



THE **CORNELL** GUIDE TO BIRD SOUNDS
Master Set for North America



TheCornellLab 

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The Cornell Guide to Bird Sounds (Master Set) is the most comprehensive guide available for the sounds of North American birds. Selected from more than 195,000 recordings in the Cornell Lab's Macaulay Library (the world's largest collection of natural sounds), the Master Set includes 4,928 recordings representing the vocal and mechanical sound repertoires of 737 bird species that regularly breed in North America as well as diagnostic sounds of vagrants.

Birds captivate us in a way that few other animals do, with their spectacular plumages, their sheer physical stamina to undertake feats such as migration, their fascinating behaviors, and their beautiful sounds that have inspired our own music for millennia. Knowledge of the sounds of birds also offers a powerful tool to understand and explore the lives of these compelling creatures. In forested settings and even in open habitats, listening can dramatically enhance our ability to detect the presence of birds nearby and at a distance.

The sounds featured in this guide express the diversity of behaviors throughout the life cycles of birds—from the calls of nestlings to duetting between mates; from contact calls and alarm calls to dawn song and territorial advertisements; from drumming to the whistling of wings.

The Master Set also includes examples of regional dialects, such as the songs of White-crowned Sparrows from the East, mountainous West, and Puget Sound areas of North America. Another unique example of variation within a species includes the Red Crossbill. Flocks of Red Crossbills may have individuals with differing bill sizes and different flight calls. There are 10 call types, each associated with a different group of Red Crossbills uniquely adapted to feed on seeds from different conifers—an example of the evolutionary process of diversification in action.

With this guide, you'll hear sounds recorded in every habitat of North America: the rhythmic song of Mourning Warbler in eastern woodlands; the trumpeting of Crested Auklet on remote Alaskan islands; the flight display of desert-dwelling Costa's Hummingbird. Also included are the sounds of vanished species—the songs of Bachman's Warbler and calls of the Ivory-billed Woodpecker—reminders of what we've lost—and the sounds of imperiled species such as the Gunnison Sage-Grouse and Florida Scrub-Jay—reminding us of what we still have time to save.

This guide is a powerful tool for conservation, to help people identify and survey birds by sound. Sound can also help reveal differences among species, subspecies, or groups that are difficult to discern visually, such as the Mexican Whip-poor-will and Eastern Whip-poor-will, vocally distinct and now recognized as two species. Recordings even help us restore bird populations directly. One of the most poignant conservation successes has been the use of recordings to attract birds to safe nesting sites. For example, scientists have played back the calls of Roseate Terns to attract terns to new breeding sites after former colony sites were destroyed by hurricanes.

Creating the Master Set is the culmination of nine decades of effort by more than 300 sound recordists and researchers working in North America, as well as archivists dedicated to the preservation of the life's work of these many collaborators. Since 1929 and continuing to this day, the Macaulay Library has been built by contributing recordists from around the world for scientific research, education, conservation, and the arts. We thank recordists, photographers, supporters, and members of the Cornell Lab for their generous contributions enabling the production of this Master Set.

The Master Set represents the result of decades of work, but it's also a work still in progress, as scientists and citizen-science participants push the frontiers of knowledge about birds. The Master Set is designed to enhance people's enjoyment and knowledge of birds, inspire new discoveries, and advance conservation efforts for these amazing birds and their vanishing habitats.

The Master Set is a work in progress. We invite you to help us refine and improve it by sending us your corrections, suggestions, or new recordings of North American birds sounds that may not be included here. We welcome your comments by email at MLproductions@cornell.edu. Email notifications will be provided as corrections and updates to the Master Set are made available online. To hear additional sounds and explore the full measure of recordings that many volunteers have created, we invite you to explore the archive at www.macaulaylibrary.org.

Good birding!

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USING THIS AUDIO GUIDE

This audio guide features the full vocal repertoire of 737 bird species that are regular breeding species or vagrants in North America, and also represents full sound repertoires and regional dialects to the greatest extent possible. Vocalizations are often described phonetically and/or by associated behaviors, but there are also many sounds that have yet to be clearly described, and therefore the accompanying text for each vocalization is a conservative interpretation of the available literature.

Common and scientific names used in this guide follow *The eBird/Clements Checklist of Birds of the World: Version 6*. *. To view the species in taxonomic order, sort by the track number column. The file names include the common name, location, and vocalization type. If the recording was made in the United States or Canada, the two-letter state or province code is used. For recordings made outside these areas, the three-letter country code is used.

Vocalizations are listed in the following order: song, advertisement calls, territorial calls; nonbreeding related calls; and mechanical sounds. Within these categorizations, they are ranked from highest to lowest quality.

If using iTunes, you can use the “Grouping” column to view the family names. Additional information has been included in the “Comments” field: the scientific name, state or province and country where the recording was made, the date, the recordists, and the Macaulay Library catalog number. Other data for these recordings are available by contacting the Macaulay Library.

A photo of each species is embedded within each sound file. In the case of Yellow-rumped Warbler, Dark-eyed Junco, and Fox Sparrow, a different photograph is provided for each distinctive eBird/Clements group within the species. We hope to add photos for all of the most important eBird/Clements groupings in the future. If you can provide photos of any of these, please let us know at MLproductions@cornell.edu.

PLAYING RECORDINGS IN THE FIELD

Please take the greatest care when using recordings in the field. Playback of these recordings should be done responsibly, particularly near nesting birds, and should be terminated immediately whenever a bird shows signs of agitation. Some recordings in this guide, especially distress and alarm calls, could cause undue stress and should never be played in the field. One of the most fulfilling ways to experience birds is simply to go out and listen.

A NOTE TO RECORDISTS AND RESEARCHERS

This guide is a dynamic resource and represents a first step in assembling and disseminating the vocalizations of North American birds. Researchers and recordists are invited to contribute their recordings for future editions and to provide any written insights into the material presented here. We hope that this collection will serve as a working reference for those describing and studying bird vocalizations and behavior.

For production purposes, changes to inter-song interval and other edits have been made to some recordings. For research purposes, please contact the Macaulay Library to obtain source recordings and associated metadata.

ADDITIONAL RESOURCES

Macaulay Library: The Macaulay Library at the Cornell Lab of Ornithology is the world's largest natural sound and video archive of animal behavior. Its mission is to collect and preserve recordings of each species' behavior and natural history, to facilitate the ability of others to collect and preserve such recordings, and to actively promote the use of these recordings for diverse purposes spanning scientific research, education, conservation, and the arts. To experience more than 200,000 audio and video recordings from around the world, visit www.macaulaylibrary.org.

eBird: eBird is an online database of bird observations providing researchers and amateur naturalists with real-time data about bird distribution and abundance across the world. To submit your own observations to eBird and explore the sightings of others, visit eBird at www.ebird.org.

All About Birds: Check out this free online bird guide to help you identify birds of your backyard and beyond. Learn about the life history of nearly 600 North American birds, listen to their sounds, and watch videos of their behavior at www.allaboutbirds.org.

Membership: The Cornell Lab of Ornithology is supported by 82,000 supporters. Your support furthers the Lab's mission to protect the earth's wildlife through research, education, and citizen science focused on birds. To find out how you can join and help conserve the birds that touch our lives and enrich our planet, visit www.birds.cornell.edu/membership.

Sound Recording Workshop: Each year experienced staff from the Macaulay Library teaches techniques for recording the sounds of wildlife and introduces students to the principles of sound analysis. Participants learn through daily field recording sessions, coupled with lectures and demonstrations. To learn more about recording wildlife, visit www.macaulaylibrary.org/inside/record/workshops/index.

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