

2019 Invasive Species Categorization for the Catskill Regional Invasive Species Partnership

This categorization of Invasive Species in the Catskill Regional Invasive Species Partnership (CRISP) attempts to prioritize invasive species based on the ability of CRISP to perform prevention, early detection and control efforts for these invasive species based on the species invasiveness (according to NYS ranking evaluation) and distribution (according to iMapInvasives and expert knowledge).

The Invasive Species Tiers were developed between New York State iMapInvasive staff and the Partnership for Regional Invasive Species Management Coordinators. Each very high, or high, impact invasive species is assigned to the following tiers (See Invasive Species Tiers Table):

Tier 1 Early Detection/Prevention- Highest level of early detection survey efforts. Should conduct detection surveys and assign to appropriate Tier if detected.

1a) Inside Buffer (within 100 miles of PRISM), but not in PRISM

1b) Outside PRISM and Buffer, but close (Eastern North America)

1c) Far outside PRISM and Buffer (not in Eastern North America), but introduction pathway exists.

Tier 2 Eradication – Highest level of early detection response efforts. High impact species with low enough abundance and suitable treatment method available to make eradication feasible within the PRISM. Need delineation surveys to determine extent.

Tier 3 Containment – Target strategic management to slow the spread (e.g. remove outlying and border populations), as likely too widespread for eradication, but many surrounding regions could be at risk if left unattended. Use IPMDAT for plants. Possible eradication candidate only if adequate resources and effective control methods available.

Tier 4 Local Control – Eradication from PRISM not feasible; focus on localized management over time to contain, exclude, or suppress to protect high-priority resources like rare species or recreation assets. Be strategic when deciding if/where to control.

Tier 5 Monitor – Species that need more research, mapping, and monitoring to understand their invasiveness. This includes naturalized species and cultivated-only species that are known to be invasive in other regions but are not yet invasive here. Invasiveness may change with environmental or genetic changes. Should monitor populations on a regular basis to see if they are starting to become invasive and assign to appropriate Tier if invasive infestations detected.

The following table summarize the species according to NYS Rank. Species rank represents assessment of that species' invasiveness in NYS. VH = Very High, H = High, M = Moderate, L = Low, I = Insignificant, U = Unknown.

Tier 1 Species are not known to occur within the PRISM boundary but represent a high potential for spread and establishment if introduced. Goals for these species are Early Detection/Prevention.

Scientific Name	Common Name	NYS Rank
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Aquatic Animals		
<i>Bythotrephes longimanus</i>	Spiny Waterflea	H
<i>Cercopagis pengoi</i>	Fishhook Waterflea	H
<i>Channa argus</i>	Northern Snakehead	H
<i>Dreissena bugensis</i>	Quagga Mussel	H
<i>Hemimysis anomala</i>	Bloody red shrimp	H
<i>Neogobius melanostomus</i>	Round Goby	H

Terrestrial Animals		
<i>Cygnus olor</i>	Mute Swan	H

Insects		
<i>Anoplophora glabripennis</i>	Asian-longhorned Beetle	H
<i>Lycorma delicatula</i>	Spotted lanternfly	H
<i>Sirex noctilio</i>	European wood wasp	H

Aquatic Plants		
<i>Butomous umbellatus</i>	Flowering Rush	H
<i>Egeria densa</i>	Brazilian Waterweed	H
<i>Hydrilla verticillata</i>	Hydrilla	VH
<i>Hydrocharis morsus-ranae</i>	Common Frogbit	VH
<i>Myriophyllum heterophyllum</i>	Broadleaf Watermilfoil	VH
<i>Pistia stratiotes</i>	Water Lettuce	

Terrestrial Plants		
<i>Actinidia arguta</i>	Hardy Kiwi	U-H?
<i>Actinidia polygama</i>	Silver Vine	U-H?
<i>Arthraxon hispidus</i>	Small Carpetgrass; Hairy Joint Grass	H
<i>Brachypodium sylvaticum</i> ssp. <i>sylvaticum</i>	Slender Falsebrome	VH
<i>Corydalis incisa</i>	Incised Fumewort	U-H?
<i>Cytisus scoparius</i>	Scotch Broom	U-H?
<i>Myriophyllum aquaticum</i>	Parrot feather	H
<i>Phellodendron amurense</i>	Amur Corktree; Amur cork tree; Amur cork	H
<i>Photinia villosa</i>	Oriental photinia; Oriental redbtip	u-H?
<i>Pueraria montana</i> var. <i>lobata</i>	Kudzu, Japanese arrowroot	VH
<i>Salix atrocinnerea</i>	Rusty Willow	VH
<i>Salix cinerea</i>	European Gray Willow, Gray Florist's Willow	VH
<i>Salvia glutinosa</i>	Sticky Sage	H

Tier 1 Species Continued

Scientific Name	Common Name	NYS Rank
Terrestrial Plants		
Silphium perfoliatum var. perfoliatum	Cup-plant, Indian cup plant	H
Viburnum dilatatum	Linden Arrowwood	M
Viburnum plicatum	Japanese Snowball	U
Ceratocystis fagacearum	Oak Wilt	

Tier 2 Species are known to occur at currently low population within the PRISM boundary. All are potentially high impact and currently low abundance, with known control measures that make Eradication attainable as a Management Goal.

Scientific Name	Common Name	NYS Rank
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Aquatic Animal		
<i>Cipangopaludina chinensis</i>	Chinese Mysterysnail	VH

Terrestrial Animal		
<i>Sus scrofa</i>	Feral Swine, Wild Boar	VH

Aquatic Plants		
<i>Aldrovanda vesiculosa</i>	Waterwheel plant	U-H?
<i>Cabomba caroliniana</i>	Fanwort; Carolina Fanwort	H
<i>Eichhornia crassipes</i>	Water Hyacinth	U-H?
<i>Ludwigia peploides</i> ssp. <i>glabrescens</i>	Floating Primrose Willow	VH
<i>Nymphoides peltata</i>	Yellow Floating-heart, Yellow floating heart	H

Terrestrial Plants		
<i>Acer pseudoplatanus</i>	Sycamore Maple	H
<i>Akebia quinata</i>	Five-leaf Akebia; Chocolate Vine; Fiveleaf Akebia	M-h?
<i>Ampelopsis brevipedunculata</i>	Porcelain Berry, Amur Pepper-vine, Porcelain-berry, Porcelainberry, Amur peppervine	H
<i>Aralia elata</i>	Japanese Angelica Tree	VH
<i>Cardamine impatiens</i>	Narrowleaf Bittercress, Bushy Rock-cress	H
<i>Carlina vulgaris</i>	Carlina Thistle	U-H?
<i>Clematis terniflora</i>	Japanese Virgin's bower	H
<i>Daphne mezereum</i>	Daphne	U-M-H?
<i>Dipsacus laciniatus</i>	Cut-leaf Teasel; Cutleaf teasel; Cut-leaved teasel	H
<i>Ficaria verna</i> ssp. <i>verna</i>	Lesser celandine, Fig Buttercup	VH
<i>Humulus japonicus</i>	Japanese Hops	H
<i>Miscanthus sinensis</i>	Chinese Silver Grass; Eulalia; Chinese silvergrass; Maiden grass	H
<i>Paulownia tomentosa</i>	Princess Tree, Empress Tree, Royal Paulownia	M
<i>Persicaria perfoliata</i>	Mile-a-minute Weed, Mile-a-minute Vine, Asiatic Tearthumb, Mile a minute weed	H
<i>Reynoutria x bohemica</i> : <i>Fallopia x bohemica</i>	Bohemian knotweed	VH
<i>Rhodotypos scandens</i>	Black Jetbead, Jetbead	M
<i>Rubus phoenicolasius</i>	Wineberry, Japanese Wineberry, Wine Raspberry	VH
<i>Syringa reticulata</i>	Japanese Tree Lilac	U

Tier 3 Species are species which are too high abundance within the PRISM boundary for Eradication to be likely. Management goal is Containment, unless particularly effective control methods or adequate funding sources become available. The IPMDAT tool should be used to assess individual populations for management.

Scientific Name	Common Name	NYS Rank
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Aquatic Animals		
<i>Bithynia tentaculata</i>	Mud Bithynia	H
<i>Corbicula fluminea</i>	Asian Clam	H
<i>Misgurnus anguillicaudatus</i>	Oriental Weatherfish	VH

Terrestrial Animals		
<i>Amyntas agrestis</i>	Crazy Snake Worm; Alabama Jumper	H

Insects		
<i>Adelges piceae</i>	Balsam Woolly Adelgid	U-M?

Aquatic Plants		
<i>Nitellopsis obtusa</i>	Starry Stonewort	U-H?
<i>Trapa natans</i>	Water Chestnut, Water-chestnut	VH

Terrestrial Plants		
<i>Cynanchum louiseae</i>	Black Swallow-wort, Louise's Swallow-wort, Dog-strangling Vine	VH
<i>Euphorbia cyparissias</i>	Cypress Spurge	H
<i>Euphorbia esula</i>	Leafy Spurge, Wolf's Milk	H
<i>Frangula alnus</i>	Glossy Buckthorn, European Buckthorn, Smooth buckthorn	H
<i>Heracleum mantegazzianum</i>	Giant Hogweed	H
<i>Impatiens glandulifera</i>	Policemen's Helmet, Ornamental Jewelweed, Himalayan Balsam, Purple Jewelweed	U-M?
<i>Iris pseudacorus</i>	Yellow Iris, Water-flag, Yellow flag iris, Water flag, Yellow flag	H
<i>Ligustrum obtusifolium</i>	Border Privet	H
<i>Lonicera maackii</i>	Amur Honeysuckle	VH
<i>Lysimachia vulgaris</i>	Garden Loosestrife, Yellow Garden Loosestrife	H

Tier 4 Species are too high abundance for Eradication on a regional scale to be likely even with outside funding sources. Management Strategy for Tier 4 Species is long-term localized Suppression or Containment. Use the IPMDAT to assess individual populations for control.

Scientific Name	Common Name	NYS Rank
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Aquatic Animals		
<i>Carassius auratus</i>	Goldfish	VH
<i>Cyprinus carpio</i>	Common Carp	VH
<i>Dreissena polymorpha</i>	Zebra Mussel	VH
<i>Orconectes rusticus</i>	Rusty Crayfish	H
<i>Petromyzon marinus</i>	Sea Lamprey	M

Insects		
<i>Adelges tsugae</i>	Hemlock Woolly Adelgid	H
<i>Agrilus planipennis</i>	Emerald Ash Borer	VH
<i>Drosophila suzukii</i>	Spotted Wing Drosophila	U-H?
<i>Halyomorpha halys</i>	Brown Marmorated Stink Bug	U-M?
<i>Lymantria dispar</i>	Gypsy Moth	H

Aquatic Plants		
<i>Didymosphenia geminata</i>	Didymo Rock snot	U-H?
<i>Myriophyllum spicatum</i>	Eurasian Water-milfoil; European Water-milfoil; Spike Water-milfoil; Eurasian watermilfoil	VH
<i>Potamogeton crispus</i>	Curly Pondweed; Crisped Pondweed; Curly-leaf pondweed; Curlyleaf pondweed; Crispy-leaved pondweed	H

Terrestrial Plants		
<i>Acer platanoides</i>	Norway Maple	VH
<i>Ailanthus altissima</i>	Tree-of-heaven, Tree of Heaven, Chinese Sumac, Ailanthus, Varnish-tree, Copa-tree	M-h?
<i>Alliaria petiolata</i>	Garlic Mustard	VH
<i>Anthriscus sylvestris</i>	Wild Chervil	H
<i>Artemisia vulgaris</i> var. <i>vulgaris</i>	Mugwort	H
<i>Berberis thunbergii</i>	Japanese Barberry	VH
<i>Celastrus orbiculatus</i>	Oriental Bittersweet; Asian Bittersweet	VH
<i>Centaurea stoebe</i> spp. <i>micranthos</i>	Spotted Starthistle, Spotted Knapweed	H
<i>Cirsium arvense</i>	Canada Thistle, Creeping Thistle	H
<i>Cirsium palustre</i>	European Marsh Thistle	M
<i>Elaeagnus umbellata</i>	Autumn Olive, Autumn-olive	VH
<i>Euonymus alatus</i>	Burning Bush, Winged Euonymus, Winged Burning Bush, Winged Spindletree	VH
<i>Lonicera japonica</i>	Japanese Honeysuckle	VH
<i>Lonicera morrowii</i>	Morrow Honeysuckle, Morrows honeysuckle	VH
<i>Lonicera</i> spp (species unknown)	Honeysuckle (species unknown)	VH

Tier 4 Species Continued

Scientific Name	Common Name	NYS Rank
Terrestrial Plants		
<i>Lonicera tatarica</i>	Tartarian Honeysuckle	VH
<i>Lonicera x bella</i>	Fly Honeysuckle, Showy pink honeysuckle, Bell's honeysuckle	VH
<i>Lonicera xylosteum</i>	European Fly-honeysuckle, Dwarf Honeysuckle, European fly honeysuckle	U-H?
<i>Lythrum salicaria</i>	Purple Loosestrife	VH
<i>Microstegium vimineum</i>	Japanese Stiltgrass, Nepalese Browntop, Japanese stilt grass, Nepalgrass	VH
<i>Pastinaca sativa</i>	Wild Parsnip	U-H?
<i>Phalaris arundinacea</i>	Reed Canarygrass	H
<i>Phragmites australis</i> ssp. <i>australis</i>	Common Reed, Common reed grass	VH
<i>Reynoutria japonica</i> var. <i>japonica</i> : <i>Fallopia japonica</i> var. <i>japonica</i>	Japanese Knotweed, Japanese Bamboo	VH
<i>Rhamnus cathartica</i>	Common Buckthorn	VH
<i>Robinia pseudoacacia</i>	Black Locust	VH
<i>Rosa multiflora</i>	Multiflora Rose, Rambler Rose	VH

Tier 5 Species are species that need more research, mapping, or monitoring to understand their invasiveness. This includes naturalized species and cultivated-only species that are known to be invasive in other regions but are not yet invasive here. Invasiveness may change with environmental or genetic changes. Should monitor populations on a regular basis to see if they are starting to become invasive and assign to appropriate Tier if invasive infestations detected.

Scientific Name	Common Name	NYS Rank
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Aquatic Animals		
<i>Eubosmina coregoni</i>	Water Flea, a Cladoceran	U
<i>Lepomis cyanellus</i>	Green Sunfish	U
<i>Orconectes virilis</i>	Virile Crayfish	U
<i>Scardinius erythrophthalmus</i>	Rudd	U

Insect		
<i>Fiorinia externa</i>	Elongate Hemlock Scale	u

Aquatic Plant		
<i>Marsilea quadrifolia</i>	European Water Fern; European Waterclover	U

Terrestrial Plants		
<i>Allium vineale</i>	Wild Garlic, Field Garlic	U-L?
<i>Alnus glutinosa</i>	European Alder, Black Alder	U
<i>Artemisia absinthium</i>	Wormwood, Common Wormwood	U
<i>Bromus inermis</i>	Smooth brome	U
<i>Buddleja davidii</i>	Orange-eye Butterfly-bush	L
<i>Capsella bursa-pastoris</i>	Common Shepherd's Purse; Shepherd's Purse	U-L?
<i>Cardamine hirsuta</i>	Hairy Bitter-cress	U
<i>Catalpa speciosa</i>	Northern Catalpa	U-L?
<i>Centaurea nigrescens</i>	Short-fringe Starthistle, Knapweed, Tyrol knapweed	U
<i>Centaurea solstitialis</i>	Yellow Star-thistle	U
<i>Commelina communis</i> var. <i>communis</i>	Asiatic Dayflower	U-L?
<i>Crataegus monogyna</i>	Hawthorn, English Hawthorn	U
<i>Digitalis lanata</i>	Grecian Foxglove	L
<i>Digitaria ischaemum</i>	Smooth Crabgrass	U-L?
<i>Digitaria sanguinalis</i>	Hairy Crabgrass	U
<i>Duchesnea indica</i>	Indian Mock-strawberry, Indian Strawberry	U-L?
<i>Echinops sphaerocephalus</i>	Great Globethistle, Blue Globethistle	U-L?
<i>Eleutherococcus pentaphyllus</i>	Five-leaved aralia	U
<i>Elsholtzia ciliata</i>	Crested Elsholtzia, Crested Late-summer Mint, Crested latesummer mint	U-L?
<i>Galium odoratum</i>	Sweet Bedstraw, Woodruff	L
<i>Geranium sibiricum</i>	Siberian Crane's-bill	U-L?
<i>Hemerocallis fulva</i>	Orange Daylily, Tawny Daylily, Day lily, Day-lily	L

Tier 5 Species Continued

Scientific Name	Common Name	NYS Rank
Terrestrial Plants		
<i>Hieracium piloselloides</i>	Kingdevil, King-devil, Tall Hawkweed	U-L?
<i>Hylotelephium spectabile</i>	Showy Stonecrop	U-L?
<i>Hylotelephium telephium</i>	Garden Stonecrop, Live Forever	U-L?
<i>Ipomoea hederacea</i>	Morning Glory; Ivy-leaved Morning Glory	U-L?
<i>Kolkwitzia amabilis</i>	Beautybush	U-L?
<i>Lathyrus odoratus</i>	Sweetpea	U-L?
<i>Lepidium campestre</i>	Field Pepper-grass	U-L?
<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	Common Pepperweed	U-L?
<i>Lotus tenuis</i>	Slender Trefoil	U
<i>Lupinus polyphyllus</i> var. <i>polyphyllus</i>	Bigleaf Lupine, Giant Lupine	U-h?
<i>Malus baccata</i>	Siberian Crabapple, Crabapple	U
<i>Malus</i> spp. (species unknown)	Crabapple (species unknown)	U
<i>Mycelis muralis</i>	Wall Lettuce	U-M?
<i>Ornithogalum umbellatum</i>	Common Star-of-Bethlehem, Star of Bethlehem, Star-of-Bethlehem	U-L?
<i>Persicaria nepalensis</i>	Nepal Smartweed	U
<i>Petasites hybridus</i>	Pestilence wort, Purple Butter-bur	U
<i>Robinia hispida</i>	Bristly Locust	L
<i>Rosa canina</i>	Dog Rose	U
<i>Salix fragilis</i>	Crack Willow; Brittle Willow	U
<i>Salix purpurea</i>	Basket Willow, Purpleosier Willow	U
<i>Salix x pendulina</i>	Wisconsin Weeping Willow	U
<i>Sedum sarmentosum</i>	Stringy Stonecrop	U-L?
<i>Torilis japonica</i>	Erect Hedge-parsley; Japanese Hedge-parsley	U-H?
<i>Typha x glauca</i>	Blue Cat-tail, Hybrid Cat-tail	U-H?