



**Technology in the Field**  
**Horticulture Web Sites and Apps**  
**Presented @ Master Gardener College 2013**  
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**Web sites:**

[Landscape Plants Images, Identification, and Information](http://oregonstate.edu/dept/ldplants/) Oregon State University

<http://oregonstate.edu/dept/ldplants/>

Over 1,700 woody landscape plants, includes a **Woody Plant Identification System**, searchable by characteristics such as leaf margin, fruit shape, and flower color. Great for landscape design ideas as well as identifying existing plants.

[MoBot](#) Missouri Botanical Garden

Google Mobot PlantFinder to search more than 5,400 plants by dozens of characteristics such as zone, attracts butterflies, bloom time and maintenance level. Individual plant pages include growing information, photos, noteworthy characteristics.

[wisplants.uwsp.edu](http://wisplants.uwsp.edu)

The database at Robert W. Freckmann Herbarium University of Wisconsin. Has thousands of plants listed by common name, family and genera. Each plant page has photos and information about form and habitat.

<http://www.greatplantpicks.org>

Includes over 800 plants zones 3 - 9. Search by selectable attributes such as flower time and foliage color. Elisabeth C. Miller Botanical Garden, emphasis on Pacific Northwest. May not be 100% accurate in its findings.

<http://plants.usda.gov> United States Department of Agriculture

Authoritative source for correct plant names and US distribution maps. All plants have id and provenance. 1,000+ plants have extended information sheets.

[Key to Leaves of Virginia Trees](http://dendro.cnre.vt.edu/forsite/key/intro.htm) Virginia Tech dendrology

<http://dendro.cnre.vt.edu/forsite/key/intro.htm>

Jeff Kirwan's native tree ID online - great to use with kids with wi-fi outdoors. Get a leaf and key it via leaf shape and arrangement.

[The Names of Plants](http://books.google.com/) by D. Gledhill <http://books.google.com/>

Not exactly a web site, but if you search Google books for it, much of the text is available. Great resource on the meaning of plant names and rules for nomenclature.

### **[Dictionary of Botanical Epithets](#)**

<http://www.winternet.com/~chuckg/dictionary.html>

Another useful resource for information on the meanings of plant scientific names.

### **[Dave's Garden](#)** [davesgarden.com](http://davesgarden.com)

Not all information is available without a membership fee. It's overwhelmingly huge and clunky and infinitely useful. Find ratings for vendors, trade seeds, look for growing information, get advice on home improvement projects, drool over other people's garden showcases, it's all here. The #1 gardening site on the web, according to the Garden Writers Association.

### **[2012 USDA Plant Hardiness Zone Map](#)**

Type in a zip code to get your hardiness zone. Blacksburg is 6b, -5 to 0 (F)

<http://planthardiness.ars.usda.gov/PHZMWeb/>

Interactive map:

<http://planthardiness.ars.usda.gov/PHZMWeb/InteractiveMap.aspx>

### **[Cornell Plant Pathology Vegetable Disease Web Page](#)**

<http://vegetablemdonline.ppath.cornell.edu/>

Has fact sheets on 25 popular vegetables, diagnostic keys for cucurbit and tomato. (Be sure to scroll down if it looks like there is no content.)

### **[BugGuide](#)** hosted by Iowa State University Entomology

<http://bugguide.net/>

A knowledgebase of bugs from the United States and Canada, for identification and research. Has a "Clickable Guide" of drawings of different insect shapes, which lead to insect order pages with many photos of specimens of the different families. Has a handy page on household pests and dangerous pests. You can also submit photos for identification.

### **[ScaleNet](#)** hosted by the United States Department of Agriculture

<http://www.sel.barc.usda.gov/scalenet/scalenet.htm>

A database of the scale insects of the world. With many photos and an identification key for 49 families of *Coccoidea*.

### **[IPM for Commercial Horticulture](#)** - University of Maryland Extension

<http://www.ipmnet.umd.edu>

Scouts and growers contribute to weekly and bi-weekly pdf updates on pests and pathogens for Landscape, Nursery, Greenhouse & Cut Flower industries in northern Maryland.

[Invasive and Exotic Species of North America](http://www.invasive.org) [invasive.org](http://www.invasive.org)

Plants, insects, pathogens and other species that are not native to the ecosystem and cause economic , health or environmental harm.

See also **Invasive Plants in the Mid-Atlantic** at

<http://www.invasive.org/eastern/midatlantic/>

[Least Wanted: Alien Plant Invaders of Natural Areas](http://www.nps.gov/plants/alien/factmain.htm)

<http://www.nps.gov/plants/alien/factmain.htm>

Factsheets on many obnoxious specimens, such as the hated *Aegopodium podagraria*

[Invasive Plant Atlas of the USA](http://invasiveplantatlas.org)

[invasiveplantatlas.org](http://invasiveplantatlas.org)

If you know the name of the invasive plant, it will be listed on this comprehensive site.

[Weed Identification Guide](http://ipm.ppws.vt.edu/weedindex.htm) Virginia & Southeastern USA

<http://ipm.ppws.vt.edu/weedindex.htm>

Virginia Tech Plant Pathology and Weed Science provides this site, with many weeds arranged by common name, **includes a grass ID section with keys**

[Advanced Master Gardeners in Virginia Cooperative Extension support site](http://advancedmastergardener.org)

[advancedmastergardener.org](http://advancedmastergardener.org)

Information on the 2013 Water Quality Training for MGs as well as PDF and PowerPoint files with information for Master Gardeners and the public on water quality, lawn care, turf, soils, firewise gardening and wildlife.

[Virginia Cooperative Extension](http://www.ext.vt.edu) [www.ext.vt.edu](http://www.ext.vt.edu)

Information on agriculture, gardening, nursery, greenhouse, crops and much more.

[Project Budburst](http://budburst.org) [budburst.org](http://budburst.org) The National Ecological Observatory Network

Citizen Science sponsored by the National Science Foundation. Volunteers track 200+ species nation wide, recording and uploading lifecycle data. Includes lesson plans for all educational levels.

[iTree Design](http://itreetools.org) [itreetools.org](http://itreetools.org)

Educational software for calculating tree eco-benefits to a community. Register to get access to the software tools, a 300 MB downloadable package (Windows only)

[Beautiful Wildlife Garden](http://www.beautifulwildlifegarden.com) [www.beautifulwildlifegarden.com](http://www.beautifulwildlifegarden.com)

A dozen bloggers from different states write about gardening to encourage wildlife. They produce about a dozen posts a month on insects, wildlife, native plants. Lots of photos.

[The Garden Professors blog](#), hosted by Washington State University Extension

<http://www.gardenprofessors.com/>

<https://www.facebook.com/groups/200375441489/>

Four horticulture professors, from Washington State, Minnesota, Michigan and Virginia blog about research, junk science, new plants, strange sightings and much more.

[flickr.com](#)

As of May 2013, Yahoo's Flickr photo-hosting and presentation began giving an entire terabyte of space to its free account holders. (You can pay \$499 a year for 2 terabytes). 1 TB is around 1 million MB, or 200,000 5 MB photos.

[cuteoverload.com](#) - Dr. Scoggins Approved!

## **APPS:**

Apps come and go, and attract imitators and look-alikes, so I have included publisher information to aid in app ID as well as cost and devices apps are available for. I wasn't able to test Android-only software but have included some that were recommended. Some apps are noted as being partially or fully NFWI - *Non-Functional Without Internet*. Some require an initial download and are then completely portable. Some apps are huge and most handheld device hard drives are not. Particularly large file sizes have been noted.

**Plant Base Online**, Deeproot Software, free and \$2.40 enhanced versions, Android only. Mixed reviews, over 10,000 records, enter the beginning part or all of a plant name and it provides a list, which has links to individual plants and photos and cultural information. Probably NFWI.

**Dirr's Tree and Shrub Finder**, Timber Press, Inc., \$14.99

Designed for iPhone, will run on iPad but may be degraded. No Android version.

Dirr's 952-page Encyclopedia of Trees and Shrubs sells for \$80 for the hardcover. This version has mixed reviews, but if it's a reference you use often, it's probably worth it. Didn't test this one.

**Plant Pictures - Plant Picture Guide for Gardeners and Landscapers**

Stevenson Software, LLC, free, offers in-app purchases. No Android version.

NFWI. Says it has age-restricted material, presumably because it is a list of plant names that link directly to Google image searches. May be useful for the list of names, searchable by scientific or common, otherwise just use Google. Wants you to upgrade to "Landscaper's Companion for iPad" (\$4.99)

**Landscaper's Companion for iPad**, Stevenson Software, LLC \$4.99 Also has iPhone and Android versions.

Semi-NFWI unless you go to the settings and download the 22,000+ image files. Plant names and descriptions are available offline. Plants may be browsed by many topics: annuals, bulbs, perennials, etc. Each plant has an entry with a small amount of growing details and photos if you are online or have them downloaded. You can spend another \$9.99 to upgrade to the "professional version" that allows you to add your own photos, and you can purchase a subscription that will allow you to sync your plants with multiple devices for an ongoing additional fee of \$9.99 a month. Probably not worth it unless you are a working landscape contractor.

**Armitage's Greatest Perennials and Annuals**, Allan Armitage, \$4.99, iPad/iPhone, Android.

87 of Armitage's favorite plants. Entries have info on deer resistance, why he likes them, favorite varieties and photos and videos. Organization is confusing at first. There's an active comments area with many responses from the author. Upgraded periodically, often in response to feedback. Works offline, but may have low-resolution images if they have not all been downloaded.

**vTree**, Michael Whitt, free, iPhone/iPad and Android.

Virginia Tech digital dendrology. NFWI until you download the 650 MB of data. Includes information for more than 900 trees, with a brief description for each and several photos of leaves, seeds, flowers, bark and distribution. Has keys for identifying trees.

**Leafsnap**, free, iPhone and iPad, no Android yet.

Columbia University, University of Maryland, Smithsonian <http://leafsnap.com/>  
An intriguing, frequently recommended app that has a rich offline-accessible database of photos of leaves, flowers, fruit, petiole, seeds and bark of trees in New York City and Washington, D.C. Developers plan to expand nationwide. The "snap" feature requires an internet connection. Use your device to take a picture of a leaf; it is uploaded to their servers, which use visual recognition software to give you a list of possible IDs.

**BASF Weed Id**, BASF plc, free, iPhone, will run on iPad, Android.

UK-based chemical company provides several free apps, Cereal Disease ID, CAT Canopy Assessment Tool, etc. This one has several hundred weeds you can browse by common or scientific name or use a simple key system for ID.

**Audubon Wildflowers**, Green Mountain Digital, \$3.99, iPhone, iPad, Android, Nook, Kindle.

Over 1700 North American wildflowers, searchable by region, shape and color. If you have 1.25 GB to spare on your device and you like the Audubon guides, this is a nice one to have. Includes a NFWI "NatureShare" feature, with user submitted photos of plants, birds, and other wildlife. Offline browsing of wildflowers by shape, family, or name. Also offers advanced search by about 20 features such as flower size, bloom month and color and habitats. Each entry has several nice photos, a description page and range map.

**Gardening How-To**, free, iPad, iPhone, Android.

Has 6 free issues of the magazine of the "Official publication of the National Home Gardening Club" NFWI until you download each issue separately, ~ 50 - 250 MB each. Great for any time you want a gardening magazine to read. No new issues since June 2012. Ads for Home Depot throughout.

**Garden Guide**, free, iPhone, iPad.

NFWI until connected to download content from Mother Earth News. Get the "Food Gardening Guide" for 18 crops with several pages of information about each and 23 'techniques' articles on various gardening topics. Has a small ad.

**Gardening Reference Guide HD!** Sebastian Burrieza/El Nudo Molesto, free, iPad.

500+ Species, searchable, nice photos, works without internet after initial download, small amount of information for each plant. Wants you to buy Garden Guide HD! with over 7000+ plants for \$.99

**Vegetable Planting Calendar** Primolicious LLC, free, iPhone/iPad, Android.

Semi-NFWI - one paragraph of information on each of about 100 crops, with links to websites to get last frost dates. Wants you to buy "Vegetable Gardening Guide," \$1.99.

**Vegetable Garden Calendar**, Primolicious LLC, free, iPhone, iPad.

Enter a number of people to feed and it tells you how many plants you will need to grow. Simple, useful. Can add crops to make a list of what to plant. Has ads.

**BeeSmart Pollinator Gardener**, Pollinator Partnership, free, iPhone/iPad, Android.

Lists plants for pollinators and can be sorted by pollinators, soils, and bloom color, sun to shade and plant type.

**NCSU Lawn Care**, NC State University, free, iPhone/iPad, Android.

All sorts of resources related to lawns – maintenance calendars, as well as lots of category info on tolerances and maintenance/care.

**Turfgrass Management Lite**, University of Georgia CAES, free, iPad/iPod, Android.

Includes information on disease insects, weeds, and turfgrasses. They have also developed a \$5.99 turfgrass management calculator app.

**PGR (Plant Growth Regulator) Mix Master**, University of New Hampshire, free, iPhone/iPad, Android.

For calculating gallons and parts per million of around 30 plant growth regulators.

**IPM Lite**, University of Tennessee Research Foundation, \$9.99, iPhone/iPad, Android.

"From when and how to plant and prune, to managing major insects, mites, and diseases." Haven't tested but it has been recommended.

**IPM Toolkit**, University of Wisconsin Nutrient and Pest Management Program, free, iPhone/iPad, no Android.

NFWI. This app has articles, publications, links to YouTube videos, and zoomable HD pictures of pests.

**SoilWeb for the iPhone**, CA Soil Resources Lab, free, iPhone/iPad, Android.

From NRCS California Resource Lab, this app can tell you the name of the soil in your area based on GPS location. Only showed one soil type when I tried it.

**TickID**, NC State University, free, iPhone/iPad.

Small app shows images of male, female and juvenile examples of deer ticks, dog ticks, and lone star ticks, with information on diseases carried, personal protection and tick removal.

**Hokie Helper**, VT Mobile Application Development, free, Android-only.

Shows weather, dining hall information including hours, and a map

#### QR codes



QR stands for Quick Response Code, a popular feature on plant tags in garden centers and some gardens. It's like a bar code that can pack in more information about the product. You can use your device to read the QR code and it will deliver extended information about a plant, or link you to a web site. iPad apps include the free "**Scan**" and "**QR Reader for iPad**" Android users have many choices, such as "**QR Droid**." Be selective about scanning random codes you encounter, they can be linked to malicious sites.

**General Tools:** Android users can get **Smart Tools**, a package of 15 tools for \$2.50. It includes: Length, Angle, Slope, Level, Smart Ruler, Distance, Height, Width, Area, Compass, Metal detector, GPS, Sound level meter, Vibrometer, Flashlight, and Magnifier.

iPhone users have a built-in **Compass** app. iPad users will have to download a third party app. There are free or low-cost tools such as flashlights, Powerbubble and Stanley Level for iPhone and iPad as well.

**Knots 3D**, Nynix, \$1.99, iPhone, iPad, Android.

Tie, untie and rotate 85+ knots in 3D with a touch interface. Includes animations of each knot being tied, and full-screen rotating. You can pause the animations to follow along. Includes many categories of knots, including fishing, climbing, rescue, and decorative.

**Animated Knots by Grog HD**, Grog LLC, \$4.99, iPhone, iPad, Android.

Knot-tying animations and tutorials, more than 100 knots. You can step through knot animations. Searchable by category (climbing, boating, etc.), type (bends, hitches, loops) or alphabetic by knot name. Includes information on what different knots are used for.

**I Know Bird Songs**, FlipCardApps, free "Lite" version & \$9.99 extended, iPhone, iPad.

Created by a Manassas area biologist from George Mason University. A portion of each sale will support the work of the Cornell Laboratory of Ornithology. Train your ear to recognize bird songs by listening to the app and practice by listening and then selecting the correct bird from a list of options. The lite version has about a dozen birds. The full version has more than 350 birds and 500 songs. <http://www.iknowbirdsongs.com/>

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