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# Alabama Invasive Plant Council

*"Rescuing and Preserving Our Natural Heritage"*

# List of Invasive Plants by Cultural Use Categories

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Shortly after formation of the Alabama Invasive Plant Council (ALIPC) in 2003, a committee dedicated to assessment and listing of invasive plants was convened – the ALIPC Invasive Plant Listing Committee. Committee members were drawn from the wide diversity of expertise of the Council, which welcomes participation by all land-use and water-use managers, owners, stewards and agencies. *Alabama's 10 Worst Invasive Weeds* were named through review and consensus in the later part of 2003. The list was published in a brochure (www.se-eppc.org/pubs/alabama.pdf), which also conveyed information on ALIPC's purpose and a membership application (over 8,000 copies of this brochure have been distributed). This led to the inherently more difficult task of developing an expanded invasive plant list, especially given the wide diversity of ALIPC's membership and Board of Directors and their traditional individual specialty focus. Considering neighboring land-use and shared invasive plant problems became a learning experience as we worked towards compromises to minimize overall impacts.

In order to include the expert viewpoints of the range of stakeholders, we developed a spreadsheet based on cultural use categories (e.g. natural areas, urban, managed forests, wildlife habitats, rights-of-way, aquatic and wetland, pasture, row crops and nurseries), with two "watch" lists. In addition, plants utilized as crops or ornamental species in a given land use type, were indicated with a 'C' or 'O', respectively, to indicate interactions between planted and invading species. For each species within a use type, a severity ranking was developed and assigned. Plants were included on the list and ranked based on expert opinion and on their meeting a list of criteria (see below) using a modified version of "The Evaluation of Non-native Plant Species for Invasiveness in Massachusetts (Final Report, May 3, 2005)" by the Massachusetts Invasive Plant Advisory Group (http://www.newfs.org/conserve/docs/MIPAG040105.pdf accessed October 30, 2006.)

## Approach

The expanded non-native invasive plant list for the state of Alabama was developed by the ALIPC Invasive Plant Listing Committee comprised of individuals representing a variety of stakeholders within the state of Alabama (see acknowledgements). Input was also obtained from various plant, fisheries and wildlife experts, and from the ALIPC Board of Directors. The sequence of developments follows:

**May 2004** – A spreadsheet showing the 400 species inventoried as invasive plants in the Southeast (http://www.invasive.org/seweeds.cfm) was distributed to ALIPC members at the annual meeting in a questionnaire format. Input was requested on which species were considered invasive in Alabama. While the response to this request was low, some valuable insights were obtained and conflicting opinions revealed.

**Oct. 2004** – The ALIPC Listing Committee drafted an invasive plant list, based on the input received from the questionnaire and on their professional experience. The list contained approximately 100 species that drew further from an inventory of invasive plants by county in Alabama's herbaria compiled by Hansen and Loewenstein. Using the TN EPPC model, plants were ranked using three "severity" and two "watch" categories.

**Nov. 2004** – The draft list was presented to the ALIPC Board, and generated heated discussion. Some board members objected to the inclusion of several widely planted species and they further recommended that the list be limited to 40 species. The list was returned to the committee for further work.

**Spring and summer 2005** – The list committee devised a cultural use categorization approach to address differences in use versus invasion, and to highlight the various habitats that are impacted by invasive plants. Inputs from ALIPC members, plant and wildlife experts and the ALIPC board were again solicited via email, and responses were incorporated into the next version. The revised list was again sent for review by the ALIPC board and membership for continued refinement.

**Nov. 2005** – The "Top 50 Worst Invasive Plants" list was submitted to the ALIPC Board, once again generating heated debate focused on the inclusion of Bermuda grass (*Cynodon dactylon*), bahia grass (*Paspalum notatum*), tall fescue (*Lolium arundinaceum*), crabgrass (*Digitaria* sp.) and purple nutsedge (*Cyperus rotundus*). It was expressed that crabgrass and purple nutsedge are so widely occurring, to the point of diluting ALIPC efforts, while other species, planted for soil stabilization, have no readily available substitutes. Compromise discussions among and across stakeholder groups followed. More transparent and structured objectives and criteria for listing species were developed based loosely on guidelines employed by the State of Massachusetts to address concerns regarding the exact purpose of this list. The Board passed a resolution precipitated by these debates that gives the Board final approval authority of the ALIPC Invasive Plant List.

**Feb. 2006** – The revised list of invasive plants with deletions, a statement of listing objectives (based on TN EPPC), and criteria for plant evaluation were approved by the ALIPC Board. During this board meeting, an annual procedure for nominating plants for inclusion or removal was developed and approved. The procedure will be initiated with a call for nominations to all membership in mid-summer. Suggested additions or deletions will go to the Listing Committee for research and study, and these will be presented to the Board at the winter meeting for discussion. A majority approval vote by the Board will be required to make the suggested change to the invasive plant list. These will then be presented to the membership at the Annual Conference.

| Alabama Invasive Plant Council List of Invasive Plants by Cultural Use Categories | | Urban and Interface | Managed Forests | Natural Areas and Parks | Wildlife Habitat/ Food Plots | Rights-of-Way | Aquatic-Wetland / Riparian | Pastures/ Orchards | Rowcrops/ Nurseries |
|---|---|---|---|---|---|---|---|---|---|
| **TREES** | | | | | | | | | |
| tree-of-heaven | *Ailanthus altissima* | 2,0 | 1 | 1 | | 1 | | | |
| silktree | *Albizia julibrissin* | 2,0 | 2 | 1 | | 1 | | | |
| chinaberrytree | *Melia azedarach* | 2,0 | W | 2 | | 2 | | | |
| princesstree | *Paulownia tomentosa* | 1,0 | 2 | 2 | | | | | |
| callery pear "Bradford" * | *Pyrus calleryana* | 2,0 | W | 2 | | 0 | | | |
| **tallowtree** | ***Triadica sebifera*** | 2,0 | 1 | 1 | 1 | | 1 | | |
| **SHRUBS** | | | | | | | | | |
| thorny olive | *Elaeagnus pungens* | 2,0 | 2 | 2 | 2,C | 2,0 | | | |
| autumn olive | *Elaeagnus umbellata* | W,0 | 2 | 1 | C | | | | |
| glossy privet | *Ligustrum lucidum* | W,0 | 2 | 2 | | 2 | | | |
| **Chinese privet** | ***Ligustrum sinense*** | 1,0 | 1 | 1 | 1 | 1 | 2 | 1 | W |
| Bell's honeysuckle | *Lonicera X bella* | W,0 | 2 | 2 | C | 2 | | | |
| Amur honeysuckle | *Lonicera maackii* | W,0 | W | 1 | C | | | | |
| **multiflora rose** | ***Rosa multiflora*** | 2,0 | W | 1 | 1 | 2 | | 1 | |
| **tropical soda apple** | ***Solanum viarum*** | | W | 2 | W | W | | 1 | |
| **VINES** | | | | | | | | | |
| Chinese yam | *Dioscorea oppositifolia* | 2,0 | 2 | 1 | | 2 | 2 | | |
| English ivy | *Hedera helix* | 1,0 | 2 | 1 | | | | | |
| Japanese honeysuckle | *Lonicera japonica* | 1,0 | 1 | 1 | C | 2 | 1 | | |
| **Japanese climbing fern** | ***Lygodium japonicum*** | 2 | 1 | 1 | 2 | | 1 | | |
| **kudzu** | ***Pueraria montana var. lobata*** | 1 | 1 | 1 | 1,C | 1 | | 1 | |
| Chinese wisteria | *Wisteria sinensis* | 1,0 | 2 | 1 | | 1 | | | |
| **GRASSES, GRASS-LIKES, AND CANES** | | | | | | | | | |
| giant reed | *Arundo donax* | W,0 | | W | | 2 | W | | |
| **cogongrass** | ***Imperata cylindrica*** | W | 1 | 1 | 1 | 1 | 1 | 1 | W |
| Nepalese browntop, Japanese stiltgrass | *Microstegium vimineum* | 2 | 1 | 1 | | 1 | 1 | | |
| torpedo grass | *Panicum repens* | 1 | | 2 | | 2 | 2 | 1 | |
| golden bamboo | *Phyllostachys aurea* | 2,0 | 2 | 2 | | 1 | | | |
| Johnsongrass | *Sorghum halepense* | 2 | 2 | 2 | 1 | 1 | | 1,C | 1 |
| **FORBS (Broadleaf Plants)** | | | | | | | | | |
| nodding plumeless thistle, musk thistle | *Carduus nutans* | | | 2 | | 1 | | 1 | |
| elephant ears, coco yam | *Colocasia esculenta* | 2,0 | | | | | 2 | | |
| tropical spiderwort, benghal dayflower | *Commelina benghalensis* | | W | | | W | W | | 2 |
| hairy crabweed, mulberry weed | *Fatoua villosa* | 2 | | | | | | | 2 |
| shrubby lespedeza | *Lespedeza bicolor* | | 2 | 2 | C | 2,C | | | |
| Chinese lespedeza | *Lespedeza cuneata* | 2 | 2 | 2 | C | 2,C | | 2,C | |
| purple loosestrife* | *Lythrum salicaria* | | | 2 | | | 2 | | |
| Asiatic dewflower, wartremoving herb | *Murdannia keisak* | | | | W | | 2 | | |
| chamber bitter | *Phyllanthus urinaria* | 1 | | W | W | W | W | 2 | W |
| sicklepod, Java-bean | *Senna obtusifolia* | 2 | 1 | 2 | 1 | 2 | | | 1 |
| blessed milkthistle | *Silybum marianum* | | | 2 | | | | 2 | |
| **AQUATIC and WETLAND PLANTS** | | | | | | | | | |
| **alligatorweed** | ***Alternanthera philoxeroides*** | W | | 1 | 1 | | 1 | | 1 |
| common water hyacinth | *Eichhornia crassipes* | W | | | | | 1 | | |
| **hydrilla, waterthyme** | ***Hydrilla verticillata*** | W | | | | | 1 | | |
| parrot feather watermilfoil | *Myriophyllum aquaticum* | W | | | | | 1 | | |
| **Eurasian water milfoil, spike watermilfoil** | ***Myriophyllum spicatum*** | W | | | | | 1 | | |
| common reed* (grass) | *Phragmites australis* | W | | | | | 1 | | |
| water lettuce | *Pistia stratiotes* | W | | | | | 1 | | |
| giant salvinia, kariba-weed | *Salvinia molesta* | W | | | | | 1 | | |
| **Watch list A: Recently appearing in Alabama as free living infestations** | | | | | | | | | |
| garlic mustard (forb) | *Alliaria petiolata* | W | W | W | | W | | | |
| hen's eyes, coralberry (forb) | *Ardisia crenata* | W | W | W | | | | | |
| bushkiller (vine) | *Cayratia japonica* | W | | | | | | | 2 |
| Oriental bittersweet (vine) | *Celastrus orbiculatus* | W,0 | 2 | W | | | | | |
| Canada thistle (forb) | *Cirsium arvense* | | | 2 | | 2 | | W | |
| bull thistle (forb) | *Cirsium vulgare* | | | | | W | | W | |
| water yam (vine) | *Dioscorea alata* | W,0 | | W | | | W | | |
| air yam (vine) | *Dioscorea bulbifera* | W,0 | | W | | | W | | |
| Japanese privet (shrub) | *Ligustrum japonicum* | W,0 | 2 | W | | W | W | | |
| Morrow's honeysuckle (shrub) | *Lonicera morrowii* | W,0 | W | W | | W | | | |
| Beale's barberry (shrub) | *Mahonia bealei* | 2,0 | W | W | C,W | | | | |
| nandina, sacred bamboo* (shrub) | *Nandina domestica* | W,0 | W | 2 | | | W | | |
| Japanese knotweed (shrub) | *Polygonum cuspidatum* | | W | W | | W | | | |
| Macartney rose (shrub) | *Rosa bracteata* | W | W | W | | | | 2 | |
| Cherokee rose (shrub) | *Rosa laevigata* | W | W | W | | W | | | |
| **Watch list B: Invasive in adjacent states or planted in Alabama** | | | | | | | | | |
| Chinese silvergrass, silverplume grass* (grass) | *Miscanthus sinensis* | 0 | W | W | | | | | |
| wetland nightshade, scrambling nightshade (shrub) | *Solanum tampicense* | | | W | | | W | | |

0 = Ornamental
C = Crop
W= Watch
1 = Extensive and dense infestations in AL or severe invasive in an adjacent state
2 = Scattered and localized infestations in AL
Bold indicates Alabama's Worst 10
* Invasiveness may vary by subspecies and variety.

## The Purpose and Objectives for Listing and Categorizing Invasive Plants in Alabama

**The intent of this list is to:**

1. Rank plants based on their invasive characteristics;
2. Foster early detection of invasive plants so that landowners, managers, and stewards can implement a rapid response to prevent them from becoming established and spreading;
3. Educate the general public, resource managers, landowners, and plant growers in an effort to eliminate the use of invasive plants in landscaping, restoration, and enhancement projects.

This list has no regulatory authority but provides useful information to help guide agencies, private landowners, and water managers in making responsible decisions about plant use and management decisions. The Council acknowledges that most introduced species are harmless. However, it also stresses that many species do escape cultivation, pasturage, landscaping, and water gardens and have the potential to spread and become ecological disasters.

## Criteria for Evaluating Plant Species for Invasiveness in Alabama

**Category 1**:

1. The plant species is non-native to Alabama.
2. The plant has the potential for rapid growth, high seed or propagule production and dissemination, and establishment in natural communities or in managed areas where it is not desired.
3. The plant persists in free living infestations (without cultivation).
4. The plant is widespread in Alabama or is at least common in a region or habitat type(s) in the state.
5. It occurs in dense stands of numerous individuals in minimally managed areas or in managed areas where it is not desired.
6. It is able to out-compete other species in the plant community, thereby impacting native plant biodiversity and/or ecosystem function.

**Category 2**:

7. The plant meets criteria 1-3.
8. It occurs as localized infestations within one or more habitat or land-water use types across the state.
9. It occurs as scattered individuals within at least one habitat or land-water use type.

**Watch list A**:

10. The plant meets criteria 1-3.
11. The plant has recently appeared as free living populations within Alabama, or
12. It is invasive in nearby states but its status in Alabama is unknown or unclear, and/or
13. It has the potential, based on its biology and its colonization history in the Southeast and elsewhere, to become highly invasive in Alabama.

**Watch list B**:

14. The plant meets criteria 1-2.
15. The species is planted in Alabama.
16. The plant has a documented history of invasiveness in other areas of the Southeast and/or is listed by the Global Invasive Species Program as a world-class invasive plant for habitats similar to those in the Southeast.

## Alabama Invasive Plant Council's List of Alabama's Invasive Plants by Cultural Use Categories

**The Importance of this Type of Listing**

The invasive plant listing approach used by ALIPC makes transparent the inter-relationships and interactions between invasive plants among land-use and water-use sectors. It shows both the invaded categories of lands and waters that incur productivity and diversity losses, and the continued use and establishment of some of these plants, by other sectors. This starkly portrays the invasive plant dilemma that plagues our society. The spreadsheet indicates that research and development is needed to identify and produce alternative species, in adequate supplies, so that invasives will not be needed or used. It is also a warning to managers regarding those plants they may have traditionally planted that can impact neighbors for perpetuity. Finally, this type of listing reveals where education is needed and those categories of land-use and water-use that require the most focused efforts. The developing watch lists are essential in this scheme to alert the early detection and rapid response efforts to prevent entry and spread, the recognized wisest approach to management of non-native invasive plants. Engagement of the entire membership of the Alabama Invasive Plant Council and that collective information base through email has been invaluable to this process. Major hurdles in understanding other's views and appropriately communicating opposing views have been met and overcome to this point in creating the list. These 'lessons learned' and the Council's several forums should continue to provide the context for progress towards a broader understanding and assessment of the problems, and cooperative strategies for addressing, the collective threat of invasive plants..


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