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Module 13: Birds in the Urban Landscape

Urban EcoLab

May 2021

Outline

Center for Urban Resilience

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Urban EcoLab - Module 13
“Birds in the Urban Landscape”

MODULE 13 OUTLINE

Introduction – “Birds in the Urban Landscape”

Birds can be found in every urban center and in almost every habitat throughout the world, from the frozen tundra of the Arctic to the deserts of Africa. Although they are ubiquitous in and around urban centers, most, if not all bird species are in decline. This decline is due to many natural and anthropogenic pressures, such as wildfire, drought, floods, storms, habitat destruction, habitat fragmentation, pollution, and other factors. It is now more important than ever to educate students about bird ecology and the importance of bird biodiversity to ecosystem health. Armed with knowledge, students can make choices about how they can help the environment and have a positive impact on bird survival rates.

This Module will highlight various bird species in the urban context. Funded by a grant from Dan & Susan Gottlieb of the Gottlieb Native Garden (GNG), students will learn about and explore the birds that live in or migrate through Southern California, including species like hummingbirds, osprey, and crows, as well as bird-related topics such as bird biodiversity, birds as bioindicators of ecosystem health, and bird classification, among others.

Students will also have the opportunity to look at hummingbird and seed feeders via live webcams that are located in urban areas around the country and world. By observing feeder birds, students will be able to explore topics such as species composition, behavior, and other topics, including designing investigations of their own.

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Notes

- This Module is written for high school grades 9-12 but has been aligned to the CA-NGSS for grades 4-12; lessons can be modified for the younger grades.
- The Module also includes adaptations for various learners including English language learners, students with special education needs, and extended learning alternatives for all groups, including gifted and talented learners.

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“Birds in the Urban Landscape”

Educator Resource – Building Background

“Birds in the Urban Context”

Birds can be found throughout the world and in various habitats. There are myriad groups of birds including flightless birds, birds that migrate and some that don't, pelagic birds, raptors, song birds, and many other groups. There are seed eaters (granivores), nectar eaters (nectarivores) and generalists that eat many things (omnivores). Some birds are scavengers while others are predators and still others are prey. Their classification mix is astounding!

What all birds have in common is that they are a vital part of every ecosystem and they are key indicators of the health of an ecosystem. They provide a myriad of ecosystem services, but due to natural and anthropogenic pressures, birds are in decline all over the world. This decline is due to factors such as habitat loss, use of pesticides, and climate change, among others.

Working together, humans can slow or stop this decline through citizen science and scientific research programs that track and monitor bird counts; improve, restore, & conserve habitat; and educate others about the importance of sound ecosystem management practices and the importance of birds as key indicator species.

To learn more about birds, including information on many of the topics that will be discussed in this module, visit the following links:

- American Birding Conservancy (ABC): <https://abcbirds.org/>
- Audubon: <https://www.audubon.org/>
- Audubon California: <http://ca.audubon.org/>
- All About Birds (Cornell): <http://www.allaboutbirds.org>
- BirdCast <http://birdcast.info/>
- Bird Checklist for Southern California – use this to create your own:
<http://losangelesaudubon.org/images/stories/pdf/fieldlistofthebirdsoflosangelescounty.pdf>
- Christmas Bird Count (Dec-Jan): <https://www.audubon.org/conservation/science/christmas-bird-count>
- Cornell Lab of Ornithology: www.birds.cornell.edu
- E-bird: www.ebird.org
- Great Backyard Bird Count (Feb): <http://gbbc.birdcount.org/about/>
- iNaturalist: <http://www.inaturalist.org>
- Los Angeles Audubon Society: <http://losangelesaudubon.org>
- Macauley Library (Cornell): <https://www.macauleylibrary.org/>
- National Audubon Society (NAS): <http://www.audubon.org/>
- Project FeederWatch (Nov-Apr): <https://feederwatch.org/>
- San Fernando Audubon Society: <https://www.sfvaudubon.org/>
- Santa Monica Bay Audubon Society <https://smbasblog.com/>

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Lessons Resources:

All Lessons will include a lesson plan, instructional PowerPoint presentations, and supportive lesson materials including checklists, student handouts, and graphic organizers specific to each Lesson.

- Lesson 1: Hummingbird Ecology
- Lesson 2: Feeder Birds
- Lesson 3: Raptors
- Lesson 4: Corvids
- Lesson 5: Aquatic Birds

Module Resources:

- CA-NGSS Standards Alignment & Extended Learning Chart
- Lesson Adaptations and Extensions Chart
- Key Terms
- Scientific Research Topics
- Binder Cover
- Career Resources
- Reading Materials
- Reference Materials
- Additional Presentations