# NEW YORK
## TERRESTRIAL VERTEBRATE INVASIVENESS RANKING FORM

| | |
|---|---|
| Scientific name: | Oryctolagus cuniculus |
| Common names: | European Rabbit |
| Native distribution: | Southwestern Europe and Northwest Africa |
| Date assessed: | 6/13/2013 |
| Assessors: | D. Adams |
| Reviewers: | M. Schiavone |
| Date Approved: | Form version date: 3 January 2013 |

**New York Invasiveness Rank:** Moderate (Relative Maximum Score 50.00-69.99)

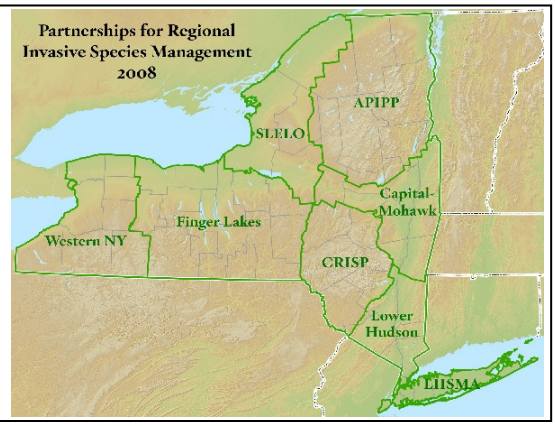
| **Distribution and Invasiveness Rank (***Obtain from PRISM invasiveness ranking form*) | | | |
|---|---|---|---|
| | Status of this species in each PRISM: | Current Distribution | PRISM Invasiveness Rank |
| 1 | Adirondack Park Invasive Program | Not Assessed | Not Assessed |
| 2 | Capital/Mohawk | Not Assessed | Not Assessed |
| 3 | Catskill Regional Invasive Species Partnership | Not Assessed | Not Assessed |
| 4 | Finger Lakes | Not Assessed | Not Assessed |
| 5 | Long Island Invasive Species Management Area | Not Assessed | Not Assessed |
| 6 | Lower Hudson | Not Assessed | Not Assessed |
| 7 | Saint Lawrence/Eastern Lake Ontario | Not Assessed | Not Assessed |
| 8 | Western New York | Not Assessed | Not Assessed |

| **Invasiveness Ranking Summary** (see details under appropriate sub-section) | | Total (Total Answered*) Possible | Total |
|---|---|---|---|
| 1 | Ecological impact | 30 (30) | 21 |
| 2 | Biological characteristic and dispersal ability | 30 (30) | 18 |
| 3 | Ecological amplitude and distribution | 30 (30) | 14 |
| 4 | Difficulty of control | 10 (10) | 6 |
| | Outcome score | 100 (100)[b] | 59[a] |
| | Relative maximum score † | | 59 |
| | New York Invasiveness Rank § | Moderate (Relative Maximum Score 50.00-69.99) | |

* For questions answered "unknown" do not include point value in "Total Answered Points Possible." If "Total Answered Points Possible" is less than 70.00 points, then the overall invasive rank should be listed as "Unknown."
†Calculated as 100(a/b) to two decimal places.
§Very High >80.00; High 70.00−80.00; Moderate 50.00−69.99; Low 40.00−49.99; Insignificant <40.00

### A. DISTRIBUTION (KNOWN/POTENTIAL): Summarized from individual PRISM forms

| A1.1. Has this species been documented in NY? (reliable source; voucher not required) | |
|---|---|
| ☐ | Yes – continue to A1.2 |
| ☒ | No – continue to A2.1; Yes ☐ NA; Yes ☐ USA |
| A1.2. In which PRISMs is it known (see inset map)? | |
| ☐ | Adirondack Park Invasive Program |
| ☐ | Capital/Mohawk |
| ☐ | Catskill Regional Invasive Species Partnership |
| ☐ | Finger Lakes |
| ☐ | Long Island Invasive Species Management Area |
| ☐ | Lower Hudson |
| ☐ | Saint Lawrence/Eastern Lake Ontario |



| | |
|---|---|
| ☐ | Western New York |

Documentation:
Sources of information:

A2.0. Is this species listed on the Federal Injurious Fish and Wildlife list?
☒ Yes – the species will automatically be listed as Prohibited, no further assessment required
☐ No – continue to A2.1

A2.1. What is the likelihood that this species will occur and persist given the climate in the following PRISMs? (obtain from PRISM invasiveness ranking form and/ or Climatch score)

| | |
|---|---|
| Not Assessed | Adirondack Park Invasive Program |
| Not Assessed | Capital/Mohawk |
| Not Assessed | Catskill Regional Invasive Species Partnership |
| Not Assessed | Finger Lakes |
| Not Assessed | Long Island Invasive Species Management Area |
| Not Assessed | Lower Hudson |
| Not Assessed | Saint Lawrence/Eastern Lake Ontario |
| Not Assessed | Western New York |

Documentation:
Sources of information (e.g.: distribution models, literature, expert opinions):

***If the species does not occur and is not likely to survive and reproduce within any of the PRISMs, then stop here as there is no need to assess the species.***

A2.2. What is the current distribution of the species in each PRISM? (obtain rank *from PRISM invasiveness ranking forms*)

| | Distribution |
|---|---|
| Adirondack Park Invasive Program | Not Present |
| Capital/Mohawk | Not Present |
| Catskill Regional Invasive Species Partnership | Not Present |
| Finger Lakes | Not Present |
| Long Island Invasive Species Management Area | Not Present |
| Lower Hudson | Not Present |
| Saint Lawrence/Eastern Lake Ontario | Not Present |
| Western New York | Not Present |

Documentation:
Sources of information:

A2.3. Describe the potential or known suitable habitats within New York. Natural habitats include all habitats not under active human management. Managed habitats are indicated with an asterisk.

| Aquatic Habitats | Wetland Habitats | Upland Habitats |
|---|---|---|
| ☐ Marine | ☐ Salt/brackish marshes | ☒ Cultivated* |
| ☐ Salt/ brackish waters | ☐ Freshwater marshes | ☒ Grasslands/old fields |
| ☐ Freshwater tidal | ☐ Peatlands | ☒ Shrublands |
| ☐ Rivers/streams | ☐ Shrub swamps | ☐ Forests/woodlands |
| ☐ Natural lakes and ponds | ☐ Forested wetlands/riparian | ☐ Alpine |
| ☐ Vernal pools | ☐ Ditches* | ☐ Roadsides* |
| ☐ Reservoirs/impoundments* | ☒ Beaches/or coastal dunes | ☒ Cultural* |

Other potential or known suitable habitats within New York:

Documentation:
Sources of information:

**B. INVASIVENESS RANKING**

*1. ECOLOGICAL IMPACT*

1.1. Impact on Ecosystem Processes and System-wide Parameters (e.g., energy cycle, nutrient and mineral dynamics, light availability, or geomorphological changes (erosion and sedimentation rates).

| | | |
|---|---|---|
| A. | No perceivable impact on ecosystem processes based on research studies, or the absence of impact information if a species is widespread (>10 occurrences in minimally managed areas), has been well-studied (>10 reports/publications), and has been present in the northeast for >100 years | 0 |
| B. | Influences ecosystem processes to a minor degree, has a perceivable but mild influence | 3 |
| C. | Significant alteration of ecosystem processes | 7 |
| D. | Major, possibly irreversible, alteration or disruption of ecosystem processes | 10 |
| U. | Unknown | |

Score 7

Documentation:
Identify ecosystem processes impacted (or if applicable, justify choosing answer A in the absence of impact information)
Can impact native plant populations, reducing density for other grazers as well.
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

1.2. Impact on Natural Habitat

| | | |
|---|---|---|
| A. | No perceived impact; causes no apparent change in native habitat | 0 |
| B. | Influences natural habitat (e.g., reduces the stem density and height of one or more native species in core habitat) | 3 |
| C. | Significantly alters natural habitat (e.g., produces a notable reduction in the population size of one or more native species in core habitat) | 7 |
| D. | Causes major alteration in natural habitat (e.g., results in the extirpation of one or more native species, or changes the community composition in core habitat towards species exotic to the natural community) | 10 |
| U. | Unknown | |

Score 7

Documentation:
Identify type of impact or alteration:
Can eradicate plant species, a few local plant extripations in Australia
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

1.3. Impact on other species or species groups, including cumulative impact of this species on other organisms in the community it invades (e.g., interferes with native predator/ prey dynamics; hybridizes with a native species; hosts a non-native disease which impacts a native species)

| | | |
|---|---|---|
| A. | Negligible perceived impact | 0 |
| B. | Minor impact (e.g. 1 species, <20% population decline) | 3 |
| C. | Moderate impact (e.g. 2-3 species and/ or 20-29% population decline of any 1 species) | 7 |
| D. | Severe impact on other species or species groups (e.g. >3 species and/ or ≥30% population decline of any 1 species) | 10 |
| U. | Unknown | |

Score 7

Documentation:
Identify type of impact or alteration:

can reproduce rto numbers that will affect grazing of other small mammals as well as livestock. Rabbits carry several diseases including tularemia and are well documented vectors impacting native species.
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

| | |
|---|---|
| Total Possible | 30 |
| Section One Total | 21 |

*2. BIOLOGICAL CHARACTERISTICS AND DISPERSAL ABILITY*

2.1. Mode and rate of reproduction

| | | |
|---|---|---|
| A. | No reproduction (e.g. sterile with no sexual or asexual reproduction) | 0 |
| B. | Limited reproduction (e.g. intrinsic rate of increase <10%/ year) | 1 |
| C. | Moderate reproduction (e.g. intrinsic rate of increase between 10-30%/ year) | 2 |
| D. | Abundant reproduction (e.g. intrinsic rate of increase >30%/ year) | 4 |
| U. | Unknown | |

Score: 4

Documentation:
Describe key reproductive characteristics:
4-8 Litters per year
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

2.2. Migratory behavior

| | | |
|---|---|---|
| A. | Always migratory in its native range | 0 |
| B. | Non-migratory or facultative migrant in its native range | 2 |
| U. | Unknown | |

Score: 2

Documentation:
Describe migratory behavior:

Sources of information:

2.3. Biological potential for colonization by long-distance dispersal/ movement.

| | | |
|---|---|---|
| A. | No long-distance dispersal/ movement mechanisms | 0 |
| A. | Adaptations exist for long-distance dispersal, but studies report that most individuals (90%) establish territories within 10 miles of parent or within a distance twice the home range of the parent, and tend not to cross major barriers such as rivers and major roads | 1 |
| B. | Adaptations exist for long-distance dispersal, movement and evidence that offsping often disperse greater than 10 miles of parent or greater than twice the home range of parent and will cross major barriers such as river and major roads | 2 |
| U. | Unknown | |

Score: 0

Documentation:
Identify dispersal mechanisms:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

2.4. Practical potential to be spread by human activities, both directly and indirectly (possible vectors include: commercial sales, deliberate stocking, translocation, rehabilitation, pest control industry, agricultural escapes, pet abandonment and release, etc.)

| | | |
|---|---|---|
| A. | Does not occur | 0 |
| B. | Low (human dispersal to new areas occurs almost exclusively by direct means and is infrequent or inefficient) | 1 |
| C. | Moderate (human dispersal to new areas occurs by direct and indirect means to a moderate extent) | 2 |
| D. | High (opportunities for human dispersal to new areas by direct and indirect means are numerous, frequent, and successful) | 4 |
| U. | Unknown | |

Score: 4

Documentation:
Identify dispersal mechanisms:
Have been established for a food source, entertainment and for fur
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

2.5. Non-living chemical and physical characteristics that increase competitive advantage (e.g., tolerance to various extremes, pH, temperature, fill vacant niche, charismatic species)

| | | |
|---|---|---|
| A. | Possesses no characteristics that increase competitive advantage | 0 |
| B. | Possesses one characteristic that increases competitive advantage | 4 |
| C. | Possesses two or more characteristics that increase competitive advantage | 8 |
| U. | Unknown | |

Score: 0

Documentation:
Evidence of competitive ability:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

2.6. Biological characteristics that increase competitive advantage (e.g., high fecundity, generalist, highly evolved defense mechanisms, behavioral adaptations)

| | | |
|---|---|---|
| A. | Possesses no characteristics that increase competitive advantage | 0 |
| B. | Possesses one characteristic that increases competitive advantage | 4 |
| C. | Possesses two or more characteristics that increase competitive advantage | 8 |
| U. | Unknown | |

Score: 8

Documentation:
Evidence of competitive ability:
Very high reproductive rate, adapting to control methods (disease)
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

2.7. Other species in the family and/ or genus invasive in New York or elsewhere?

| | | |
|---|---|---|
| A. | No | 0 |
| B. | Yes | 2 |
| U. | Unknown | |

Score: 0

Documentation:
Identify species:

Total Possible: 30
Section Two Total: 18

*3. ECOLOGICAL AMPLITUDE AND DISTRIBUTION*

3.1. Current introduced distribution of established populations in the northern latitudes of USA and southern latitude of Canada (e.g., between 35 and 55 degrees)

| | | |
|---|---|---|
| A. | Not known from the northern US or southern Canada | 0 |
| B. | Established as a non-native in 1 northern USA state and/or southern Canadian province | 1 |
| C. | Established as a non-native in 2 or 3 northern USA states and/or southern Canadian provinces | 2 |
| D. | Established as a non-native in 4 or more northern USA states and/or southern Canadian provinces, and/or categorized as a problem species (e.g., "Invasive") in 1 northern state or southern Canadian province | 3 |
| U. | Unknown | |

Score 0

Documentation:
Identify states and provinces:

Sources of information:
- See known introduced range at www.usda.gov, and update with information from states and Canadian provinces.

tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.2. Current introduced distribution of established populations of the species in natural areas in the eight New York State PRISMs (Partnerships for Regional Invasive Species Management)

| | | |
|---|---|---|
| A. | Established in none of the PRISMs | 0 |
| B. | Established in 1 PRISM | 1 |
| C. | Established in 2 or 3 PRISMs | 3 |
| D. | Established in 4 or more PRISMs | 5 |
| U. | Unknown | |

Score 0

Documentation:
Describe distribution:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.3. Number of known, or potential (each individual possessed by a vendor or consumer is a potential release), individual releases and/ or release events (propagule pressure)

| | | |
|---|---|---|
| A. | None | 0 |
| B. | Few releases (e.g., <10 annually) | 2 |
| C. | Regular, small scale releases (e.g., 10-99 annually) | 4 |
| D. | Multiple, large scale (e.g., ≥100 annually) | 6 |
| U. | Unknown | |

Score 0

Documentation:
Describe known or potential releases:

Sources of information:

tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.4. Current introduced population density in northern USA and/ or southern Canada.

| | | |
|---|---|---|
| A. | No known populations established | 0 |
| B. | Low to moderate population density (e.g., ≤1/4 or < to 1/2 native population density) | 1 |
| C. | High or irruptive population density (e.g., ≥1/2 native population density) | 2 |
| U. | Unknown | |

Score 0

Documentation:
Describe population density:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.5. Number of habitats the species may invade

| | | |
|---|---|---|
| A. | Not known to invade any natural habitats | 0 |
| B. | Known to occur in 2/ 3 habitats, with at least 1/ 2 natural habitat(s) | 2 |
| C. | Known to occur in 4 or more habitats, with at least 3 natural habitats | 3 |
| U. | Unknown | |

Score 3

Documentation:
Identify type of habitats where it occurs and degree/type of impacts:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.6. Role of anthropogenic (human related) features in establishment (e.g. buildings, roads, agricultural fields, etc)

| | | |
|---|---|---|
| A. | Requires anthropogenic disturbances to establish | 0 |
| B. | May occasionally establish in undisturbed areas but can readily establish in areas with natural or anthropogenic disturbances | 2 |
| C. | Can establish independent of any known natural or anthropogenic disturbances | 3 |
| U. | Unknown | |

Score 3

Documentation:
Identify anthropogenic features:
Agricultural land, urban areas
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

3.7. Climate in native range (e.g., med. to high, ≥5, Climatch score; within 35 to 55 degree latitude; etc.)

| | | |
|---|---|---|
| A. | Native range does not include climates similar to New York | 0 |
| B. | Native range possibly includes climates similar to portions of New York | 4 |
| C. | Native range includes climates similar to those in New York | 8 |
| U. | Unknown | |

Score 8

Documentation:
Describe known climate similarities:
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

| | |
|---|---|
| Total Possible | 30 |
| Section Three Total | 14 |

*4. DIFFICULTY OF CONTROL*

4.1. Re-establishment potential, nearby propagule source, known vectors of re-introduction in vicinity (e.g. biological supplies, pets, game farms, zoos, shooting preserves, connecting corridors, mechanized transportation)

| | | |
|---|---|---|
| A. | No known vectors/ propagule source for re-establishment following removal | 0 |
| B. | Possible re-establishment from 1 vector/ propagule source following removal | 1 |
| C. | Likely to re-establish from 2-3 vectors/ propagule sources following removal | 2 |
| D. | Strong potential for re-establishment from 4 or more vectors/ propagule sources following removal | 3 |
| U. | Unknown | |

Score: 1

Documentation:
Identify source/ vectors:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

4.2. Status of monitoring and/ or management protocols for species

| | | |
|---|---|---|
| A. | Standardized protocols appropriate to New York State are available | 0 |
| B. | Scientific protocols are available from other countries, regions or states | 1 |
| C. | No known protocols exist | 2 |
| U. | Unknown | |

Score: 1

Documentation:
Describe protocols:
Extensive management and monitoring in Australia
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

4.3. Status of monitoring and/ or management resources (e.g. tools, manpower, travel, traps, lures, ID keys, taxonomic specialists, etc.)

| | | |
|---|---|---|
| A. | Established resources are available including commercial and/ or research tools | 0 |
| B. | Monitoring resources may be available (e.g. partnerships, NGOs, etc) | 1 |
| C. | No known monitoring resources are available | 2 |
| U. | Unknown | |

Score: 1

Documentation:
Describe resources:

Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

4.4. Level of effort required.

| | | |
|---|---|---|
| A. | Management is not required (e.g., species does not persist without repeated human mediated action) | 0 |
| B. | Management is relatively easy and inexpensive; invasive species can be maintained at low abundance causing little or no ecological harm (e.g., 10 or fewer person-hours of manual effort can eradicate a local population in 1 year) | 1 |
| C. | Management requires a major short-term investment, and is logistically and politically | 2 |

challenging; eradication is difficult, but possible (e.g., 100 or fewer person-hours/year of manual effort, or up to 10 person-hours/ year for 2-5 years to suppress a local population)

D. Management requires a major investment and is logistically and politically difficult; eradication may be impossible (e.g., more than 100 person-hours/ year of manual effort, or more than 10 person hours/year for more than 5 years to suppress a local population) 3

U. Unknown

| | |
|---|---|
| Score | 3 |

Documentation:
Identify types of control methods and time required:
Eradication is difficult with such a prolific species, however it has been achived on some islands.
Sources of information:
tsusinvasives.org; animaldiversity.ummz.umich.edu; iucnredlist.org; columbia.edu

| | |
|---|---|
| Total Possible | 10 |
| Section Four Total | 6 |
| **Total for 4 sections Possible** | 100 |
| **Total for 4 sections** | 59 |

## C. STATUS OF GENETIC VARIANTS AND HYBRIDS:

At the present time there is no protocol or criteria for assessing the invasiveness of genetic variants independent of the species to which they belong. Such a protocol is needed, and individuals with the appropriate expertise should address this issue in the future. Such a protocol will likely require data on cultivar fertility and identification in both experimental and natural settings.

Genetic variants of the species known to exist: some domestic rabbits possess genetics from Oryctolagus cuniculus

Hybrids (crosses between different parent species) should be assessed individually and separately from the parent species wherever taxonomically possible, since their invasiveness may differ from that of the parent species. An exception should be made if the taxonomy of the species and hybrids are uncertain, and species and hybrids can not be clearly distinguished in the field. In such cases it is not feasible to distinguish species and hybrids, and they can only be assessed as a single unit.

Hybrids of uncertain origin known to exist:

**References for species assessment:**

tsusinvasives.org;

animaldiversity.ummz.umich.edu;

iucnredlist.org;

columbia.edu

Mitro, S., and H. Krauss. 1993. Rabbit hemorrhagic disease: a review with special reference to its epizootiology. Eur. J. Epidemiol. 9:70−78.

Navarro-Gonzalez, N., Serrano, E., Casas-Díaz, E., Velarde, R., Marco, I., Rossi, L. and Lavín, S. 2010. Game restocking and the introduction of sarcoptic mange in wild rabbit in north-eastern Spain. Animal Conservation 13: 586−591.

Park, A.W. 2012. Infectious disease in animal metapopulations: the importance of environmental transmission. Ecology and Evolution 2(7): 1398-1407.

**Citation:** The New York Terrestrial Vertebrate Invasiveness Ranking Form is an adaptation of the New York Plant Invasiveness Ranking Form. The original plant form may be cited as: Jordan, M.J., G. Moore and T.W. Weldy. 2008. Invasiveness ranking system for non-native plants of New York. Unpublished. The Nature Conservancy, Cold Spring Harbor, NY; Brooklyn Botanic Garden, Brooklyn, NY; The Nature Conservancy, Albany, NY.

**Acknowledgments:** The New York Terrestrial Vertebrate Invasiveness Ranking Form incorporates components and approaches used in several other systems, cited in the references below. Valuable contributions by members of the Invasive Species Council and Invasive Species Advisory Committee were incorporated in revisions of this form. Members of the Office of Invasive Species Coordination's Four-tier Team, who coordinated the effort, included representatives of the New York State Department of Environmental Conservation* (Division of Fish, Wildlife and Marine Resources, Division of Lands and Forests, Division of Water); The Nature Conservancy; New York Natural Heritage Program; New York Sea Grant; Lake Champlain Sea Grant*; New York State Department of Agriculture and Markets (Division of Plant Industry and Division of Animal Industry); Cornell University (Department of Natural Resources and Department of Entomology); New York State Nursery and Landscape Association; New York Farm Bureau; Brooklyn Botanic Garden; Pet Industry Joint Advisory Council*; Trout Unlimited; United States Department of Agriculture Animal and Plant Health Inspection Service* (Plant Protection and Quarantine and Wildlife Services); New York State Department of Transportation; State University of New York at Albany and Plattsburgh; and Cary Institute of Ecosystem Studies. Those organizations listed with an asterisk comprised the Terrestrial Vertebrate Working Group.

**References for ranking form:**

Bomford, M. 2008. Risk Assessment Models for Establishment of Exotic Vertebrates in Australia and New Zealand. Invasive Animals Cooperative Research Centre, Canberra.

Broken Screens: The Regulation of Live Animal Imports in the United States. 2007. Defenders of Wildlife, Washington, DC.

Cooperative Prevention of Invasive Wildlife Introduction in Florida. 2008. The Environmental Law Institute, Washington, DC.

Jordan, M.J., G. Moore and T.W. Weldy. 2008. Invasiveness ranking system for non-native plants of New York. Unpublished. The Nature Conservancy, Cold Spring Harbor, NY; Brooklyn Botanic Garden, Brooklyn, NY; The Nature Conservancy, Albany, New York.

Natural Resources Board Order No. IS-34-06, Invasive Species Identification, Classification and Control. 2008. Wisconsin Department of Natural Resources, Madison Wisconsin.

Preventing Biological Invasions: Best Practices in Pre-Import Risk Screening for Species of Live Animals in International Trade. 2008. Convention of Biological Diversity, Global Invasive Species Programme and Invasive Species Specialist Group of IUCN's Species Survival Commission. University of Notre Dame, Indiana.

Standard Methodology to Assess the Risks From Non-native Species Considered Possible Problems to the Environment. 2005. DEFRA.

Witmer, G., W. Pitt and K. Fagerstone. 2007. Managing Vertebrate Invasive Species. USDA National Wildlife Research Center Symposia, Fort Collins, Colorado.