

# Missouri Invasive Plant Task Force (MoIP)

## Reviewer Guidelines for Missouri Invasive Plant Assessment

**Region of Expertise in Missouri:** Please complete species assessments only for the natural division(s) of Missouri with which you are strongly familiar. The assessment divisions are based on a modification of the [Natural Divisions of Missouri](#), with the Springfield Plateau section excluded from the Ozark Division and merged with the Osage Plains division due to the floristic similarities of the Osage Plains and Springfield Plateau. Metropolitan/developed areas are not assessed separately, and observations from these areas should be attributed to the division in which they occur. The impact rank will indicate if a species is only known to be invasive in developed and/or disturbed areas within a natural division.

**Regional Assessments** from neighboring states can be provided based on observations from the broader region with which Missouri shares ecological and climatic attributes. The identification of emerging invasive species that have already exhibited invasive attributes in neighboring states is an important assessment objective.

**Species Expertise:** Only provide assessments for a species if you are able to make a well-informed assessment. Simply leave cells blank in the assessment worksheet for unassessed species. It is expected that most reviewers will not have sufficiently comprehensive knowledge of a regional flora to rank all species on the list. It is also acceptable to provide ranks for only certain categories within a region. For instance, a reviewer may feel confident with their assessment of impact and distribution, but uncertain of the current trend in distribution and abundance. In such an instance, the latter category could be left blank. This is a group effort and your contribution is greatly appreciated.

**Each species assessed should be given an independent rank for the following three categories:**

**1). Impact:** How severe is the current impact of the species on natural communities in the Missouri division or other region of expertise?\*

1. Severe ecological damage in natural communities: *capable of becoming dominant, altering ecosystem conditions (e.g. light availability, prescribed fire fuel conditions, soil chemistry), plant community structure, and/or species composition, leading to localized extirpation of native plant species - e.g. Amur honeysuckle (*Lonicera maackii*), sericea lespedeza (*Lespedeza cuneata*).*
2. Moderate ecological damage in natural communities: *capable of becoming abundant, causing displacement and reduced abundance, but seldom localized extirpation, of native plant species – e.g. multiflora rose (*Rosa multiflora*), beefsteak plant (*Perilla frutescens*).*
3. Low impact in natural communities: *present, but with minimal impacts on native plant species composition and abundance – e.g. Deptford pink (*Dianthus armeria*), salsify (*Tragopogon dubius*).*
4. Restricted to disturbed and/or developed areas: *occurs in urban/suburban developed areas, fallow fields, rights-of-way, or margins of natural communities, but does not invade intact natural communities – e.g. Chicory (*Cinchorium intybus*), common soapwort (*Saponaria officinalis*).*

\* Reviewers are encouraged to rank species for multiple MO natural divisions and the Regional Assessment columns if they have familiarity with the species from multiple natural divisions and/or from elsewhere in our broader region. For instance, a reviewer might rank a species as currently being restricted to disturbed areas in the Missouri Ozarks, yet know from work in adjacent states that the species is capable of severe ecological damage in natural communities.

**2). Current Abundance:** Estimate the species current abundance in Missouri division or region of expertise. \*\*

- A. High: greater than 1000 populations
- B. Moderate: 100 to 1000 populations
- C. Low: 10-100 populations
- D. Trace: Fewer than 10 populations
- E. Absent

\*\* Abundance in this assessment refers to an estimate of the number of naturalized (i.e. occurring outside of cultivation) populations of any size within a Missouri division or other region of expertise.

**3). Trend in Distribution and Abundance:** Based on observations and regional trends over the past 10-20 years, estimate how rapidly the species range will expand to form new occurrences throughout the Missouri division or region of expertise over the next 10 years?

- +++ Rapid increase: estimated to increase by more than 75%
- ++ Moderate increase: estimated to increase by 25-75%
- + Gradual increase: estimated to increase by up to 25%
- = Stable/Decreasing†

†Although it may seem hard to imagine any invasive species actually decreasing, this is a possibility. For instance, between rose-rose-tite disease and eventual spread of the rose-seed chalcid wasp (*Megastigmus aculeatus* var. *nigroflavus*), some research has suggested that *Rosa mutliflora* will eventually decrease in abundance within our region. ([Amrine, J.W. 2002.](#))

## Spreadsheet Structure Explanation & Entry Instructions

**Saving your assessment:** The spreadsheet is named “Missouri Invasive Plant Assessment 2017 Last Name, First Name.” Please save your assessment with your last and first name in the file name (e.g. “Missouri Invasive Plant Assessment 2017 Smith, John”) and return via email to [info@moinvasives.org](mailto:info@moinvasives.org).

**Scientific vs. Common Names:** The accompanying spreadsheet includes two separate worksheets for invasive species assessments. Both worksheets have identical fields including scientific name, scientific name synonyms, common name and alternate common names. Species are sorted by scientific name in the first worksheet as opposed to common name in the second worksheet. **Please complete all of your assessments in either the scientific name or common name worksheet, but not mixed among the two.**

**Locked Cells:** All spreadsheet cells other than those for assessment rankings and comments are locked to avoid alteration of cell contents and sorting, which could complicate the compilation of individual assessments to formulate final statewide and divisional assessments.

# Spreadsheet Column Definitions

## Nomenclature and Synonymy:

- **Scientific Name, Synonym1, and Synonym2:** These fields are hyperlinked to the scientific name page in the MBG Tropicos database, which was chosen as the authority for current scientific nomenclature and synonymy.
- **Family Scientific Name & Family Common Name:** The source is the MBG Tropicos database.
- **Common Name:** The USDA PLANTS database was chosen as the source for the primary common name.
- **Alternate Common Names:** These alternate common names were sourced Tropicos, MBG Plant Finder, Invasive.org, Plants for a Future (PFAF), and Wikipedia.

**Invasive Species Resources: NOTE - Species distribution maps were included to consolidate species information, but reviewer assessment should be based on firsthand observation.** Species distribution maps often grossly underestimate true distributions, particularly for rapidly spreading invasive species. If assessments of distribution could be adequately surmised from available distribution maps, then there would be no need for this aspect of the assessment.

- **Abbreviation:** The USDA PLANTS database alphanumeric abbreviation. Some reviewers may be familiar with these, but their primary use here is to shorten the length of content in the subsequent fields.
- **USDA PLANTS:** Hyperlinks to USDA PLANTS database species profile pages.
- **BONAP Map:** Hyperlinks to BONAP (Biota of North America Program) species distribution maps.
- **Invasive.org-Subject Page and Images:** Hyperlinks to Invasive.org subject and image pages, respectively.
- **EDDMapS:** Hyperlinks to Early Detections and Distribution Mapping System species distribution maps. Reviewers are encouraged to improve the quality of our knowledge of invasive species distributions by contributing to the Early Detections and Distribution Mapping System ([EDDMapS](#)).

## Noxious Listings:

- **Federal Noxious Weed and State Noxious Weed Lists:** These fields designate whether the species is a federal noxious weed and/or included on any state noxious weed listings. **NOTE – Noxious weed laws are typically based on threats to agricultural landscapes and not natural communities. These fields consolidate species information, but reviewer assessment should be based on firsthand observation**

## State Lists and Laws:

- These fields designate whether a species has been included in invasive plant lists and/or invasive plant laws in states neighboring Missouri and/or included in the Midwest Invasive Plant Network (MIPN). **NOTE – These fields consolidate species information, but reviewer assessment should be based on firsthand observation**

## **Reviewer Assessments: (ENTER YOUR ASSESSMENT HERE)**

- These fields include drop-down lists for assessment of impact, current distribution, and trend in distribution and abundance, in addition to a section for entry of any additional comments that a reviewer may wish to provide, for each species in the assessment, with separate sections for each Missouri division or region of expertise.