

Beyond Tweeting: Apps to Make You a Better Birder

Adapted from a presentation at the July 2015 Audubon Convention by Zach Slavin

Technology has been a part of birding for as long as people have been observing birds. Take John James Audubon, for instance: one of our country's most famous early birders, his technology of choice happened to be a shotgun full of bird shot and a burlap bag. Not the most complex, and certainly not digital, but it was technology none-the-less.

Over the centuries technological advances have changed the hobby of birdwatching several times over. Opera glasses and notepads replaced shotguns on the first Christmas Bird Counts in the early 1900's. By the middle of the 20th century, birders were equipped with the first field guides and better, lighter, more affordable binoculars. And today, birders are heading out with 50 megapixel image-stabilized super-telephoto zoom cameras and precision-honed, multi-coated, ultra-light-weight binoculars... and paper field guides, the technology of which hasn't changed significantly since their inception nearly a century ago.

So take a look at some of the apps described below (as well as other birding apps not listed here) and the next time you go birding heading out without your smartphone will feel as antiquated as heading out with a shotgun full of bird shot.

Field Guides

These apps are the most direct competitors with the classic paper field guides. Some, like iBird, are designed exclusively for the mobile app format, and others are digital versions of paper field guides you may already be familiar with (Sibley, Audubon, National Geographic, Peterson, etc.) but even the most bare-bone of field guide apps have some features that leverage the technology and go beyond the contents of the paper versions.

Application	Price*	Platforms	Details
Sibley eGuide to the Birds of North America	\$19.99	iOS, Android, Kindle Fire, Windows, and Blackberry	Covers 810 species and features all of the drawings, range maps, and explanatory text found in the Sibley Guide to Birds. Taking advantage of the digital format it includes more than 2,000 recordings of songs and calls, a compare species function, and a smartsearch tool that allows you to filter species by color, shape, and your current location.
Audubon Birds Pro	\$3.99-9.99 (and soon to be free)	iOS, Android, Kindle Fire, HP, and Nook	Covers 821 species using photos instead of drawings, includes range maps that also cover Central and South America, has a good selection of audio recordings including alternate calls and regional variations, and slightly more descriptive text including habitat, range, and nesting information. Similar species and browse by family or shape tools are useful for identifying unknown birds, and includes a find birds with eBird function to find nearby reports of specific species.
iBird	\$2.99-39.99 (free Lite version)	iOS, Android, Kindle Fire,	Covers 940 species (in the Pro version) with both photos and drawings of each species. Great audio recordings, including variations and convenient links to

		and Windows	similar-sounding species. Contains copious amounts of information on each species, including notes on identification, ecology, behavior, nests and eggs, as well as links to Wikipedia and Flickr and a very powerful filter/search tool. Five different versions from Lite to Ultimate available with different features and species.
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Active Identification

Much like the field guides above the goal of these apps is to help you identify an unknown bird. However, these apps take a more active role in the process, analyzing your observations, photos, and audio recordings to help you arrive at an ID. Most of these are less than a couple of years old and while they are fun and useful now, they show great promise for the application of this technology to birding in the future.

Application	Price	Platforms	Details
Merlin Bird ID	Free	iOS and Android	Amazing app for beginning and intermediate birders that asks you five questions to help identify over 400 common North American birds: Where were you? When did you see it? About how big was it (relative to other birds)? What were the main colors? And what was it doing? Provides photos and descriptions of matching bird species based on this information and is surprisingly accurate.
Birdsnap	Free	iOS and online	This app uses computer vision to identify the species of birds in the photos you upload. Simply take or upload an existing photo, zoom in to frame the bird, tap on the eye and tail, and then let Birdsnap go to work. Works really well with good, close-up photos, so great for digiscoping with your smartphone.
BirdSong ID: USA Automatic	\$4.99	iOS and Android	This is the app that people always ask about when it comes to birding apps: it allows you to make a 30-second recording of a bird singing, then attempts to identify the species based on the audio recording. Not incredibly accurate and getting a good recording with smartphone microphones can be difficult, but a very promising idea.

Citizen Science

Many people enjoy participating in citizen science programs like the Christmas and Great Backyard Bird Counts as part of their birding. These apps provide an opportunity to share your bird data with researchers and other birders directly from the field, making your birding more valuable to conservation and helping you track your observations over time.

Application	Price	Platforms	Details
eBird	Free	iOS and coming	Well-designed app that allows you to submit to eBird (eBird.org), a citizen science program that collects bird

		soon for Android	observations from around the world and shares them with birders and conservationists. You can select your location using GPS, automatically download checklists for your area, and submit checklists directly from the field. Great for new birders participating in the Great Backyard Bird Count (birdcount.org). While the Android version is not yet available, you can download this app's predecessor, BirdLog, for Android devices.
Hummingbirds at Home	Free	iOS and Android	The first of Audubon's citizen science programs designed exclusively for mobile users, this app collects data on how hummingbirds interact with nectar sources to inform conservation. You set up a "patch," and report what species of hummingbirds you see as well as which species of plants you see them feeding on, or if you see them visiting feeders. Based on these observations Audubon scientists hope to be able to make recommendations as to how to help hummingbirds survive the effects of climate change.

Bird-finding Guides

As the name implies these apps help you locate specific species of birds in the field, based on either reports to citizen science programs like eBird, or through the aggregation of decades of local knowledge.

Application	Price	Platforms	Details
BirdsEye Bird Finding Guide	Subscriptions are \$1.50-4.99 a month	iOS and Android	This is a great tool for finding new and interesting birds at home or in a new location based on real-time citizen science data. You can immediately start viewing reports of nearby birds, but the real power comes after you sign into your eBird account and can view nearby birds that are missing from your life or year lists for a specific location. Filters allow you to adjust for the timeframe and distance of reports shown, and the app includes an abbreviated species guide with links to Flickr and Wikipedia pages for more photos and information.
The Great Washington State Birding Trail (and other birding trails from Aves Amigos)	Birding Loops are \$1.99 each	iOS	Based on copious amounts of local knowledge instead of real-time data, this app features information on 375 birding hotspots within Washington state. The app features details on each location, such as: the best time of year to go birding at each site, where to park, what trails to take, and what birds you can expect to see. It also includes information on fees, handicap accessibility, parking, and nearby amenities. Great for planning a birding trip in advance, as well as finding birds and other nearby birding spots in the field.

Song Learning

These apps are designed specifically to help you learn bird songs and calls and can be helpful for even the most tone-deaf of birders.

Application	Price	Platforms	Details
Chirp! Bird Song USA	\$3.99	iOS	Features over 300 high-quality recordings of songs and calls of North American birds. There are several ways to experience them, including listen and slideshow modes and an interactive quiz. You can select specific species to practice identifying or select from more than a dozen different regions to focus on the most common species you are most likely to hear near you.
Larkwire Birdsong Master Birder	\$2.99	iOS	Includes songs and calls from 343 North American species and presents them in a game-like quiz. Offers the ability to sort by Eastern and Western birds, as well as song types, including clear, rough, complex, and simple. A little bit more difficult and repetitive than Chirp!, but worth checking out for the different style of gameplay and few extra species.

A few additional notes:

- Always follow all local, regional, and federal laws and consider the well-being and enjoyment of birds and other birders before playing back recordings of songs or calls in the field.
 - Consider using portable battery-powered speakers for your responsible playback, as smartphone speakers can be a bit under-powered.
- Be sure to bring a phone charger or a spare battery. Using these apps all day in the field (especially with the brightness turned up in bright sunlight) can drain your battery rather quickly.
- Consider getting a pair of touch-sensitive gloves to keep your hands warm while using these apps outdoors in the winter.
- Over 80% of Americans 18-29 own smartphones, and they use them a lot! Consider sharing these apps with young people to help get them interested in birds and birding.
- These apps are just a few of one birder's personal favorites, so be sure to search around and see what else is out there that might work better for you.