

## INVASIVE EXOTIC PEST PLANTS IN TENNESSEE

## TENNESSEE EXOTIC PEST PLANT COUNCIL

REVIEW COMMITTEE: BRIAN BOWEN, KRIS JOHNSON, SCOTT FRANKLIN, GEOFF CALL, AND  
MICHELE WEBBER

*Tennessee Department of Environment and Conservation Division of Natural Heritage, 14<sup>th</sup> Floor L & C Tower,  
401 Church Street, Nashville, TN 37243-0447*

*Great Smoky Mountains National Park, 107 Park Headquarters Road, Gatlinburg, TN 37738*

*The University of Memphis, Memphis, TN 38152*

*Arnold Engineering and Development Center, Tullahoma, TN 37388-9700*

*Stones River National Battlefield, 3501 Old Nashville Highway, Murfreesboro, TN 37129*

**ABSTRACT**—The Tennessee Exotic Pest Plant Council has produced this list of invasive exotic plants to serve as a guide for land managers in making responsible decisions about plant use and management decisions. The purposes of this list are to: 1) identify introduced plant species that are invasive or may become invasive and cause damage to native plant communities in Tennessee; 2) rank exotic plants based on their invasive characteristics; 3) foster early detection of these plants; and 4) educate the general public and resource managers in an effort to eliminate the use of invasive exotics in landscaping, restoration, and enhancement projects.

The Tennessee Exotic Pest Plant Council (TN-TPPC) first published the Invasive Exotic Pest Plants in Tennessee list in February 1995. That list was initiated from the “introduced taxa” portion of the *Checklist of the Vascular Plants of Tennessee* (Wofford and Kral, 1993). Sufficient new information has been collected to warrant this first revision.

Introduced plant species are those not native to a region. They are referred to as exotics. Most introduced species are harmless. However, many species do naturalize and have the potential to spread and negatively impact plant communities. Invasive exotic plants usually exhibit some of the following characteristics: produce many small seeds and begin reproducing within their first few years; can reproduce both by seed and vegetative growth; have no special seed germination requirements; and have long flowering and fruiting periods (Randall and Marinelli, 1996). The ecological impacts of invasive exotics may include: reduction of biodiversity; loss of endangered species and their habitats; loss of habitat and food sources for wildlife; and disruption of native plant-animal associations (Westbrooks, 1998).

The list was prepared to provide useful information to help guide agencies and private landowners in making responsible decisions about plant use and management decisions. It is meant for use as a management tool; it has no regulatory authority. The plants are ranked in order of threat to natural communities. It is recommended that Rank 1 and Rank 2 category species be controlled and managed in the early stages of detection when possible. The “Lesser Threat” and “Watch List” category species may become problems in the future and should be monitored. Some species on the “Watch List” are severe threats elsewhere, but have not yet been reported in Tennessee (Kentucky Exotic Pest Plant Council; Virginia Native Plant Society).

## METHODS

The development of the original list in 1995 included reviews by individuals who are familiar with the flora of their region, including professional and amateur botanists, ecologists, and resource managers. All comments were considered, and a consensus approach was accepted.

This revision followed a similar review process; however, a second step was initiated to review the plant list on a regional scale. First, the list was sent to professional and amateur botanists, ecologists, and resource managers for review and recommendations, including additions, deletions, or changes to current species ranking. Working subcommittees representing the three historical Grand Divisions of Tennessee were established: West (Mississippi River Valley and the Coastal Plain), Middle (Highland Rim and Central Basin), and East (Cumberland Plateau, Valley and Ridge, and the Appalachian Mountains) (Chester and Ellis, 1989). The subcommittees reviewed the 1995 list, considered all reviewers’ comments, consulted the *Atlas of Tennessee Vascular Plants* (Chester et al., 1993, 1997), and made their recommendations to the TN-EPPC Review Committee.

The Review Committee, which also was representative of the Grand Divisions, made final additions, deletions, and changes in the species ranking based on consensus. Additions to the list include species discovered in Tennessee since 1995 that have been reported to cause ecological damage (Chester et al., 1997), species known to cause ecological damage elsewhere and are considered to be potential threats (Schwartz, 1999), and species that may have been overlooked during development of the 1995 list.

Some plants are more invasive in one part of the state than in others, so the rankings are based on overall invasiveness across the state. This revision of the Invasive Exotic Pest Plants in Ten-

nese list meets the goal of providing useful information to help guide agencies and private landowners in making responsible decisions about plant use and management decisions. The list has no regulatory authority.

Kartesz (1999) is the authority for nomenclature and authorship. Common names include those given by Kartesz.

### RANK 1

*Severe Threat.* Exotic plant species that possess characteristics of invasive species and spread easily into native plant communities and displace native vegetation. Includes species that are or could become widespread in Tennessee.

Scientific Name	Common Name
<i>Ailanthus altissima</i> (P. Mill.) Swingle	Tree-of-heaven
<i>Albizia julibrissin</i> Durazz.	Mimosa, silktree
<i>Alliaria petiolata</i> (Bieb.) Cavara and Grande	Garlic-mustard
<i>Celastrus orbiculata</i> Thunb.	Asian bittersweet
<i>Dioscorea oppositifolia</i> L.	Air-potato, Chinese yam
<i>Elaeagnus pungens</i> Thunb.	Thorny-olive
<i>Elaeagnus umbellata</i> Thunb.	Autumn-olive
<i>Euonymus fortunei</i> (Turcz.) Hand.-Maz.	Winter-creeper
<i>Hedera helix</i> L.	English-ivy
<i>Lespedeza cuneata</i> (Dum.-Cours.) G. Don	Chinese bush-clover
<i>Ligustrum sinense</i> Lour.	Chinese privet
<i>Ligustrum vulgare</i> L.	European privet
<i>Lonicera fragrantissima</i> Lindl. and Paxton	Sweet-breath-of-spring
<i>Lonicera japonica</i> Thunb.	Japanese honeysuckle
<i>Lonicera maackii</i> (Rupr.) Herder	Amur honeysuckle
<i>Lonicera morrowii</i> Gray	Morrow's honeysuckle
<i>Lonicera tatarica</i> L.	Tartarian honeysuckle, twin-sisters
<i>Lonicera x bella</i> Zabel	Bush honeysuckle
<i>Lythrum salicaria</i> L. [all varieties and cultivars]	Purple loosestrife
<i>Microstegium vimineum</i> (Trin.) A. Camus	Nepalese browntop
<i>Myriophyllum spicatum</i> L.	Eurasian water-milfoil
<i>Paulownia tomentosa</i> (Thunb.) Sieb. and Zucc. ex Steud.	Princesstree
<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	Common reed
<i>Polygonum cuspidatum</i> Seib. and Zucc.	Japanese knotweed, Japanese bamboo
<i>Pueraria montana</i> var. <i>lobata</i> (Willd.) Malsen and S. Almeida	Kudzu
<i>Rosa multiflora</i> Thunb. ex Murr	Multiflora rose, rambler rose
<i>Solanum viarum</i> Dunal	Tropical soda-apple
<i>Sorghum halepense</i> (L.) Pers.	Johnson grass
<i>Spiraea japonica</i> L.f.	Japanese meadowsweet

### RANK 2

*Significant Threat.* Exotic plant species that possess characteristics of invasive species but are not presently considered to spread as easily into native plant communities as those species listed as Rank 1.

Scientific Name	Common Name
<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Alligator-weed
<i>Artemisia vulgaris</i> L.	Mugwort, common worm-wood
<i>Arthraxon hispidus</i> (Thunb.) Makino	Small carp grass, hairy joint-grass
<i>Berberis thunbergii</i> DC.	Japanese barberry
<i>Bromus commutatus</i> Schrad.	Meadow brome
<i>Bromus japonicus</i> Thunb. ex Murr.	Japanese brome
<i>Bromus secalinus</i> L.	Rye brome
<i>Bromus tectorum</i> L.	Thatch brome, cheat grass
<i>Carduus nutans</i> L.	Nodding plumeless-thistle
<i>Centaurea biebersteinii</i> DC.	Spotted knapweed
<i>Cirsium arvense</i> L. (Scop.)	Canadian thistle
<i>Cirsium vulgare</i> (Savi) Ten.	Bull thistle
<i>Clematis terniflora</i> DC.	Sweet autumn virgin's-bower, leatherleaf clematis
<i>Conium maculatum</i> L.	Poison hemlock
<i>Coronilla varia</i> L.	Purple crown-vetch
<i>Daucus carota</i> L.	Wild carrot, Queen Anne's-lace
<i>Dipsacus fullonum</i> L.	Fuller's teasel
<i>Euonymus alata</i> (Thunb.) Sieb.	Burning bush, winged spindle-tree
<i>Hesperis matronalis</i> L.	Dame's rocket, mother-of-the-evening
<i>Hydrilla verticillata</i> (L.f.) Royle	Hydrilla, water-thyme
<i>Lespedeza bicolor</i> Turcz.	Bicolor lespedeza, two-color bush-clover
<i>Ligustrum japonicum</i> Thunb.	Japanese privet
<i>Lolium arundinaceum</i> (Schreb.) S. J. Darbyshire	Tall rye grass
<i>Lolium pratense</i> (Huds.) S. J. Darbyshire	Meadow rye grass
<i>Lysimachia nummularia</i> L.	Moneywort, creeping-Jenny
<i>Mahonia bealei</i> (Fortune) Carriere	Beale's Oregon-grape
<i>Melilotus officinalis</i> (L.) Lam.	Yellow [and white] sweet clover[s]
<i>Miscanthus sinensis</i> Anders.	Zebra grass, Chinese silver grass
<i>Murdannia keisak</i> (Hassk.) Hand.-Maz.	Wart-removing-herb
<i>Myriophyllum aquaticum</i> (Vell.) Verdc.	Parrot's-feather, water milfoil
<i>Nandina domestica</i> Thunb.	Nandina, sacred-bamboo
<i>Rorippa nasturtium-aquaticum</i> (L.) Hayek	Watercress
<i>Polygonum caespitosum</i> Blume	Bunchy knotweed, oriental lady's-thumb

<i>Populus alba</i> L.	White poplar
<i>Potamogeton crispus</i> L.	Curly pondweed
<i>Setaria faberi</i> R.A.W. Herrm.	Nodding foxtail-grass, Japanese bristle grass
<i>Setaria italica</i> (L.) P. Beauv.	Millet, Italian bristle grass
<i>Setaria pumila</i> (Poir.) Roem. and Schult.	Yellow bristle grass
<i>Setaria viridis</i> (L.) P. Beauv.	Green bristle grass
<i>Torilis arvensis</i> (Huds.) Link	Spreading hedge-parsley
<i>Tussilago farfara</i> L.	Colt's-foot
<i>Verbascum thapsus</i> L.	Common mullein
<i>Vicia sativa</i> L.	Garden vetch
<i>Vinca minor</i> L.	Lesser periwinkle
<i>Wisteria floribunda</i> (Willd.) DC.	Japanese wisteria
<i>Wisteria sinensis</i> (Sims) DC.	Chinese wisteria
<i>Xanthium strumarium</i> L.	Common cocklebur, rough cocklebur

## RANK 3

*Lesser Threat.* Exotic plant species that spread in or near disturbed areas, and are not presently considered a threat to native plant communities.

Scientific name	Common Name
<i>Allium vineale</i> L.	Field garlic, crow garlic
<i>Arundo donax</i> L.	Giant-reed, elephant grass
<i>Bromus catharticus</i> Vahl	Bromegrass, rescue grass
<i>Bromus inermis</i> Leyss.	Smooth brome
<i>Broussonetia papyrifera</i> (L.) L'Her. ex Vent.	Paper-mulberry
<i>Buglossoides arvensis</i> (L.) I. M. Johnston	Corn-gromwell
<i>Cardiospermum halicacabum</i> L.	Balloonvine, love-in-a-puff
<i>Centaurea cyanus</i> L.	Bachelor's button, garden cornflower
<i>Cichorium intybus</i> L.	Chicory
<i>Egeria densa</i> Planch.	Brazilian elodea, Brazilian-waterweed
<i>Elaeagnus angustifolia</i> L.	Russian-olive
<i>Eschscholzia californica</i> Cham.	California-poppy
<i>Fatoua villosa</i> (Thunb.) Nakai	Hairy crabweed
<i>Glechoma hederacea</i> L.	Gill-over-the-ground, ground-ivy
<i>Iris pseudacorus</i> L.	Pale-yellow iris
<i>Kummerowia stipulacea</i> (Maxim.) Makino	Korean-clover
<i>Kummerowia striata</i> (Thunb.) Schindl.	Japanese-clover
<i>Leucanthemum vulgare</i> Lam.	Ox-eye daisy
<i>Melia azedarach</i> L.	China-berry
<i>Ornithogalum umbellatum</i> L.	Star of Bethlehem, sleepy-dick
<i>Pastinaca sativa</i> L.	Wild parsnip
<i>Polygonum persicaria</i> L.	Lady's-thumb
<i>Rubus phoenicolasius</i> Maxim.	Wine raspberry, wineberry

<i>Senna obtusifolia</i> (L.) H. S. Irwin and Barneby	Coffeeweed, sicklepod senna
<i>Tragopogon dubius</i> Scop.	Meadow goat's-beard
<i>Tribulus terrestris</i> L.	Puncturevine
<i>Urtica dioica</i> L.	Stinging nettle
<i>Xanthium spinosum</i> L.	Spiny cocklebur

## WATCH LIST A

Exotic plant species that are severe problems in surrounding states but have not been reported in Tennessee

<i>Ampelopsis brevipedunculata</i> (Maxim.) Trautv.	Amur peppervine
<i>Imperata cylindrica</i> (L.) Beauv.	Cogon grass
<i>Polygonum perfoliatum</i> L.	Mile-a-minute, Asiatic tear-thumb
<i>Rhamnus cathartica</i> L.	European buckthorn
<i>Rottboellia cochinchinensis</i> (Lour.) W. D. Clayton	Itch grass
<i>Salvinia molesta</i> Mitchell	Aquarium water-moss, kariba-weed
<i>Setaria pumila</i> ssp. <i>pallidifusca</i> (Schumacher) B. K. Simon	Cattail grass
<i>Solanum sisymbriifolium</i> Lam.	Sticky nightshade
<i>Triadica sebifera</i> (L.) Small	Chinese tallowtree

## WATCH LIST B

Exotic plants that naturalize and may become a problem in the future. At this time more information is needed, and there is no consensus about their status.

Scientific Name	Common Name
<i>Agrostis stolonifera</i> L.	Weeping love grass, spreading bent
<i>Alnus glutinosa</i> (L.) Gaertn.	Sticky alder, European alder
<i>Bromus hordeaceus</i> L.	Soft brome
<i>Bromus sterilis</i> L.	Poverty brome
<i>Buddleja davidii</i> Franch.	Orange-eye butterfly-bush
<i>Bupleurum rotundifolium</i> L.	Hound's-ear, hare's-ear
<i>Cosmos bipinnatus</i> Cav.	Garden cosmos
<i>Cosmos sulphureus</i> C Cav.	Sulphur cosmos
<i>Dipsacus laciniatus</i> L.	Cutleaf teasel
<i>Echium vulgare</i> L.	Common viper's-bugloss
<i>Frangula alnus</i> P. Mill.	Glossy false buckthorn
<i>Hibiscus syriacus</i> L.	Rose-of-Sharon
<i>Hypericum perforatum</i> L.	Goatweed, common St. John's-wort
<i>Mentha spicata</i> L.	Spearmint
<i>Mentha x piperita</i> (pro sp.) L.	Peppermint
<i>Muscari botryoides</i> (L.) Mill.	Common grape-hyacinth
<i>Muscari neglectum</i> Guss. ex Ten.	Starch grape-hyacinth
<i>Najas minor</i> All.	Brittle waternymph
<i>Phalaris canariensis</i> L.	Common canary grass
<i>Pyrus calleryana</i> Dcne.	Bradford pear

<i>Rhodotypos scandens</i> (Thunb.)	Makino Jetbead
<i>Senecio vulgaris</i> L.	Ragwort, old-man-in-the-spring
<i>Setaria verticillata</i> (L.) P. Beauv.	Bur-foxtail, rough bristle grass
<i>Solanum dulcamara</i> L.	Bittersweet, climbing night-shade
<i>Stachys floridana</i> Shuttlew. ex Benth.	Florida hedge-nettle

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