

A Homeowner's Guide to Preventing the Introduction and Spread of Invasive Species

*How You Can
Make a Difference*



“The two great destroyers of biodiversity are, first, habitat destruction and, second, invasion by exotic species.” E.O. Wilson



THE UNIVERSITY OF GEORGIA
**CENTER FOR INVASIVE SPECIES
AND
ECOSYSTEM HEALTH**
WARRELL SCHOOL OF FORESTRY AND NATURAL RESOURCES COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

Acknowledgements:

The guidelines in this book are based on the Gardensmart Plantwise Guidelines developed by The Lady Bird Johnson Wildflower Center.

The authors wish to thank Nancy Loewenstein, Auburn University, Christopher Evans, Illinois Wildlife Action Plan, James R. Allison, Naturalist and Rebekah D. Wallace, University of Georgia for their review and helpful comments on this publication.

Invasive plant list for Georgia is based on the Georgia Exotic Pest Plant Council's Invasive Plant List for 2011. Further details and the complete list can be found at www.gaeppc.org.

Layout: Christa Barlow.

Front Cover: Kudzu, the poster child of invasive plants eats yet another home. Photo credit Jerry Asher, USDI Bureau of Land Management

Citation:

Rawlins, K.A., D.J. Moorhead and C.T. Barger. 2013. A Homeowner's Guide to Preventing the Introduction and Spread of Invasive Species: How You Can Make a Difference. The University of Georgia, Center for Invasive Species and Ecosystem Health, Tifton GA.
BW-2013-01. 36 p.

All images can be found in the Bugwood Image Database System at <http://images.bugwood.org>.

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***SPECIAL NOTE**

Invasive species images are outlined in red.
Native species images are outlined in green.

Introduction

Homeowners and other citizens can play a critical role in helping prevent the introduction and spread of invasive species. No matter the size of our landscape, we can have a direct impact on reducing the introduction of invasive plants into nearby natural areas, simply by choosing native or noninvasive plants for our gardens and yards.

Many invasive animals and other organisms are being moved by human activities. Learn how you can help slow down the spread of invasive pests. These guidelines show how easy it can be for you to make a difference.

*Volunteers from GA-EPPC shown working together to remove garlic mustard (*Alliaria petiolata*) from Kennesaw Mountain National Battlefield Park. The Georgia Exotic Pest Plant Council works with partners across Georgia and the southeast to help prevent the spread of invasive species.*



“It is now within the power of individual gardeners to do something that we all dream of doing: to make a difference. In this case, the ‘difference’ will be to the future of biodiversity, to the native plants and animals of North America and the ecosystems that sustain them.”

Douglas W. Tallamy

Whether your perfect landscape and garden design is orderly and formal or wild and informal, you can benefit the ecosystem around you. For example, by choosing to plant one or more of the 60 species of oaks native to North America you can support over 500 species of butterflies and moths as well as other wildlife including birds, deer and squirrels.

Invasive Tree
Chinaberry
(*Melia azedarach*)



J. Miller, USFS

UGA0016023

Native Tree
Chinkapin oak
(*Quercus muehlenbergii*)
Grows to 60 ft. tall with a
spread of 40-50 ft.



J. Sharman, Vitaltree

5454693

Native Vine
American wisteria
(*Wisteria frutescens*)



G. Todia, WREC

5453371

Invasive Vine
Chinese wisteria
(*Wisteria sinensis*)
Japanese wisteria
(*Wisteria floribunda*)



R. Wallace, UGA

5423735

Wildlife such as birds, raccoons and mice eat fruit and seeds from the plants around our homes. The animals then deposit the seeds later, sometimes many miles away, where they can sprout and grow in a new location. By using native or noninvasive plants for our landscaping we are making the choice to prevent further introduction and spread of invasive plants or potentially invasive plants.



K. Rawlins, UGA

Ask your local nursery for help in finding native plants for your landscaping needs



K. Rawlins, UGA

Educate your local nursery about the dangers of invasive plants

Help educate local businesses about the dangers of planting invasive species. Educate nurseries you visit that are selling invasive plants or seeds. Tell them about the damage those invasive species can cause our native wildlife. Let them know that you are choosing noninvasive and native plants for your landscaping. Business owners want to stock what consumers are buying and to be good members of their community. If your local nursery does not have the native plants you want in stock, ask if they will order the plants for you.

Native Shrub
Strawberry bush
(*Euonymus americanus*)



K. Rawlins, UGA

Invasive Shrub
Winged burning bush
(*Euonymus alatus*)



L. Mehrhoff, University of Connecticut

Check with your local Exotic Pest Plant Council, Native Plant Society, Botanical Society, Department of Natural Resources, Library or a reputable nursery near you for a list of native or noninvasive alternatives for your area. These organizations often have the recommended alternatives listed on their websites. For website addresses see pages 32 and 33.

1. Know Your Plants

Which is native and which is invasive?



Find an identifying characteristic like the glandular notches in this photo.

This can make plant identification much easier. Smooth sumac, *Rhus glabra*, is pictured on the left and Tree-of-heaven, *Ailanthus altissima*, is pictured on the right.

Find invasive plant images and information at www.invasive.org.

Tree-of-heaven
(*Ailanthus altissima*)



Which is native and which is exotic?



These two plants are very similar and provide a good example of how well native plants can be used in place of nonnatives in your landscape. Nonnative Chaste tree, *Vitex agnus-castus*, on the left can escape and establish itself in natural areas. The native bottlebrush buckeye, *Aesculus parviflora*, can be grown as a spreading shrub or pruned to grow upright. It supports bumblebees, tiger swallowtail butterflies, Sphinx moths and ruby-throated hummingbirds.

2. Use Native or Noninvasive Alternatives

Ask your nursery about noninvasive plant alternatives. Native plants often have similar landscaping characteristics as invasives, without the potential for ecosystem damage.

Gulf fritillary &
Purple passionflower
(*Passiflora incarnata*)



R. Wallace, UGA

Monarch butterfly &
Purple coneflower
(*Echinacea purpurea*)



S. Katovich, USFS

Using native plants in your landscaping promotes a healthier interactive local ecosystem and supports local food webs and habitats for wildlife.

Eastern bluebirds along with many other songbirds need insects to feed their young



O. Knott, GFC

Red-winged blackbird nest



J. Triana, Regional Water Authority

Plant as much variety of native and noninvasive trees, shrubs, vines, flowers and grasses as your space allows. A few resources for lists of native and noninvasive alternatives for your garden and landscape include the Lady Bird Johnson Wildflower Center, the USDA United States National Arboretum and your Native Plant Society. See pages 32 and 33 for websites.

3. Watch Out for Invasive Hitchhikers

Check clothes, belongings, pets and vehicles for seeds and pieces of invasive plants that may have become attached. These invasive hitchhikers can drop off and begin growing to establish an infestation in another location.



T. Perna, NPS

Be wary of hitchhikers

Clean equipment carefully to prevent the spread of invasive seed or plant pieces into another area.



J. LaForest, UGA



D. Moorhead, UGA

Never move firewood or untreated wood products!

America's forests are some of the most beautiful in the world. It is up to us to protect them. Pests such as the emerald ash borer, which was found in the firewood below, are quickly spread when people carry firewood or untreated wood products to new locations.

Always use local firewood.



T. Kimoto, CFIA

UGA1249003

4. *Have a Care if You Share*

Only share native or noninvasive plants. Remember, buy native plants from a reputable supplier of nursery propagated stock. While some native plants are legitimately rescued from areas, such as active construction sites, many native plants are unethically dug from the wild to be sold.

Share a Native Plant with a Friend

Butterfly milkweed
(*Asclepias tuberosa* L.)



K. Rawlins, UGA

Dimpled trout lily
(*Erythronium umbilicatum*)



K. Rawlins, UGA

Harvesting native plants from the wild can reduce the populations, sometimes to the point of extinction and may actually be illegal. Native Plant Societies often have a list of reputable nurseries in their area. See page 32 for the Georgia Native Plant Society website address. Your local nursery may be able to order plants for you as well.

Learn which plants are native to your area



The Dow Gardens Archive

White fringetree
(*Chionanthus virginicus*)

Flowering dogwood
(*Cornus florida*)



K. Rawlins, UGA

5. Use Weed Free Seed Mixes

Buy seed mixes from reputable sources that guarantee the purity and content of their seed. Take your native plant list with you when go shopping to be sure the seeds you buy are native to your area.

Invasive Vines
Japanese honeysuckle
(*Lonicera japonica*)

C. Bargeron, UGA



UGA1150069

Native Vines
Trumpet honeysuckle
(*Lonicera sempervirens*)

D. Moorhead, UGA



6. Use Weed Free Soil & Mulch

Check to be sure soil and mulch are weed free. You may have to pay a little more for guaranteed weed free products, but it will be much less expensive than the price of eradicating an invasive plant infestation.

D. Teague, U.S. Air Force



UGA1197027

Invasive Fern
Japanese climbing fern
(*Lygodium japonicum*)
in pine straw mulch

D. Moorhead, UGA



Invasive Fern
Japanese climbing fern
(*Lygodium japonicum*)
in potting soil

Buyer Beware!



D. Moorhead, UGA

7. Keep an Eye on New Sprouts & Volunteers

Invasive plants can come from anywhere and spread very quickly. Some make attractive additions to our gardens, but can produce a lot of seedlings making control difficult. Control new sprouts by hand-pulling or mowing unwanted seedlings to prevent them from growing to maturity.

Saplings, seedlings, sprouts

Tree-of-heaven
(*Ailanthus altissima*)

L. Mehrhoff, UCONN



Kudzu
(*Pueraria montana* var. *lobata*)

N. Fraley, NPS



Invasive plants are usually good at taking advantage of landscape disturbances. Be especially watchful for invasive plants sprouting up in newly disturbed soil such as ground tilled for a vegetable or flower garden.

Chinese privet
(*Ligustrum sinense*)

J. Miller, USFS



Tallowtree
(*Triadica sebifera*)

J. LaForest, UGA



Construction areas where the soil is disturbed is another area to be on the lookout for new sprouts. Pulling or treating these invasive plant sprouts quickly before they become established is the easiest and most cost effective way to manage them. Visit www.invasive.org to find control and management information for many invasive species.

8. Be Especially Careful With Aquatic Plants

Always dispose of aquatic plants carefully! Many aquatic plants, although attractive as water garden and aquarium decorations, are highly invasive.

Invasive Aquatics

Alligatorweed
(*Alternanthera philoxeroides*)



R. Wallace, UGA

Wild taro, coco yam
(*Colocasia esculenta*)



F. & K. Starr, Starr Environmental

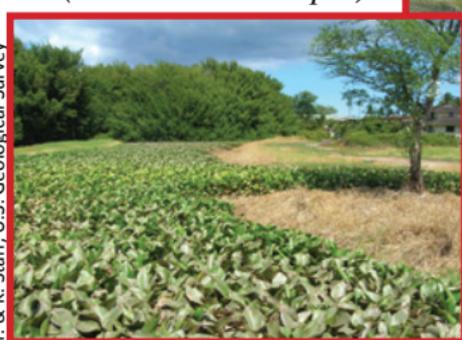
Many continue to be sold through aquarium and pond supply dealers, both online and in retail garden centers. Infestations are often the result of the improper disposal of water and plants from aquariums; ornamental ponds; or the overflow of ponds into local waterways after heavy rains.

Hydrilla or waterthyme
(*Hydrilla verticillata*)



D. Moorhead, UGA

Waterhyacinth
(*Eichhornia crassipes*)



F. & K. Starr, U.S. Geological Survey

Invasive aquatic plants often thrive in slow moving water such as ponds, lakes, swamps and irrigation canals. These dense colonies of aquatic plants can clog waterways and make fishing, swimming and boating difficult. They also block animals from getting to the water, crowd or shade out native plants and reduce the amount of oxygen in the water, which fish and other organisms need to survive.

Native Aquatic Plants

Common arrowhead
(*Sagittaria latifolia*)



G. Lovell, AL DCNR

American lotus
(*Nelumbo lutea*)



K. Rawlins, UGA

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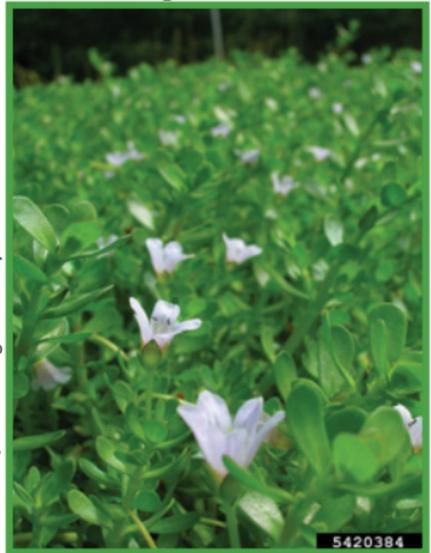
Pickerelweed
(*Pontederia cordata*)



C. Evans, Illinois Wildlife Action Plan

UGA1380294

Monnier waterhyssop
(*Bacopa monnieri*)



F. & K. Starr, U.S. Geological Survey

5420384

Goldenclub
(*Orontium aquaticum*)



C. Evans, Illinois Wildlife Action Plan

Fragrant waterlily
(*Nymphaea odorata*)



J. LaForest, UGA

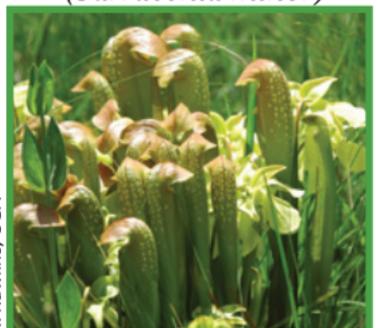
Yellow pitcherplant
(*Sarracenia flava*)



S. McKeever, Georgia Southern Univ.

154

Hooded pitcherplant
(*Sarracenia minor*)



K. Rawlins, UGA

9. Dispose of Invasive Plants Carefully

When disposing of invasive plant material, check for any seeds, fruit or cuttings that could resprout. At a minimum, bag these materials to help stop their spread. If it is permitted in your area and can be safely done, consider burning the material. If you use chemical treatment to eradicate invasive plants be sure to follow all label directions.



A. Koester, ISA

Invasive plant parts such as seeds, fruit or cuttings may resprout unless composted properly

When possible safely burn invasive plant material



C. Bargeron, UGA



S. Dewey, USU

Invasive plant material may resprout if left uncontained



C. Evans, Illinois Wildlife Action Plan

Contain It or Treat It*

*always follow label directions



S. Dewey, USU

10. *If You Can't Part With Your Invasive Plant, Remember – contain it, control it or cage it*

Be responsible. If you have a plant in your garden that has invasive tendencies, take special steps to keep it in your garden. Insert root barriers, trim regularly or harvest fruits or seeds before they can be spread.

Remove flowers after blooming, before fruits or seeds develop



J. Allison, GA DNR

Prune or trim regularly to prevent unwanted growth



R. Webb, Bugwood.org

Be a good neighbor. Put aggressive plants in pots or install the proper root barriers to prevent rhizomes or suckers from sprouting outside the planting area. Pull any sprouts to prevent them from spreading and becoming established.

Monitor for invasive seedling volunteers



J. Miller, USFS

UGA2307269

Plant it in a pot to contain it



F. & K. Starr, Starr Environmental

Other Invasive Species of Concern

Recreational activities such as hunting, fishing, camping and boating often involve traveling to other areas. When we travel, we usually also move things like firewood, boats, ATVs, camping equipment and other supplies. Hunters sometimes establish food plots. These and other activities can unintentionally move invasive species from one area to another.

Fortunately, there are practices we can adopt while continuing to enjoy these activities that help prevent the movement of invasives. One important



K. Rawlins, UGA

key is to use only local firewood, as many serious invasive insects and diseases can move on firewood from infested areas. Buy firewood from the same county or from only a few miles away from where you will burn it. Many parks now sell firewood. Leave any unburned, locally purchased, firewood for the next camper. If you take it home, you may also be taking home unwelcome pests that can attack your valuable trees.

Don't move firewood

Emerald ash borer

Emerald ash borer has a broad distribution in the United States and Canada and was discovered in east Tennessee in July 2010. The widespread distribution is primarily due to the transportation of infested ash commodities such as nursery stock, unprocessed logs, firewood, and other ash tree products.

Federal and state quarantines in infested

states now regulate transport of these products.



Pennsylvania Department of Conservation and Natural Resources – Forestry Archive



D. Cappaert, Michigan State University

Emerald ash borer
(*Agrilus planipennis*)

Asian long-horned beetle

The Asian long-horned beetle is known to attack at least 18 species of hardwood trees including maple, birch, horse chestnut, willow, elm, ash, and black locust.



Asian long-horned beetle
(*Anoplophora glabripennis*)

Sirex woodwasp

The Sirex woodwasp, while not yet found in the South, can attack loblolly, slash and shortleaf pines. The female drills into the wood and inserts a toxic mucous and the fungus, *Amylostereum areolatum*, along with her eggs. The mucus prevents the tree from forming anti-fungal toxins at the site of infection. The fungus grows in the wood causing it to dry out and the trees die in a few weeks or months.



Sirex woodwasp (Sirex noctilio)

Thousand cankers disease symptoms

Thousand cankers disease has been found in many western states. The first confirmation of the beetle and fungus within the native range of black walnut was in Tennessee (July 2010). The potential for damage to eastern forests is great because of the widespread distribution of eastern black walnut, the susceptibility of this tree to the disease, and the capacity of the fungus and beetle to invade new areas. These serious invaders can easily be moved on firewood, logs and boards with bark edges from infested areas. Always use local firewood and never move firewood or untreated wood products.

N. Tisserat, Colorado State University



Thousand cankers disease
(*Geosmithia morbida*)

Prevention is Best!

- Always buy firewood near where you will burn it.
- Wood that looks clean and healthy can still have tiny insect eggs, or microscopic fungal spores, that will start a new and deadly infestation. Always leave it at home, even if you think the firewood looks fine.
- Aged or seasoned wood is still not safe. Even though it is dry, insects can still easily move onto it.
- If you already moved firewood, and you now know you need to dispose of it safely, burn it soon and completely. Make sure to rake the storage area carefully and also burn the debris. And next time, buy from a local source.
- Spread the word. Tell your family, friends and neighbors about the importance of using local firewood.
- Any untreated wood or wood products should be treated with the same precautions as firewood.

DON'T MOVE FIREWOOD

Our forests are threatened by nonnative insects that can kill large numbers of trees. Three recently introduced insects—emerald ash borer, Asian longhorned beetle, and Sirex woodwasp—are wood-infesting species that can be transported long distances in firewood. Once transported into new areas, these insects can become established and kill local trees. We must **STOP THE SPREAD** of these insects and protect our forests and trees.

How you can help:

- Leave firewood at home—do not transport it to campgrounds or parks.
- Use firewood from local sources.
- If you have moved firewood, burn all of it before leaving your campsite.



Inset photo: Asian longhorned beetle larva (courtesy of Thomas B. Cechstein, New Jersey Dept. of Agriculture, www.forestimages.org)

HELP STOP INVASIVE PESTS

For more information, visit the following Web sites:
www.emeraldashborer.info
www.na.fs.fed.us/tp
www.aphis.usda.gov/ppq/tp



USDA Forest Service
Northeastern Area
State and Private Forestry
NA-PT-02-06
April 2006
www.na.fs.fed.us

The USDA is an equal opportunity provider and employer.

www.dontmovefirewood.org

Never Release Exotic Pets into the Wild

N. Yglesias, SFWMD



Female pythons carrying more than 80 eggs have been captured in the Everglades.

Florida's burrowing owl is protected as a species of special concern and is being preyed upon by exotic reptiles.



G. Holmes, Valent USA Corporation

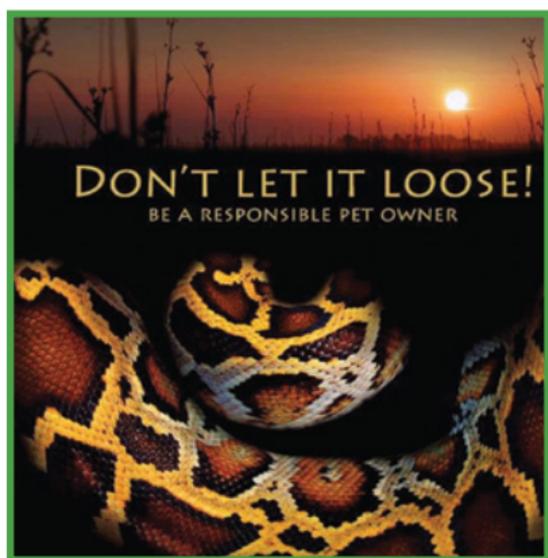
G. Stolz, US Fish and Wildlife Service



Carnivorous reptiles, such as this Nile monitor, feed on native mammals and birds.

A common pathway by which nonnative fish and wildlife species find their way into native habitats is through escape or release by pet owners. Burmese pythons, now established throughout south Florida and the Everglades, feed on native mammals and birds. Recent studies have found dramatic reductions in small mammal populations in Everglades National Park as python populations have increased. Nile monitor lizards in south Florida pose a threat to the Florida burrowing owl, which is a protected species.

These are just a few of the many nonnative species that have escaped from or been released by their owners.



An ad campaign in Florida helps educate the public about the dangers of releasing unwanted pets.

Clean Your Boat Before You Move It

When you use lakes, ponds and streams follow these guidelines to help limit the introduction of aquatic invasives from one body of water to another. Remember these three steps: Drain, Clean, and Dry.



W. Robles, MSU

Invasive aquatic species can hitch a ride

Drain, Clean & Dry

- Drain every space or item that can hold water.
- Follow factory guidelines for eliminating water from boat motors and jet drives on personal watercraft.
- Remove the drain plug from boats and put boat on an incline so the water drains out.
- Drain live-wells, bilge, ballast tanks and transom wells on land. Empty water out of kayaks, canoes, rafts, etc.
- Remove any visible plant or plant fragments as well as mud or other debris. Plant material, mud and other debris routinely contain other organisms, including plants that may be an aquatic nuisance species.
- Check trailer, including axle, fender and wheel areas.
- Check in and around the boat itself, anchor, props, jet drives, ropes, boat bumpers and paddles.
- Clean, check and dry off all parts and equipment that may have come into contact with the water.
- Empty bait buckets into the trash. Never empty any bait fish or worms into the lake or reservoir.
- Allow boat and trailer to completely dry before launching into another body of water.

Using a car wash or home power water sprayer alone is not adequate to kill and/or remove zebra or quagga mussels. They cement themselves to surfaces. Carefully inspect after washing and remove any remaining mussels.

S. Krynock, Michigan Sea Grant



Zebra mussels can damage motors

Aquatic Plants and Animals

Invasive aquatic plants, used as water garden and aquarium decorations, aquarium fish, bait fish and fishing worms should never be dumped or “released” into any stream, lake, river or other water body.

Invasive aquatic plants, can infest slow moving water such as ponds, lakes, swamps, irrigation canals, or ornamental ponds. Dense populations of invasive plants can clog waterways, which makes fishing, swimming and boating difficult. Thick colonies cover the surface of the water, preventing air from reaching it. This reduces the amount of oxygen in the water, which fish and other organisms need to survive.

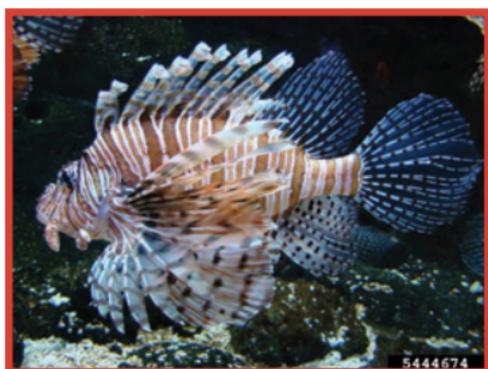
These dense mats of invasive aquatic vegetation can crowd or shade out native plants, which other organisms depend upon for food or shelter. These dense mats may also prevent animals from getting to the water to drink.

Many invasive aquatic plants continue to be sold through aquarium and pond supply dealers, both online and in retail garden centers. New introductions are probably the result of the improper disposal of ornamental pond plants or water, or when ponds adjacent to local water bodies overflow with winter rains.



Goldfish (Carassius auratus)

Always dispose of the aquarium plants, animals and other contents safely.



Lionfish (Pterois volitans)

When building a decorative pond that will contain nonnative plant or animal species, be sure it is located in an area safely away from any nearby bodies of water.

Feral Hogs (Wild Pigs)

European wild boar, feral hogs, and crossbreeds of the two can be found in the wild. Feral hogs are domestic hogs that either escaped or were released for hunting. They generally adjust quickly to the wild and survive well on their own. Within just a few generations they develop traits, such as camouflage markings, needed for survival in the wild.

Feral hogs continue to grow in numbers. Their destructive feeding habits and potential to spread



V. Dinets, University of Miami

Feral pigs have a high reproductive rate

disease make feral hogs a substantial liability to agriculture, livestock, native wildlife and natural areas.

However, these animals are also sought for recreational hunting and commercial harvest.

Adult feral hogs can weigh from 110 to 770 lbs. Females can give birth to litters of 1-12 piglets beginning at about 9 months of age. Life span in the wild is usually about 10 years, but feral hogs have been recorded living as long as 27 years.

B. Higginbotham, Texas Agrilife Extension Service



Damage caused by feral pigs

Feral hogs are indiscriminate omnivores which allow them to survive across a wide range of habitats, limited only by scarcity of water and severely cold temperatures. They are considered to be intelligent and can be very aggressive when threatened.

Humans are the main predator of mature feral hogs. Trapping and hunting are the main forms of control.

Invasive Plants in Georgia

Plants pictured here are from the Georgia Exotic Pest Plant Council's list of invasive plants (www.gaepcc.org). Because populations and ranges can change very quickly, distribution maps of the plants are not provided here. Find up to date distribution maps at www.EDDMapS.org.

Severe or Emerging Threat

Japanese chaff flower
Achyranthes japonica

C. Evans, Illinois Wildlife Action Plan



Nonnative wisterias
Wisteria spp.

J. Miller & Ted Bodner Southern Weed Science Society



Multiflora rose
Rosa multiflora

K. Rawlins, UGA



Cogongrass
Imperata cylindrica

R. Wallace, UGA



Kudzu

Pueraria montana var. *lobata*

D. Moorhead, UGA



Princesstree

Paulownia tomentosa

J. Miller, USDA Forest Service



Oriental bittersweet
Celastrus orbiculatus

J. Allison, GA DNR



Tree-of-heaven
Ailanthus altissima

C. Barger, UGA



Invasive Plants in Georgia: Severe or Emerging Threat

Garlic mustard
Alliaria petiolata

C. Evans, Illinois Wildlife Action Plan



Chinese yam
Dioscorea polystachya

C. Evans, Illinois Wildlife Action Plan



Alligatorweed
Alternanthera philoxeroides

R. Wallace, UGA



Waterhyacinth
Eichhornia crassipes

W. V. Evans



Small carpgrass/hairy jointgrass
Arthraxon hispidus

L. Mehrhoff, UCONN



English ivy
Hedera helix

C. Barger, UGA



Chinese privet
Ligustrum sinense

K. Rawlins, UGA



Japanese honeysuckle
Lonicera japonica

L. Mehrhoff, UCONN



Japanese climbing fern
Lygodium japonicum

C. Evans, Illinois Wildlife Action Plan



Chinese tallowtree
Triadica sebifera

J. LaForest, UGA



Invasive Plants in Georgia: Severe or Emerging Threat

Chinese silvergrass
Miscanthus sinensis

C. Evans, Illinois Wildlife Action Plan



Pampas grass
Cortaderia spp.

C. Evans, Illinois Wildlife Action Plan



Callery pear (Bradford pear)
Pyrus calleryana

C. Barger, UGA



Chinaberry
Melia azedarach

K. Rawlins, UGA



Japanese knotweed
Fallopia japonica

L. Mehrhoff, UCONN



Mimosa
Albizia julibrissin

J. Byrd, Mississippi State University



Hydrilla
Hydrilla verticillata

R. Vidéki, Doronicum Kft.



Golden bamboo
Phyllostachys aurea

C. Barger, UGA



Nepalese browntop
Microstegium vimineum

L. Mehrhoff, UCONN



Ground ivy
Glechoma hederacea

L. Mehrhoff, UCONN



Invasive Plants in Georgia: Severe or Emerging Threat

Shrubby lespedeza
Lespedeza bicolor

C. Evans, Illinois Wildlife Action Plan



Sericea lespedeza
Lespedeza cuneata

K. Rawlins, UGA



Marsh dayflower
Murdannia keisak

L. Lee, SC



Japanese spiraea
Spiraea japonica

L. Mehrtorf, UCONN



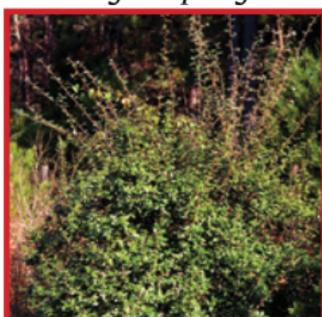
Giant salvinia
Salvinia molesta

B. Rice, sarracenia.com



Thorny olive
Elaeagnus pungens

J. Miller, USFS



Autumn-olive
Elaeagnus umbellata

N. Loewenstein, AU



Skunk-vine
Paederia foetida

C. Evans, Illinois Wildlife Action Plan



Beach vitex
Vitex rotundifolia

F. & K. Starr, Starr Environmental



Invasive Plants in Georgia: Significant Threat

Giant reed
Arundo donax

C. Bargeron, UGA



Canary Island tamarisk
Tamarix canariensis Willd.

J. Spencer



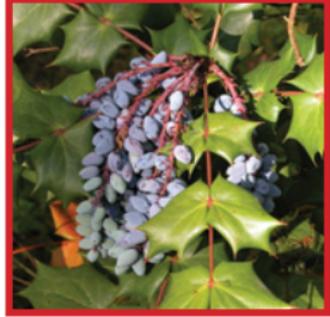
Sacred bamboo
Nandina domestica

J. Miller, USFS



Leatherleaf mahonia
Mahonia bealei

J. Miller, USFS



Periwinkle
Vinca spp.

F. & K. Starr, Starr Env.



Trifoliate orange
Poncirus trifoliata

J. Byrd, MS State



Tawny daylily
Hemerocallis fulva

B. Slattery, USFWS



Paper-mulberry
Broussonetia papyrifera

K. Rawlins, UGA



Japanese barberry
Berberis thunbergii

L. Mehrhoff, UCONN



Cornflower
Centaurea cyanus

S. Dewey, USU



Invasive Plants in Georgia: Significant Threat

Coral ardisia
Ardisia crenata

C. Evans, Illinois Wildlife Action Plan



Coco yam, wild taro
Colocasia esculenta

C. Barger, UGA



Largeleaf lantana
Lantana camara

F. & K. Starr, Starr Environmental



Monkeygrass
Liriope muscari

J. Miller, USFS



Winter creeper
Euonymus fortunei

J. Miller, USFS



Tungoil tree
Vernicia fordii

C. Bryson, USDA Agricultural Research Service



Chocolate vine
Akebia quinata

C. Evans, Illinois Wildlife Action Plan



Oxeye daisy
Leucanthemum vulgare

M.E. Harte, Bugwood.org



Sweet breath of spring
Lonicera fragrantissima

J. Miller, USFS



Winged burning bush
Euonymus alatus

B. Rice, sarracenia.com



Invasive Plants in Georgia: Significant Threat

Red sesbania
Sesbania punicea



J. Randall, TNC

Glossy privet
Ligustrum lucidum



K. Rawlins, UGA

Sweet autumn virginbower
Clematis terniflora



C. Evans, Illinois Wildlife Action Plan

Chinese parasoltree
Firmiana simplex



J. Miller, USFS

Himalaya blackberry
Rubus armeniacus



J. Miller, USFS

Queen Anne's lace
Daucus carota



J. Byrd, MS State

Florida betony
Stachys floridana



R. Wallace, UGA

Camphortree
Cinnamomum camphora



C. Evans, Illinois Wildlife Action Plan

Scarlet firethorn
Pyracantha coccinea



R. Vitéki, Doronicum Kft.

Parrotfeather
Myriophyllum aquaticum



G. Lovell, ADCNR

Invasive Plants in Georgia: Significant Threat

McCartney rose
Rosa bracteata



J. Miller, USFS

Sawtooth oak
Quercus acutissima



D. Moorhead, UGA

Sakhalin knotweed
Reynoutria sachalinensis



B. Tokarska-Guzik, University of Silesia

Japanese privet
Ligustrum japonicum



K. Rawlins, UGA

Arrasa con todo
Gomphrena serrata



B. Wursten, Ndundu Lodge Vumba

Moss vervain
Glandularia pulchella



R. Wallace, UGA

Dwarf waterclover
Marsilea minuta



G. Lovell, ADCNR

Chinese holly
Ilex cornuta



J. Ruter, University of Georgia

Curlyleaf pondweed
Potamogeton crispus



L. Mehrhoff, UCONN

Tall morningglory
Ipomoea purpurea



D. Tenaglia, MissouriPlants.com

Frequently asked questions:

What is the best way to control or eradicate invasive plants in my yard?

Prevention is best, next is catching the infestation early. The following website has specific information on control and management of over 1200 invasive plants.

www.invasiveplantatlas.org

How can I find out if a plant is invasive in my area?

State or regional Exotic Pest Plant Councils have a list of the invasive plants found in your area.

www.invasive.org

www.gaeppc.org

www.se-eppc.org

Where can I find native or noninvasive plants to buy for my landscape and garden?

Many local nurseries will order native plants if you tell them what you need. If you need help finding a nursery, ask your Native Plant Society. Be sure to check on the reliability and quality of the service or product offered for sale by any business.

www.gnps.org

www.wildflower.org

www.gaeppc.org

<http://botgarden.uga.edu/consERVE/nursery.php>

Where can I find lists for native or noninvasive alternatives to invasive plants?

Some lists only contain native species and some list both native and noninvasive exotic species.

www.gaeppc.org

www.wildflower.org/collections

www.usna.usda.gov/Gardens

www.gnps.org

Books:

'Gardening with Native Plants of the South' by Sally Wasowski

'Best Native Plants for Southern Gardens' by Gil Nelson

'Armitage's Native Plants for North American Gardens' by Allan M. Armitage

'Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens' by Douglas W. Tallamy

How do I volunteer to help in the fight against invasive species in my community?

www.eddmaps.org – Map invasives in your area.

EDDMapS is quick and easy to use, free smartphone apps are available and online training is provided to help you learn how to use it. www.naeppc.org – Join the Exotic Pest Plant Council.

www.gabotsoc.org or www.gnps.org – Volunteer for projects with the Botanical or Native Plant Society.

www.georgiawildlife.com/getinvolved/volunteer – Help promote conservation in Georgia by volunteering with DNR's Wildlife Resources Division.

<http://aesl.ces.uga.edu/aascd/riversalive> – Volunteer with Rivers Alive and Adopt-a-stream programs.

If you still have questions:

Contact your local County Extension Office

www.caes.uga.edu/extension/office.cfm

www.extension.org/invasive_species

or your local Georgia Forestry Commission Office

www.gfc.state.ga.us/ContactUs.cfm

or your county's Georgia Dept. of Natural Resources Conservation Ranger

www.georgiawildlife.com/about/contact

or the Georgia Dept. of Agriculture Plant Protection Division

<http://agr.georgia.gov/site>

or email Center for Invasive Species and Ecosystem Health: bugwood@uga.edu

Give wildlife space in your landscape

R. Billings, Texas Forest Service



Pine woods tree frog
(*Hyla femoralis*)

Spicebush swallowtail
caterpillar
(*Papilio troilus*)



C. Evans, Illinois Wildlife Action Plan

Remember...

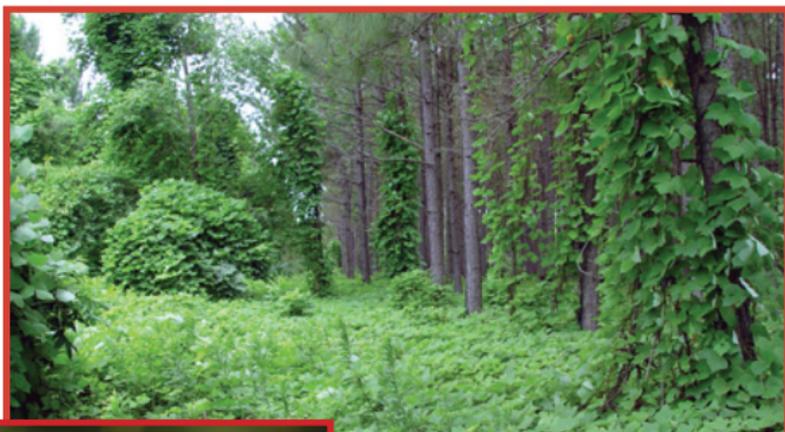
You Can Help. You Can Make a Difference. Save America's natural areas by making Plantwise choices in your landscaping.

A recent survey of the 24.8 million forested acres in Georgia, found the following acreages occupied by invasive species.

<i>Japanese honeysuckle</i>	920,413 Acres
<i>Privet (7 species)</i>	546,924 Acres
<i>Kudzu</i>	32,739 Acres
<i>Japanese Climbing fern</i>	13,350 Acres
<i>Nonnative roses</i>	12,412 Acres
<i>Nonnative elaeagnus</i>	12,275 Acres
<i>Tallowtree</i>	9,759 Acres
<i>Nonnative wisteria</i>	7,111 Acres

Help protect our natural areas and forests

Kudzu has been called the “plant that ate the south”. What then do we call Japanese honeysuckle which covers over 29 times more forest acres and Chinese privet which covers almost 17 times more forest acres than kudzu?



C. Evans, Illinois Wildlife Action Plan



M. Atwater, Weed Control Unlimited, Inc.

Cogongrass, one of the world's worst weeds, invades southeastern U.S. forests. Over 1,000,000 acres have already been infested. Help fight this invasive grass.

Report any suspected occurrence to www.EDDMapS.org, your county Forester or your county Extension agent.

See www.cogongrass.org for more information on Cogongrass.

Citations:

Coping With Feral Hogs: About Feral Hogs. AgriLife Extension Texas A&M System. <http://feralhogs.tamu.edu/about/>

Giovengo, Keren. Personal communication 2010. University of Georgia Marine Extension Service. Coastal Sustainable Communities Program.

Gardensmart: Plantwise. Plantwise Guidelines. Lady Bird Johnson Wildflower Center, The University of Texas at Austin. http://www.wildflower.org/howto/howto_resources/Plantwise_Poster.pdf

How Do Nonnative Species Get to Florida? MyFWC.com Florida Fish and Wildlife Conservation Commission. www.myfwc.com/

Tallamy, D.W. 2009. Bringing Nature Home: How You Can Sustain Wildlife with Native Plants. Timber Press, Inc. 11 p. [WILDLIFEHABITATS/nonnative_HowGetToFL.htm](http://www.timberpress.com/WILDLIFEHABITATS/nonnative_HowGetToFL.htm)

Sus scrofa, wild boar. University of Michigan, Museum of Zoology. http://animaldiversity.ummz.umich.edu/site/accounts/information/Sus_scrofa.html

Don't move firewood. USDA Forest Service Northeast Area. <http://na.fs.fed.us/firewood/>

USGS-NAS-Nonindigenous Aquatic Species. <http://nas.er.usgs.gov>

USDA Forest Service's Southern Research Station and Southern Region. www.srs.fs.usda.gov/futures/reports

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Funding, in part, for this publication is from a grant from the Georgia Forestry Commission, USDA Forest Service as part of the American Recovery & Reinvestment Act.



Funding for this edition was provided in part by the Cooperative Agricultural Pest Survey program as part of a cooperative agreement with Georgia Department of Agriculture and USDA APHIS PPQ.



Contributions were also made by Georgia Exotic Pest Plant Council, Georgia Botanical Society, Skidaway Audubon, Wildflower Bunch Garden Club at Big Canoe, Songbird Landcare, Memorial Park Birchmore Trail Weed Warriors and private citizens.

www.gainvasives.org

January 2013