# THE WIRED BIRDER

*Editor's note: Do you know the difference between CB and FRS radios? Should you buy a GPS unit? How do rare bird alerts vary from place to place? What options exist for maintaining sightings records on a computer? How do birders get those pictures on the computer? This new series on the use of electronics in birding and bird-related activities will address these sorts of questions in short tutorials, each with a list of relevant websites and other resources at the end of the article.*

## Bird Alerts

*David M. Larson*

Not all that long ago, the well-equipped birder carried a shotgun and a game bag. Later, the weapons were replaced by binoculars, presumably to the relief of the birds. The evolutionary transformation from the armed birder to the optical birder has now been extended to the latest species, the wired birder. No, not the hyper-caffeinated and oversugared lister/ticker/twitcher; rather, the birder with the outrageous annual expenditure on batteries. With the proliferation of small portable electronics, and advances in communications, birders are more wired and connected than ever before. This new series of articles is intended to sort out some of the electronic gizmos available to birders, and their utility in various situations.

Uses for electronic devices in birding fall into various categories: communications, group coordination, bird finding, identification, documentation, and research. This first article on the wired birder addresses certain issues of communication, particularly rare bird alerts and rarity reporting.

**Rare Bird Alerts for Twitchers and the Rest of Us**

A standard feature in many locations around the United States has been the rare bird alert (RBA) telephone recording. In Massachusetts we can call one telephone number (888-224-6444) to hear recordings of the Eastern, Western, or Cape Cod RBAs. Different compilers assemble and arrange their recordings in different ways: for example, the Florida Statewide RBA lists only rarities, but provides detailed locations; the Voice of Audubon recordings in Massachusetts list rarities and many other species, but usually give only general locations; and Armas Hill produces long narratives with bird sightings, stories, and essays on the Philadelphia (and Delaware) Birdline. With the advances in Internet technologies and access (and work by dedicated volunteers), these recordings are now available from email listserves (e.g., BirdEast) or on the internet (see table).

Rare bird alert compilers rely on bird-sighting reports that arrive by mail, telephone, or email. For all their utility, even semiweekly RBAs lack the immediacy of first-hand reports. So how can you get the word out faster if you spot a great bird? What do you hope your fellow birders are doing?

Several communication avenues have been employed in efforts to spread the word about rare or unusual sightings. The old days of racing off to find a pay telephone to call friends, or a central authority, have given way in part to the ubiquity of cellular telephones. For example, a couple of years ago my wife Susan called me from the dike at Great Meadows NWR in Concord, by cell phone, to say that she was enjoying a Reeve that had been reported. I was at work in Boston and emailed the news to the Massbird mail list before heading off to Concord — a fine confluence of technologies. Birders in the Newburyport area commonly telephone Bird Watcher's Supply and Gift (978-462-0775) to report hot birds, and the staff there posts alerts on Massbird. Since more birders carry cellular telephones in their cars, or even into the field, we can expect more reports to be generated via this medium.

Telephone calling trees are in use in many locations: for instance, the Brookline Bird Club operates a telephone alert system in Eastern Massachusetts. In these systems each participant receiving an alert is obliged to call several specific persons on the list to pass along the message. If there are no breaks in the chain, the word gets out quickly. However, according to some participants, these systems have suffered in recent years with the growing popularity of email lists. For those on email lists, like Massbird, notification of hundreds or thousands of subscribers can occur nearly simultaneously, as long as someone can get the word out, and as long as subscribers are paying attention to their mailboxes.

Email lists are a growing phenomenon in the United States. Nearly every state has one or more lists, and there are many national and international lists. Email messages are sent to a central address and then automatically routed to all subscribers. Some of these lists are primarily for alerts or RBAs (e.g., the BirdEast, BirdWest, and BirdCtr lists from the National Bird Hotline Cooperative, NBHC) and so have restrictions on who can post messages; some are for chatting or discussing fine points of identification or some such topic (e.g., BirdChat, IDFrontiers, or BirdBand) and are open to all subscribers. In Massachusetts, Massbird serves as a chat and alert list. Sightings, notices, comments, and data are all distributed over the Massbird list. For links to the email listserves of other states, see the Real Birds section of the Virtual Birder online magazine, a tremendous resource. Most of these mail lists provide the option of digests, meaning that all of the traffic from one day is mailed as one message. This option is useful if you have restrictions on the number of messages you can receive. During spring migration, Massbird can generate fifty messages per day.

Many geographic localities have central clearinghouses for sighting information. In central Massachusetts, Rick Quimby has set up a website called the Central Mass Bird Update to post sightings, counts, and surveys, mostly from Worcester County. This localized resource is a boon to the region, and certainly worth a look for visiting birders.

In several European countries, pagers constitute a common means of receiving bird alerts. There is the *Bombevarsler'n* in Norway, and the *piepergroep 2000* in the Netherlands, but possibly the most elaborate is the commercial Birdnet Rare Bird Paging Service in the United Kingdom. For under £200 per year, you can rent an

alphanumeric, graphic pager, and receive of all the bird news and alerts. According to the Birdnet website, the service delivered 53 messages on January 19, 2000, including one *mega* alert (Sora Rail in Devon). A typical message might run: "(76) (10:02) *W YORKS **LITTLE BUNTING** SHEPLEY IN HAWTHORN BY JOSS LN PARKING AREA 8.45-9.15AM.BN."

Of course, the twitchers of the United Kingdom are famously in a different league from most ardent birders elsewhere. The closest thing to a national alert system now available in the United States is probably the subscription bird alert system NARBA (North American Rare Bird Alert, a nonprofit service sponsored by the Houston Audubon Society). For a fee, subscribers to NARBA can call for a tape recording of recent rare bird sightings and directions, or access the same information over the Internet. NARBA also has three "We Call You" services: North American First Records, Occasional Birds, or Accidental Birds. For the latter two services, subscribers designate wanted species, and NARBA staffers call to tell them when and where the birds are reported (oh yes, NARBA does take pager numbers). These "We Call You" services are available at additional cost.

At present, email lists provide the most widely available and lowest cost bird alert system. Of course, the sender needs to get to a computer to get the word out, and everyone else needs to be sitting at a computer in order to get the news. At least, that is how it used to be. Right now, it is possible, albeit expensive, to send and receive email from the field or nearly anywhere else using wireless technology. Wireless modem service is widely available in New England and in other heavily urbanized areas in the United States. So just drag along your laptop computer on your next hike out to Race Point in Provincetown, MA; maybe you will find an Ancient Murrelet.

If a laptop sounds too cumbersome, there are other options for wireless email. Handheld computers (running the Palm operating system, e.g., Palm VII; or the Windows CE/Pocket PC system, e.g., Hewlet-Packard Jornada) are capable of sending and receiving email, and even of limited web surfing, via wireless modem service (or via a modem connected to a wireless telephone). These instruments are pocket-sized, reducing the weight and bulk considerably from the laptop class, although they have much more limited screen displays.

Finally, why not combine wireless email service (and limited web browsing) with cellular telephony and use one of the digital cellular phone services that include these advanced features? The combination of a telephone, email server, and web browser in one handheld device is the wave of the future. Right now, the upshot of these new technologies is that we can send and receive alerts while in the field, using equipment less bulky and lighter than a good field guide. Drawbacks? Well, digital wireless coverage is spotty, and you may not always be able to connect, even in areas supposedly covered. If you are out in the boondocks, you are probably out of luck. In addition, all of the wireless data services are much slower than modern landline modem connections, and a lot more expensive. As is always the case with useful technologies, prices will drop, and speeds will rise with time.

**Location, location, location**

Okay, you found a great bird, and you can get the word out, but how do you describe the spot? Well, you could give a street address, if applicable, or you could give directions in terms of distance from a well-recognized or describable location (e.g., 100 yards past the guardhouse on Christopher Clark Road in Mount Tom State Reservation, Easthampton, MA). Or you could report the map coordinates from a widely used map (Florida RBAs list coordinates from the state DeLorme atlas). Really though, these are old school alternatives, and you are a wired birder. So you whip out your trusty GPS (Global Positioning System) receiver and report the coordinates. Theoretically, any other GPS-equipped birder could find the same location with relative ease and accuracy.

Portable GPS units have become smaller (pocket-sized), less expensive (quite functional units for less than $200), and with the easing of government restrictions this year, more accurate. One of the earlier drawbacks to commercial GPS was the deliberate coding errors (SA or Selective Accuracy) introduced by the Federal Government for security reasons. The degradation of the system ended this year. Tests by the United States National Geodetic Survey indicate that removal of SA increased precision by tenfold (with SA, 95 percent of plotted data fell within 44.2 meters of the correct location; after SA was eliminated, 95 percent fell within 4.1 meters), and now a properly initialized and calibrated GPS unit is capable of accuracy within a few meters. GPS receivers work by triangulating on satellites (up to 12) to determine latitude, longitude, and elevation. Many models provide tracking displays, showing bearings to known locations, headings for routes, storage of positions, distances traveled, and time/distance calculations. Some models have computer interfaces that allow display of routes using mapping software. These features make them particularly useful for Christmas Bird Counts, Breeding Bird Surveys, and other field studies, as well as for locating rarities.

At present some handheld and vehicle-mounted GPS units have moving map displays, allowing for continuous monitoring of location (and upcoming side streets and turns and gas stations, etc.), but detailed maps are available only for some cities and interstate highways. Zoomable topographic maps are available from certain manufacturers, but the quality and functionality of the maps on the relatively tiny screens on GPS units do not match USGS topographic paper maps or the scanned computer versions.

Some caveats worth noting are that GPS units are not compasses, nor are they particularly useful as altimeters in mountainous terrain. GPS signals are degraded by heavy cover (in deep woods) and by atmospherics (wind, rain, and snow). Never rely on only one navigation aid. Everything you ever wanted to know about GPS, and much more, is available on line *at Joe Mehaffey and Jack Yeazel's GPS Information Website*. Stephen Ingraham recently published an excellent article on the use of GPS for birding (*Birding* 32 (1): 77-79, 2000).

No matter whether you chase rarities, are a twitcher's twitcher, or just monitor the latest bird report in the newspaper, the notion of rare birds and their pursuit is strangely compelling. Good luck.

**Links to web sites mentioned in this article**

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| Rare Bird Alerts for North America | http://listserv.arizona.edu/lsv/www.index.html<br>http://www.virtualbirder.com/vbirder/realbirds/index.html |
| RBA telephone list | http://americanbirding.org/publications/wgrbaadd.htm |
| Brookline Bird Club | http://massbird.org/BBC/ |
| Massbird mail list | Archive at:<br>http://www.virtualbirder.com/bmail/massbird/latest.html<br>Subscribe at: http://massbird.org/massbird.htm<br>Also see: http://www-stat.wharton.upenn.edu/~siler/birdmail.html |
| Bird East, West, Ctr BirdChat, IDFrontiers, BirdBand | http://listserv.arizona.edu/lsv/www.index.html |
| The Virtual Birder | http://www.virtualbirder.com/ |
| Birding listserves | http://americanbirding.org/resources/reschat.htm |
| Central Mass Bird Update | http://www.wpi.edu/~rsquimby/birds/ |
| Birdnet Ltd. | http://www.birdnet.ltd.uk/pagers.html |
| NARBA | http://www.narba.org |
| Palm Computing | http://www.palm.com |
| Windows CE Pocket PC | http://www.microsoft.com/mobile/ |
| Joe Mehaffey and Jack Yeazel's GPS Information Website | http://joe.mehaffey.com/ |

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