Biodiversity

Local Biodiversity Overview from iNaturalist

September 2025

Contents

1 Introduction

Understanding the local biodiversity within and around a property is essential for effective land stewardship, conservation, and ecological monitoring. This report summarizes observations collected from the iNaturalist platform, focusing on a focal property and its surrounding landscape within two concentric zones: a 1.0 km radius inner circle and a broader 3.0 km outer circle.

By analyzing these data, we aim to provide insight into the richness and composition of local species, the presence of unique and threatened species, and spatial patterns of biodiversity. This information supports land managers, conservationists, and nature enthusiasts in making informed decisions, tracking changes over time, and contributing to regional conservation goals.

Throughout the report, we highlight taxonomic classifications, the occurrence of unique species, and the status of threatened species based on internationally recognized criteria, such as the IUCN Red List. We also identify species that have been observed nearby but not yet locally, helping guide future observation efforts.

It is important to approach biodiversity monitoring with respect and care, especially for sensitive and threatened species. Platforms like iNaturalist play a critical role in protecting sensitive data and promoting responsible citizen science.

This report is designed to be accessible to a broad audience, offering clear visualizations and explanations to encourage curiosity, participation, and informed stewardship of the natural world.

2 Understanding the Taxonomic Hierarchy Used in This Report

To make sense of the biodiversity data in this report, observations from the iNaturalist platform are grouped into a simplified taxonomic hierarchy. This structure organizes living organisms from broad to more specific categories.

The hierarchy is used to show both overall diversity and the types of organisms most commonly recorded. We focus on the Kingdom level for all observations and provide further detail (Phylum and Class levels) for Animalia, i.e. Animals, where classification data is more consistently available.

Kingdom (broadest level – used for all organisms)

- **Animalia** (*Animals*): All animals. This is the only group where we also report Phylum and Class levels.
- **Plantae** (*Plants*): Includes flowering plants, trees, grasses, shrubs.
- **Fungi** (*Fungi*): Includes mushrooms, molds, and lichens.
- **Chromista** (*Chromists*): Includes mostly aquatic organisms like algae and diatoms.
- **Protozoa** (*Protozoans*): Single-celled microscopic organisms.

Phylum (used only within Animalia)

- **Chordata** (*Chordates*): Animals with a backbone or similar structure.
- **Arthropoda** (*Arthropods*): Invertebrates with exoskeletons and jointed limbs.
- **Mollusca** (*Molluscs*): Soft-bodied invertebrates, often with shells, for example, snails and clams.

Class (used only within Animalia where available)

Each Phylum under Animalia is further divided into Classes where reliable classification exists:

- **Chordata** (*Chordates*) includes:
  - **Mammalia** (*Mammals*)
  - **Aves** (*Birds*)
  - **Reptilia** (*Reptiles*)
  - **Amphibia** (*Amphibians*)
  - **Actinopterygii** (*Ray-finned fishes*)
- **Arthropoda** (*Arthropods*) includes:
  - **Insecta** (*Insects*)
  - **Arachnida** (*Arachnids*)

When a finer classification isn't available, the organism is presented at the highest level confidently identified.

3 Summary of Observations

This section summarizes biodiversity observations collected from the iNaturalist platform within two zones centered on the focal property: a 1.0 km radius inner circle, and a broader 3.0 km radius outer circle. These zones allow for a comparison between biodiversity patterns in the immediate surroundings and the larger landscape context.

The analysis includes:

- Spatial density maps showing where iNaturalist observations are most concentrated (Figure 1 and Figure 2),
- A taxonomic breakdown of all recorded observations, represented across three hierarchical levels: Kingdom, Phylum, and Class (Figure 3 and Figure 4).

It is important to note that these data represent the number of observations, which may include multiple records of the same species. This reflects observer activity and organism visibility, not necessarily species richness. Species counts will be further investigated in section 4.

To explore the composition of recorded biodiversity, we summarize the taxonomic affiliation of all observations, regardless of species repetition. The classification follows the hierarchical structure used by iNaturalist: Kingdom, Phylum, and Class. When full classification was not available, the organism is grouped under *Others* at the respective level. These charts provide insight into which broad biological groups dominate the recorded data in both the inner and outer zones.

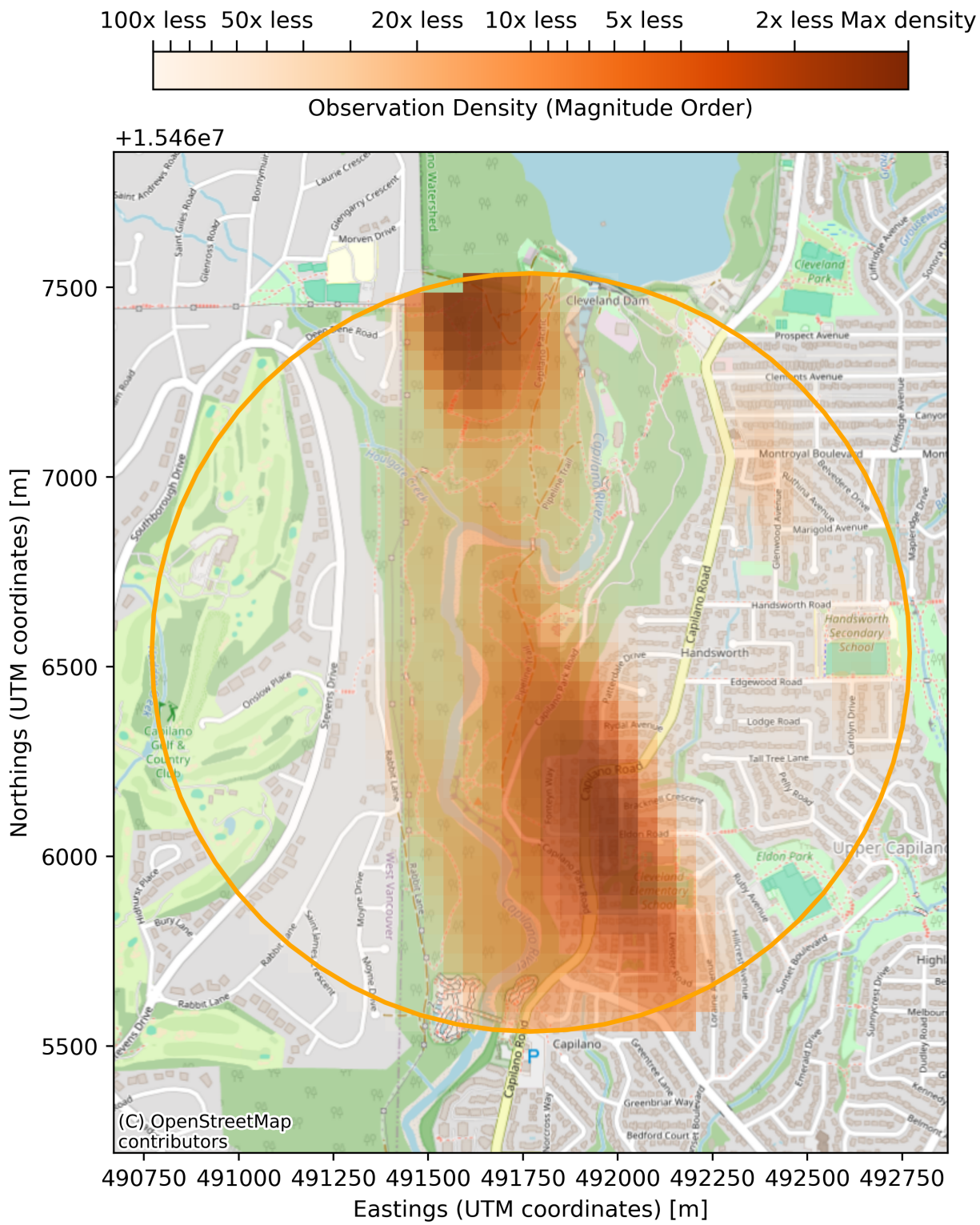

Figure 1: Density of biodiversity observations submitted to iNaturalist within the 1.0 km inner circle (orange). This map shows the spatial distribution of all recorded observations, which may include repeated sightings of the same species. Higher densities often correspond to areas of greater observer presence or accessibility.

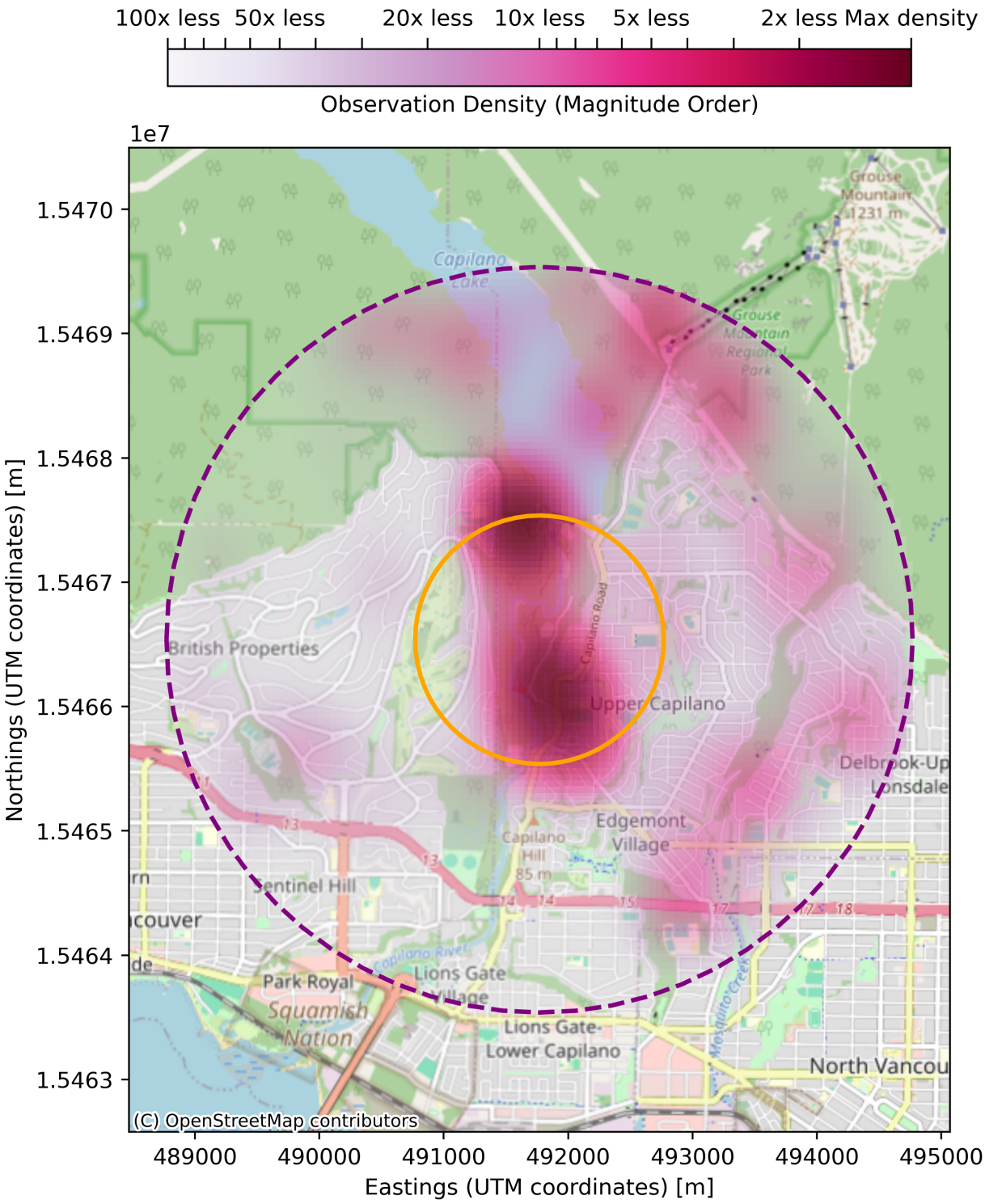

Figure 2: Density of biodiversity observations submitted to iNaturalist within the 3.0 km outer circle (purple dashed circle; the inner circle is also represented by the orange circle). This map shows the spatial distribution of all recorded observations, which may include repeated sightings of the same species. Higher densities often correspond to areas of greater observer presence or accessibility.

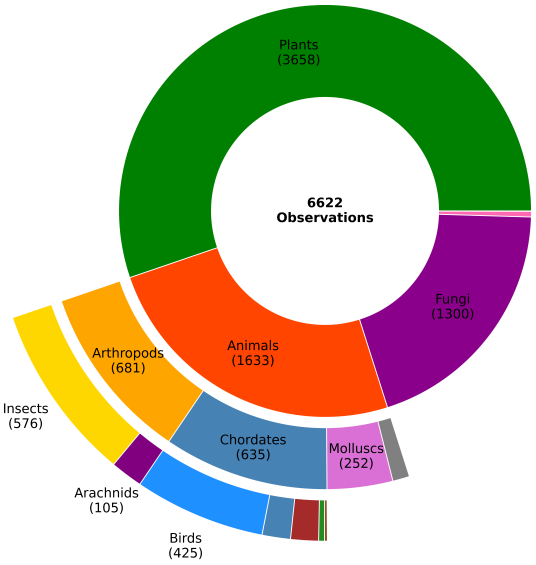

Figure 3: Taxonomic composition of iNaturalist observations within the 1.0 km radius zone. The sunburst chart shows the relative distribution of observed organisms by Kingdom (inner ring), Phylum (middle ring), and Class (outer ring). These values represent observation counts, not unique species.

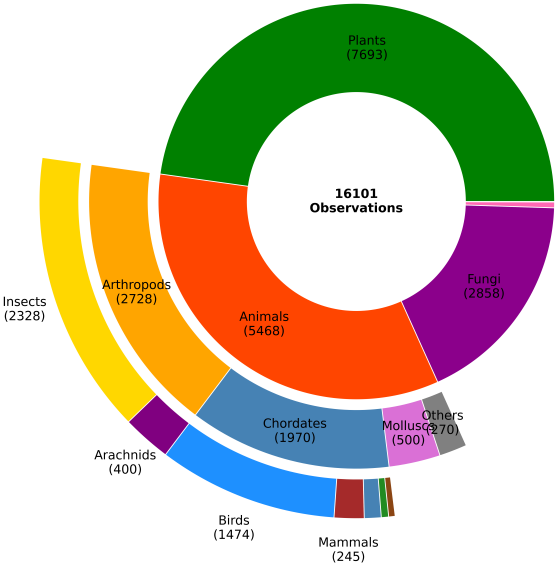

Figure 4: Taxonomic composition of iNaturalist observations within the 3.0 km radius zone, structured identically to Figure 3. Differences between zones may reflect ecological variation, observer focus, or data collection density.

4 Unique Species

This section explores the diversity of unique species observed within the two study zones centered on the focal property. Understanding the number and distribution of distinct species, rather than just total observations, provides deeper insights into biodiversity richness and ecosystem health.

In subsection 4.1, we begin by examining the proportion of unique species detected relative to all observations in each zone, visualized using donut charts (Figure 5). This highlights the extent to which observations reflect repeated sightings of the same species versus new species discoveries. Then, similarly to what was shown for all observations, the taxonomic composition of unique species is summarized using hierarchical pie charts at the three taxonomic levels described earlier — Kingdom, Phylum, and Class — for both the inner (1.0 km) and outer (3.0 km) zones. This layered representation offers a nuanced view of the biodiversity makeup in these areas.

subsection 4.2 lists and gives information about the most observed species in the inner zone for all levels.

Next, in subsection 4.3, we analyze the temporal evolution of unique species recorded over time across several key taxonomic groups (iconic taxa, taken from any of the 3 taxonomic levels) (Figure 8). This time series reveals trends in species detection, including notable spikes likely associated with public engagement events or increased app adoption.

Following this, if available, subsection 4.4 presents a curated list of the top 10 species most frequently observed in the outer zone but not yet detected in the immediate inner zone vicinity. This list serves as an indication of species likely present nearby and highlights valuable targets for observers to seek and contribute to the database, enhancing local biodiversity records. Each species entry includes a photograph, brief description, and links for further information.

4.1 New Species Records and Taxonomic Distribution

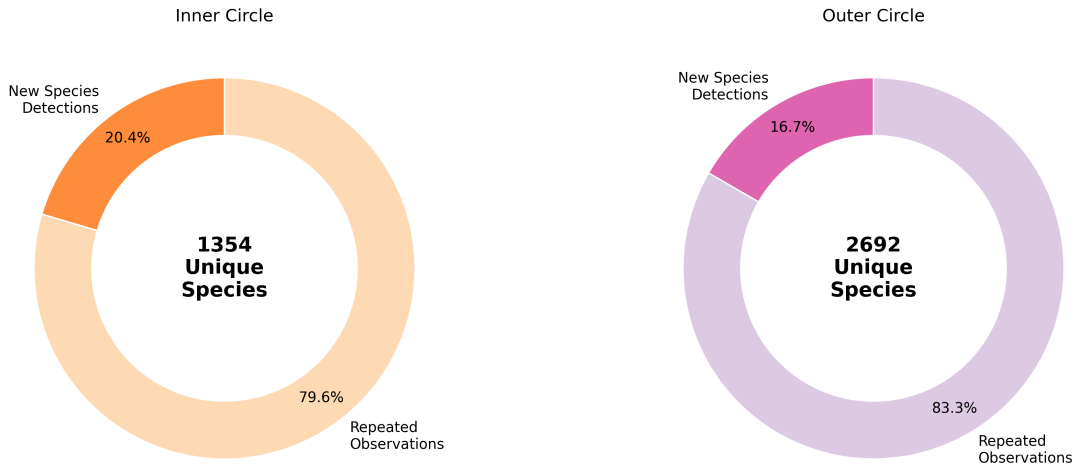

Figure 5: Donut charts illustrating the fraction of unique species detections relative to the total number of observations recorded within the 1.0 km radius inner zone (left) and the 3.0 km radius outer zone (right). This comparison reveals the extent of species repetition in each zone's biodiversity records.

4.2 Current Most Observed Species Locally

To avoid overwhelming the document with too many species details, we have listed the top 40 most observed species or species groups in Table 1, Table 2, Table 3, and Table 4. Visual cues highlight po-

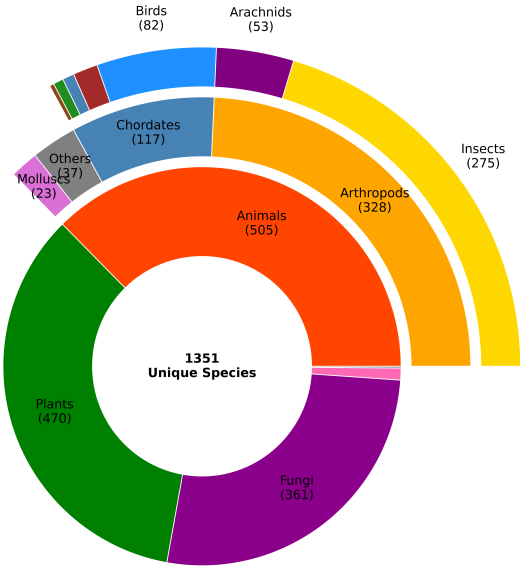

Figure 6: Three-level hierarchical pie chart representing the distribution of unique species detected within the 1.0 km radius inner zone, categorized by Kingdom, Phylum, and Class. This visualization highlights the diversity and taxonomic composition at multiple biological levels.

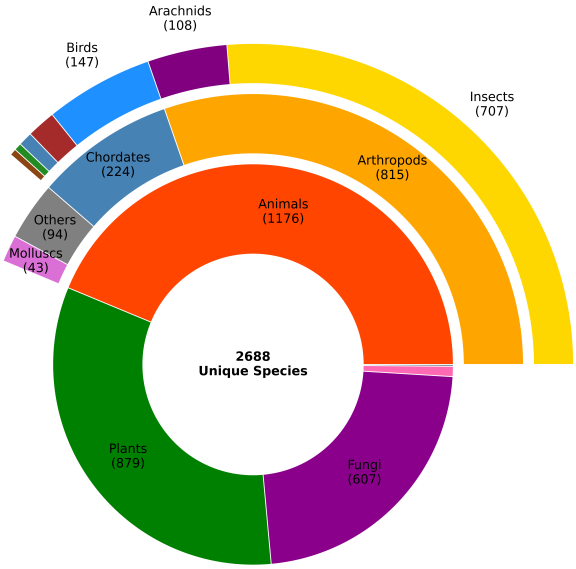

Figure 7: Three-level hierarchical pie chart illustrating the taxonomic composition of unique species recorded within the 3.0 km radius outer zone, shown across Kingdom, Phylum, and Class levels. This chart provides a comprehensive overview of species diversity in the broader landscape context.

tentially native and/or threatened species, but each entry is also a clickable link to its iNaturalist page for further information.

4.3 Unique Species Through Time

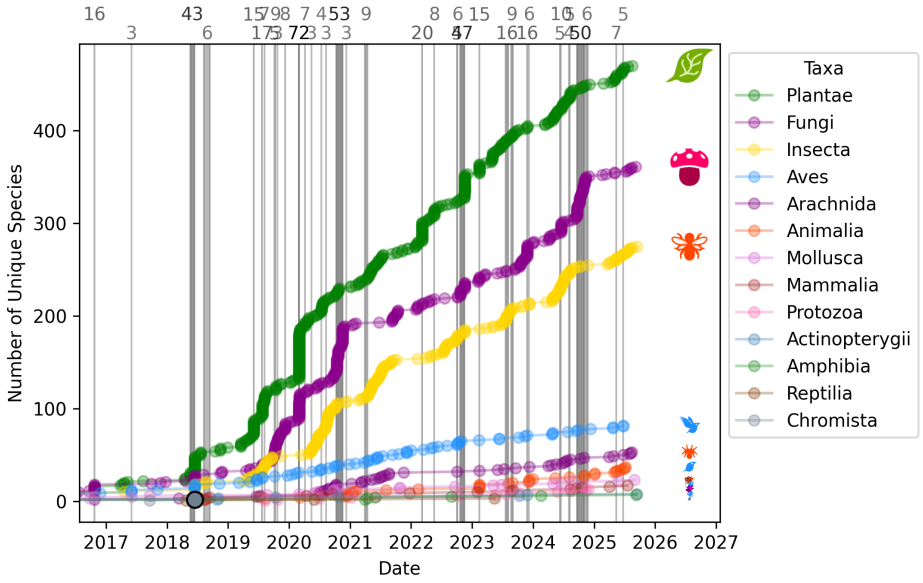

Figure 8: Time series plot displaying the cumulative number of unique species detected over time within the inner study area (close proximity to the property), separated by major taxonomic groups. Notable spikes in detection rates are indicated, corresponding to periods of increased observer activity or special events. The gray patches indicate the extent of these spikes while numbers on top of the figure correspond to the numbers of newly detected species, all groups included, during that period.

Several distinct periods show spikes in new species observations. Sorted by decreasing number of newly detected species, these are:

- 89, between March 30 and June 12, 2021.
- 80, between September 21 and October 26, 2024.
- 56, on February 29, 2020.
- 40, on June 14, 2018.
- 38, between June 16 and June 29, 2020.
- 34, between July 19 and August 15, 2020.
- 32, between February 09 and April 16, 2019.
- 31, on November 16, 2022.
- 29, between September 04 and October 03, 2021.
- 20, between June 10 and July 07, 2022.
- 19, on March 08, 2022.
- 19, on May 22, 2019.

- 17, between December 08, 2024 and January 04, 2025.
- 14, on November 16, 2020.
- 14, between November 11 and November 25, 2024.
- 13, on July 24, 2019.
- 12, on February 13, 2023.
- 12, on November 27, 2023.
- 12, on August 07, 2019.
- 10, between December 03 and December 08, 2023.
- 10, on October 12, 2020.
- 9, on June 23, 2025.
- 8, on October 12, 2019.
- 7, on April 26, 2025.
- 7, on August 03, 2021.
- 5, on November 26, 2023.
- 5, on July 23, 2021.
- 5, on July 11, 2022.
- 4, on October 24, 2020.
- 4, on June 28, 2025.
- 4, on May 11, 2010.
- 4, on June 02, 2020.
- 4, on October 02, 2022.
- 4, on August 25, 2020.
- 4, on August 24, 2022.
- 3, on May 29, 2020.
- 3, on December 28, 2023.
- 3, on October 10, 2020.
- 3, on June 21, 2019.
- 3, on November 26, 2022.

4.4 Nearby Species Yet to Be Observed Locally

In this section, we highlight ten species that have been frequently observed in the broader 3.0 km radius surrounding the focal property but have not yet been recorded within the immediate 1.0 km vicinity. These species are strong candidates for future local detection, as their presence nearby suggests that suitable habitat and conditions may already exist on or near the property.

For each species, we provide an image, a brief description, and links to further information. This list serves as an invitation to remain attentive to these organisms and contribute to the growing biodiversity record. Documenting such species locally can improve our understanding of the site's ecological context and enhance the completeness of its biodiversity profile.

So, eyes open and cameras ready—these species are just waiting for someone to spot them! Will you be the first to record them in your area?

Fomitopsis

Fomitopsis
Iconic Taxon: Fungi
Observed 50 times in the outer ring

Fomitopsis is a genus of more than 40 species of bracket fungi in the family Fomitopsidaceae.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Song Sparrow

Melospiza Melodia
Iconic Taxon: Aves
Observed 34 times in the outer ring

The song sparrow (Melospiza melodia) is a medium-sized New World sparrow. Among the native sparrows in North America, it is easily one of the most abundant, variable, and adaptable species.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Clavulina

Clavulina
Iconic Taxon: Fungi
Observed 23 times in the outer ring

Click to read more on iNaturalist and IUCN Red List of Threatened Species.

Hypholoma

Hypholoma
Iconic Taxon: Fungi
Observed 20 times in the outer ring

Hypholoma is a genus of fungi which are quite well known due to the commonness of sulphur tuft (Hypholoma fasciculare) on stumps in temperate woodlands. Species in this genus are easily recognizable because the dark spores create a distinctive greenish effect on the yellow cap underside. Hypholoma means ”mushrooms with threads” because of the thread-like veil that connects the cap to the stem when young and for the bundles of rhizomorphs which radiate outwards from the stem base.

Other well-known species are H. capnoides and H. lateritium.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Ptenothrix Beta

Ptenothrix Beta
Iconic Taxon: Animalia
Observed 16 times in the outer ring

Ptenothrix beta is a species of springtail in the genus Ptenothrix. It is incredibly variable and ranges across the northwestern US.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Sawadaea Bicornis

Sawadaea Bicornis
Iconic Taxon: Fungi
Observed 14 times in the outer ring

Sawadaea bicornis is a species of powdery mildew in the family Erysiphaceae. It is found across the world, where it affects maples (genus Acer).

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Red Deadnettle

Lamium Purpureum
Iconic Taxon: Plantae
Observed 14 times in the outer ring

Lamium purpureum (from Latin purpureus 'purple'), known as red dead-nettle, purple dead-nettle, or purple archangel, is an annual herbaceous flowering plant in the mint family (Lamiaceae). It is native to Eurasia but can also be found in North America.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Gerrini

Gerrini
Iconic Taxon: Insecta
Observed 13 times in the outer ring

Gerrini is a tribe of water striders containing over 160 species in 12 genera.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Garlic Mustard

Alliaria Petiolata
Iconic Taxon: Plantae
Observed 13 times in the outer ring

Alliaria petiolata, or garlic mustard, is a biennial flowering plant in the mustard family (Brassicaceae). It is native to Europe, western and central Asia, north-western Africa, Morocco, Iberia and the British Isles, north to northern Scandinavia, and east to northern Pakistan and Xinjiang in western China. It has now become a tenacious invasive plant across the northern U.S., in particular because of its earlier springtime emergence than many native species, often in the forest understory.

In the first year of growth, plants form clumps of round, slightly wrinkled leaves, that when crushed smell like garlic. The plants flower in spring of the next year, producing cross-shaped white flowers in dense clusters. As the flowering stems bloom they elongate into a spike-like shape. When flowering is complete, plants produce upright fruits that release seeds in mid-summer. Plants are often found growing along the margins of hedges, giving rise to the old British folk name of jack-by-the-hedge. Other common names include garlic root, hedge garlic, sauce-alone, jack-in-the-bush, penny hedge and poor man's mustard. The genus name Alliaria, "resembling Allium", refers to the garlic-like odour of the crushed foliage. All parts of the plant, including the roots, have this smell.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

Animalia (Animals)		
Chordata (Chordates)		
Aves (Birds)	**Amphibia** (Amphibians)	**Reptilia** (Reptiles)
*Bald Eagle (44)	*Northwestern Salamander (10)	*Common Garter Snake (6)
*Great Blue Heron (43)	*Oregon Ensatina (3)	*Northwestern Alligator L (2)
*Common Merganser (29)	*Coastal Tailed Frog (2)	*Northwestern Garter Snak (1)
*Dark-Eyed Junco (20)	*Ensatina (1)	
*American Robin (20)	*Northern Red-Legged Frog (1)	
*Barred Owl (20)	*Western Red-Backed Salam (1)	
*American Crow (20)	American Bullfrog (1)	
*American Dipper (17)		
*Pacific Wren (14)		
*Varied Thrush (13)		
*Pileated Woodpecker (12)		
*Golden-Crowned Kinglet (9)		
*Spotted Towhee (8)		
*Glaucous-Winged Gull (8)		
*Red-Breasted Sapsucker (7)		
*Brown Creeper (6)		
*Common Raven (5)		
*Steller'S Jay (5)		
*Anna'S Hummingbird (5)		
*Belted Kingfisher (5)		
*Mallard (5)		
*Northwestern Crow (4)		
*White-Crowned Sparrow (4)		
*Black-Capped Chickadee (4)		
*Red-Tailed Hawk (4)		
*Swainson'S Thrush (4)		
European Starling (4)		
*Northern Rough-Winged Sw (3)		
*Willow Flycatcher (3)		
*Hairy Woodpecker (3)		
*Warbling Vireo (3)		
Birds (3)		
*Townsend'S Warbler (3)		
*Northern Flicker (3)		
*House Finch (3)		
*Canada Goose (3)		
*Savannah Sparrow (3)		
*Western Flycatcher (2)		
*Northern Saw-Whet Owl (2)		
*Cooper'S Hawk (2)		

Table 1: Top 40 Most Observed Species (or Groups) for Aves, Amphibia, and Reptilia, in the inner circle. The first three rows display the Kingdom, Phylum, and Class of the taxon. Species are sorted by observation frequency; native ones are marked with a star (*), and potentially threatened ones are highlighted with a light red background. The group level (e.g., genus or family) may be used for unidentified species, and full name might be truncated if particularly long. **Each entry is a clickable link** to its iNaturalist page for further details.

Animalia (Animals)		
Chordata (Chordates)		**Mollusca** (Molluscs)
Mammalia (Mammals)	**Actinopterygii** (Ray-finned fishes)	All
*Douglas'S Squirrel (48)	*Coho Salmon (42)	*Pacific Banana Slug (134)
*American Black Bear (9)	*Chinook Salmon (17)	Black Slug (40)
Eastern Gray Squirrel (8)	*Pacific Salmons And Tro (14)	Ater-Group Arion Slugs (23)
*Common Raccoon (6)	*Rainbow Trout (9)	Arion Slugs (13)
*North American River Ott (4)	*Coastal Rainbow Trout (6)	*Robust Lancetooth Snail (7)
*California Sea Lion (2)	*Pink Salmon (2)	*Yellow-Bordered Taildrop (6)
*North American Deer Mice (2)	*Chum Salmon (1)	Gastropods (4)
Mammals (2)	Salmons, Pikes And Mudmi (1)	Draparnaud'S Glass Snail (3)
*American Beaver (1)		Common Land Snails And S (3)
*Martens (1)		Leopard Slug (2)
*Western Deer Mouse (1)		*Pacific Sideband (2)
*Yellow-Pine Chipmunk (1)		Brown-Lipped Snail (2)
Western River Otter (1)		Roundback Slugs And Alli (2)
Black Rat (1)		Blue Mussel Complex (1)
*Striped Skunk (1)		*Northwest Hesperian (1)
*Pacific Harbor Seal (1)		Helicina (1)
*Pine Squirrels (1)		Taildropper Slugs (1)
		Milky Slug (1)
		Bivalves (1)
		Hortensis-Group Arion Sl (1)
		Sidebands (1)
		Gastrodontoidea (1)
		Hedgehog Slug (1)
		Chocolate Arion (1)

Table 2: Top 40 Most Observed Species (or Groups) for Mammalia, Actinopterygii, and Mollusca, in the inner circle. The first three rows display the Kingdom, Phylum, and Class of the taxon. Species are sorted by observation frequency; native ones are marked with a star (*), and potentially threatened ones are highlighted with a light red background. The group level (e.g., genus or family) may be used for unidentified species, and full name might be truncated if particularly long. **Each entry is a clickable link** to its iNaturalist page for further details.

Animalia (Animals)		**Plantae** (Plants)
Arthropoda (Arthropods)		All
Arachnida (Arachnids)	**Insecta** (Insects)	All
Cross Orbweaver (27)	Asian Lady Beetle (21)	*Western Sword Fern (122)
Running Crab Spiders (5)	*Hemlock Looper Moth (17)	*Salmonberry (103)
Long-Bodied Cellar Spide (4)	*Western Tiger Swallowta (15)	*Western Skunk Cabbage (94)
Giant House Spider (4)	*Phantom Hemlock Looper (14)	*Vine Maple (87)
Harvestmen (3)	Rusty Tussock Moth (13)	*Deer Fern (83)
Eurasian Running Crab Sp (3)	Small White (12)	*Western Hemlock (80)
Stretch Spiders (3)	Virginian Tiger Moth (12)	*Western Redcedar (74)
Ground Crab Spiders (2)	Butterflies And Moths (12)	*Western Maidenhair Fern (69)
Metellina (2)	Western Honey Bee (10)	*Red-Berried Elder (66)
*Goldenrod Crab Spider (2)	Ichneumonid Wasps (10)	*Douglas-Fir (66)
Callobius (2)	*Western Conifer Seed Bu (10)	*Red Huckleberry (65)
Entelegyne Spiders (2)	*Bumble Bees (10)	*Cat'S Tail Moss (61)
True Velvet Mites (2)	*Spotted Tussock Moth (8)	*Threeleaf Foamflower (60)
Trochosa (2)	*Yellow-Fronted Bumble Be (7)	*Salal (53)
Zebra Jumping Spider (2)	Geometer Moths (7)	Waved Silk-Moss (51)
Longlegged Sac Spiders (2)	Podisus (6)	Herb Robert (49)
Angulate And Roundshould (2)	Bronze Ground Beetle (5)	*Bigleaf Maple (49)
Meshweavers (1)	*Margined White (5)	*Stairstep Moss (48)
Furrow Spiders (1)	*Narrow-Collared Snail-Ea (5)	*Goatsbeard (45)
Trombidium (1)	Gerrini (5)	*Cascade Oregon-Grape (44)
Comb-Footed Spiders (1)	*Woodland Skipper (5)	*Western Lily Of The Val (44)
Anyphaena (1)	*Polyphemus Moth (5)	*Western Bunchberry (44)
Dwarf Spiders (1)	*Bald-Faced Hornet (4)	*Oregon Grape (42)
Misumenini (1)	*Sitka Bumble Bee (4)	Wall Lettuce (38)
Phalangioidea (1)	*Lorquin'S Admiral (4)	Broad-Leaved Helleborin (36)
*Phanias Albeolus (1)	Oak Bush-Cricket (4)	*Spreading Wood Fern (34)
Orbweavers And Allies (1)	*Variable Duskyface Fly (4)	Lesser Periwinkle (34)
Whirligig Mites (1)	*Greater Night-Stalking T (4)	*Large-Leaved Avens (34)
Hackledmesh Weavers (1)	*Pale Swallowtail (4)	*Candy Flower (32)
Cellar Spiders (1)	*Yellow-Faced Bumble Bee (4)	*Licorice Fern (32)
Downy Jumping Spider (1)	Common Snakeflies (3)	Common Ivy (32)
Eratigena (1)	Syrphini (3)	Spurge-Laurel (31)
Paroligolophus Agrestis (1)	White-Horned Horntail (3)	Purple Foxglove (30)
*Theridion (1)	*Etorofus Obliteratus (3)	*Mock Azalea (29)
*Six-Spotted Orbweaver (1)	*Halesochila Taylori (3)	Cherry Laurel (28)
Orbweavers (1)	*Punicealis Hamata (3)	*Thimbleberry (28)
*Johnson'S Jumping Spider (1)	Rover Fireflies (3)	Red Campion (27)
Pityohyphantes (1)	*Long-Haired June Beetle (3)	European Holly (27)
*Turf Running Spider (1)	*Giant Western Crane Fly (3)	Creeping Buttercup (26)
*Alder Leaf Gall Mite (1)	*Red Net-Winged Beetle (3)	Himalayan Balsam (25)

Table 3: Top 40 Most Observed Species (or Groups) for Arachnida, Insecta, and Plantae, in the inner circle. The first three rows display the Kingdom, Phylum, and Class of the taxon. Species are sorted by observation frequency; native ones are marked with a star (*), and potentially threatened ones are highlighted with a light red background. The group level (e.g., genus or family) may be used for unidentified species, and full name might be truncated if particularly long. **Each entry is a clickable link** to its iNaturalist page for further details.

Fungi (Fungi)	**Chromista** (Chromists)	**Protozoa** (Protozoans)
All	All	All
All	All	All
*Fungi Including Lichens (91)	Vesicled Rockweeds (1)	*Dog Vomit Slime Mold (8)
*Northern Red Belt (64)	Water Molds (1)	*Wolf'S Milk (6)
Mushrooms, Bracket Fung (33)		Slime Molds (3)
Fomitopsis (30)		*Common Coral Slime (2)
Common Gilled Mushrooms (29)		Salmon-Eggs (1)
*Brittlegills (26)		Physarum (1)
Smoky-Gilled Hypholoma (25)		Lycogala (1)
*Ochre-Banded Conk (22)		*Chocolate Tube Slime (1)
*West Coast Reishi (21)		Fuligo (1)
Shelf Fungi (19)		Chocolate Tube Slimes (1)
*Lobster Mushroom (18)		True Slime Molds (1)
*Alpine Jelly Cone (16)		Hemitrichia (1)
Orange Jelly Spot (15)		Trichiales (1)
White Coral Fungus (14)		Wolf'S Milk (1)
Amanita Sect. Amanita (13)		
*Dyer'S Polypore (12)		
*Turkey-Tail (12)		
*Pixie Cup And Reindeer (12)		
*Varied Rag Lichen (12)		
Common Lichens (11)		
*Lichen Agaric (11)		
Clavulina (10)		
Hypholoma (10)		
Bracket Polypores (9)		
*Candlesnuff Fungus (9)		
Amanita Mushrooms (9)		
Fir-Cone Mushroom (9)		
Honey Mushrooms (9)		
Beard Lichens (9)		
Bonnets (9)		
Short-Stemmed Russula (8)		
Waxcaps (8)		
False Chanterelle (8)		
Late Oyster (8)		
Rosy Oysterling (8)		
Vermilion Waxcap (8)		
*Jelly Spot Fungus (8)		
*Sulphur Tuft (8)		
Sawadaea Bicornis (7)		
*Artist'S Bracket (7)		

Table 4: Top 40 Most Observed Species (or Groups) for Fungi, Chromista, and Protozoa, in the inner circle. The first three rows display the Kingdom, Phylum, and Class of the taxon. Species are sorted by observation frequency; native ones are marked with a star (*), and potentially threatened ones are highlighted with a light red background. The group level (e.g., genus or family) may be used for unidentified species, and full name might be truncated if particularly long. **Each entry is a clickable link** to its iNaturalist page for further details.

5 Threatened Species

Biodiversity conservation is a critical part of understanding and managing ecosystems. Within this broader context, species classified as threatened hold particular importance because they face a higher risk of extinction in the wild. This section focuses on species identified as threatened based on data from the iNaturalist platform and the International Union for Conservation of Nature (IUCN) Red List, the most comprehensive global inventory of the conservation status of species.

The IUCN Red List categorizes species according to their risk levels, including classifications such as Critically Endangered, Endangered, and Vulnerable. These categories help prioritize conservation efforts and guide responsible land management practices. By identifying and monitoring threatened species within both the immediate vicinity of the focal property and the broader landscape, we can better understand local biodiversity vulnerabilities and contribute to ongoing protection efforts.

It is important to emphasize that while this report shares observations of threatened species, protecting these species and their habitats must always take priority. Observers should avoid disturbing individuals or sensitive environments. Furthermore, platforms like iNaturalist safeguard sensitive location data to minimize risks of exploitation or harm to vulnerable species.

The following subsections provide an overview of threatened species detected in the landscape, detailed listings of those found in the vicinity, and a complementary list of threatened species observed nearby but not yet recorded locally. This information aims to support awareness, foster responsible observation, and encourage active participation in biodiversity conservation.

5.1 Threatened Species in the Landscape: Overview and Classifications

This first subsection provides a quantitative overview of threatened species observed in the study area. We begin with two donut charts that compare the proportion of threatened species to the total number of unique species recorded in both the inner and outer zones.

Next, we dive into the IUCN Red List classifications for the species flagged as threatened, showing the breakdown of their conservation statuses. This helps us understand whether species in the area are mildly vulnerable or facing severe extinction risks.

Figure 9: Donut charts showing the proportion of unique species flagged as threatened in iNaturalist and/or listed in the IUCN Red List, relative to the total number of unique species observed in each zone (1.0 km inner circle and 3.0 km outer ring).

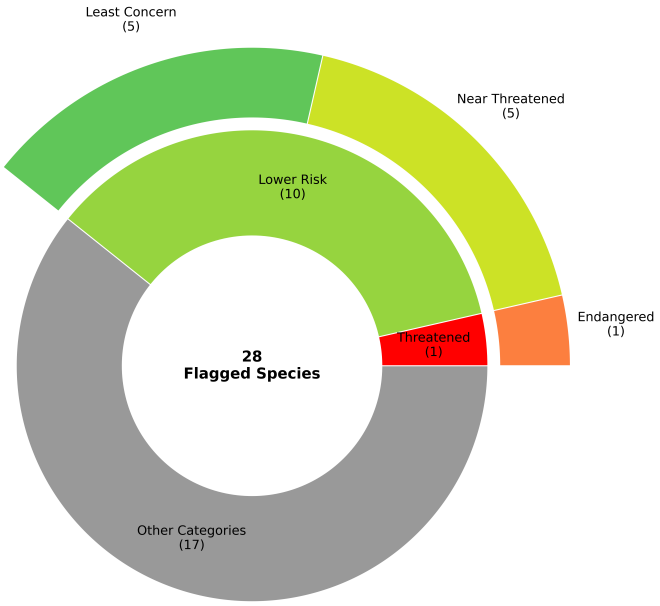

Figure 10: Distribution of IUCN Red List conservation statuses among the potentially threatened species observed in the 1.0 km radius inner circle.

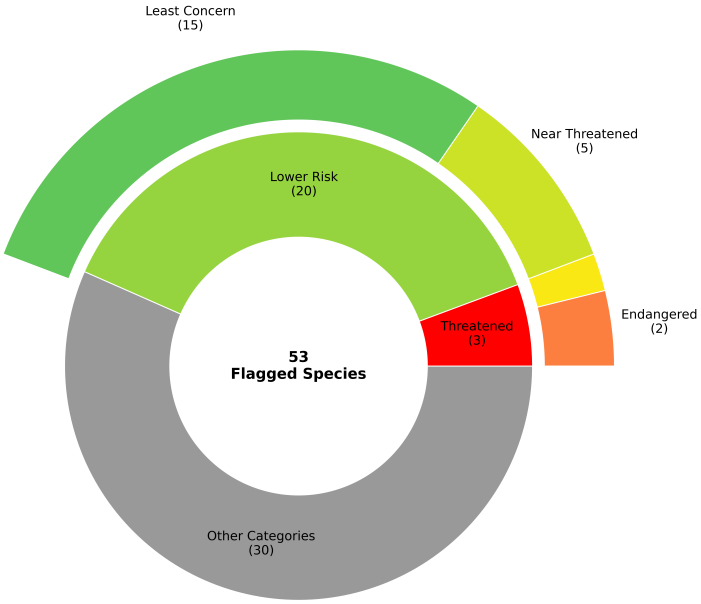

Figure 11: Distribution of IUCN Red List conservation statuses among the potentially threatened species observed in the 3.0 km radius outer circle.

5.2 Threatened Species Observed in the Vicinity

This subsection provides a detailed look at threatened species observed within 5 km of the focal property. Only species listed as Critically Endangered, Endangered, or Vulnerable in the IUCN Red List are shown here.

Each species is presented with a photo, a brief description, and a link to more information. These species are particularly important indicators of ecosystem health — and also the most sensitive to disruption. Please respect their space if encountered.

5.2.1 Endangered

Quinine Conk

Laricifomes Officinalis
Iconic Taxon: Fungi
Observed 3 times in the outer ring

Laricifomes officinalis, also known as agarikon, eburiko, or the quinine conk, is a wood-decay fungus that grows in large conks on the trunks of trees. It causes brown heart rot on conifers in Eurasia, Morocco, and North America. This fungus is the only member of the genus Laricifomes.

There has been a history of human use of the fungus, from textiles, to ritualistic masks, and medicinal use; the name "quinine conk" refers to its bitter taste. There is recent scientific evidence of it having potency against several viruses.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

5.3 Threatened Species Nearby But Not Yet Observed in the Vicinity

This list highlights species that have not yet been recorded in your immediate vicinity but are known to occur close by. Their presence in the wider region suggests that they might also be found within or near your property — if the conditions are right and with a bit of luck and attention!

However, it is essential to approach the search for these species with respect and caution. Many threatened species are sensitive to disturbance, and their survival can depend on minimal human interference. Please do not attempt to handle, follow, or disrupt these species or their habitats. And don't worry, iNaturalist automatically obscures the precise location of observations for threatened species to protect them from potential harm.

By being the first to observe these species in your area, you can help gather vital data that supports their conservation and protection. Stay curious, stay respectful — and keep your eyes open!

5.3.1 Endangered

Little Brown Bat

Myotis Lucifugus
Iconic Taxon: Mammalia
Observed 3 times in the outer ring

The little brown bat or little brown myotis (Myotis lucifugus) is an endangered species of mouse-eared microbat found in North America. It has a small body size and glossy brown fur. It is similar in appearance to several other mouse-eared bats, including the Indiana bat, northern long-eared bat, and Arizona myotis, to which it is closely related. Despite its name, the little brown bat is not closely related to the big brown bat, which belongs to a different genus.

Its mating system is polygynandrous, or promiscuous, and females give birth to one offspring annually. The offspring, called pups, are quickly weaned and reach adult size in some dimensions by three weeks old. The little brown bat has a mean lifespan of 6.5 years, though one individual in the wild reached 34 years old. It is nocturnal, foraging for its insect prey at night and roosting in hollow trees or buildings during the day, among less common roost types. It navigates and locates prey with echolocation.

It has few natural predators, but may be killed by raptors such as owls, as well as terrestrial predators such as raccoons. Other sources of mortality include diseases such as rabies and white-nose syndrome. White-nose syndrome has been a significant cause of mortality since 2006, killing over one million little brown bats by 2011. In the Northeastern United States, population loss has been extreme, with surveyed hibernacula (caves used for hibernation) averaging a population loss of 90%.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.

5.3.2 Vulnerable

Evening Grosbeak

Coccothraustes Vespertinus
Iconic Taxon: Aves
Observed 1 times in the outer ring

The evening grosbeak (Hesperiphona vespertina) is a passerine bird in the finch family Fringillidae found in North America.

The evening grosbeak is bulky, with a large bill and short tail. The bird has a distinct appearance, with the adult male featuring a bright yellow forehead and body, brown head, and white wing patches, while the adult female has a mainly olive-brown body with greyer underparts and white wing patches.

The evening grosbeak breeds in coniferous and mixed forests across Canada, the western mountainous areas of the United States, and Mexico. Its migration pattern is variable, sometimes reaching as far south as the southern U.S. in winters. These birds forage in trees and bushes, and their diet mainly consists of seeds, berries, and insects. The bird's range has expanded eastward in historical times, likely due to the planting of Manitoba maples and other shrubs near farms and the availability of bird feeders during winter.

Click to read more on iNaturalist, IUCN Red List of Threatened Species, and Wikipedia.