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Module 11: Bird Migration

Urban EcoLab

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April 2021

## Urban Birds - January 2019

Center for Urban Resilience

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# Birds in the Urban Landscape







<https://youtu.be/c0caVjDTyZo>

# Introductions

- **Maria Curley Auger**
  - LMU-CURes Research Asst, Managing Editor – Cities and the Environment (CATE) Journal
  - LMU-CEEL Education Specialist
  - Certified Teacher
  - Curriculum Writer
  - Teacher Professional Development
  - Past Life: 20 years Customer Svc Management, Corporate Training – Utilities -Sprint, FPC (FL) and Banking (MA)
  - Passions: teaching, birding, hiking, rock climbing, reading
  - Obsessions: owls, hummingbirds, chocolate
  - Favorite place to Travel: Costa Rica, Sedona, AZ

# Introductions

- Lisa Fimiani

- LMU-CURes Gottlieb Environmental Leadership Fellow (*Dan and Susan Gottlieb Foundation*)
- Board Member, Friends of Ballona Wetlands <http://www.ballonafriends.org/>
- Master Gardener and Restoration Specialist, Giardino della Vita <http://giardinodellavita.com/>
- Former Executive Director, Friends of Ballona Wetlands (7 years)
- Former Board Member, Los Angeles Audubon Society (10 years)
- Former Board Member, California Audubon (6 years)
- Passions: teaching, birding, native gardening
- Favorite place(s) to Travel: Africa, Nebraska (Sandhill cranes migration)

# Introductions

- **Dr. Pete Auger**
  - LMU-CURes Senior Scientist, Field Biologist, Professor
  - LMU – 7 years
  - Boston College – 14 years
  - Helped found the Urban Ecology Institute (UEI) in Boston ... the model for CURes in Los Angeles!
  - Former HS Teacher, Baseball & Football Player and Coach
  - Former Baseball Player on the Cotuit Ketteliers
  - Passions: teaching, reading, flying drones, technology, building field equipment, sports (Boston Red Sox & Patriots; LA Dodgers & Rams!)
  - Favorite place to Travel: Costa Rica!







## **On Guardian Angels**

Perhaps my angels have all along been birds.  
How often am I out of their sight?  
Even when I'm indoors, they come  
to the window, seek me, keep watch.

So what if I can't understand their speech?  
As long as the dawn hears the rooster & the waves  
take their cue from the gulls, I too can have  
their music without demanding sense of it.

In the main, my angels are small, brown sparrows,  
who fly like tiny grapeshot & fastidiously watch,  
but call little attention to themselves. They even seem  
indifferent; but isn't that a perfect disguise?

By [Richard Beban](#)



# Topics of Discussion

- Bird Biodiversity – Indicator Species
- Bird Classification - Taxonomy
- Bird Identification & Sociobiology
- Bird Migration – the Pacific Flyway...
- Focus on 10 Birds
- Getting Involved
  - **The Power of Citizen Science**

# What do birds tell us about the health of an ecosystem?

Biodiversity: biological diversity in an environment is indicated by numbers of different species of plants and animals

Monoculture: describes systems that have very low biological diversity

# Bird Classification

- Nearly 30 orders of birds exist.
- The largest order of birds includes the **perching birds** (songbirds). There are nearly 5000 species of perching birds.





**passerines**

*(All the songbirds such as sparrows, warblers, cardinals, chickadees, mockingbirds, vireos, and many other perching birds)*

**the other  
twenty-four  
orders**

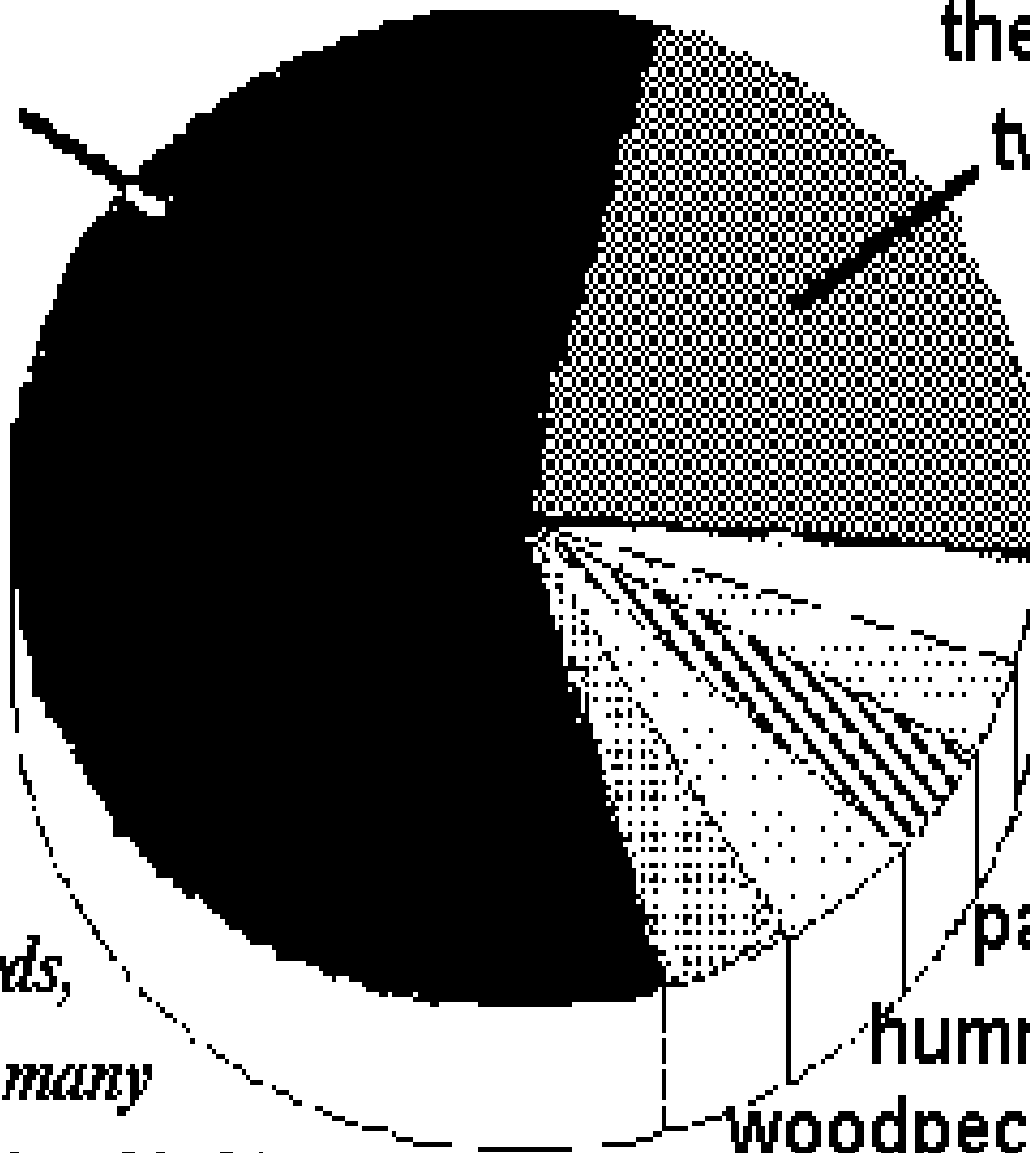
**gulls**

**doves**

**parrots**

**hummingbirds**

**woodpeckers**

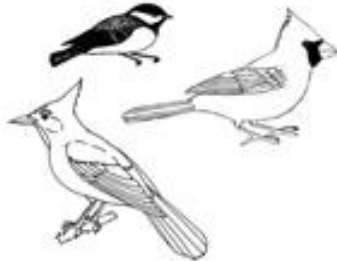


# Orders of Birds

Strigiformes  
owls



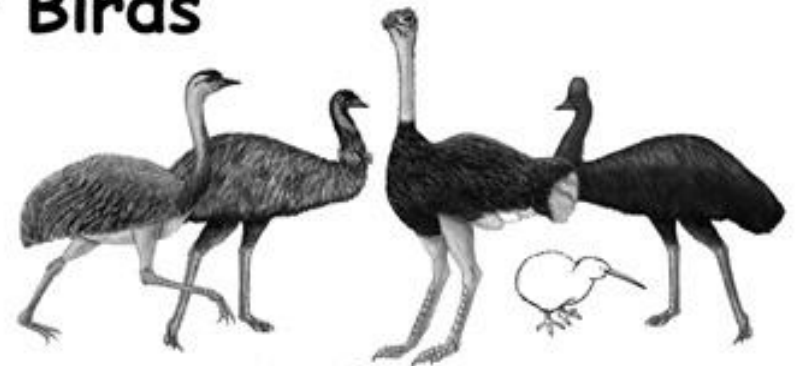
Passeriformes  
songbirds



Coraciiformes  
kingfishers



Gaviiformes  
loons



Struthioniformes  
emus, rheas, ostriches, and kiwis, cassowaries

Columbiformes  
doves and pigeons



Piciformes  
woodpeckers



Galliformes  
grouse, quails,  
pheasants and  
turkeys



Apodiformes  
hummingbirds



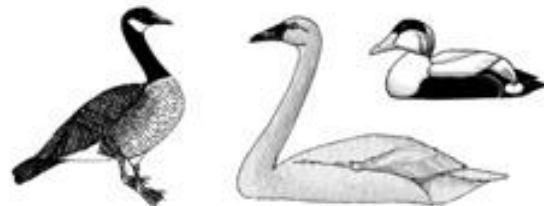
Psittaciformes  
mawcaws and  
parrots



Ciconiiformes  
herons



Anseriformes  
geese, swans and ducks



Falconiformes  
hawks, eagles,  
and vultures



Charadriiformes  
sandpipers and  
seagulls



# Bird Classification - Taxonomy

*As examples, a finch, a hawk, and a human are classified and named in the table below:*

Classification	<b>Goldfinch</b>	<b>Cooper's Hawk</b>	<b>Human</b>
<b>Kingdom</b>	Animal	Animal	Animal
<b>Phylum</b>	Chordata	Chordata	Chordata
<b>Class</b>	Aves	Aves	Mammalia
<b>Order</b>	PASSERIFORMES	FALCONIFORMES	PRIMATE
<b>Family</b>	Finches (Fringillidae)	Kites, Eagles and Hawks (Accipitridae)	Hominidae
<b>Genus &amp; species</b>	<i>Carduelis tristis</i>	<i>Accipiter cooperii</i>	<i>Homo sapiens</i>
<b>Common name</b>	American Goldfinch	Cooper's Hawk	Human



# Birds Come in all sizes and shapes and they act differently!

- Soaring birds
- Perching Birds
- Flightless Birds
- Birds that Migrate ... some that don't ...
- Birds that nest on the ground
- Birds that nest on cliffs, trees, or buildings
- Aquatic birds
- Pelagic birds
- Terrestrial birds ...and the list goes on ...

# *Bird Identification*

- Visual markings, color, iridescence ...
- Vocalizations
- Habitat (wetland, urban, cliffs ...)
- Temporal - time of year - seasonal migrations
- Nesting characteristics
- Diet - omnivores, frugivores, carnivores...
- BEHAVIOR
  - SOCIOBIOLOGY: a branch of biology that deals with social behavior, and also draws from ethology, anthropology, evolution, zoology, archaeology, population genetics, and other disciplines.

# *Bird Identification*

Do you know this bird?

See Page 281 of *Birds of Southern California Book*





# *Bird Identification*

## Saturday Bird Count at the Ballona Freshwater Marsh (FWM)

- Usually 1<sup>st</sup> Saturday of each month – posted on the CUREs website
- Starts at 7am (sometimes earlier, during certain times of the year)
- Meet at the gate on Jefferson Blvd, at the southwestern end of the woodchip trail (where the gate to the back maintenance road begins)
- Binoculars are good to have, but not a must (we will share ours)
- A camera is nice too, but we will share our pics
- Be sure to give provide your email address
- Come Join Us!

# Highlights from Sept 29, 2018 Bird Count





# Highlights from Sept 29, 2018 Bird Count



**Juvenile  
Black-crowned  
Night Heron  
*Nycticorax  
nycticorax***



# Highlights from Sept 29, 2018 Bird Count



**Great Egret**  
*Ardea alba*

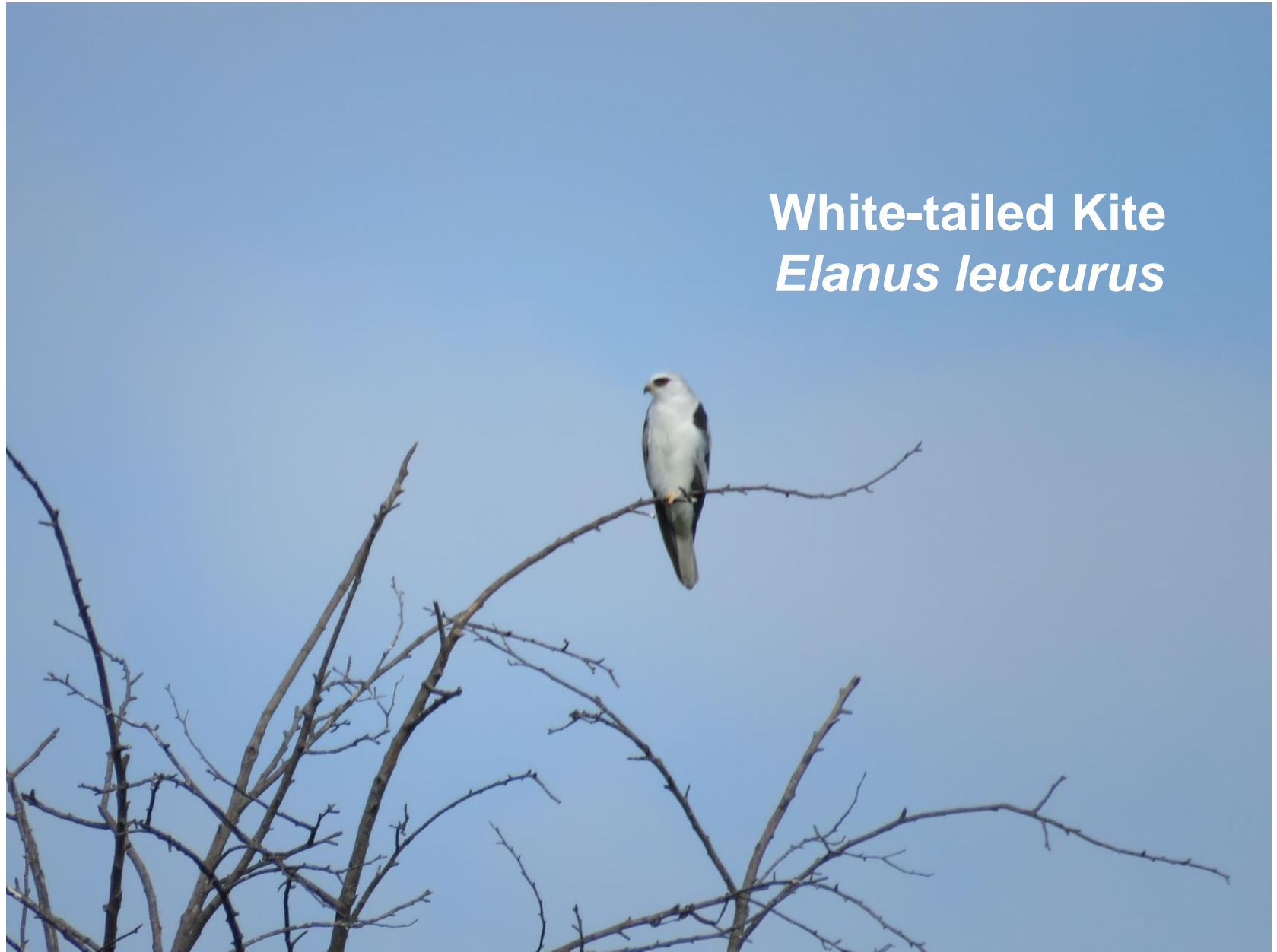


# Highlights from Sept 29, 2018 Bird Count



Northern Shoveler  
*Spatula clypeata*

# Highlights from Sept 29, 2018 Bird Count



**White-tailed Kite**  
*Elanus leucurus*



# Highlights from Sept 29, 2018 Bird Count



Cassin's Kingbird  
*Tyrannus*  
*vociferans*

# Ballona FWM and Playa Vista Riparian Corridor Bird List Jan 2019

## BALLONA FRESHWATER WETLANDS BIRD LIST

Updated Jan 2019 (259 spp.)  
Includes all species observed utilizing habitat in the Freshwater Marsh and Riparian Corridor. Species observed high overhead only are not included. Years when a species has been confirmed or strongly suspected of nesting, attempting to nest, or establishing a breeding territory are indicated in parentheses. Unusual species are marked with an asterisk (\*) and reports of sightings would be appreciated (see contact information below). This is a screened list. Only reliable observations of species utilizing the marsh in some manner (resting, foraging, and/or nesting) are counted. Errors or additions should be reported to the Preserve Manager, Edith Read (marshmistress@msn.com).

### SWANS, GEESE AND DUCKS

Fulvous Whistling-Duck\*  
Snow Goose\*  
Ross's Goose  
Greater White-fronted Goose\*  
Brant\*  
Cackling Goose\*  
Canada Goose (2006-2018)  
Mute Swan (introduced)  
Tundra Swan\*  
Egyptian Goose (introduced)  
Wood Duck\*  
Mandarin Duck (introduced)  
Blue-winged Teal  
Cinnamon Teal (2008-2017)  
Northern Shoveler  
Gadwall (2005-2018)  
American Wigeon  
Mallard (2003-2018)  
Northern Pintail  
Green-winged Teal  
Canvasback\*  
Redhead  
Ring-necked Duck  
Greater Scaup\*  
Lesser Scaup  
Surf Scoter\*

Bufflehead  
Common Goldeneye\*  
Hooded Merganser  
Common Merganser\*  
Red-breasted Merganser\*  
Ruddy Duck (2003-2015, 2017-2018)

### NEW WORLD QUAIL

California Quail\*  
  
GREBES  
Pied-billed Grebe (2003-2018)  
Horned Grebe\*  
Eared Grebe  
Western Grebe

PIGEONS AND DOVES  
Rock Pigeon (introduced)  
Eurasian Collared-Dove (introduced)  
White-winged Dove\*  
Mourning Dove (2003-2018)

NIGHTJARS  
Lesser Nighthawk\*  
Common Poorwill\*

SWIFTS  
Black Swift\*  
Vaux's Swift  
White-throated Swift

HUMMINGBIRDS  
Black-chinned Hummingbird\*  
Anna's Hummingbird (2006-2018)  
Costa's Hummingbird\*  
Rufous Hummingbird\*  
Allen's Hummingbird (2006-2018)

RAILS AND ALLIES  
Ridgway's Rail\*  
Virginia Rail (2009-2016)  
Sora  
Common Gallinule (2008-2015)  
American Coot (2003-2018)

STILTS AND AVOCETS  
Black-necked Stilt (2003, 2007-2016)  
American Avocet

### PLOVERS

Black-bellied Plover  
Semipalmated Plover  
Killdeer (2004-2018)

### SANDPIPERS AND ALLIES

Whimbrel  
Long-billed Curlew\*  
Marbled Godwit\*  
Sanderling\*  
Dunlin\*  
Baird's Sandpiper\*  
Least Sandpiper  
Pectoral Sandpiper\*  
Western Sandpiper  
Short-billed Dowitcher\*  
Long-billed Dowitcher  
Wilson's Snipe  
Wilson's Phalarope  
Red-necked Phalarope  
Spotted Sandpiper  
Solitary Sandpiper\*  
Greater Yellowlegs  
Willet  
Lesser Yellowlegs\*

### GULLS, TERNS AND ALLIES

Bonaparte's Gull  
Mew Gull\*  
Ring-billed Gull  
Western Gull  
California Gull  
Herring Gull\*  
Glaucous-winged Gull  
Least Tern  
Caspian Tern  
Forster's Tern  
Elegant Tern\*  
Black Skimmer\*

LOONS  
Red-throated Loon\*  
Pacific Loon\*  
Common Loon\*

CORMORANTS  
Double-crested Cormorant

PELICANS  
American White Pelican\*  
Brown Pelican\*

### BITTERNS AND HERONS

American Bittern\*  
Least Bittern (2005-2016, 2018)  
Great Blue Heron  
Great Egret  
Snowy Egret  
Little Blue Heron\*  
Cattle Egret\*  
Green Heron (2005, 2008-2018)  
Black-crowned Night-Heron  
Yellow-crowned Night-Heron\*

### IBISES

White-faced Ibis

### NEW WORLD VULTURES

Turkey Vulture

### OSPREY

Osprey

### KITES AND HAWKS

White-tailed Kite  
Northern Harrier  
Sharp-shinned Hawk  
Cooper's Hawk  
Red-shouldered Hawk  
Swainson's Hawk\*  
Red-tailed Hawk  
Ferruginous Hawk\*

### BARN OWLS

Barn Owl

### TYPICAL OWLS

Great Horned Owl  
Burrowing Owl\*  
Short-eared Owl\*

### KINGFISHERS

Belted Kingfisher

### WOODPECKERS AND ALLIES

Acorn Woodpecker\*  
Downy Woodpecker  
Nuttall's Woodpecker\*  
Northern Flicker  
"Red-shafted" Flicker  
"Yellow-shafted" Flicker\*



# Osprey Pole coming soon to LMU!



# Osprey Pole being installed at BHS on Cape Cod



# Osprey Pole being installed at BHS on Cape Cod





# Osprey Nest at BHS - Cape Cod, MA

**BHS Osprey Platform**  
**5/18/05**





# Live Bird Cams on the CUREs Website!

Visit the link via <https://academics.lmu.edu/cures/research/animalbehavior/>

10/2/2018

Untitled-1.jpg



# CURes Staff at the LMU Open House Sat 10/7/18





# Recruiting Future Environmental Stewards!



# CELEBRATING 2018 AS THE YEAR OF THE BIRD

<https://www.nationalgeographic.org/projects/year-of-the-bird/>

“IF YOU TAKE CARE OF BIRDS, YOU TAKE CARE OF MOST OF THE ENVIRONMENTAL PROBLEMS IN THE WORLD.”

Thomas Lovejoy  
Biologist and Godfather of Biodiversity

Watch these videos for more inspiration:

The **Cornell** Lab of Ornithology  
Exploring and Conserving Nature



<https://youtu.be/c0caVjDTyZo>



EXTRAORDINARY  
FOOTAGE SHOWS  
MICROLIGHT PILOT  
DUBBED 'BIRDMAN'  
TAKING TO THE  
SKIES

<https://www.youtube.com/watch?v=Y05Lajbebq4>

<http://www.dailymail.co.uk/news/article-5220829/Microlight-pilot-dubbed-birdman-flies-geese.html>



# Get your bird on!

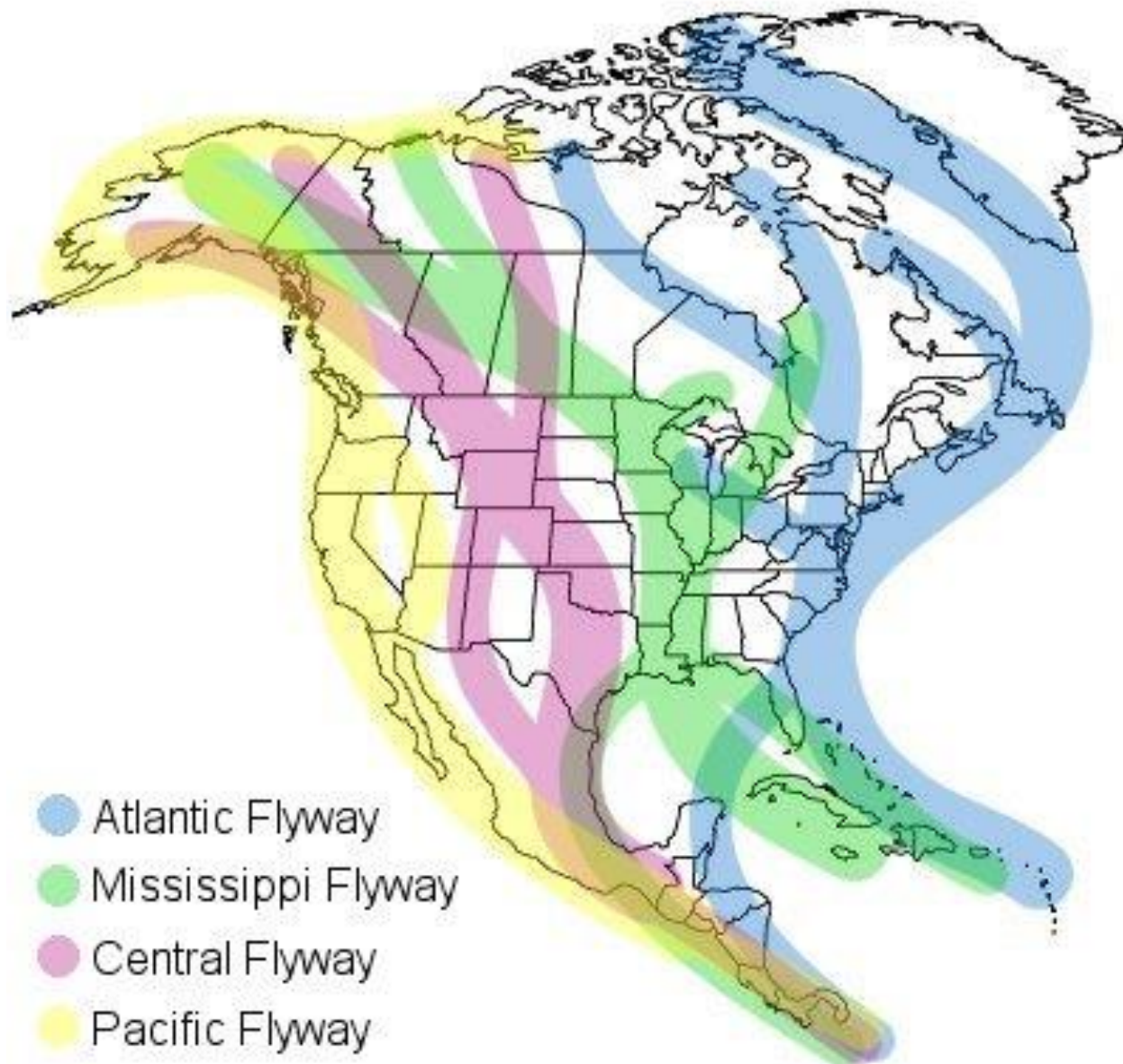
Birds are the fly-through eye candy that tie habitats and neighborhoods together

For the first time, scientists at the Cornell Lab of Ornithology have documented migratory movements of bird populations spanning the entire year for 118 species throughout the Western Hemisphere. The study finds broad similarity in the routes used by specific groups of species—vividly demonstrated by animated maps showing patterns of movement across the annual cycle.

<https://www.allaboutbirds.org/mesmerizing-migration-watch-118-bird-species-migrate-across-a-map-of-the-western-hemisphere/>

<https://www.allaboutbirds.org/mesmerizing-migration-map-which-species-is-which/>

# Bird Migration Flyways





## 4 Billion Birds Will Fly Over North America This Fall (2018)

For the first time ever we have an idea of just how busy the skies are at this time of year. Most birds migrate at night, out of sight and beyond earshot. To count these enormous flights, Cornell Lab scientists used weather radar and big data analyses. Their estimates also give us an idea of the birds' overall survival rates. [Read more about this cutting-edge research.](#)



# THE POWER OF CITIZEN SCIENCE

# Citizen Science (Birding and Wildlife)

- E-bird
  - [www.ebird.org](http://www.ebird.org)
- iNaturalist
  - <http://www.inaturalist.org/>
- Project FeederWatch (November to April)
  - [www.feederwatch.org](http://www.feederwatch.org)
- Christmas Bird Count (CBC) (December)
  - <http://www.audubon.org/conservation/science/christmas-bird-count>
- Great Backyard Bird Count (GBBC) (February)
  - <http://gbbc.birdcount.org/about/>

# Project FeederWatch

Sign up for eNews

Donate

HOME ABOUT LEARN COMMUNITY EXPLORE YOUR DATA

## Embrace the WINTER. — \* Count Feeder Birds for \* — SCIENCE!

Join, Renew or Donate





# Project FeederWatch

## What is a Project FeederWatch?

Project FeederWatch is a citizen science program where birders around the world conduct winter-long bird counts at bird feeders and enter their totals on their Project FeederWatch account. They can conduct tallies as little as one time during the week, or as many times as they want, but at least a minimum of 15 minutes each observation. The counts tell scientists about bird abundance or absence, which are key indicators of the health of an ecosystem. For this year, the count runs from:

- **November 10, 2018 to April 5, 2019.**

If you are new to Project FeederWatch, sign up on-line at the link below and receive a starter kit and beautiful bird poster.

Project FeederWatch: <https://feederwatch.org/>

# Tally Sheet

FeederWatch ID number:	Password:	User name:
------------------------	-----------	------------

The 2 consecutive dates of this count are \_\_\_\_\_ and \_\_\_\_\_

## Bird Counts

Use the space to the right to tally the number of individuals of each species that you see simultaneously. Report your counts to Project FeederWatch at [feederwatch.org](http://feederwatch.org) (do not send in this Tally Sheet). Report only the highest number seen simultaneously—do not add your running tally together.

## Effort

When did you watch your FeederWatch count site?

- ☐ Day 1, morning  
☐ Day 1, afternoon  
☐ Day 2, morning  
☐ Day 2, afternoon

Estimate the cumulative time you watched your FeederWatch count site.

- ☐ Less than 1 hour  
☐ 1 to 4 hours  
☐ 4+ to 8 hours  
☐ More than 8 hours

## Snow depth

Mark the average conditions during the two-day count.

- ☐ None  
☐ Under 5 cm (under 2")  
☐ 5 cm to 15 cm (2" to 6")  
☐ Over 15 cm (over 6")

## Eye disease

Watch for eye disease in House Finches, Purple Finches, Evening Grosbeaks, or goldfinches and note how many birds you see with the disease.

Species name

Highest number seen at one time

Example: House Finch 3, 5, 12 12 (enter this number online)

## Behavior Interactions

Use the space below to note if a bird attempted to displace or depredate another bird and if the attempt was successful.

Source species	Behavior	Target species	Successful?
Example: Blue jay	displaced	American Goldfinch	No

## Helpful hints

- Under "Species name," list the birds you see most often. Then make copies of your tally sheet.
- Print tally sheets from our website at: [feederwatch.org/about/detailed-instructions/#prepare-a-tally-sheet](http://feederwatch.org/about/detailed-instructions/#prepare-a-tally-sheet).

# Project FeederWatch Rules

- Choose count site
- Use same site each time
- Count one session per week
- One session = 2 consecutive days
- Count at the same time each day / same days each week
- Allow 5 days between counting sessions
- Only tally most birds of that species at one time (don't total all)
- Submit counts on-line



# Christmas Bird Count (CBC)

## What is a Christmas Bird Count?

The longest running Citizen Science survey in the world (over 115 years), the annual Christmas Bird Count provides critical data on population trends. Tens of thousands of participants know that it is also a lot of fun. Data from the over 2,300 circles are entered after the count and become available to query under the Data & Research link on the following websites.

Information on CBC's nationwide:

<http://www.audubon.org/bird/cbc/>

Information on CBC's in California:

<http://natureali.org/cbcs.htm>

# Great Backyard Bird Count (GBBC)

## What is the GBBC?

The Great Backyard Bird Count started in 1998, and is an annual four-day event every **February** over President's Day weekend, that engages bird watchers of all ages in counting birds to create a real-time snapshot of where the birds are.

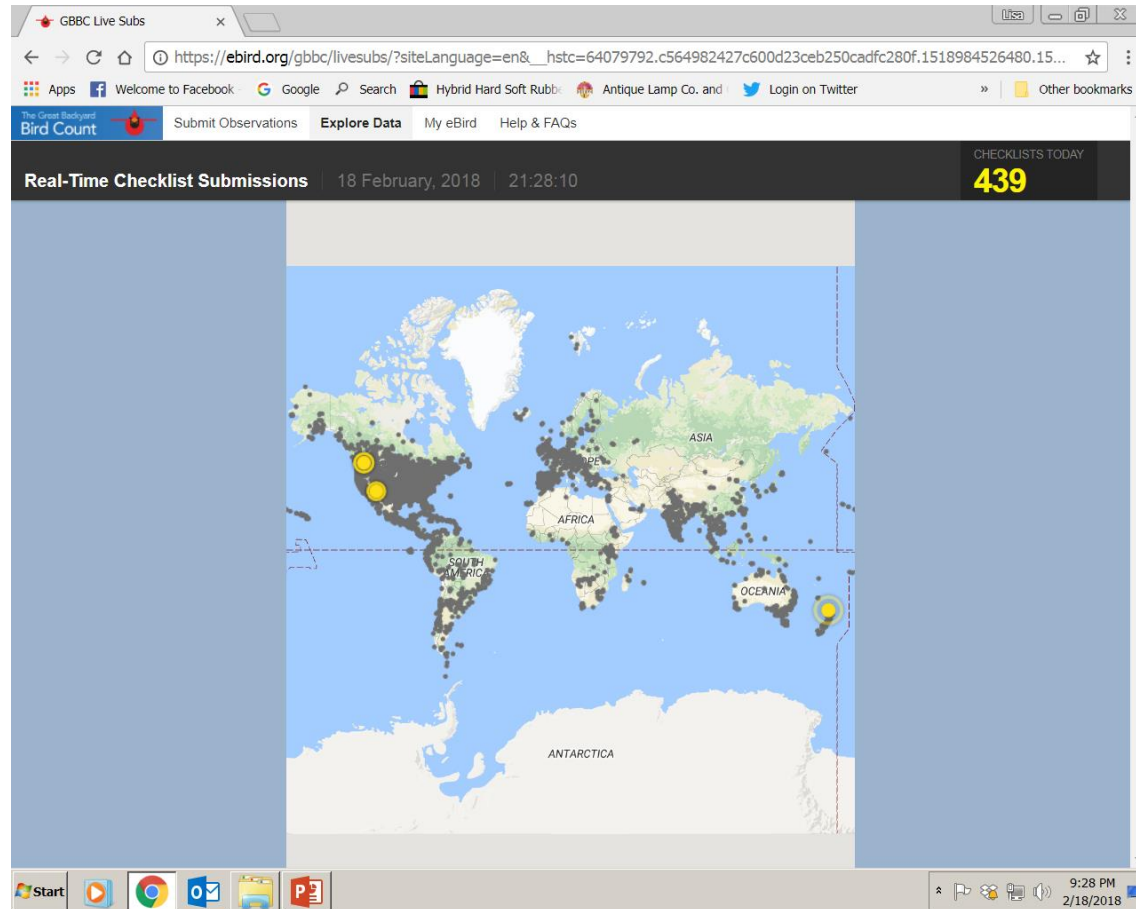
**GBBC checklists can be accepted from anywhere in the world!**

Everyone is welcome--from beginning bird watchers to experts. It takes as little as 15 minutes on one day, or you can count for as long as you like each day of the event. It's free, fun, and easy—and it helps the birds.

Participants tally the number of individual birds of each species they see during their count period. They enter these numbers on the GBBC website.

*The Great Backyard Bird Count is led by the Cornell Lab of Ornithology and National Audubon Society, with Canadian partner Bird Studies Canada and sponsorship from Wild Birds Unlimited.*

<http://www.birdsource.org/gbbc>



Sunday,  
February 18,  
2018

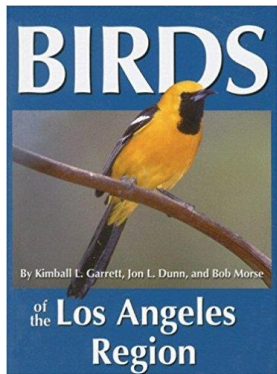
I counted 14 species in my yard

<https://ebird.org/gbbc/view/checklist/S42940506>



# Birding Resources

- Apps
  - Audubon Bird Guide – free (phone)
  - iBird PRO app - \$14.95 (phone)
  - Merlin Bird ID app - free (phone)
- American Birding Conservancy (ABC) <https://abcbirds.org/>
- National Audubon Society (NAS) <http://www.audubon.org/>
- Audubon California <http://ca.audubon.org/>
- Cornell Lab of Ornithology
  - [www.birds.cornell.edu](http://www.birds.cornell.edu)
  - <http://www.allaboutbirds.org/>
- Macauley Library (Cornell)
  - <https://macaulaylibrary.org/browse/taxa/aves>
- The Institute for Bird Populations <http://www.birdpop.org/>
- Join a Local Audubon Birding Group
  - Los Angeles Audubon Society <http://losangelesaudubon.org>
  - San Fernando Audubon Society <https://www.sfvaudubon.org/>
  - Santa Monica Bay Audubon Society <https://smbasblog.com/>
- Join a Local Birding Email Group
  - LACoBirds <https://groups.yahoo.com/neo/groups/LACoBirds/info>
  - CalBirds <https://groups.yahoo.com/neo/groups/CALBIRDS/info?referrer=LACoBirds>



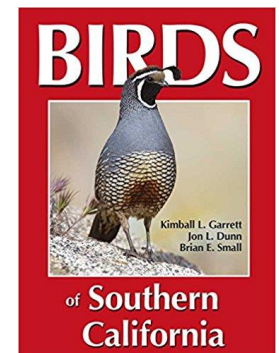
# Birding Resources

## – Bird Reference Books

- 1) A Birder's Guide to Southern California, by Brad Schram, published by American Birding Association (ABA), 1998
- 2) Birds of the Los Angeles Region, by Kimball L. Garrett, Jon L. Dunn, and Bob Morse, 2006
- 3) Birds of North America, By Kenn Kaufman, 2000
- 4) Birds of Southern California, by Kimball L. Garrett, Jon L. Dunn, Brian E. Small, 2012
- 5) Field Guide to the Birds – Western Region, by Donald & Lillian Stokes, 1996
- 6) Field Guide to the Birds of North America, published by National Geographic, 1999
- 7) Field Guide to the Birds of Western North America, published by National Geographic, 2008
- 8) Important Bird Areas of California, by Daniel S. Cooper, published by Audubon California, 2004
- 9) Sibley Field Guide to Birds – Western North America, by David Sibley, 2003
- 10) Western Birds, by Roger Tory Peterson, 1990

STANDARDIZED 4- AND 6-LETTER BIRD SPECIES CODES

<https://www.birdpop.org/pages/birdSpeciesCodes.php>



# Bird and Garden Resources

- 1) "A CALIFORNIAN'S GUIDE TO THE TREES AMONG US", by Matt Ritter
- 2) "AN INTRODUCTION TO SOUTHERN CALIFORNIA BUTTERFLIES", by Fred Heath and Herbert Clarke
- 3) "BRINGING NATURE HOME How You Can Sustain Wildlife with Native Plants", by Douglas Tallamy
- 4) "CALIFORNIA NATIVE PLANTS FOR THE GARDEN", by Carol Bornstein, David Fross and Bart O'Brien
- 5) "DESIGNING CALIFORNIA NATIVE GARDENS", by Glenn Keator and Alrie Middlebrook
- 6) "FLOWERING PLANTS The Santa Monica Mountains Coastal & Chaparral Regions of Southern California", by Nancy Dale and California Native Plant Society
- 7) "GARDENING WITH A WILD HEART Restoring California's Landscapes at Home", by Judith Larner Lowry
- 8) "HEALING WITH MEDICINAL PLANTS OF THE WEST", by Cecilia Garcia and James D. Adams, Jr.
- 9) "HOW TO BE A (BAD) BIRDWATCHER", by Simon Barnes
- 10) "INSECTS OF THE LOS ANGELES BASIN", by Charles L. Hogue
- 11) "KINGBIRD HIGHWAY: The Biggest Year in the Life of an Extreme Birder", by Kenn Kaufman
- 12) "NATIVE TREASURES, GARDENING WITH THE PLANTS OF CALIFORNIA", by M. Nevin Smith
- 13) "REIMAGING THE CALIFORNIA LAWN Water-conserving Plants, Practices, and Designs" by Carol Bornstein, David Fross, and Bart O'Brien
- 14) "SONGBIRD JOURNEYS Four Seasons in the Lives of Migratory Birds", by Miyoko Chu
- 15) "TENDING THE WILD", by M. Kat Anderson
- 16) "THE GENIUS OF BIRDS", by Jennifer Ackerman
- 17) "THE HIDDEN LIFE OF TREES What They Feel, How They Communicate", by Peter Wohlleben
- 18) "THE LANDSCAPING IDEAS OF JAYS A Natural History of the Backyard Restoration Garden", by Judith Larner Lowry
- 19) "THE SECRET LIFE OF TREES: HOW THEY LIVE AND WHY THEY MATTER", by Colin Tudge
- 20) "THE SINGING LIFE OF BIRDS The Art and Science of Listening to Birdsong", by Donald Kroodsma
- 21) "THE SOIL WILL SAVE US How Scientists, Farmers, and Foodies are Healing the Soil to Save the Planet", by Kristin Ohlson
- 22) "THE SONGS OF TREES Stories From Nature's Great Connectors", by David George Haskell
- 23) "TREES AND SHRUBS OF CALIFORNIA", by John D. Stuart and John O. Sawyer
- 24) "WILDFLOWERS OF THE SANTA MONICA MOUNTAINS", by Milt McAuley



# Where to buy native plants and seeds, take classes and get info on the garden:

- C&S Nursery (Los Angeles) <http://www.csnursery.com/>
- International Garden Center (El Segundo) <http://www.igardencenter.com/IGC/>
- Manhattan Beach Botanical Garden – Julie Gonella <http://www.manhattanbeachbotanicalgarden.org/> (310) 546-1354
- Marina Garden Center (Marina del Rey) <http://marinagardencenter.com/>
- Matilija Nursery (Moorpark) <http://www.matilijanursery.com/>
- Theodore Payne Foundation (Sun Valley) <http://www.theodorepayne.org/>
- Tree of Life Nursery (San Juan Capistrano) <http://www.californianativeplants.com/>
- Madrona Marsh Nature Center (Torrance) - Connie Vadheim and Tracy Drake  
<http://www.friendsofmadronamarsh.com/> (310) 782-3989
  1. “Out of the Wilds and Into Your Garden” Series
  2. “One Pot at a Time” Project
  3. Ongoing Classes and Workshops
- Mother Nature’s Backyard: Water-wise and Life Friendly Gardening (out of Gardena Willows):  
<http://mother-natures-backyard.blogspot.com/>
- Native Plants at CSUDH: Research, Restoration and Education with California Native Plants  
<http://nativeplantscsudh.blogspot.com/>
- Rancho Santa Ana Botanical Garden <http://www.rsabg.org/>

# Garden Resources On-line - PLANTS

- Annie's Annuals & Perennials <http://www.anniesannuals.com>
- Calflora <http://www.calflora.org/index0.html>
- CalPhotos Plants <http://calphotos.berkeley.edu/flora/>
- El Nativo Growers (Azusa) <http://www.elnativogrowers.com/> (through garden centers)
- Lady Bird Johnson Wildflower Center *Austin, Texas-based center, website includes image gallery and native plants database* <http://www.wildflower.org>
- Las Pilitas Nursery (San Juan Capistrano) <http://laspilitas.com/> (on-line or open Fri/Sat Only)
- Larner Seeds <http://www.larnerseeds.com/>
- Manhattan Beach Botanical Garden  
<http://www.manhattanbeachbotanicalgarden.org/MBBGplantlist.html>
- Matilija Nursery <http://www.matilijanursery.com/>
- Mother Nature's Backyard Plants at the Gardena Willows Wetland Preserve <http://mother-natures-backyard.blogspot.com/p/plant-list-tentative.html>
- Native Grow Nursery <http://www.nativegrow.com/>
- Native Sons Nursery <http://nativeson.com/plants.htm>
- Pacific Horticultural Society <http://www.pacifichorticulture.org/>
- Plant Native [http://www.plantnative.org/nd\\_ca.htm](http://www.plantnative.org/nd_ca.htm)
- Rancho Santa Ana Botanical Garden <http://www.rsabg.org/public/plant-lists>
- Sunset <http://plantfinder.sunset.com/sunset/plant-home.jsp>
- Theodore Payne Foundation <http://www.theodorepayne.org/>
- [Tree of Life Nursery](http://californianativeplants.com/october-in-the-natural-garden/) <http://californianativeplants.com/october-in-the-natural-garden/>
- UC ANR Cooperative Extension – Master Gardner Program  
<http://ucanr.org/findinformation.cfm?findinfosub=6>  
<http://celosangeles.ucdavis.edu/>
- USDA National Resources Conservation Service <http://plants.usda.gov/>
- Yerba Buena Nursery <http://www.yerbabuenanursery.com/BirdPlantsforNativeGarden.php>

# Get your bird on! (other Bird Resources)

- A. A Yard Full Of Native Plants Is A Yard Full Of Well-Fed Birds: <https://www.allaboutbirds.org/its-true-a-yard-full-of-native-plants-is-a-yard-full-of-well-fed-birds/>
- B. AUDUBON STATE OF THE BIRDS 2017: <http://www.stateofthebirds.org/2017>
- C. Audubon's Birds and Climate Change Report - September 2014: <http://climate.audubon.org/>
- D. Bird Checklist for Southern California – use this to create your own: <http://losangelesaudubon.org/images/stories/pdf/fieldlistofthebirdsoflosangelescounty.pdf>
- E. Bird LA Day – May 4, 2019 <http://birdladay.org/>
- F. BRINGING NATURE HOME: HOW NATIVE PLANTS SUSTAIN WILDLIFE IN OUR GARDENS: <http://bringingnaturehome.net/book>
- G. Christmas Bird Count (CBC) 2018/2019 – do a count for your area with a local Audubon Chapter: <https://www.audubon.org/conservation/science/christmas-bird-count>
- H. eBird – a great way to capture your data and compare with others around the world: <http://ebird.org/content/ebird/>
- I. 4 Billion Birds Will Fly Through American Airspace This Fall (2018): <https://www.allaboutbirds.org/4-billion-birds-will-fly-through-american-airspace-this-fall/>
- J. Gardening For Life, article by Douglas Tallamy: <http://www.for-wild.org/download/tallamy/gardeningforlife.html>
- K. Great Backyard Bird Count (GBBC) February 16-19, 2018 – just do it: <http://gbbc.birdcount.org/>
- L. HOW BIRDS KEEP OUR WORLD SAFE FROM THE PLAGUES OF INSECTS: [http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Fact\\_Sheets/default.cfm?fxsh=2](http://nationalzoo.si.edu/ConservationAndScience/MigratoryBirds/Fact_Sheets/default.cfm?fxsh=2)
- M. iNaturalist – a great way to share your observations with others from around the world: <http://www.inaturalist.org/>
- N. LA County Birds Yahoo Group – to keep up on local sightings: <https://groups.yahoo.com/group/LACoBirds/>
- O. Mobile Phone Apps: **Audubon California Birds, iBird PRO, Sibley Life, Merlin Bird ID**
- P. IMPACT OF NATIVE PLANTS on Bird and Butterfly Biodiversity in Suburban Landscapes: <http://blog.audubon.org/cs/blogs/birdscapes/archive/2009/03/10/impact-of-native-plants-on-bird-and-butterfly-biodiversity-in-suburban-landscapes.aspx>
- Q. Los Angeles leads all US counties nationwide in bird count - February 2014: <http://ca.audubon.org/newsroom/press-releases/2014/los-angeles-leads-all-us-counties-nationwide-bird-count>
- R. State Of North America's Birds 2016: <https://www.allaboutbirds.org/state-of-north-americas-birds-2016-more-than-one-third-in-need-of-conservation-action/>
- S. Where do birds go in a hurricane 2017: <https://www.forbes.com/sites/grrlscientist/2017/09/08/where-do-birds-go-in-a-hurricane/#55087d75254a>
- T. Year of the Bird 2018: <https://www.nationalgeographic.com/magazine/2018/01/why-birds-matter/>



How resourceful do birds have to be looking for water?

A WATER PUDDLE BRINGS WARBLERS Huntington Central Park in  
Sept 2007 Photos by Monte M. Taylor and Christopher H. Taylor:

[http://www.tsuru-bird.net/20070930\\_california/index.html](http://www.tsuru-bird.net/20070930_california/index.html)



These are just a few select images of warblers, tanagers and flycatchers in one spot (3 square meters) for a couple hours on a fall day in Huntington Beach Central Park.

- Black-throated Gray Warbler
- Blackpole Warbler
- Common Yellowthroat
- Nashville Warbler
- Orange-crowned Warbler
- Tennessee Warbler
- Townsend's Warbler
- Yellow-rumped Warbler
- Yellow Warbler
- Western Tanager
- Western Wood Pewee

## How resourceful do birds have to be looking for shelter?



- These Bluebirds are surviving a cold winter together in the hollow of a tree.
- Under normal circumstances they'd be competing for their territories and chasing each other away.
- Their very existence is so fragile, hinging on mankind realizing what they are up against, and helping them with the odds -- by NOT CUTTING DOWN EVERY DEAD HOLLOWED OUT TREE!

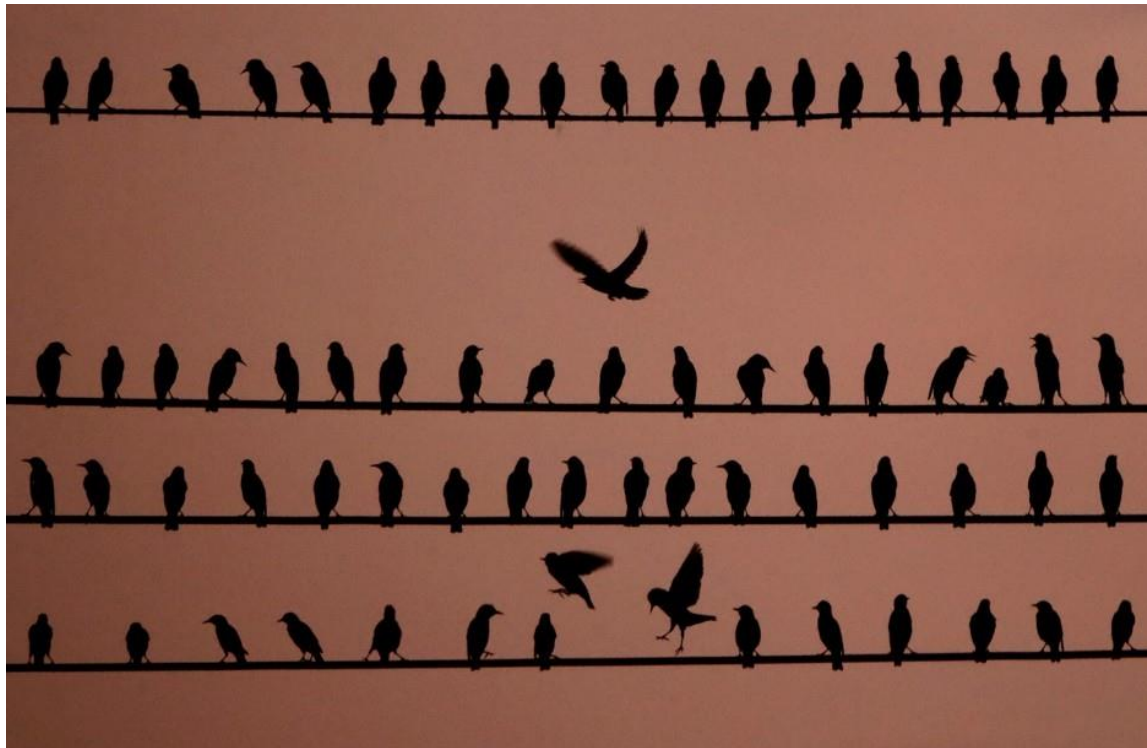
Photo property of National Wildlife Federation [www.nwf.org](http://www.nwf.org)

*BACK COVER: Another memorable picture from a past issue, Michael L. Smith's photo of eastern bluebirds appeared in the April/May 1984 article "Blueprint for Bluebirds." The birds had crowded together for warmth inside a nesting cavity in Maryland during cold weather.*



Volume 40, Number 6  
October / November 2002

What happens when habitat disappears?



Birds vie for position on power lines at dusk in Kansas City, Kansas. Charlie Riedel/AP

## Where Do Urban Animals Go When Their Habitats Disappear?

STEVE HOLT

NOV 16, 2017

<https://www.citylab.com/environment/2017/11/where-do-urban-animals-go-when-their-habitats-disappear/546002/>



What happens when habitat disappears?

This parkway tree in West LA is ideal  
For the birds to bed down for the night



Bottle Brush Street

[https://youtu.be/4Q4loBF\\_fRU](https://youtu.be/4Q4loBF_fRU)



Image from Wikipedia

White-crowned Sparrows, a migrating Wintering bird in Southern California suburbs between September and April, like to roost at night in dense trees or bushes with their own species, and tolerate others (like House Finches and Sparrows) in the same tree

## What happens when habitat disappears?



These 2 Eucalyptus trees, not far from the Bottle Brush tree, were loaded with White-crowned Sparrows last Winter. Since the trees have been trimmed they have not been back

The birds had to move to find a denser tree for protection at night from predators





What happens when habitat disappears?



Excerpt from:

## **Where Do Urban Animals Go When Their Habitats Disappear?**

“The creation of wildlife habitats on public and blighted lands is not nearly as difficult as the protection of mature trees on private property,” Strauss said. But solutions are possible when residents are educated on the benefits of these ecosystems and weigh in on how to protect them. “Successful green intervention is a negotiated settlement within a community,” Strauss said. “Communities need to decide not what green spaces or animals they want, but what ecosystem services they want from their green space,” he says. Once a community decides what it wants from nature, the specific trees and animals to introduce or protect becomes clearer. And with a regulatory framework in place to protect living ecosystems, cities can enforce it with a system of incentives and penalties.”

<https://www.citylab.com/environment/2017/11/where-do-urban-animals-go-when-their-habitats-disappear/546002/>



What happens when habitat APPEARS?



## Hummingbird Pool Party Number Five!

[wildwingsla](https://www.youtube.com/watch?v=YAer4rDnA6I)

A record 30 hummingbirds bathe together at one time during this morning's wash!

<https://www.youtube.com/watch?v=YAer4rDnA6I>

<https://youtu.be/YAer4rDnA6I>



Male Allen's Hummingbird



Female Allen's Hummingbird  
By Marilyn Meadows Bernstein

What happens when habitat APPEARS?



These Cedar Waxwings are taking advantage of a bird bath in someone's yard



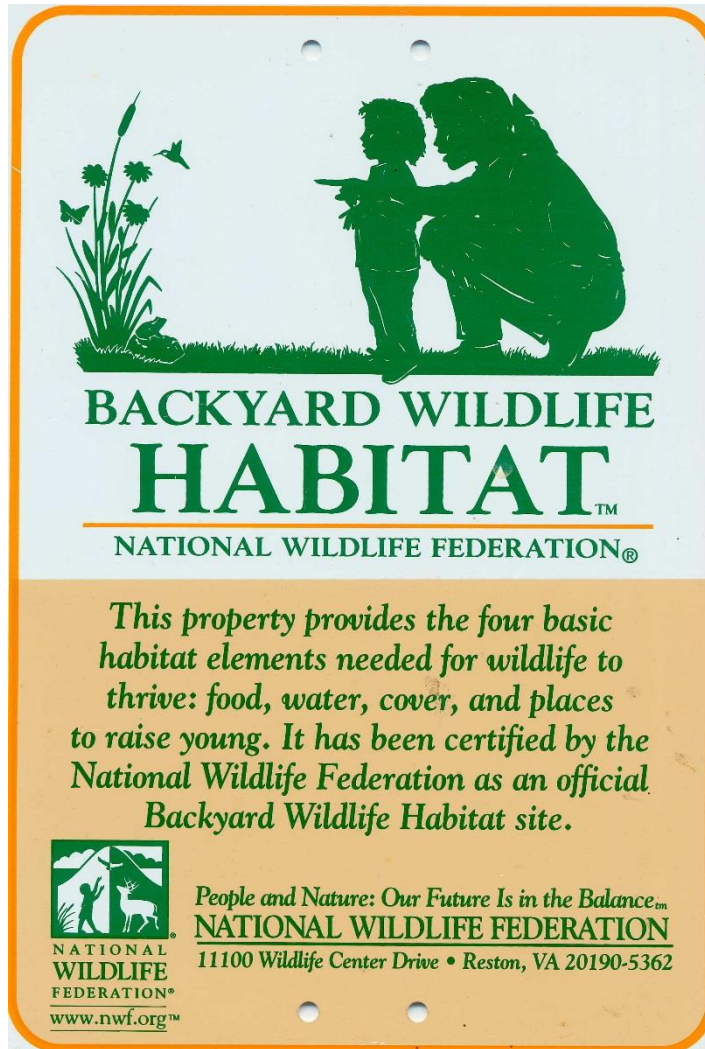
What happens when habitat APPEARS?



Birds at feeders and birdbaths

<https://youtu.be/LaOyccJu7hM>

We can ensure birds survive and thrive in an urban setting!



## It's Simple

4 basic habitat elements  
needed for wildlife to thrive:

1. Food
2. Water
3. Cover
4. Places to raise young



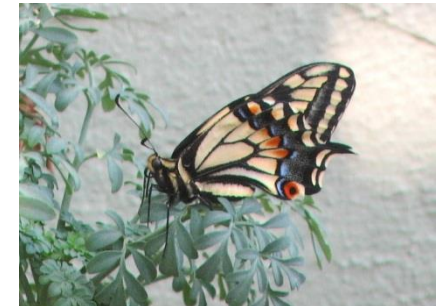
# Garden Resources On-line

## How to register your garden as a **Wildlife Habitat Yard**

- 1) Audubon At Home <http://audubonathome.org/>
- 2) National Wildlife Federation  
<http://www.nwf.org/gardenforwildlife/create.cfm?CFID=7177856&CFTOKEN=176461acda590e96-4839F373-5056-A868-A0F00601F3124B08>
- 3) Monarch Waystation Program  
<http://www.monarchwatch.org/waystations/certify.html>
- 4) Xerces Society <http://www.xerces.org/bringbackthepollinators/>



The Pollinator Partnership is a non-profit 501(c)3 organization and the largest in the world dedicated exclusively to the protection and promotion of pollinators and their ecosystems.  
•Go to this website for more resources on pollinators: <http://www.pollinator.org/>



### Why do this?

- Your garden will come alive
- You'll teach your students
- You'll love your garden!



What happens when habitat APPEARS,  
or is maintained for wildlife?



Birds have a better chance to  
overcome the challenges they face



Photo by Dean Schaff



Photo by Lisa Fimiani



Photo by Stacey Vigallon

# TOP 10 BIRDS

## Around the LMU Campus as Indicator Species:

### CATEGORIES

- habitat specific
- migrants
- nesting

# TOP 10 BIRDS Around the LMU Campus as Indicator Species

They can be divided into 5 main groups:

- 1) **Carnivore – Meat Eater**
  - Red-tailed Hawk (REHA)
- 2) **Granivore – Seed Eater**
  - Scrub Jay (SCJA)
- 3) **Insectivore – Insect Eater**
  - a) Black Phoebe (BLPH)
  - b) Bushtit (BUSH)
  - c) Northern Mockingbird (NOMO)
  - d) White-crowned Sparrow (WHSP)
  - e) Yellow-rumped Warbler (YEWA)
- 4) **Nectarivore – Drinks Nectar**
  - Allen's Hummingbird (ALHU)
- 5) **Omnivore – Mixed Diet**
  - a) American Crow (AMCR)
  - b) Song Sparrow (SOSP)



# The Primary Categories To Bird Identification

1. Size and Shape
2. Color Pattern
3. Behavior
4. Habitat
5. Vocalization
6. Diet

Example:

Common Name: American Crow

FAMILY *Genus Species*: CORVIDAE *Corvus brachyrhynchos*

# 1. Allen's Hummingbird

TROCHILIDAE *Selasphorus sasin*



Female

Female Allen's Hummingbird by Marilyn Meadows Bernstein  
(notice the patch of orange feathers on throat)

## Vocalizations

[https://www.allaboutbirds.org/guide/Allens\\_Hummingbird/sounds](https://www.allaboutbirds.org/guide/Allens_Hummingbird/sounds)

## Habitat

Allen's Hummingbirds breed in coastal forest, scrub, and chaparral along a narrow strip that stretches up the coast from California to southern Oregon.

## Size & Shape

Allen's Hummingbirds are small, compact, and stocky hummingbirds. The bill is straight and about as long as the head. The tail extends past the wings when perched and the outermost tail feather is narrower than the rest.



Male

Photo by Richard Beban

## 2. American Crow

CORVIDAE *Corvus brachyrhynchos*



### Size & Shape

A large, long-legged, thick-necked bird with a heavy, straight bill. In flight, the wings are fairly broad and rounded with the wingtip feathers spread like fingers. The short tail is rounded or squared off at the end.

### Vocalizations

[https://www.allaboutbirds.org/guide/American\\_Crow/sounds](https://www.allaboutbirds.org/guide/American_Crow/sounds)

### Habitat

American Crows are common birds of fields, open woodlands, and forests. They thrive around people, and you'll often find them in agricultural fields, lawns, parking lots, athletic fields, roadsides, towns, and city garbage dumps.

# 3. Black Phoebe

TYRANNIDAE *Sayornis nigricans*



## Size & Shape

Black Phoebes are small, plump songbirds with large heads and medium-long, squared tails. They often show a slight peak at the rear of the crown. The bill is straight and thin.

## Vocalizations

[https://www.allaboutbirds.org/guide/Black\\_Phoebe/sounds](https://www.allaboutbirds.org/guide/Black_Phoebe/sounds)

## Habitat

In the U.S., you'll almost always find these flycatchers near water. They live along streams, rivers, lakes, and the Pacific Ocean—even around cattle tanks. As long as there is water present and some kind of ledge or overhang on which to anchor a mud nest, Black Phoebes could be around.

<https://dreamcatcherimages.net/portfolio/backyard-birds/>



# 4. Bushtit

AEGITHALIDAE *Psaltriparus minimus*



Adult Male Bushtit

<http://www.audubon.org/field-guide/bird/bushtit>



Adult Female Bushtit (notice the yellow eye)

[Fishandgame.Idaho.gov](http://fishandgame.idaho.gov)

<https://www.pinterest.com/pin/396879785884837147>

## Size & Shape

Bushtits are tiny, kinglet-sized birds. They are plump and large-headed, with long tails and short, stubby bills.

## Vocalizations

<https://www.allaboutbirds.org/guide/Bushtit/sounds>

## Habitat

Bushtits live in oak forest, evergreen woodlands, dry scrublands, streamsides, and suburbs. You can find them at elevations from sea level to over 10,000 feet.

# 5. Northern Mockingbird

MIMIDAE *Mimus polyglottos*

## Size & Shape

A medium-sized songbird, a bit more slender than a thrush and with a longer tail. Mockingbirds have small heads, a long, thin bill with a hint of a downward curve, and long legs. Their wings are short, rounded, and broad, making the tail seem particularly long in flight.

## Vocalizations

[https://www.allaboutbirds.org/guide/Northern Mockingbird/sounds](https://www.allaboutbirds.org/guide/Northern_Mockingbird/sounds)

## Habitat

Look for Northern Mockingbirds in towns, suburbs, backyards, parks, forest edges, and open land at low elevations.



[http://commons.wikimedia.org/wiki/File:Northern\\_Mockingbird\\_\(Mimus\\_polyglottos\)\\_RWD.jpg](http://commons.wikimedia.org/wiki/File:Northern_Mockingbird_(Mimus_polyglottos)_RWD.jpg)

# 6. Red-tailed Hawk

ACCIPITRIDAE *Buteo jamaicensis*

## Size & Shape

Red-tailed Hawks are large hawks with typical Buteo proportions: very broad, rounded wings and a short, wide tail. Large females seen from a distance might fool you into thinking you're seeing an eagle. (Until an actual eagle comes along.)

## Vocalizations

[https://www.allaboutbirds.org/guide/Red-tailed\\_Hawk/sounds](https://www.allaboutbirds.org/guide/Red-tailed_Hawk/sounds)

## Habitat

The Red-tailed Hawk is a bird of open country. Look for it along fields and perched on telephone poles, fenceposts, or trees standing alone or along edges of fields.



[http://commons.wikimedia.org/wiki/File:Buteo\\_jamaicensis\\_7.jpg](http://commons.wikimedia.org/wiki/File:Buteo_jamaicensis_7.jpg)

# 7. Scrub Jay

CORVIDAE *Aphelocoma californica*

## Size & Shape

A fairly large songbird with lanky dimensions. The tail is long and floppy; the bird often adopts a hunched-over posture. The bill is straight and stout, with a hook at the tip.

## Vocalizations

[https://www.allaboutbirds.org/guide/California\\_Scrub-Jay/sounds](https://www.allaboutbirds.org/guide/California_Scrub-Jay/sounds)

## Habitat

These birds are a fixture of dry shrublands, oak woodlands, and backyards from Washington state south to Baja California.



[http://commons.wikimedia.org/wiki/File:Western\\_Scrub-Jay\\_6.jpg](http://commons.wikimedia.org/wiki/File:Western_Scrub-Jay_6.jpg)



# 8. Song Sparrow

EMBERIZIDAE *Melospiza melodia*

## Size & Shape

Song Sparrows are medium-sized and fairly bulky sparrows. For a sparrow, the bill is short and stout and the head fairly rounded. The tail is long and rounded, and the wings are broad.

## Vocalizations

[https://www.allaboutbirds.org/guide/Song Sparrow/sounds](https://www.allaboutbirds.org/guide/Song_Sparrow/sounds)

## Habitat

Look for Song Sparrows in nearly any open habitat, including marsh edges, overgrown fields, backyards, desert washes, and forest edges. Song Sparrows commonly visit bird feeders and build nests in residential areas.



<https://identify.whatbird.com/img/4/63229/image.aspx>

# 9. White-crowned Sparrow

## Size & Shape

The White-crowned Sparrow is a large sparrow with a small bill and a long tail. The head can look distinctly peaked or smooth and flat, depending on the bird's attitude.

## Vocalizations

[https://www.allaboutbirds.org/guide/White-crowned\\_Sparrow/sounds](https://www.allaboutbirds.org/guide/White-crowned_Sparrow/sounds)



Juvenile by Ron Dudley

<http://www.featheredphotography.com/blog/2013/11/28/a-white-crowned-sparrow-and-the-effect-of-depth-of-field/>

EMBERIZIDAE *Zonotrichia leucophrys*



Adult

[https://en.wikipedia.org/wiki/White-crowned\\_sparrow](https://en.wikipedia.org/wiki/White-crowned_sparrow)

## Habitat

Look for White-crowned Sparrows in places where safe tangles of brush mix with open or grassy ground for foraging. For much of the United States, White-crowned Sparrows are most likely in winter (although two races live year round in the West, along the coast and in the mountains).

# 10. Yellow-rumped Warbler (Audubon's)

PARULIDAE *Setophaga coronata*

## Size & Shape

Yellow-rumped Warblers are fairly large, full-bodied warblers with a large head, sturdy bill, and long, narrow tail.

## Vocalizations

[https://www.allaboutbirds.org/guide/Yellow-rumped Warbler/sounds](https://www.allaboutbirds.org/guide/Yellow-rumped_Warbler/sounds)



Going into Breeding Plumage

<http://www.audubon.org/field-guide/bird/yellow-rumped-warbler>



Nicknamed "Butter Butts"

<https://www.birdnote.org/show/yellow-rumped-warbler-winter-warbler>

## Habitat

In summer, Yellow-rumped Warblers are birds of open coniferous forests and edges, and to a lesser extent deciduous forests. In fall and winter they move to open woods and shrubby habitats, including coastal vegetation, parks, and residential areas.