



# BUGWOOD NETWORK

*[www.bugwood.org](http://www.bugwood.org)*

*information sources supporting forestry,  
natural resources and agriculture*



Photo by David Cappaert



Photo by James Miller, USFS

## **The University of Georgia**

Daniel B. Warnell School of Forestry and Natural Resources  
and

Department of Entomology -  
College of Agricultural and Environmental Sciences

### **Funding and Support from:**

USDA Forest Service - Forest Health Protection  
USDA Forest Service - Forest Health Technology Enterprise Team  
USDA APHIS PPQ, USDA CSREES and  
NSF Center for Integrated Pest Management

# The Bugwood Networks' mission is:

*To gather, create, maintain, promote the use of, and distribute digital information as tools to enhance and complement information exchange and educational activities.*



## Interactive CD-ROMs



## Web Sites

*Expanding Extension, Service and Outreach to a global audience through use of the World Wide Web.*

### Web Sites include:

- Bugwood Network, [www.bugwood.org](http://www.bugwood.org)
- Forestry Images, [www.forestryimages.org](http://www.forestryimages.org)
- Invasive and Exotic Species, [www.invasive.org](http://www.invasive.org)
- Insect Images, [www.insectimages.org](http://www.insectimages.org)
- IPM Images, [www.ipmimages.org](http://www.ipmimages.org)
- Forest Pests of North America, [www.forestpests.org](http://www.forestpests.org)
- Bark Beetles of North America, [www.barkbeetles.org](http://www.barkbeetles.org)
- Georgia Integrated Pest Management, [www.gaipm.org](http://www.gaipm.org)
- Georgia Invasive Species Task Force, [www.gainvasive.org](http://www.gainvasive.org)
- Georgia Exotic Pest Plant Council, [www.gaeppc.org](http://www.gaeppc.org)
- Southeast Exotic Pest Plant Council, [www.se-eppc.org](http://www.se-eppc.org)
- Southern Forest Insect Work Conference, [www.sfiwc.org](http://www.sfiwc.org)
- Eastern Arc Mountains Information Source, [www.easternarc.org](http://www.easternarc.org)
- Cogongrass in the Southeast U.S., [www.cogongrass.org](http://www.cogongrass.org)
- Regional Tropical Soda Apple Task Force, [www.tropicalsodaapple.org](http://www.tropicalsodaapple.org)

*These sites average over 7 million hits and 2.5 million requests from 750,000 unique users each month.*



## Full Color Publications

# High-Quality/High-Resolution Image Archive

*Over 35,000 images from 950 photographers  
covering 5900 species from 80 countries*



Photo by Ron Billings, Texas Forest Service

## System is:

- Database Driven
- Fully-searchable
- “Taxonomically” - based
- Focused on images and includes links to information and publications

## Images are:

- High Quality
- Available in 5 Resolutions  
192 x 128 to 3072 x 2048
- Uniquely Numbered
- Downloadable
- Selected for Quality and Content
- Reviewed for Taxonomy and Descriptive Information
- Available at No Cost for Educational Use with Proper Photographer and Archive Credit



Photo by William Ciesla

## Images can be and are used in:

- Web pages
- PowerPoint Presentations
- Newsletters
- Newspaper articles
- Posters
- Magazines
- Full-page color prints
- Diagnostic Keys
- Journals
- Text Books



Photo by Chris Evans, UGA

# Forest Health



## *Forest Insects*



## *Forest Diseases*

[www.forestpests.org](http://www.forestpests.org)  
Featuring USDA Forest Service  
Forest Health Protection Publications



## *Bark Beetles of North America*

[www.barkbeetles.org](http://www.barkbeetles.org)



Content available on 2-disc CD-ROM set with 192 high resolution images along with major publications on identification, distribution and management



## *Forest Pests of North America PhotoCD*

- 300 high resolution images
- 150 insect images
- 150 disease images
- Kodak PhotoCD format
- Full scientific descriptions
- Photographer credits
- \$45 (U.S.) including shipping

*Host and Develop the  
Southern Forest Insect Work Conference Website*  
[www.sfiwc.org](http://www.sfiwc.org)

# Invasive Species



Photo by Louis-Michel Nagelstein

**Insects**



Photo by Joe O'Brien, USFS

**Diseases**



Photo by Chris Evans, UGA

**Plants**



Photo by USGS Archives

**Other Invasives**

[www.invasive.org](http://www.invasive.org)

Featuring USDA Forest Service

Forest Health Technology Enterprise Team Publications



## *Invasive Plants of the Eastern United States CD*

- 97 species
- High resolution images
- Identification and control information
- USDA Forest Service, National Park Service, U.S. Fish and Wildlife and SE-EPPC publications
- 20,000 copies distributed



Photo by Charles Bryson, USDA ARS

[www.cogongrass.org](http://www.cogongrass.org)



Photo by Jeff Mullahey, Univ. of Florida

[www.tropicalsodaapple.org](http://www.tropicalsodaapple.org)



[www.se-eppc.org](http://www.se-eppc.org)

## *Their Natives are Our Exotics*

- Polish Forest Research Institute
- Hungarian Forest Research Institute
- European & Mediterranean Plant Protection Organization
- Forestry and Game Management Research Institute - Czech Republic
- University of Zagreb - Croatia
- Forest Research Institute - Slovak Republic
- Département de la Santé des Forêts - France
- Sächsische Landesanstalt für Forsten - Germany
- University of Udin - Italy
- Università di Padova - Italy
- University of Ljubljana - Slovenia
- Dept. of Agriculture, Fisheries and Forestry - Australia

and many others



Photo by Stanislaw Kinefski

# Forestry and Natural Resources

[www.forestryimages.org](http://www.forestryimages.org)



Photo by USFS Archives  
UGA1442177

***Fire***



Photo by Dave Powell, USFS  
UGA0806045

***Trees and  
Stand Types***



Photo by James Long, Utah State Univ.  
UGA4800016

***Silvicultural  
Practices***



Photo by Chris Evans, UGA  
UGA1119347

***Understory and  
Rangeland Plants***



Photo by Dave Powell, USFS  
UGA0807047

***Wildflowers***



Photo by Doug Page, USDI BLM  
UGA9003067

***Forest Products***



Photo by Dave Moorhead, UGA  
UGA4064008

***Nursery Practices***



Photo by Steven Katovich, USFS  
UGA1398101



Photo by Terry Spivey, USFS  
UGA1374246

***Wildlife***

# Agriculture and Integrated Pest Management

[www.ipmimages.org](http://www.ipmimages.org)



Photo by Johnny Crawford, UGA  
UGA4064024



Photo by Kenneth Gale  
UGA4322080

**Agricultural Crops**

**Horticultural Crops**

**Vegetables, Fruits, Nuts, Lawn, Turf,  
Livestock and Poultry**

**Featuring:**



Photo by Clemson Univ. - USDA/ACES  
UGA1235144



Photo by Clemson Univ. - USDA/ACES  
UGA1235094

**Clemson University -  
USDA Cooperative Extension  
Slide Series**

**R.J. Reynolds Tobacco  
Company Slide Set**

# Insects

[www.insectimages.org](http://www.insectimages.org)



UGA1346032



UGA1304048



UGA1346033



UGA1331257



UGA1346089



UGA1216051



UGA1231024

## Submission Guidelines for Images

The Bugwood Network Image Archive is actively accepting image submissions. Your images will make the archive more useful. The Forestry Images website contains guidelines for submission of images (<http://www.forestryimages.org/contribute.cfm>) including details for submitting slides, digital images, negatives and line art, as well as editing and image handling guidelines. A summary follows.

**Quantity** - The Bugwood Network can work with any number of images, but receiving groups of 50-100 images or image files promotes efficient processing and does not burden the photographer with an extreme amount of documentation.

**Quality** - Original slides should be submitted whenever possible, as they provide better color and detail than slide copies. Digital scans and image files should be submitted at the highest quality and resolution possible to maximize the usefulness of the image.

### Image Formats

**Slides:** Submit original slides in protective sleeves or boxes or digitized photographic slides on a compact disc (CD). Received slides will be scanned and then returned to the contributor.

Scan slides at a high resolution (2000 PPI or greater). Scanned image files typically should be 10 megabytes or larger. The file format should be uncompressed TIFF. The received TIFF files will be archived in their original state. Crop and rotate images as required prior to submission.

**Digital camera image files:** Submit high-resolution image files taken with a good-quality digital camera.. Use at least a 4-megapixel digital camera if possible. Images should be taken at the largest size and best quality settings that the camera is able to produce. If sending JPEG files, please submit the best quality JPEG photos your camera can produce. Very good quality can be obtained in high-resolution JPEG files. However, if TIFF or RAW files are available, please send those, as they are the highest quality images. Send the least-edited, least compressed file available.

Package all submissions as securely as possible. Digital submissions can be sent on CD or DVD. We request e-mail notification that the materials are underway and the date that they were sent so that we can anticipate their arrival and can schedule image processing. We will do everything possible to ensure that the items are processed and returned expeditiously.

Regardless of how images are submitted, subject identification and descriptive information for each image must be provided.

Photographers are asked to join the Forestry Images system at <http://www.forestryimages.org/join/> to ensure current and correct affiliation and contact information.

### For More Information, Contact:

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