Reporting Invasive Species on Your Smartphone – http://mobile.eddmaps.org
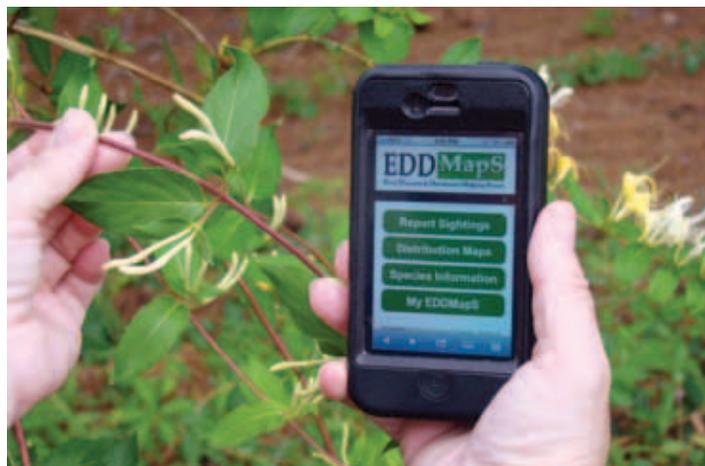
by Chuck Bargeron

Smartphones have changed the way we work and play. Currently the Apple iPhone and phones running the Google Android operating system dominate the smartphone market. Apple has sold over 100 million iPhones since its launch in 2007[1] and sold a total of 5.8 million[2] in the first quarter of 2011 to AT&T and Verizon customers. There were 67.2 million[3] Android phones sold in 2010 on all four major U.S. cell phone providers. Most of these smartphones feature high-resolution cameras, GPS and Internet connectivity, making them ideal devices for reporting sightings of invasive plants and animals.

The Early Detection and Distribution Mapping System (EDDMapS) was launched in 2005 by the University of Georgia, Center for Invasive Species and Ecosystem Health (Bugwood) to support mapping of invasive plants in the Southeast. EDDMapS is now being actively used in 36 states and includes over 1 million reports from over 700 reporters. The primary purpose of EDDMapS is to provide a tool for easy early detection reporting and to provide a mechanism to enable aggregation of data to display complete county distribution maps for invasive species in the U.S. Bugwood has received funding and support from the U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. However, EDDMapS has been limited by the fact that users must report infestations from their home or work computer.

To facilitate rapid reporting of invasive plants and animals, Bugwood developed EDDMapS Mobile to run on a smartphone, currently being tested on iPhones and Androids. It is a scaled-down version of EDDMapS designed to fit the smaller screen size and other limitations of mobile web browsers. Although smartphone browsers have many limitations, one major advantage is the browser can access the GPS built into the smartphone with the user's permission. Thus the user can allow EDDMapS Mobile to access the GPS and then complete the location information required for an EDDMapS report. Other key features of EDDMapS Mobile:

• Login and complete an abbreviated EDDMapS Report Sightings form

• View point distribution maps of invasive species (Note: Animal distribution currently available in Florida only)

• View species information for selected invasive plants from the Invasive Plant Atlas of the U.S., including images scaled for a mobile web browser screen

• Manage and edit your recent reports via the My EDDMapS interface

• Instant access: no need to download and install an App

EDDMapS now runs on a smartphone so users can enter data from the field.

EDDMapS Mobile allows users of Android-based smartphones to upload images directly from their phones. iPhone users will have to upload images from their desktop computers because of a limitation of the iPhone operating systems. Bugwood is currently developing two iPhone Apps to help solve this limitation. The first App, funded by the National Park Service—Everglades National Park, will allow reporting of invasive animals in Florida and will feature an interactive field guide. The second App, funded by the U.S. Forest Service—Southern Research Station, will convert the publication *"A Field Guide for the Identification of Invasive Plants in Southern Forests"[4]* by Jim Miller, Erwin Chambliss, and Nancy Loewenstein into an interactive iPhone App and allow for reporting of the plants featured in the publication. These two Apps will solve two of the major limitations of the web application – image uploading and offline reporting.

We view EDDMapS Mobile as another tool in the fight against invasive species and an important step in simplifying the reporting process. To learn more about EDDMapS, visit www.eddmaps.org or start reporting now from your smartphone at http://mobile.eddmaps.org/

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[1] http://mashable.com/2011/03/02/100-million-iphones/
[2] http://www.infosyncworld.com/reviews/cell-phones/apple-sales-and-revenue-charts-2007-2011/11957.html
[3] http://topics.nytimes.com/top/reference/timestopics/subjects/a/android/index.html
[4] http://wiki.bugwood.org/Archive:IPSF