spanning from Gabriel Park to the Tualatin River Refuge. Proposed locations are shown in red, established locations are shown in black.





Figure 2. Examples of photographs taken by Portland UWIN cameras during the spring 2021 monitoring season.

Partnership with Portland State University (PSU)

Camera trap data are incorporated into the urban ecology curriculum within the PSU Honors College. Students learn about the urban ecology research process through navigating within the UWIN database and tagging wildlife photos by species. In turn, this provides valuable volunteer assistance to UWIN Portland. Olyssa Starry, PhD (associate professor at PSU) works with Hunter Storm (UWIN Portland project coordinator) to maintain the deployment, upkeep, and retrieval of the cameras.

Starting in September 2021, the PSU Honors College will begin partially funding the labor cost of camera management and the data analysis detailed in the previous section. This funding will completely cover the labor cost associated with the upcoming fall and winter monitoring seasons.

Community Outreach

As previously mentioned, monitoring data from 2019-2020 has been uploaded to the UWIN website. These data have also been synthesized into informational datasheets that were provided to the community contacts at all of the 25 locations monitored. Moving forward, we will continue to update our contacts in this way.

In alliance with Portland Audubon, a virtual information meeting was held in June 2021 to introduce 15+ volunteers to UWIN and build community involvement in the project. Following this, a field training session was held to teach volunteers the UWIN camera set-up and retrieval protocol. Six community members will begin maintaining the existing transect and the new proposed camera locations, beginning in the fall season of 2021. This group of volunteers will be expanded to include photo tagging and additional cameras as needed. Portland Audubon recently approved the addition of a UWIN Portland webpage to be included under their “Community Science” projects tab. Once completed, this page will further increase UWIN Portland’s visibility and volunteer radius.

2021 - 2022 Project Goals

With the initial set-up of the camera transect completed, UWIN Portland is ready to pursue the following goals in data analysis and community outreach for the upcoming year:

- Expand the existing camera transect and add a spur transect (a total of 10 additional cameras) by October 2021. Use GIS software to compare the resulting wildlife data to various Portland land characteristics such as vegetation type and density, human development, wetland density, and road density.
- Use this spatial analysis to build an undergraduate thesis project, focused on the occupancy and distribution patterns of Portland wildlife. This thesis will be completed in spring 2022 with the intention of publishing the work and distributing the findings to wildlife protection advisors and agencies.
- Broaden our volunteer network to account for increased camera monitoring. Focus on reaching underserved communities through coordination with Portland Audubon and PSU. Hold additional volunteer events and training to educate the public about UWIN and delegate camera maintenance and photo tagging to volunteers.

Organization

Many of the key partners of UWIN Portland have remained the same over the last two years:

Oregon Wildlife Foundation remains the fiscal sponsor of the project and Tim Greseth is responsible for funding administration. Joe Liebezeit, Staff Scientist & Avian Conservation Manager of Portland Audubon continues to aid in volunteer recruitment and coordination as well as providing wildlife monitoring expertise. Leslie Bliss-Ketchum, PhD, and Olyssa Starry, PhD continue to offer wildlife monitoring experience in advising the project. Leslie Bliss-Ketchum assists in study design and advising data analysis using methods developed by her environmental consulting company, the Samara Group. Olyssa Starry is an assistant professor at the PSU Honors College and coordinates student participation in the project. She also provides physical space for storing equipment, as well as organizing additional funding through PSU.

Project coordination was previously conducted by Erica Patterson, who has since moved to pursue her PhD but remains an advisor to the project. Hunter Storm is now the UWIN Portland coordinator, after volunteering with the project over the last two years. Hunter Storm is in her final year as an undergraduate student at PSU, finishing a degree in biology. She will conduct the data analysis and complete the thesis project, as well as organizing camera deployment and maintenance.

The national UWIN organization is led by the Lincoln Park Zoo in Chicago, directed by Seth Magel, PhD. The Lincoln Park Zoo continues to facilitate discussion between UWIN cities, offers database support, and provides research methodology.



Tim Greseth <tim@myowf.org>

letter of support for UWIN Portland

Joe Liebezeit <jliebezeit@audubonportland.org>
To: Tim Greseth <tim@myowf.org>

Mon, Aug 23, 2021 at 1:26 PM

Dear Oregon Wildlife Foundation Project Committee,

I'm writing to encourage you to support continued funding for the UWIN Portland Project. Portland Audubon has been a partner on this project from the start and are excited about the work that has already been done. This project is contributing to a better understanding of wildlife and natural resource management needs in the Portland Metro area and will hopefully inform wise policy and land-use decisions. The fact that we are contributing data to the wider UWIN network is exciting in that we can contribute to projects on a much greater geographic scale and help answer questions important to many urban areas. Finally, we are encouraged by the potential of this work to engage local citizens to build awareness and support of urban wildlife.

Sincerely,

Joe Liebezeit

Joe Liebezeit
Staff Scientist & Avian Conservation Manager
[Portland Audubon](#)
Office: 971-222-6121
Cell: 503-329-6026

He | Him | His

*****The majority of Portland Audubon's staff is working remotely during COVID-19 for the benefit and safety of our community. To learn more about our facilities and programs during this time, [please click here](#). I can still be reached readily by cell phone and email.*****



Urban Wildlife Information Network: Portland

Urban Wildlife Information Network: Portland

Hunter Storm, UWIN Portland Coordinator

Joe Liebezeit, Staff Scientist, Portland Audubon

Leslie Bliss-Ketchum, PhD, Director & Founder, Samara Group, LLC



Why study
urban wildlife
in the first
place?



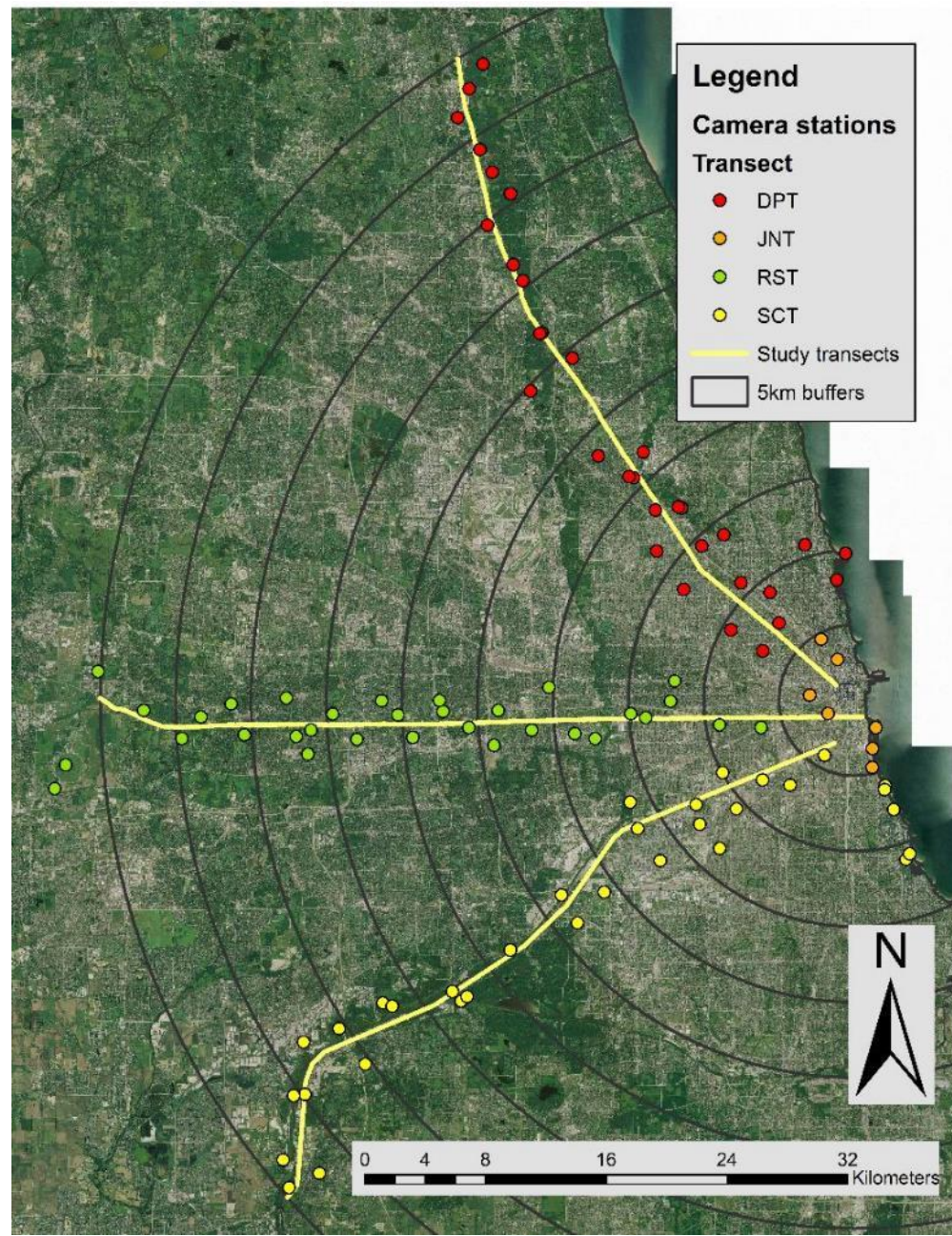
Living with Urban Wildlife



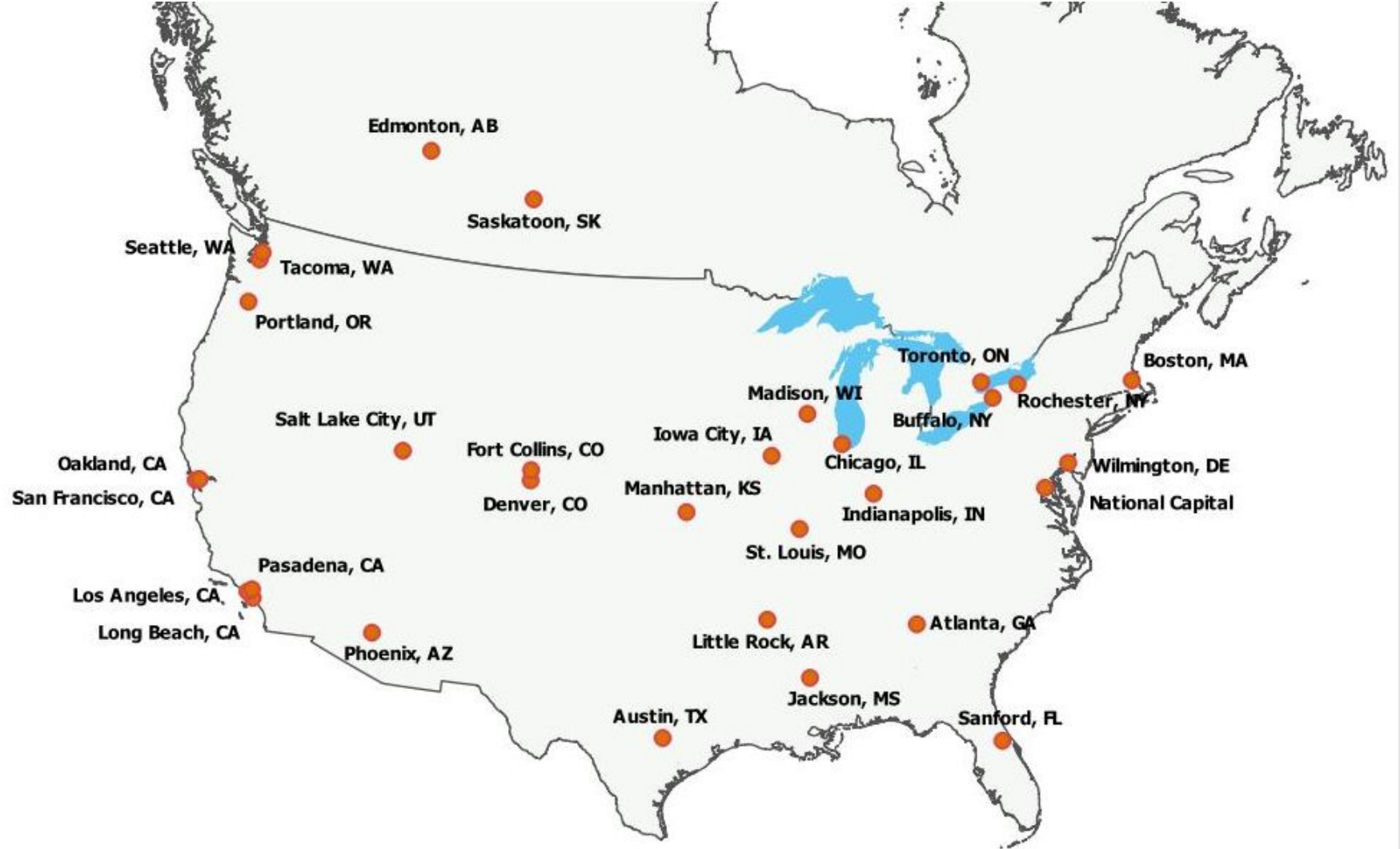
Having a Wildlife Problem?



Protocol first developed in the Chicago urban wildlife biodiversity monitoring project



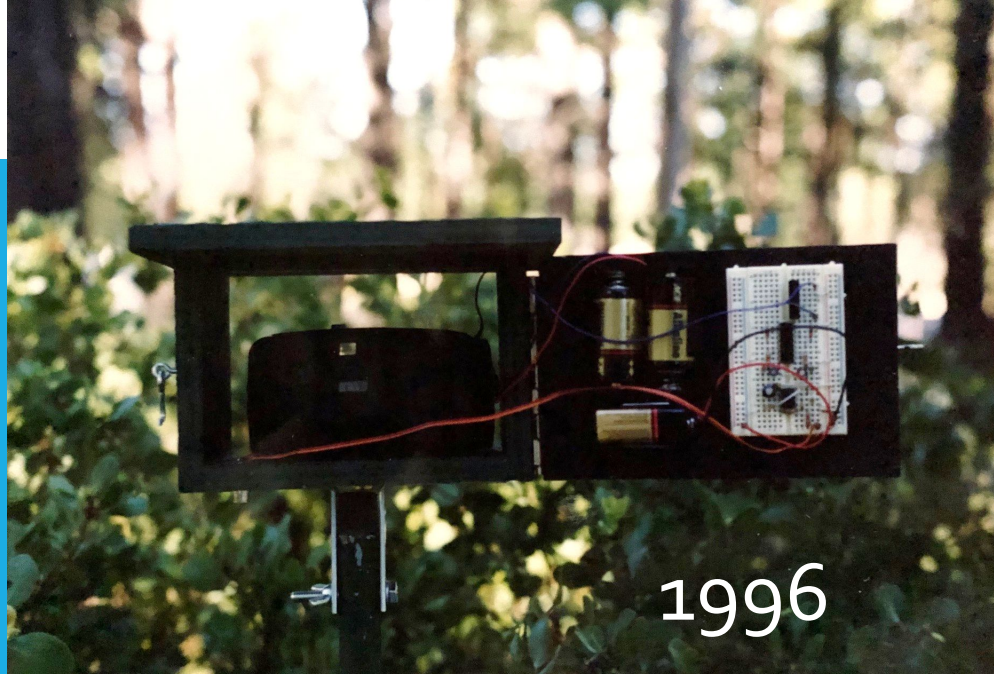
Lincoln park
zoo in 2016
started
reaching out
to partners to
develop the
UWIN



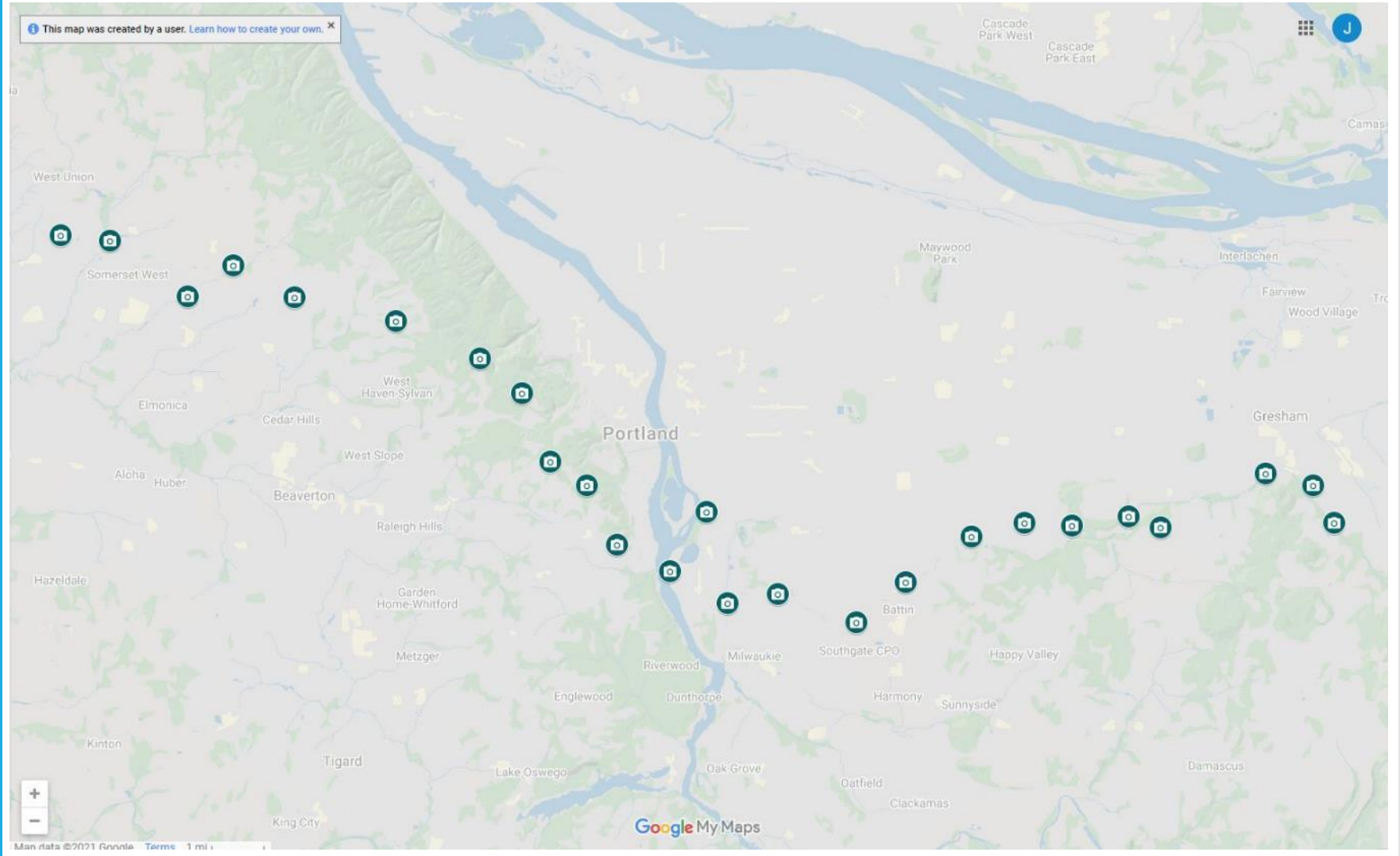
Use motion detect cameras to monitor wildlife activity across seasons



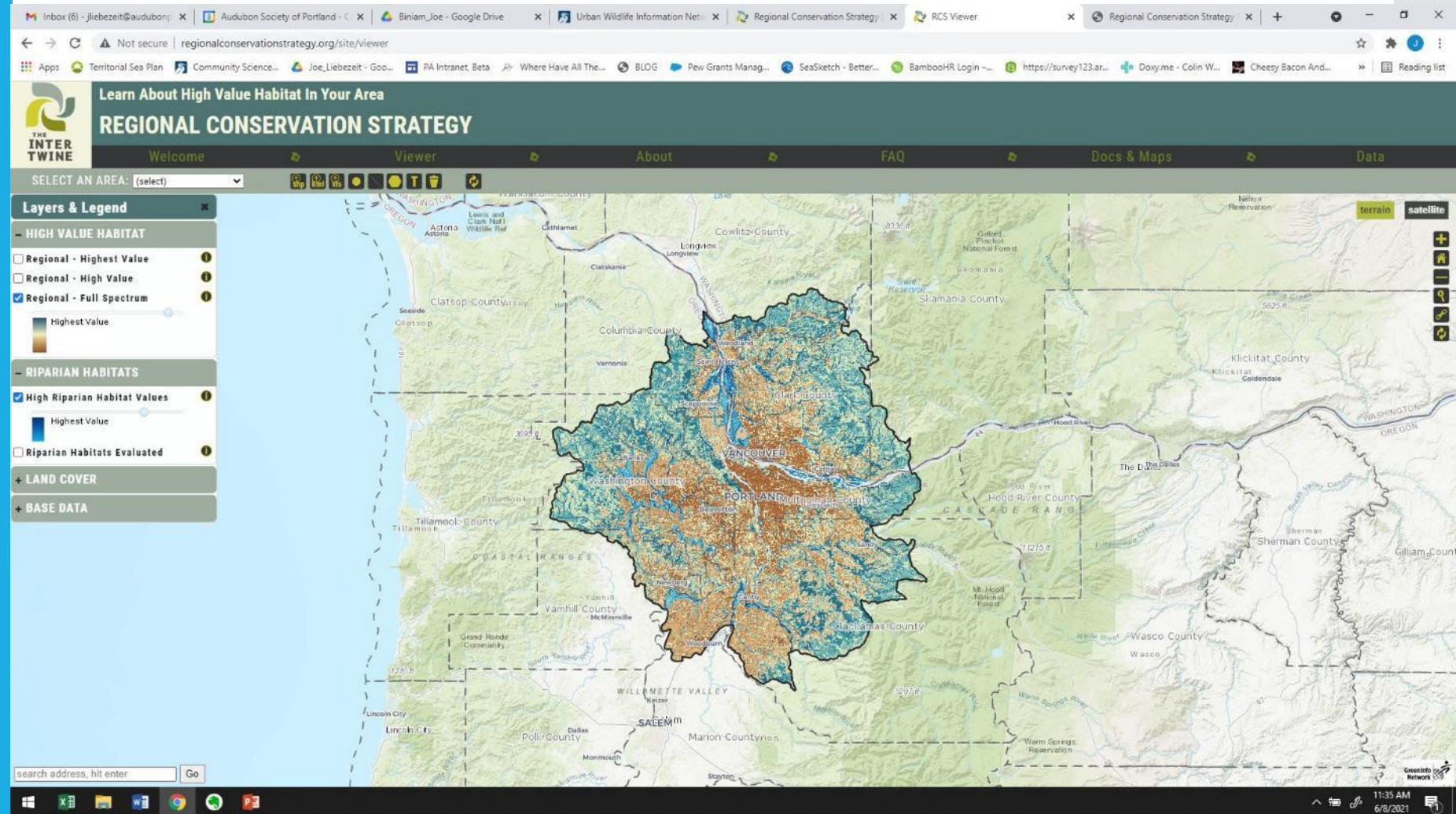
Evolution of
trail cams:
they've come
a long way!



UWIN Portland Camera transects



Regional Habitat Connectivity Strategy



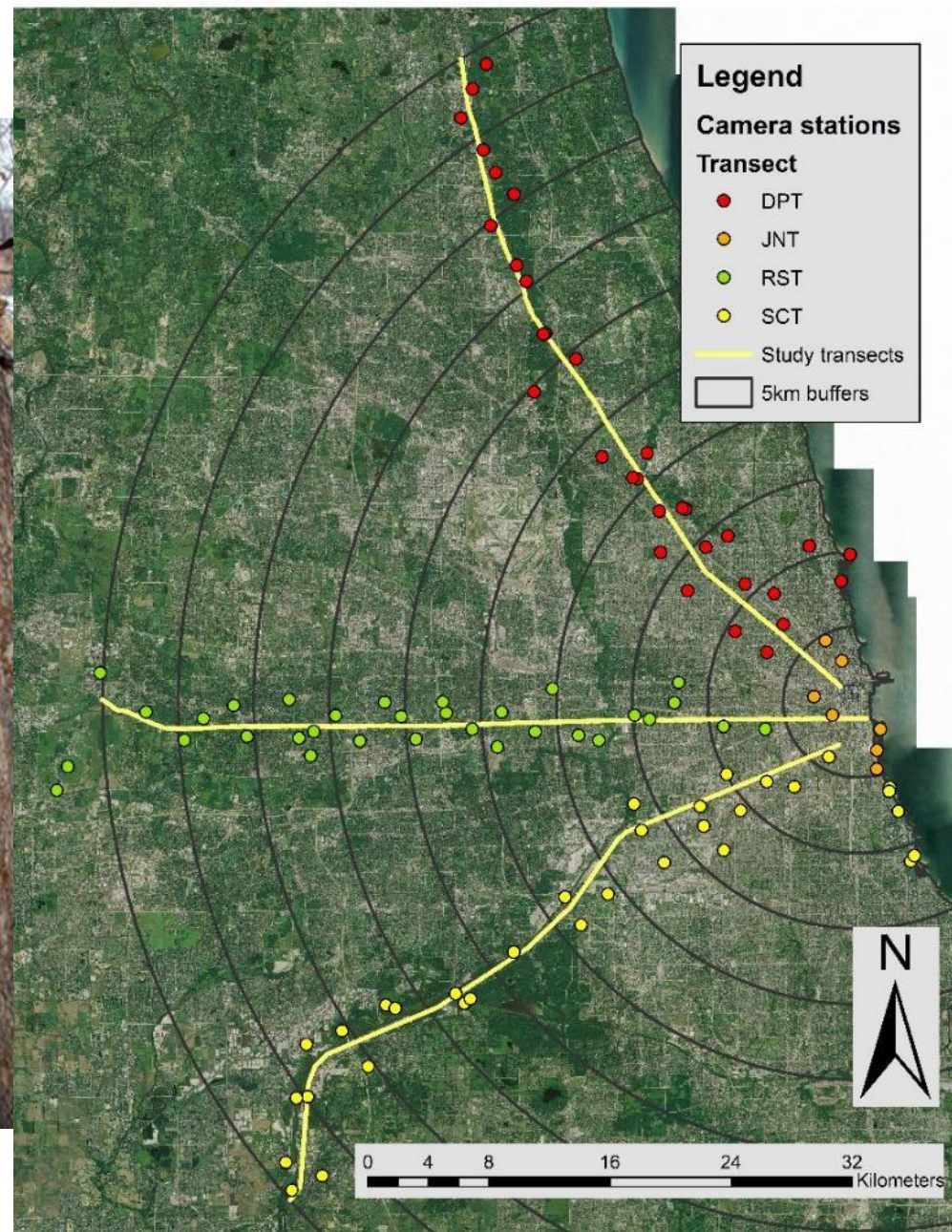
Connecting
people with
nature –
community
science



Why study
urban wildlife
in the first
place?



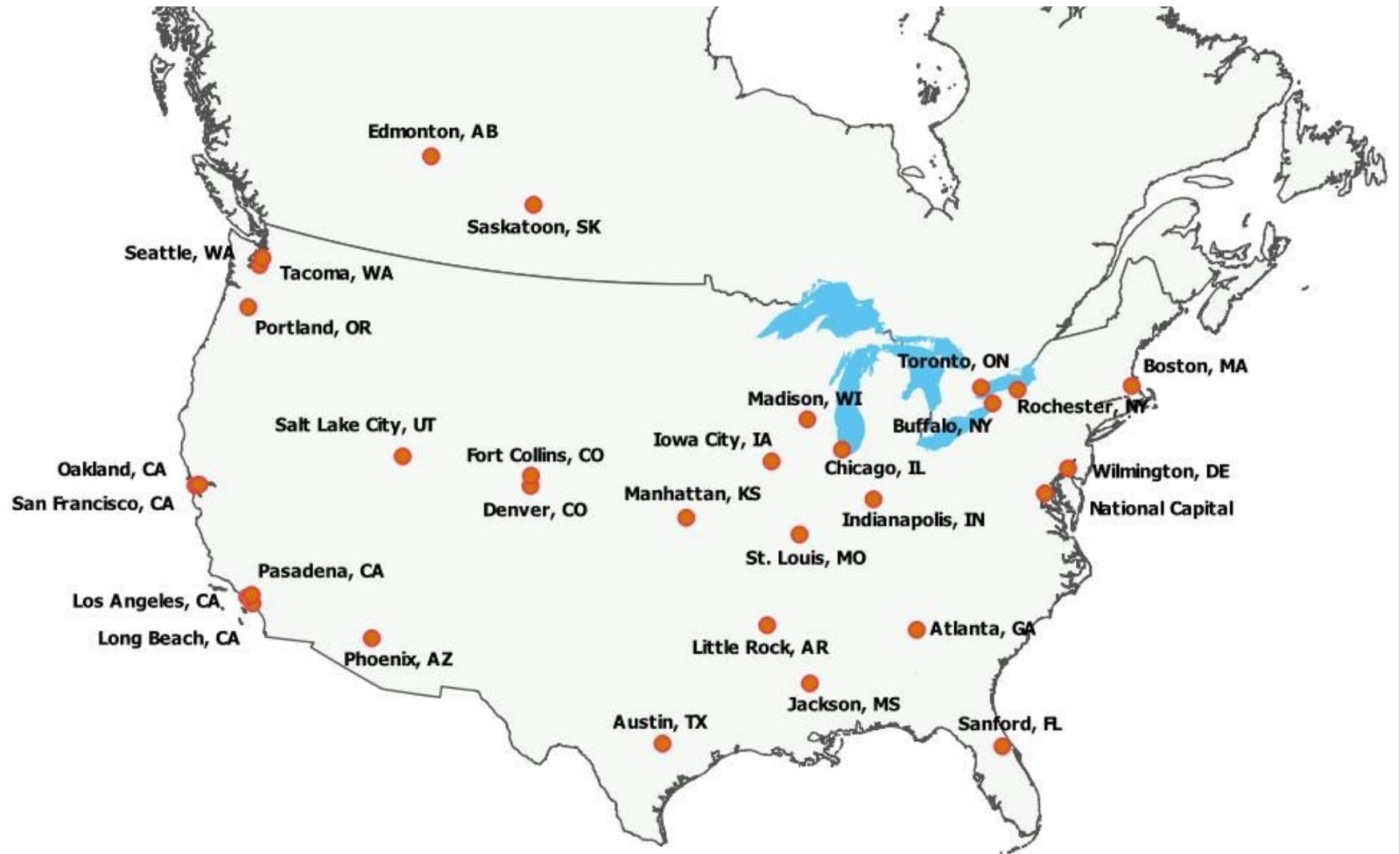
Protocol first developed in the Chicago urban wildlife biodiversity monitoring project



Use motion
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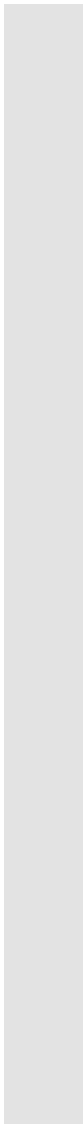


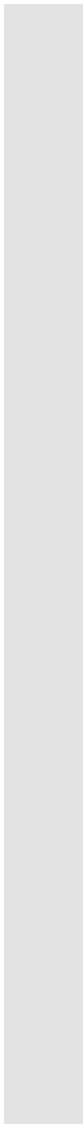
Lincoln park
zoo in 2016
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UWIN PDX







Research Opportunities

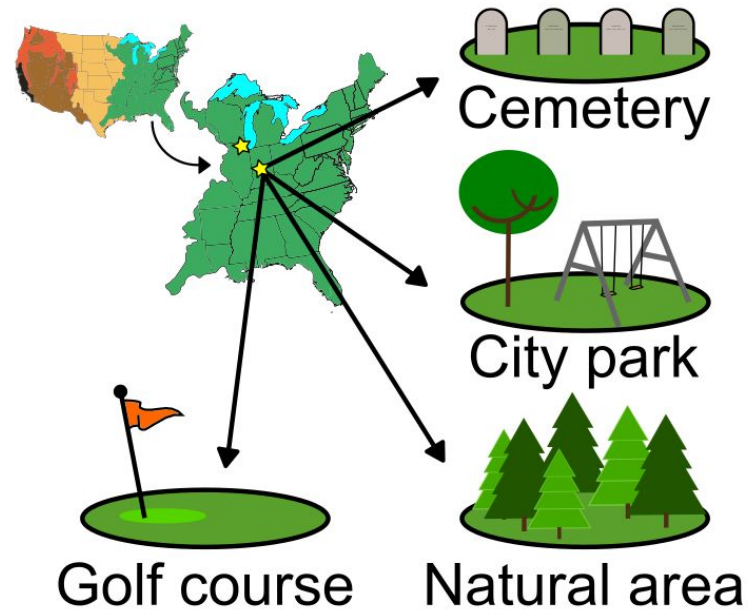


Research questions!

Local scale

Spatial scale

Within cities



Species occupancy and abundance depends on:

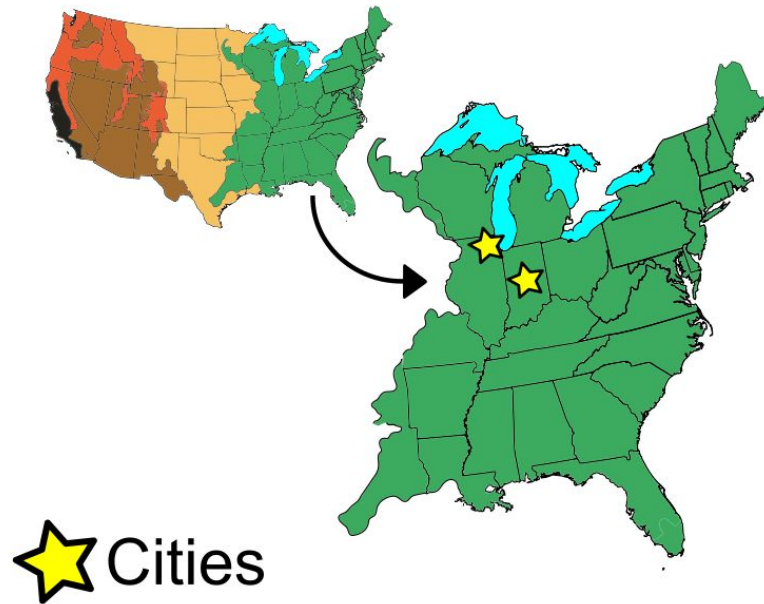
- Patch size
- Green space type
- Human activity
- Housing density
- Socioeconomics
- Species interactions

Research questions!

City scale

Spatial scale

Between cities



Species occupancy and abundance depends on:

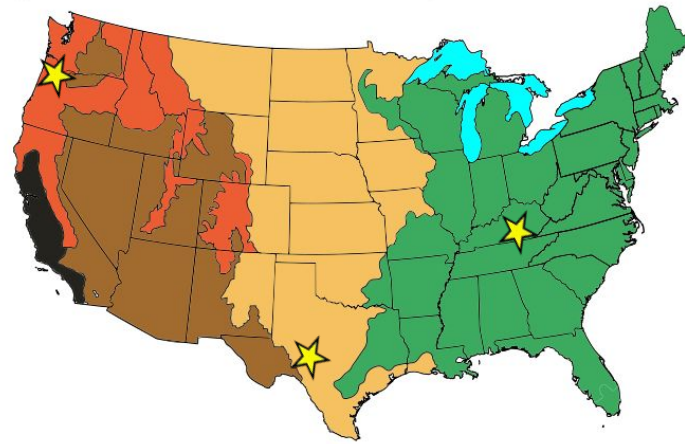
- % available habitat
- Built infrastructure
- Cultural attitudes
- Human population
- Landuse legacies

Research questions!

Regional scale

Spatial scale

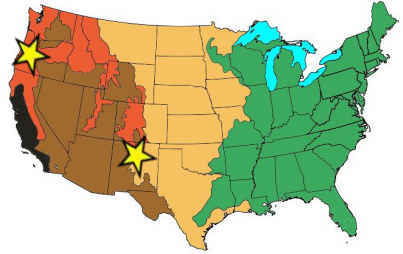
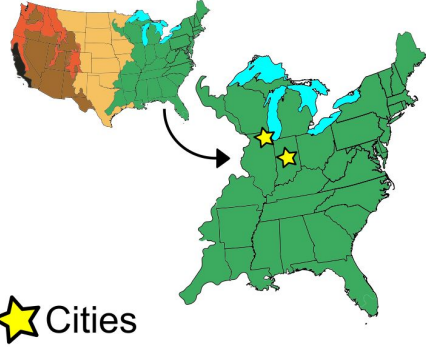
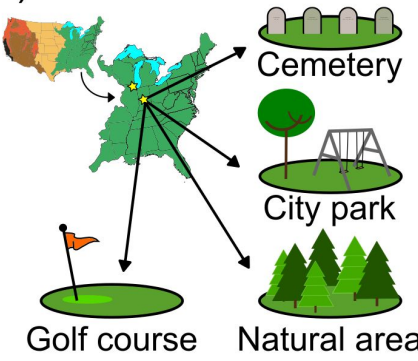
Between regions



Species occupancy and abundance depends on:

- Climate
- Human facilitated introductions
- Land cover

Collaborative efforts like UWIN are the only way to answer questions across all these scales!

Spatial scale	Species occupancy and abundance depends on:
(a) Between regions 	<ul style="list-style-type: none">• Climate• Human facilitated introductions• Land cover
(b) Between cities  ★ Cities	<ul style="list-style-type: none">• % available habitat• Built infrastructure• Cultural attitudes• Human population• Landuse legacies
(c) Within cities 	<ul style="list-style-type: none">• Patch size• Green space type• Human activity• Housing density• Socioeconomics• Species interactions

Only multi-city studies can answer questions at all three scales

Cross-City Collaboration!

10 papers associated with data collected as part of UWIN

9 multi-city analyses papers approved

Most recent multi-city analysis included:

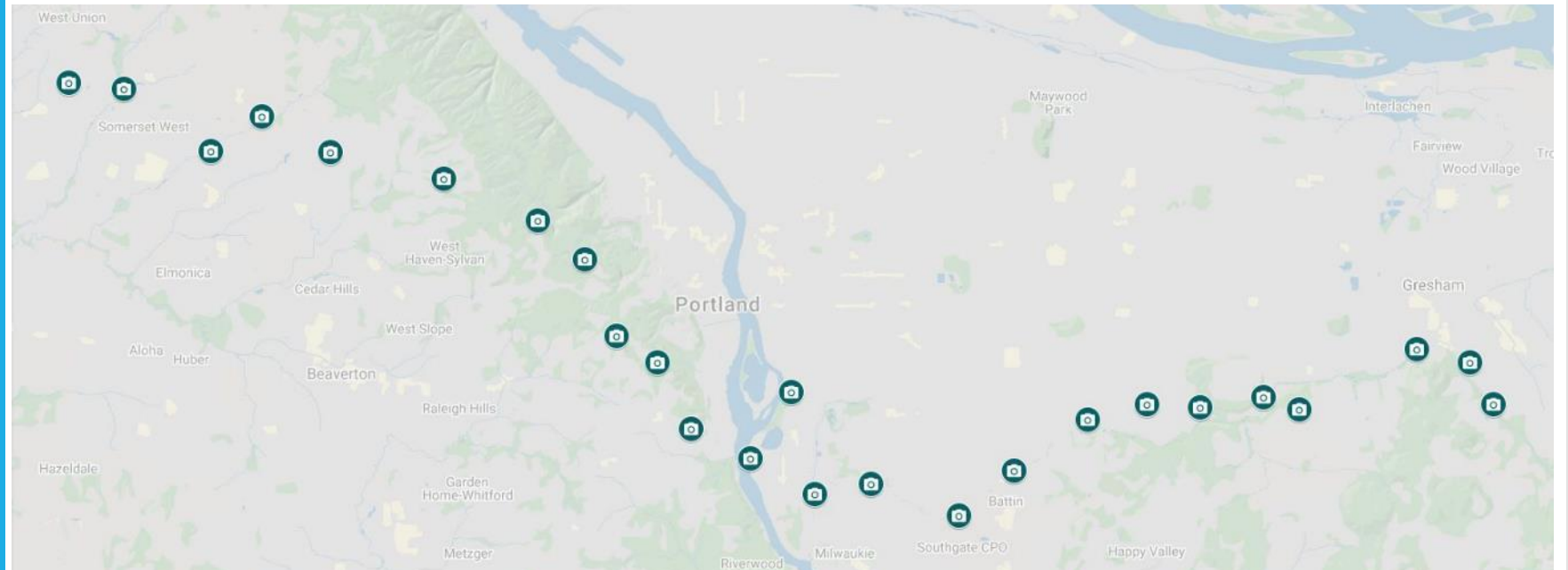
- **887** camera sites
- **20** UWIN cities using shared methods
- **105** seasons of data
- **100,000+** species detections
- **2,000,000+** images



UWIN PDX

General research questions

- How do west side detections differ from eastside?
- Does proximity to backyard habitat certification areas influence species detections?
- Do we see spatial trends for specific species and/or where specific species co-occur?



UWIN PDX

Exploring Correlations

- We can explore correlations in the type, frequency, and/or diversity of species detected at camera stations looking at factors such as:
 - Habitat connectivity
 - Road barriers (size/traffic volume/speed)
 - Time since isolation
 - Proximity to large greenspaces/parks
 - Socioeconomics
 - Luxury effect
 - Redlining legacy
 - Human Population Density
 - Human recreation activities
 - Landcover types and proportions



UWIN PDX

Collaborative efforts

- How can this data also support other local agencies and entities in their work involving urban wildlife and the habitats that support them?
- Opportunities to add transects and new camera locations for collaborative efforts.



Recent investigations to include acoustic monitoring and other techniques



