Adirondack Park
Terrestrial Invasive Species Steward

Survey & Management Report

2022

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Photo Credit: Becca Tamagna

INVASIVE SPECIES MANAGEMENT
ADIRONDACKS

Funding provided from the Environmental Protection Fund
as administered by the New York State Department of Environmental Conservation

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Executive Summary

State campgrounds and recreational access points are high priority areas for terrestrial invasive species surveillance and management due to high levels of disturbance from recreational traffic. These areas are often the first location where new invasive species are introduced or detected. Once an invasive species becomes established, they can serve as source populations for spread into backcountry areas of higher conservation value.

During the 2022 field season, the Adirondack Park Invasive Plant Program's (APIPP) invasive species management stewards (stewards) spent approximately 18 weeks surveying and/or managing terrestrial invasive species at several recreational facilities and access points including:

- 42 New York State administered campgrounds
- 117 recreational access points such as trailheads, parking lots, and boat launches

Of the 42 campgrounds surveyed, 38 were found to contain one or more terrestrial invasive species. Infestations of APIPP's target species were mapped using The Nature Conservancy's (TNC) Invasive Plant Mobile Monitoring System (IPMMS). Bush honeysuckle was the most commonly mapped species, present at 71% of surveyed campgrounds. Reed canary grass and garlic mustard were also common, present at 55% and 48% of surveyed campgrounds, respectively. When feasible, priority infestations were managed using mechanical control techniques.

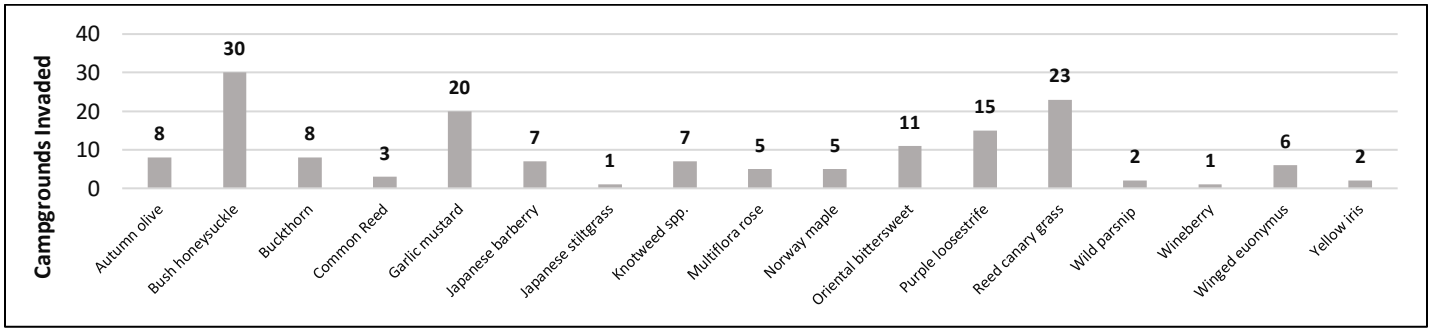


Figure 1. Summary of invasive plant species present at NYSDEC administered campgrounds in 2022.

Four campgrounds were free of all target terrestrial invasive plant species. Eleven years of survey and management results indicate there is significant opportunity for successful control and local eradication of many species at Adirondack campgrounds. Since the program's inception, garlic mustard abundance at New York State Department of Environmental Conservation (NYSDEC) campgrounds has declined by approximately 91%, while purple loosestrife has declined by 98%. With continued annual management, there is a high likelihood for many infestations to be significantly reduced in abundance or locally eradicated. However, there are notable exceptions at select campgrounds where particularly large infestations are unlikely to be eradicated, even with sustained allocation of resources. Nevertheless, most infestations can be effectively suppressed to minimize impacts to the environment, economy, and human health.

Many campground employees were unaware that their facility was infested by an invasive plant species and were not familiar with invasive plant identification and management practices. To rectify this challenge, it would be beneficial to offer trainings in invasive species identification and management to campground staff at the beginning of the season. Ideally, this would occur at all campgrounds, but is especially important at those currently invaded or located near heavily infested areas. This is also important for campgrounds that are located adjacent to areas of high conservation value, such as the Forest Preserve.

Introduction

Overview

Beginning in the summer of 2006, the NYSDEC supported a seasonal invasive species specialist position to implement annual invasive plant inventories and management at state campgrounds in the Adirondack Park. Since state campgrounds are intensive use areas that receive high levels of recreational traffic, they are more susceptible to the inadvertent introduction of invasive species. Once a campground becomes infested, it can serve as a source for invasive species spread into nearby areas of high conservation value. The spread of invasive plants can result from things like vegetative growth, seed dispersal, and root and stem fragmentation. Movement of contaminated soils or equipment, use of non-native plants in landscaping, and transport of seeds on clothing and equipment are likely vectors of invasive species introduction at state campgrounds. As a result, APIPP and NYSDEC have identified state campgrounds as priority areas for invasive species surveillance and management.

The NYSDEC invasive species specialist performed invasive plant surveys and control each field season from 2006 through 2009. In 2010, funding for the position was unavailable, resulting in a lapse of data collection and management. Progress that had been made in controlling garlic mustard and purple loosestrife was set back as plants regrew and infestations went unmanaged. In 2011, APIPP initiated limited management, collecting data and controlling several infestations at priority campgrounds. From 2012 through the 2018 field season APIPP, in collaboration with the NYSDEC and the State University of New York College of Environmental Science and Forestry (SUNY ESF), deployed an invasive species campground steward to survey and manage infestations. Over 4,000 acres of DEC-administered lands were surveyed by these stewards, with over 1,000 infestations mapped and more than 700 infestations managed.

Beginning in 2019, the campground steward position was incorporated into APIPP's five-year Partnership for Regional Invasive Species Management (PRISM) contract, supported by funding from the Environmental Protection Fund (EPF) as administered by NYSDEC. The restructured invasive species management steward position expanded the program's scope to include surveys at additional New York State administered and private recreational facilities. APIPP's 2022 steward provided an exceptional level of plant identification knowledge that helped grow APIPP's invasive plant distribution database.

Supervision and project oversight for the steward was provided by APIPP's terrestrial invasive species project coordinator and most of the survey and management was preformed alone, with occasional assistance from a handful of TNC employees at select facilities. APIPP's invasive species assistant also surveyed some campgrounds and trailheads to allow the steward to assist with other tasks and experience more of APIPP's work.

The following report summarizes terrestrial invasive species surveillance and management activities performed by the steward throughout the Adirondack PRISM during the 2022 field season. This report divides the Adirondack PRISM and its state administered campground facilities into working circles, as defined by Wayne G. Blanchard in *Invasive Species Adaptive Management Guiding Document Adirondack Forest Preserve Campgrounds Final Report (2008)*. All remaining trailheads and recreational facilities were grouped together and are listed in the appendix at the end of this report.

Standard Monitoring and Management Procedures for Target Invasive Species

The steward was equipped with TNC's IPMMS to document the location and extent of terrestrial invasive species infestations located at state campgrounds and recreational access points throughout the PRISM. Data was collected using an iPad and Bluetooth GPS antenna and was uploaded daily to TNC's server for processing and storage. At the end of each season, all invasive species observation data is submitted to New York's Invasive Species Database (iMapInvasives).

Campgrounds are divided into six working circles based upon their location within the region. The steward visited one or more campgrounds per day depending on the size of the facility and number of infestations present. In general, management activities started in the southern portion of the PRISM and progressed northward to coincide with the latitudinal advance of the growing season. However, some campgrounds where historically more management was required were prioritized earlier in the growing season to allow for treatment prior to seed set.

Some species were targeted for management, while others were only surveyed due to logistical constraints. The table below provides a summary of species the steward was trained to detect and their designation as management or survey targets.

Table 1. Target invasive species and their management status.

Species	Scientific Name	Priority
Garlic mustard	*Alliaria petiolata*	Management target
Purple loosestrife	*Lythrum salicaria*	Management target
Wild parsnip	*Pastinaca sativa*	Management target
Yellow iris	*Iris pseudacorus*	Management target
Autumn olive	*Elaeagnus umbellata*	Management target, if isolated
Buckthorn spp.	*Rhamnus cathartica & Frangula alnus*	Management target, if isolated
Bush honeysuckles	*Lonicera spp.*	Management target, if isolated
Japanese barberry	*Berberis thunbergii*	Management target, if isolated
Multiflora rose	*Rosa multiflora*	Management target, if isolated
Oriental bittersweet	*Celastrus orbiculatus*	Management target, if isolated
Winged euonymus	*Euonymus alatus*	Management target, if isolated
Common reed grass (*Phragmites*)	*Phragmites australis*	Survey only
Emerald ash borer	*Agrilus planipennis*	Survey only
Hemlock woolly adelgid	*Adelges tsugae*	Survey only
Knotweed spp.	*Reynoutria spp.*	Survey only
Norway maple	*Acer platanoides*	Survey only

Species	Scientific Name	Priority
Reed canary grass	*Phalaris arundinacea*	Survey only
Japanese tree lilac	*Syringa reticulata*	Survey only

Garlic mustard – Historically, only second-year plants were pulled up by the root and placed in thick contractor garbage bags as infestations were too extensive to permit management of all life stages in the project time allotted. As historic management efforts have decreased the size and density of infestations, removal of the rosette stage began in 2019, allowing for all life stages to now be managed.

Purple loosestrife – Plants were pulled or dug up to remove as much of the root system as possible. Plants with evidence of damage from the biocontrols *Galerucella spp.* or *Nanophyes marmoratus* were not removed, as the biocontrols require purple loosestrife for habitat and food to establish and spread. In some cases, only the flower heads were removed to prevent seed production.

Wild parsnip – Plants were pulled up by the root and placed in thick contractor garbage bags. NOTE: Protective clothing (long sleeves and gloves, at a minimum) was worn when managing this species as the sap of this plant is phototoxic and can cause phytophotodermatitis upon contact with exposed skin.

Yellow iris – Plants were pulled or dug up to remove as much of the root system as possible and placed in thick contractor garbage bags.

For the above species, plant material was bagged and transported to TNC's office in Keene Valley, NY, where bags were solarized until the contents had liquefied and no viable plant material remained. At the end of the season, bags were disposed of at the local transfer station.

Bush honeysuckles, Japanese barberry, multiflora rose, autumn olive, winged euonymus, Oriental bittersweet, common buckthorn, Norway maple – The presence of these invasives was documented, but infestations were managed only when plants were sparsely distributed throughout the campground. These species are a lower priority for management because of their widespread distribution in the Adirondack PRISM and their ability to be transported long distances by birds. Management of infestations was performed only when adequate time remained after management and inventories of other, higher priority species/infestations had been completed. To manage these species, plants were pulled up by the base to remove the entire root system. Medium-sized plants often required the use of a leverage tool. Extracted plants were hung upside down in nearby trees to dry and decompose. Large plants were left in place and noted for potential cut stump herbicide treatment by APIPP.

Knotweed spp., **common reed grass**, and **reed canary grass** are difficult to manage, perennial invasives with extensive rhizome systems. Mechanical treatment of established infestations is difficult or often infeasible. Chemical treatments are most often used to control established infestations. When these species were encountered in a campground, they were mapped but not managed. Many of these sites were treated in 2022 by APIPP's early detection and rapid response crew.

Japanese tree lilac is an ornamental large shrub or small tree that can escape cultivation. Only a few infestations are documented in the PRISM and stewards were asked to map this species if it was encountered to help provide information about the regional distribution of this species.

Emerald ash borer and **hemlock woolly adelgid** are forest pests which present unique management challenges. Surveys were conducted for these pests and if they were encountered, they were mapped and reported to the terrestrial invasive species project coordinator.

Herkimer Working Circle

The Herkimer Working Circle contains two campgrounds: Alger Island and Nicks Lake. The following section provides an overview of survey and management activities for these campgrounds. For a comprehensive summary of these campgrounds, see Appendix Table 1. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 2. Herkimer Working Circle invasive species distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Alger Island	None observed in 2022	
Nicks Lake	Bush honeysuckle Garlic mustard Reed canary grass Yellow iris	0 1,164 0 12

Alger Island

Invasive Species Distribution and Management Overview:

As in previous years, no target invasive species were observed in 2022. This is likely due to the island's isolated location.

Recommendations:

Annual surveys should continue to take place at this facility. Reed canary grass is present at the boat launch used to access this campground and could potentially be transported to the island via campers.

Photo Credit: Reserve America

Nicks Lake

Invasive Species Distribution and Management Overview:

Bush honeysuckle is widespread throughout campground and was not managed.

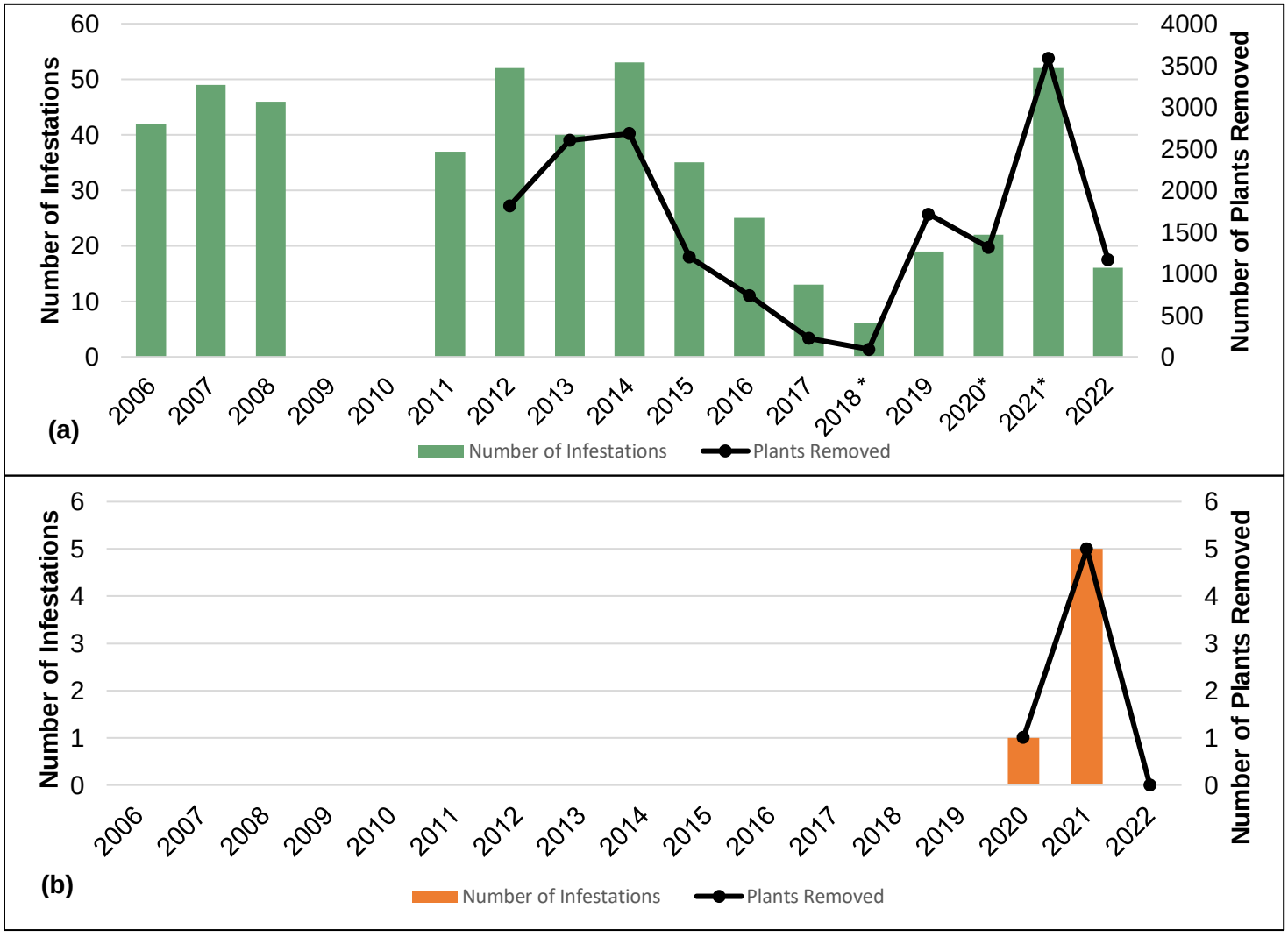
Garlic mustard was mapped and removed from sites 1, 3, 7-9, 11, 14, 59, 62, 64, 72, 76 80, 84, 104, and behind the RV dump station. A total of 1,164 plants were removed (Figure 2a).

Reed canary grass is widespread throughout the campground and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
3,649		1,176

Wild parsnip was no longer present at this campground (Figure 2b).

Yellow iris was mapped and removed. A total of 12 plants were removed from the entrance to site 43 (Figure 2c).



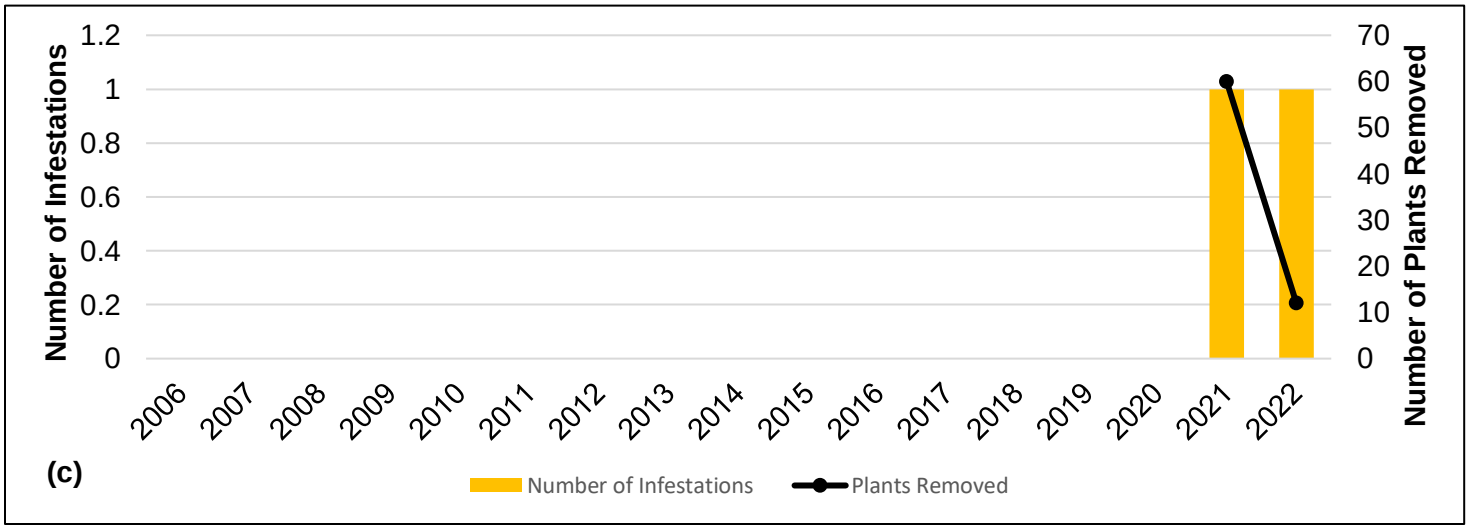


Figure 2 a-c. Garlic mustard (a), wild parsnip (b), and yellow iris (c) distribution and management progress at Nicks Lake Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Early detection for vegetative and flowering wild parsnip should still be a priority for 2023, as the species has spread considerable distances from the first identified occurrence. Early detection of yellow iris should also be a priority for 2023, as this species was first detected last year. Garlic mustard management should remain a priority for this campground, as this species has reached a new peak in 2021 and there was still a lot present in 2022. Although bush honeysuckle and reed canary grass are abundant throughout the campground, management is not currently recommended due to their widespread distribution and likely reintroduction.

Indian Lake Working Circle

The Indian Lake Working Circle contains nine campgrounds: Brown Tract Pond, Eighth Lake, Forked Lake, Golden Beach, Indian Lake Islands, Lake Durant, Lewey Lake, Limekiln Lake, and Tioga Point. The Moose River Plains Wild Forest primitive campsites are in this region. Numbers for this facility are not included in the campground totals but are summarized in this section. The following section provides an overview of survey and management activities for these campgrounds. For a comprehensive summary of these campgrounds, see Appendix Table 2. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 3. Indian Lake Working Circle invasive species distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Brown Tract Pond	Bush honeysuckle Garlic mustard	0 23
Eighth Lake	Garlic mustard Reed canary grass	81 0
Forked Lake	Bush honeysuckle	0
Golden Beach	Bush honeysuckle Garlic mustard Reed canary grass	0 1,238 0
Indian Lake Islands	Bush honeysuckle Reed canary grass	0 0
Lake Durant	Autumn olive Bush honeysuckle Garlic mustard Oriental bittersweet	0 0 70 0
Lewey Lake	Bush honeysuckle Garlic mustard Purple loosestrife Reed canary grass	0 69 9 0
Limekiln Lake	Bush honeysuckle Garlic mustard Reed canary grass	0 153 0
Tioga Point	Not surveyed in 2022	
Moose River Plains Wild Forest	Garlic Mustard Reed canary grass	309 0

Brown Tract Pond

Invasive Species Distribution and Management Overview:

Bush honeysuckle is widespread throughout the campground. In 2022 plants were newly mapped across the road from a foot trail and near a small field by the bathrooms.

Garlic mustard was mapped and removed from site 76. In total, 23 plants were removed (Figure 3).

Reed canary grass was not observed in 2022.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
1,103	PLANTS REMOVED	23

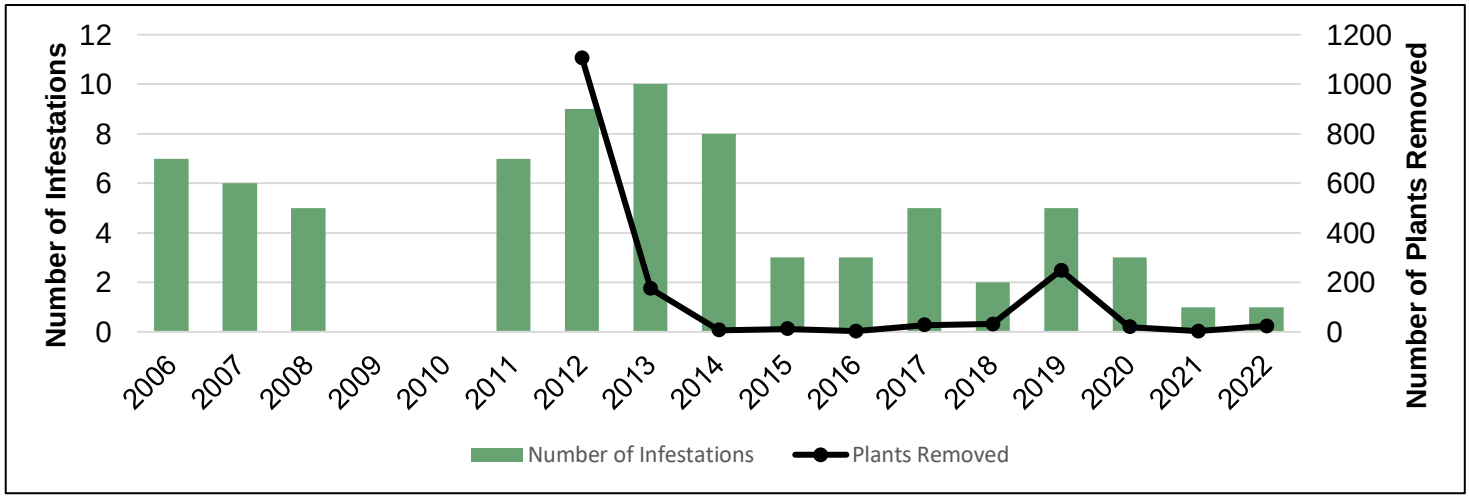


Figure 3. Garlic mustard distribution and management progress at Brown Tract Pond Campground.

Recommendations:

Garlic mustard should remain a priority at this facility. With the inclusion of basal rosettes in management efforts, local eradication seems likely. Bush honeysuckle is found throughout the campground and should be addressed once management of higher priority species has been completed. Reed canary grass should continue to be included in future surveys.

Eighth Lake

Invasive Species Distribution and Management Overview:

Garlic mustard was mapped and managed in sites 37, 65, 75, 80, 97, 107, and along the trail to Bug Lake. In total, 81 plants were removed from seven locations (Figure 4).

Reed canary grass was mapped around the maintenance garage but was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
3,450		81

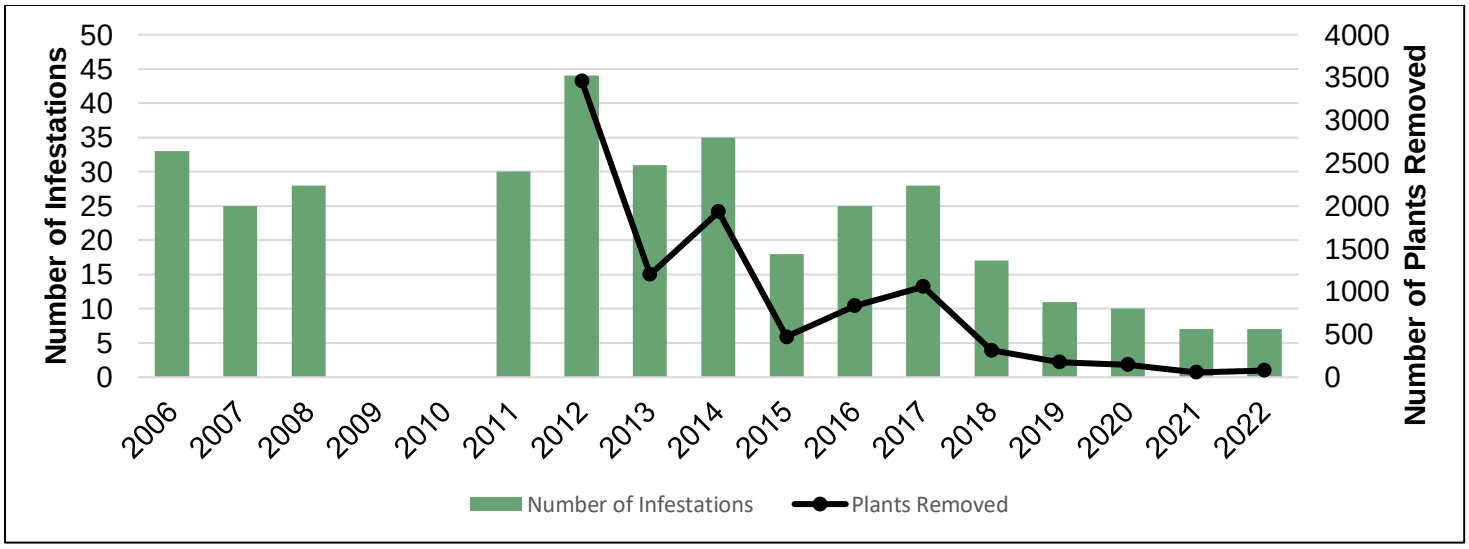


Figure 4. Garlic mustard distribution and management progress at Eighth Lake Campground.

Recommendations:

Garlic mustard should remain a high priority for management. Local eradication is likely through efforts by APIPP staff. Reed canary grass is well established at this facility and management is not recommended at this time.

Forked Lake

Invasive Species Distribution and Management Overview:

Bush honeysuckle was found throughout the main campground area and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
3	PLANTS REMOVED	0

Recommendations:

Water access sites were surveyed for the second time in 2022 and were not found to contain any target invasive species. Surveys for new target invasive species should continue at this campground while also monitoring for changes in abundance of bush honeysuckle. Management of bush honeysuckle should be considered if resources are available; however, reintroduction via bird dispersed seed is likely.

Photo Credit: New York State Department of Environmental Conservation

Golden Beach

Invasive Species Distribution and Management Overview:

Bush honeysuckle is widespread throughout the campground and was not managed.

Garlic mustard was mapped and removed from sites 14, 16 -18, 20, 22, 37, 39, 41, 43, 52 -54, 61, 65, 67, 78, 89, 93, 102, 104, 109, 130, 136, and the bathroom near site 119. In total 1,238 plants were removed from 21 sites (Figure 5).

Reed canary grass was observed in 2022 between sites 182 and 184.

SUMMARY STATS: PROGRESS TO DATE

PEAK INFESTATION		CURRENT CONDITION
9,000	PLANTS REMOVED	1,238

Winged euonymus was not observed in 2022, likely due to the removal of the single plant found in 2019.

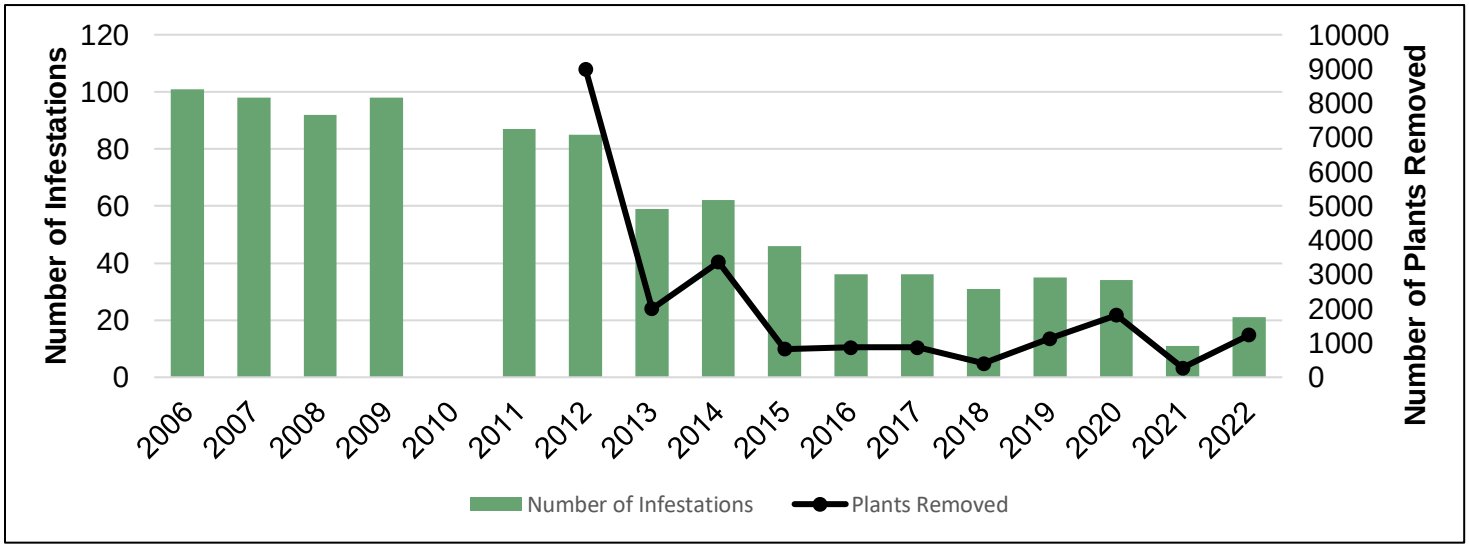


Figure 5. Garlic mustard distribution and management progress at Golden Beach Campground.

Recommendations:

Garlic mustard management should remain the top priority, as the number of plants removed has fluctuated since 2018 and saw a sharp increase in 2022. Winged euonymus should continue to be a survey priority to ensure early management. Bush honeysuckle is abundant throughout the campground and management is not recommended at this time as reintroduction is likely.

Indian Lake Islands

Invasive Species Distribution and Management Overview:

This facility is only accessible by motorboat and was first surveyed in 2022. Only a partial survey was performed due to NYSDEC staff time constraints.

Bush honeysuckle was observed on one island at site 26 but was not removed due to size.

Reed canary grass was observed at sites 22 and 26.

Recommendations:

Annual surveys should continue to take place at this facility. Reed canary grass could potentially be transported to the other islands via campers.

Lake Durant

Invasive Species Distribution and Management Overview:

Autumn olive was observed at site 8 but was not removed due to size.

Bush honeysuckle is widespread throughout the campground and was not managed.

Garlic mustard was mapped and removed from sites 36 and 58. In total, 70 plants were removed from two locations (Figure 6a).

Oriental bittersweet was observed for the first time in 2022, behind the kayak paddle shed.

Wild parsnip was not observed in 2022 (Figure 6b).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
300	PLANTS REMOVED	70

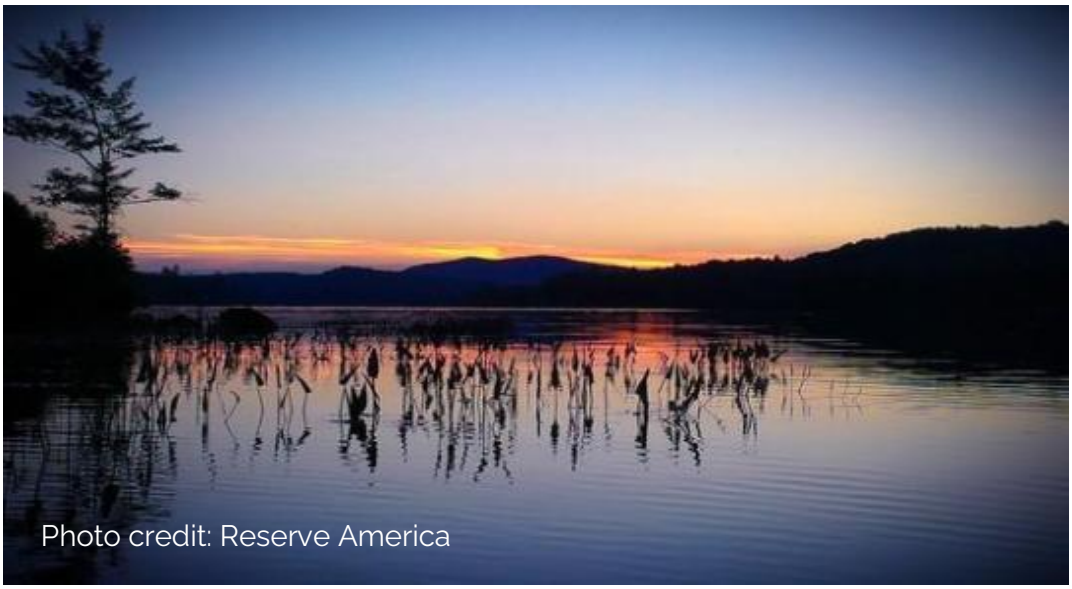


Photo credit: Reserve America

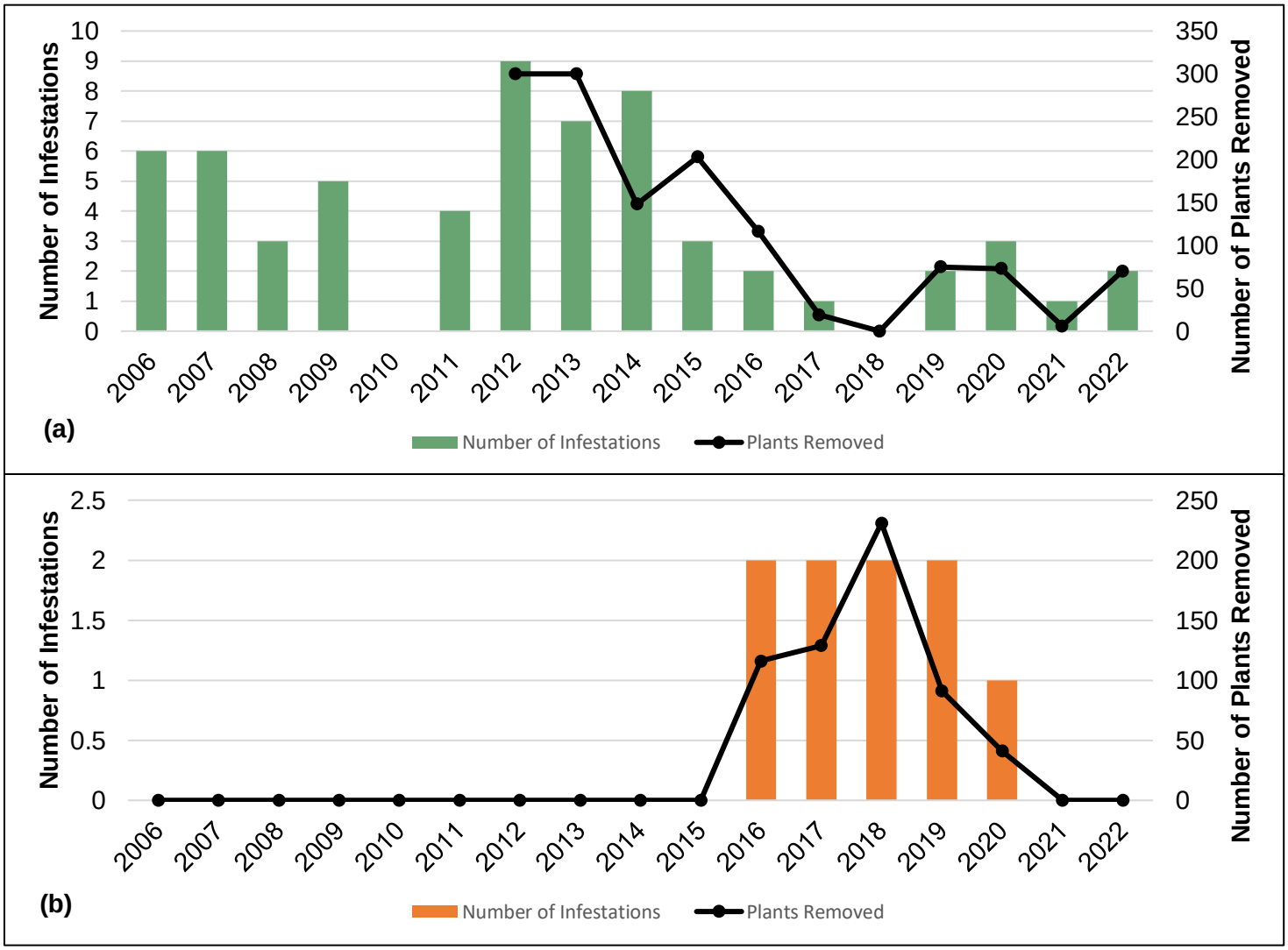


Figure 6 a-b. Garlic mustard (a) and wild parsnip (b) distribution and management progress at Lake Durant Campgroun

Recommendations:

Given the reemergence of garlic mustard in 2019, this species should remain a top priority at this facility. Wild parsnip was not observed for the second time in 2022, likely from a combination of manual removal and mowing. Wild parsnip surveys should remain a top priority. Bush honeysuckle is widespread throughout the campground and should be addressed once higher priority species have been managed.

Lewey Lake

Invasive Species Distribution and Management Overview:

Autumn olive was not observed in 2022. Past reports mention the plant near the assistant caretaker's cabin had been mowed.

Bush honeysuckle is scattered throughout the campground and was not managed due to size and time constraints.

Garlic mustard was mapped and removed from sites 47, 59, 101, 142, and 149. A total of 69 plants were removed from six locations (Figure 7a).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
300	PLANTS REMOVED	78

Purple loosestrife was mapped at sites 13, 18, and 78. Site 13 was not managed due to high water levels. In total, nine plants were removed from two sites (Figure 7b).

Reed canary grass is widespread throughout the campground and was not managed.

Photo Credit: Reserve America

Figure 7 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Lewey Lake Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management should remain a top priority as the number of plants removed at this facility has fluctuated throughout the years. With the presence of *Galerucella* biocontrol noted in previous years, purple loosestrife populations should continue to be monitored, and flower heads should be removed in areas with biocontrol present. *Galerucella* beetles were not observed in 2022, potentially due to lower levels of purple loosestrife. Monitoring for autumn olive should continue although repeated mowing will likely be effective management. Bush honeysuckle and reed canary grass are widespread throughout the campground and management is not recommended at this time as reintroduction is likely.

Limekiln Lake

Invasive Species Distribution and Management Overview:

Autumn olive was not observed in 2022.

Bush honeysuckle is scattered throughout the campground and was not managed.

Garlic mustard was mapped and removed from sites 11, 32, 36, 95, 117, between 118-120, 168, 190, and 214 and 193. A total of 153 plants were removed from ten locations (Figure 8).

Reed canary grass is widespread throughout the campground and was not managed.

SUMMARY STATS: PROGRESS TO DATE

PEAK INFESTATION		CURRENT CONDITION
3,112	PLANTS REMOVED	153

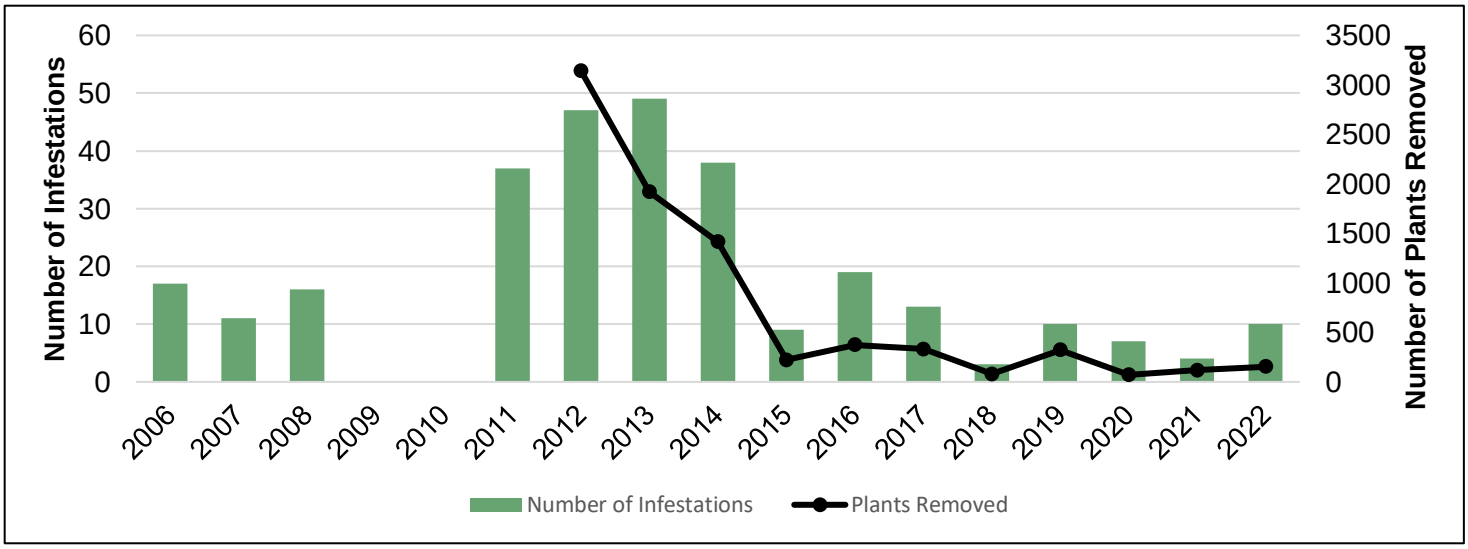


Figure 8. Garlic mustard distribution and management progress at Limekiln Lake Campground.

Recommendations:

Garlic mustard management should continue to be a top priority as the number of plants removed has trended upward recently but has fluctuated over the years. Autumn olive should continue to be surveyed with management focused on small plants. Bush honeysuckle and reed canary grass are widespread throughout the campground and management is not recommended at this time as reintroduction is likely.

Tioga Point

Invasive Species Distribution and Management Overview:

This facility was not surveyed for terrestrial invasive species in 2022 due to limited motorboat availability, which is required to access the facility. The first survey was performed in 2015 and no target invasive species were found. The risk of invasive species introduction is presumed low due to the campground's isolated location. If motorboat resources are available, a survey should be performed in 2023.

Moose River Plains – Primitive Campsites

Invasive Species Distribution and Management Overview:

Garlic Mustard was mapped and removed from sites 34, 64, 66, 70, and near a culvert along the roadside. A total of 309 plants were removed from five locations.

Reed Canary Grass was observed and mapped at site 120 but was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
309	PLANTS REMOVED	309

Recommendations:

Garlic mustard should remain top priority at this facility in 2023. Reed canary grass is not a high priority and is not recommended for management at this time.

Photo credit: Becca Tamagna

Northville Working Circle

The Northville Working Circle contains six campgrounds: Caroga Lake, Little Sand Point, Moffitt Beach, Northampton Beach, Point Comfort, and Sacandaga. Poplar Point is no longer administered as a campground; however, it is open and accessible as a boat launch. The Mason Lake Primitive Campsites & Perkins Clearing Tract Conservation Easement is also in this region. Numbers for these facilities are not included in the campground totals but are summarized in this section. This section contains individual reports for each of the campgrounds. For a comprehensive summary of these campgrounds, see Appendix Table 3. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 4. Northville Working Circle distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Caroga Lake	Autumn olive Bush honeysuckle Common buckthorn Common reed grass Japanese barberry Japanese knotweed Multiflora rose Purple loosestrife Reed canary grass	0 0 0 0 0 0 0 0 0
Little Sand Point	Bush honeysuckle Garlic mustard Japanese knotweed Reed canary grass	0 2 0 0
Moffitt Beach	Bush honeysuckle Common reed grass Garlic mustard Purple loosestrife Reed canary grass	0 0 241 0 0
Northampton Beach	Autumn olive Bush honeysuckle Common buckthorn Norway maple Oriental bittersweet	0 0 0 0 0
Point Comfort	Garlic Mustard Norway maple	8 0
Poplar Point	Oriental bittersweet Reed canary grass	0 0
Sacandaga	Autumn olive Bush honeysuckle Reed canary grass	0 0 0

Campground	Invasive Plants Present	Total Plants Removed
Mason Lake Primitive Campsites & Perkins Clearing Tract Conservation Easement	Garlic Mustard Purple loosestrife Reed canary	5 0 0

Caroga Lake

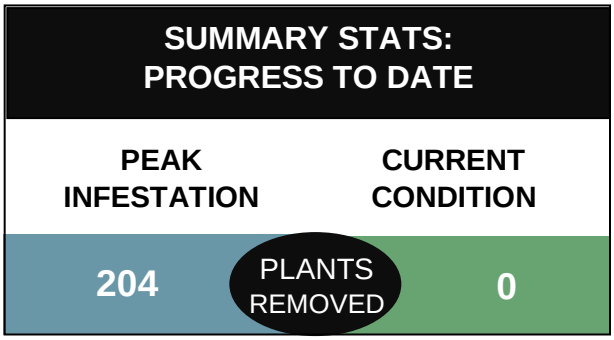
Invasive Species Distribution and Management Overview:

Autumn olive was mapped near bathroom building 15 but was not managed due to size.

Bush honeysuckle is widespread throughout the campground and was not managed.

Common Buckthorn was mapped near site 79 but was not managed.

Common reed grass (*Phragmites*) was mapped near a culvert outflow near the beach and near a fire pit dumpsite. Common reed grass was not managed.



Garlic mustard was not present in 2022 at this location (Figure 9a).

Japanese barberry was mapped across from site 19, between sites 71-72, and 73, but was not managed due to size.

Japanese knotweed was mapped along fence line across from site 126, and behind sites 155 and 156 and was not managed. This population extends onto adjacent private property.

Multiflora rose was mapped near a clearing across from picnic table stacks and near a spoils pit. It was not managed due to size and time constraints.

Purple loosestrife was mapped at the mouth of a small inlet near the beach area and near site 85. There were no plants removed as a large portion of plants had evidence of biocontrol and were left to provide habitat (Figure 9b).

Reed canary grass was mapped in sites 104 and 62 and was not managed.

Yellow iris was not observed in 2022 (Figure 9c).

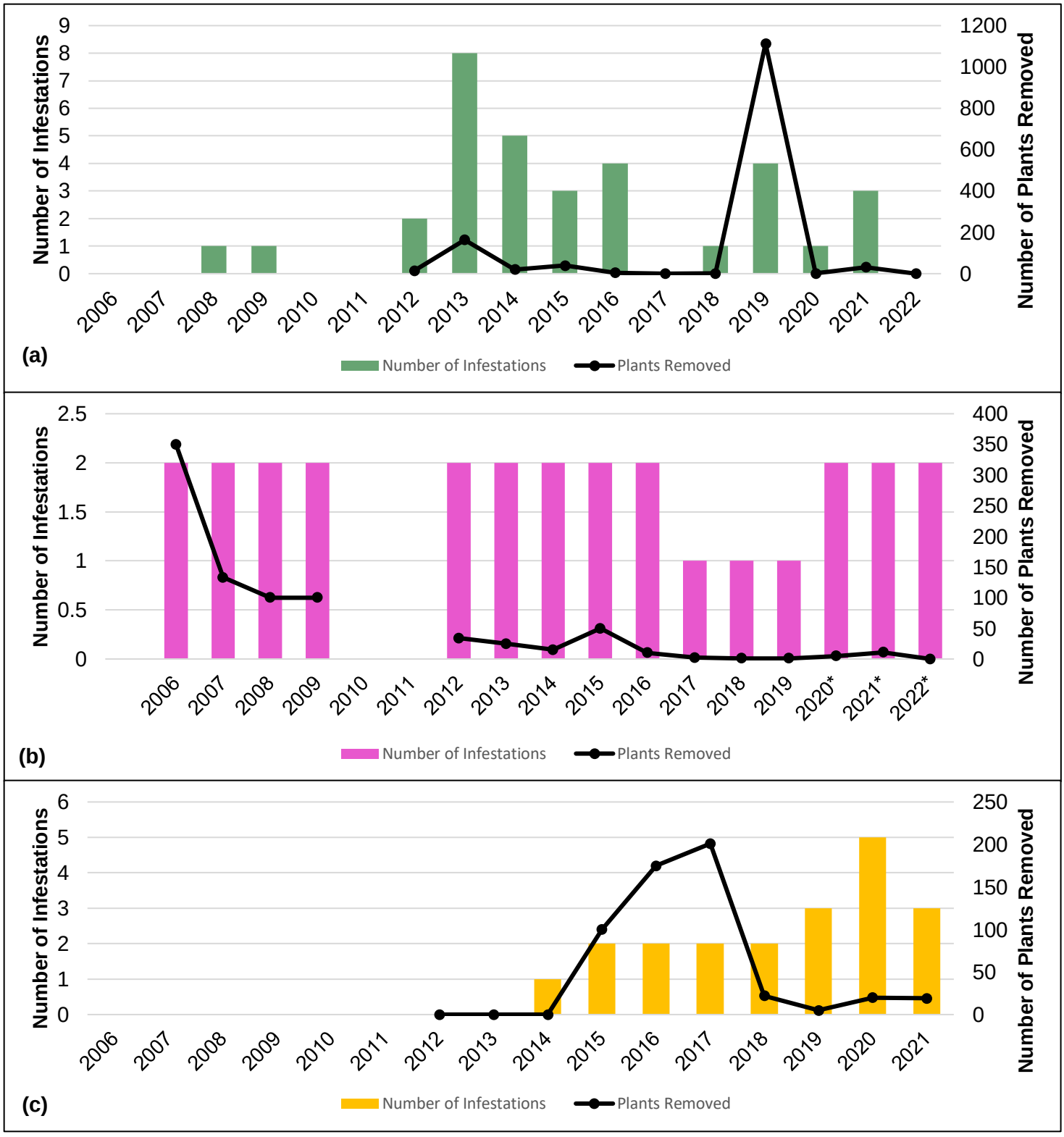


Figure 9 a-c. Garlic mustard (a), purple loosestrife (b) and yellow iris (c) distribution and management progress at Caroga Lake Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management should remain a top priority for this facility in 2023. Yellow iris should also continue to be a top priority as the number of infestations has fluctuated in recent years. Purple loosestrife populations should continue to be monitored, but the presence of *Galerucella* biocontrol should limit management to removing flower heads and isolated plants when necessary. Common reed grass and knotweed should be prioritized for chemical treatment. The remaining woody species and reed canary grass are not high priority and are not recommended for management at this time.

Photo credit: New York State Department of Environmental Conservation

Little Sand Point

Invasive Species Distribution and Management Overview:

Bush honeysuckle is widespread throughout the campground and was not managed.

Garlic mustard was mapped at site 38. A total of two plants were removed from this site (Figure 10).

Japanese barberry has not been observed at this facility since 2018.

Japanese knotweed was mapped in sites 5 and 6.

Reed canary grass was mapped near sites 31-38 and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
229		2

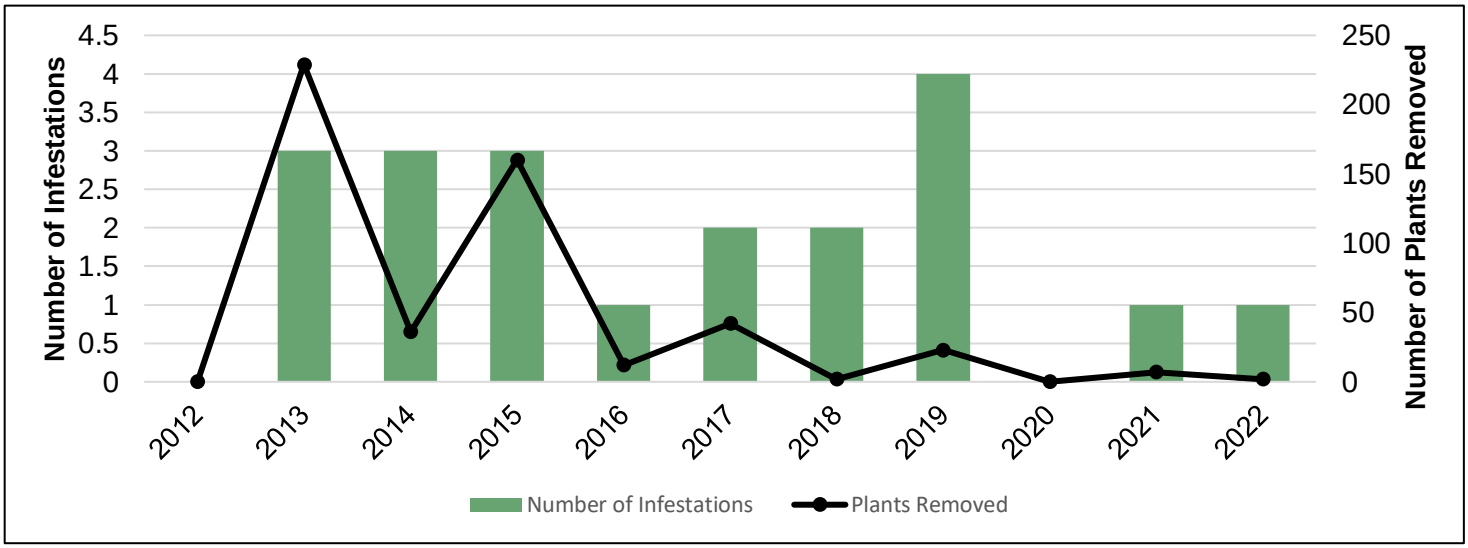


Figure 10. Garlic mustard distribution and management progress at Little Sand Point Campground.

Recommendations:

Garlic mustard surveys should remain a top priority at this facility to ensure reemerging plants are not overlooked. Previous chemical treatment of knotweed has greatly reduced infestations and should continue to facilitate local eradication. Japanese barberry surveys should continue in 2023 to ensure local eradication. Bush honeysuckle and reed canary grass are abundant throughout the campground and management is not currently recommended.

Moffitt Beach

Invasive Species Distribution and Management Overview:

Autumn olive was not found in 2022 and was potentially misidentified in previous years.

Bush honeysuckle is found sporadically throughout campground.

Common reed grass (*Phragmites*) was mapped near site 106 along the beach.

Garlic mustard was mapped and removed from sites 178, 180, 182 and 183. A total of 241 plants were removed from four locations (Figure 11a).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
2,112		241

Purple loosestrife was mapped along the lakeshore across from site 32, near the waste area, within the waste area, and in a wet area along sites 102-105. Management was not performed in 2022 due to the presence of biocontrol (Figure 11b).

Reed canary grass is widespread throughout campground and was not managed.

Wild parsnip was not observed for a fourth consecutive year and is considered locally eradicated. (Figure 11c).

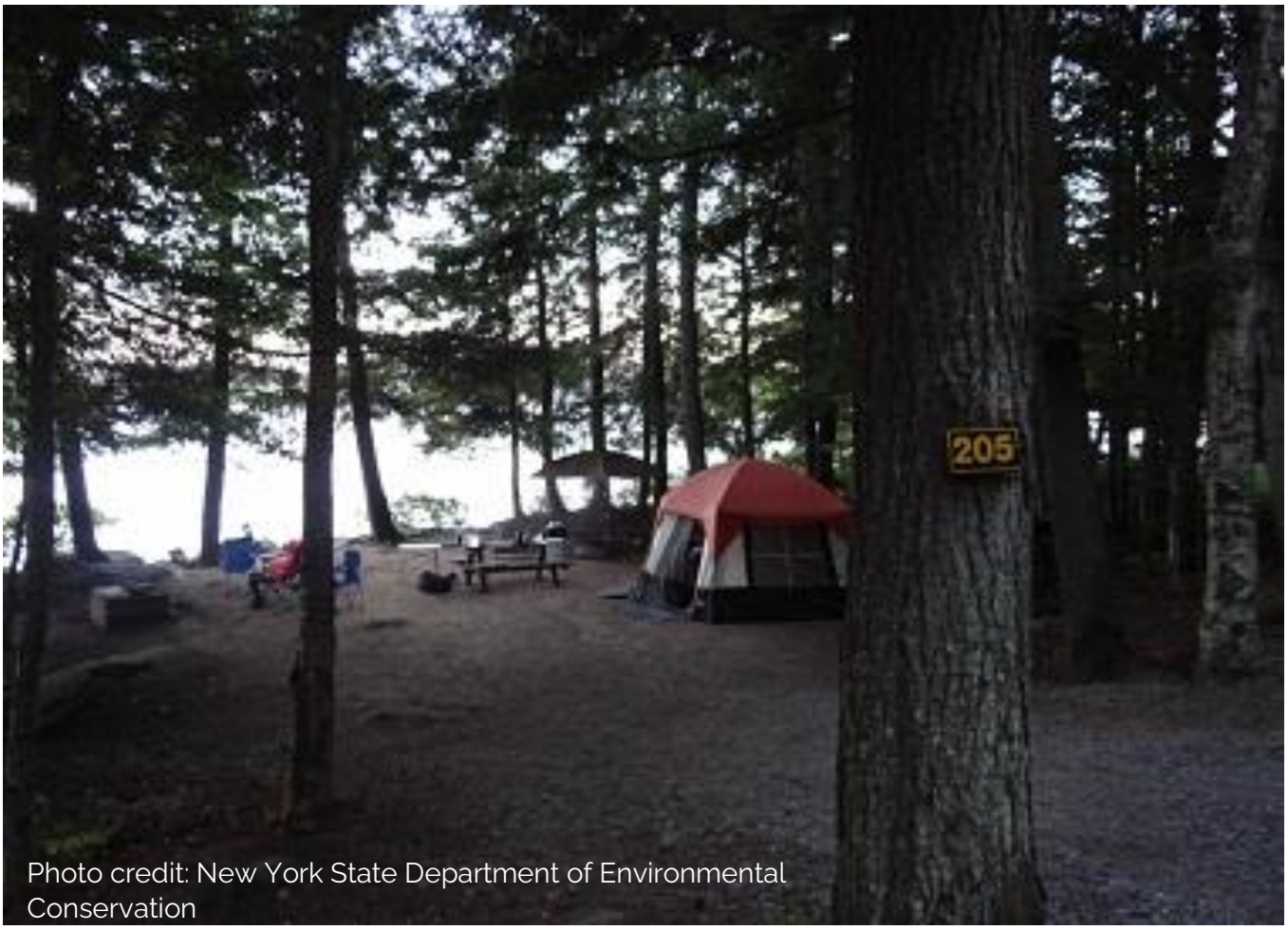


Photo credit: New York State Department of Environmental Conservation

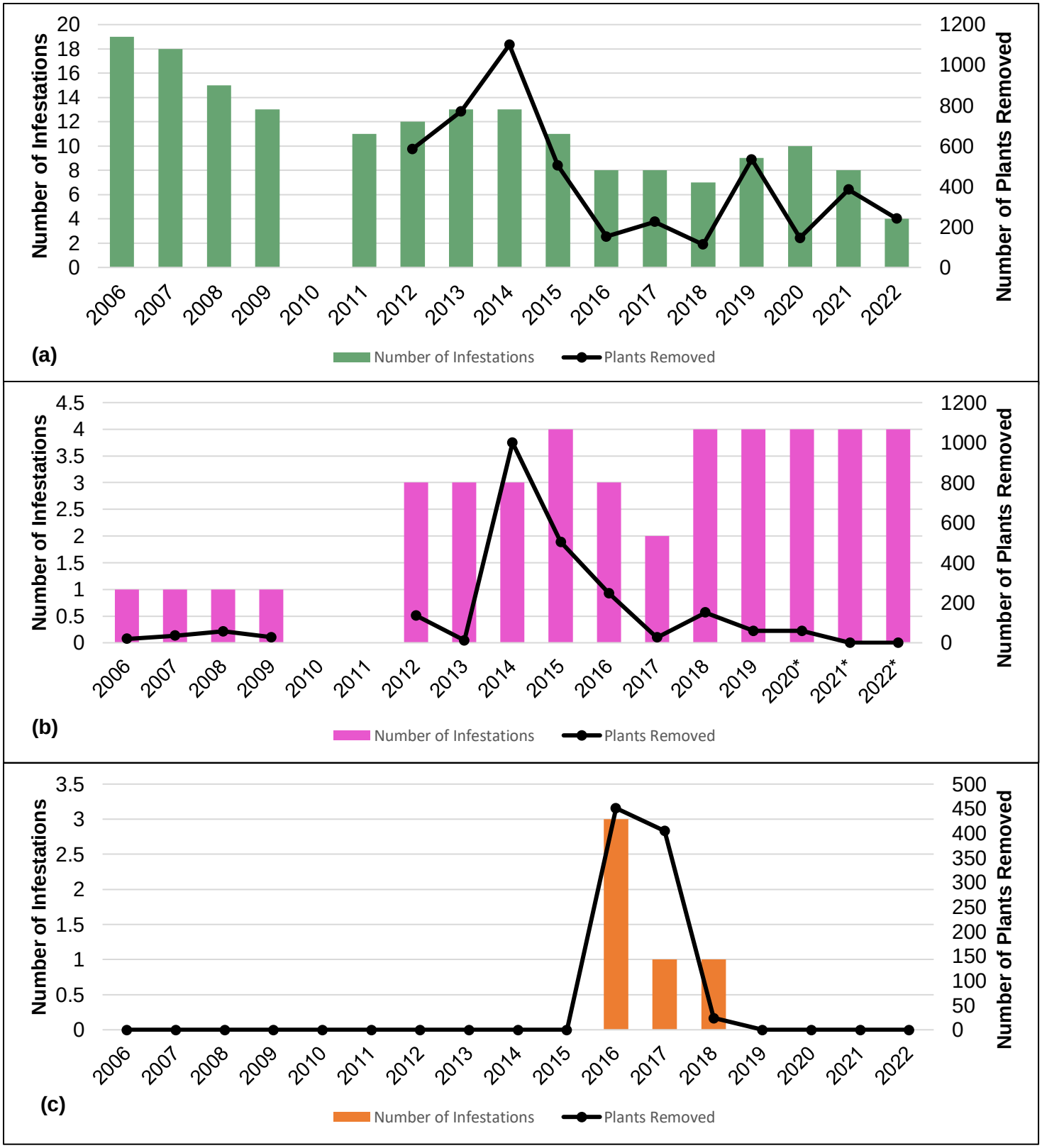


Figure 11 a-c. Garlic mustard (a), purple loosestrife (b), and wild parsnip (C) distribution and management progress at Moffit Beach Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management remains the top priority at this facility as the number of infestations has fluctuated. With the presence of *Galerucella* biocontrol, purple loosestrife monitoring should continue to be a top priority with management limited to removing flower heads and isolated plants when necessary. Populations of *Galerucella* should continue to be monitored as a potential source for future collections.

Photo credit: APIPP staff

Northampton Beach

Invasive Species Distribution and Management Overview:

Autumn olive was found in site 212 and was not managed due to size.

Bush honeysuckle is widespread throughout the campground and was not managed.

Common buckthorn is widespread throughout the campground and was not managed.

Garlic mustard was not observed for a third consecutive year and is now considered locally eradicated (Figure 12).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
38	PLANTS REMOVED	0

Japanese barberry was last observed in 2015 and is presumed to be locally eradicated.

Norway maple was mapped near site 203 and was not managed due to size.

Oriental bittersweet is found sporadically throughout the campground and was not managed.

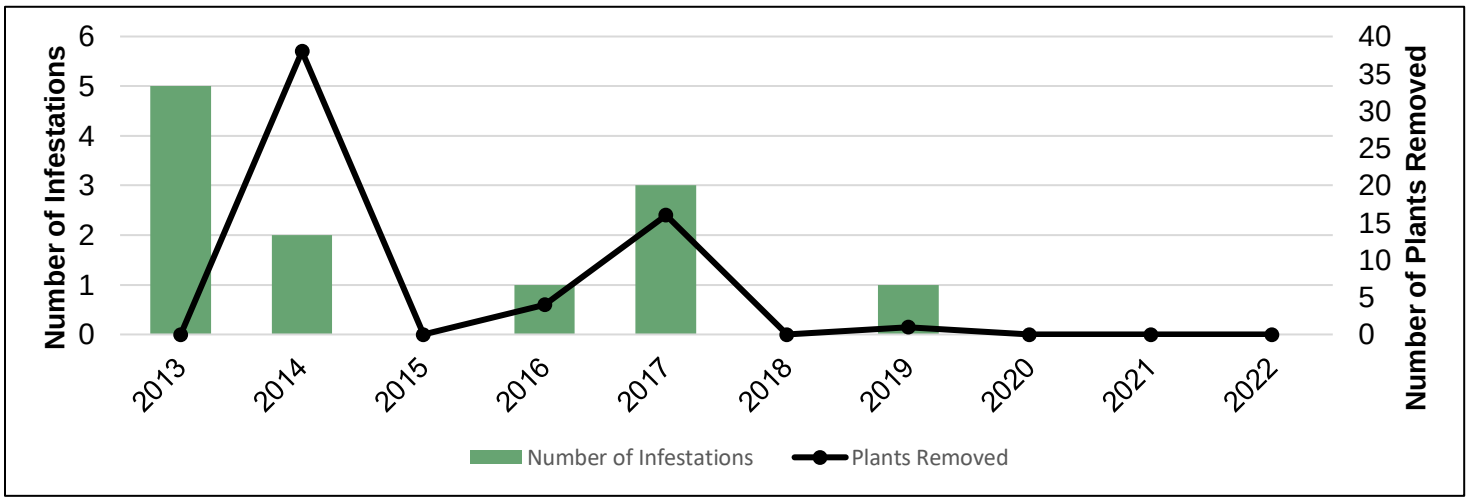


Figure 12. Garlic mustard distribution and management progress at Northampton Beach Campground.

Recommendations:

Garlic mustard surveillance should remain a top priority at this facility to ensure that any newly emerged plants are managed before setting seed. It is recommended that the Oriental bittersweet be chemically treated via cut stem to help prevent it from becoming widespread throughout the campground. The remaining woody species are not high priority and are not recommended for management at this time.

Point Comfort

Invasive Species Distribution and Management Overview:

Bush honeysuckle has been mapped historically but was not observed in 2022 for the third consecutive year and is now considered locally eradicated.

Garlic mustard was mapped and removed at sites 44 and 86. (Figure 13). A total of eight plants were removed at these sites.

Norway maple was first observed last year near the bathroom buildings across from site 57 and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
16		8

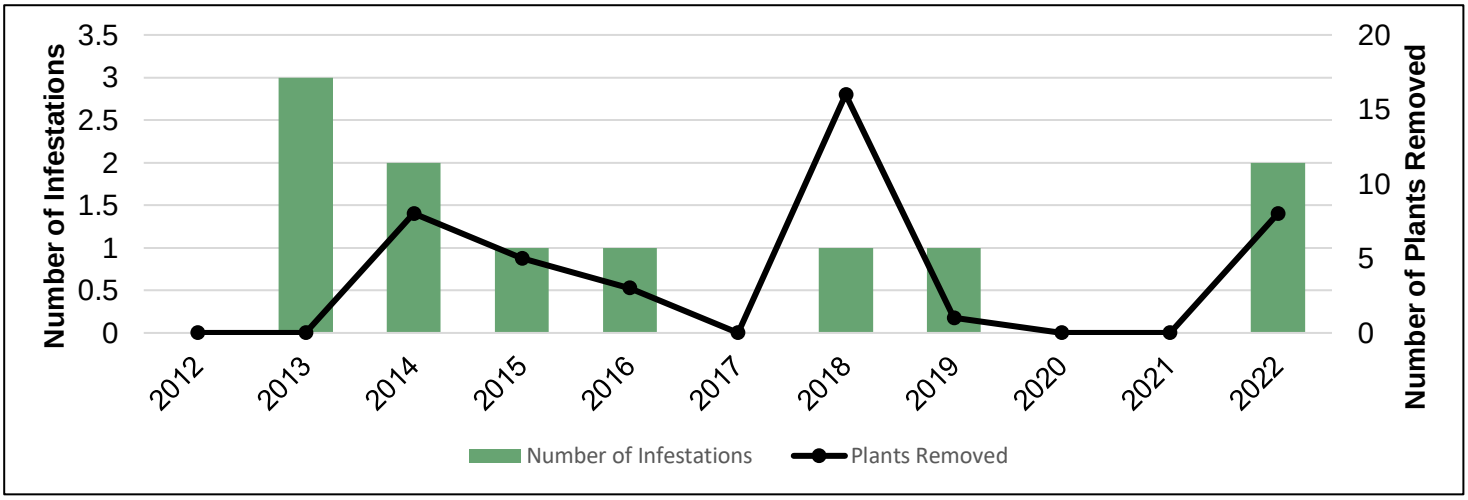


Figure 13. Garlic mustard distribution and management progress at Point Comfort Campground.

Recommendations:

Garlic mustard surveillance should remain a top priority at this facility as local eradication is likely with sustained efforts. Early detection surveys for other target invasive species should be continued in the future. Management of Norway maple is not recommended as the population is well established.

Poplar Point

*This facility is no longer administered as a campground; however, it is open and accessible as a boat launch. Numbers for this facility are not included in the campground totals.

Invasive Species Distribution and Management Overview:

Garlic mustard was not observed in 2022 or 2021. Three plants were removed in 2020 (Figure 14a).

Japanese barberry was not observed in 2022.

Japanese knotweed has not been observed at the facility since 2016 and is presumed locally eradicated.

Oriental bittersweet was found in a dense patch near the boat steward shed at the boat launch and was not managed due to size and time constraints.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
21	PLANTS REMOVED	0

Purple loosestrife was not observed in 2022 for the fifth consecutive year and is presumed to be locally eradicated (Figure 14b).

Reed canary grass was mapped along the main campground road and was not managed.

Photo credit: See Swim

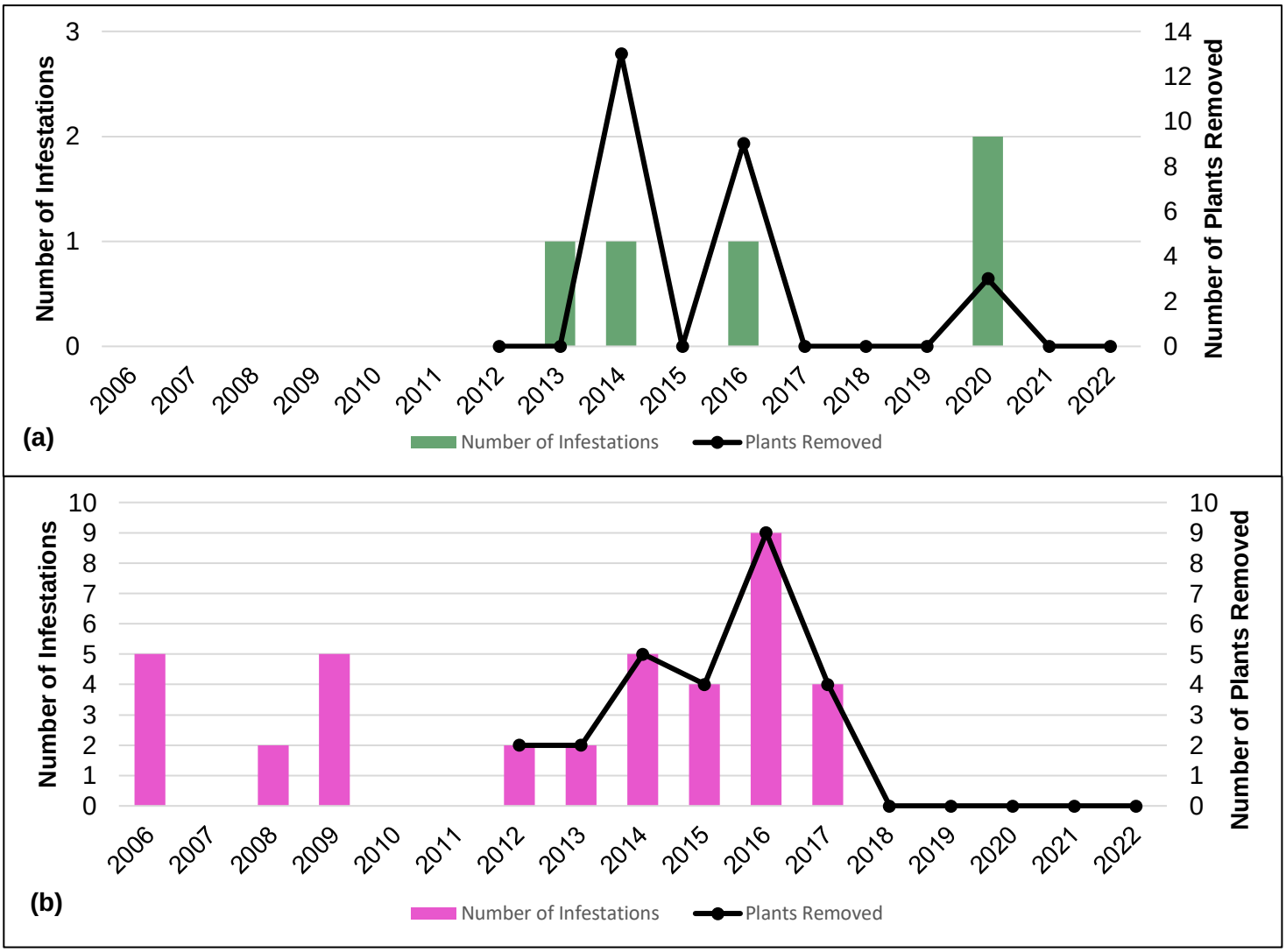


Figure 14 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Poplar Point Campground.

Recommendations:

Garlic mustard management should remain a top priority at this facility as sustained efforts will likely lead to local eradication. Purple loosestrife should also be a top monitoring priority to ensure infestations do not reemerge. It is recommended to cut any larger Japanese barberry to prevent their spread once higher priority species are addressed. Chemical treatment of the Oriental bittersweet using a cut-stump method is recommended. As the reed canary grass is well established and reintroduction is likely, management is not recommended at this time.

Sacandaga

Invasive Species Distribution and Management Overview:

Autumn olive was mapped along the road to the trailer dump station and was not managed due to size.

Bush honeysuckle was mapped along the back of the site near the Sacandaga river.

Garlic mustard was last observed in 2013 and is deemed locally eradicated (Figure 15).

Japanese knotweed was not observed in 2022.

Reed canary grass is growing along the river at sites 142-143 and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
2		0

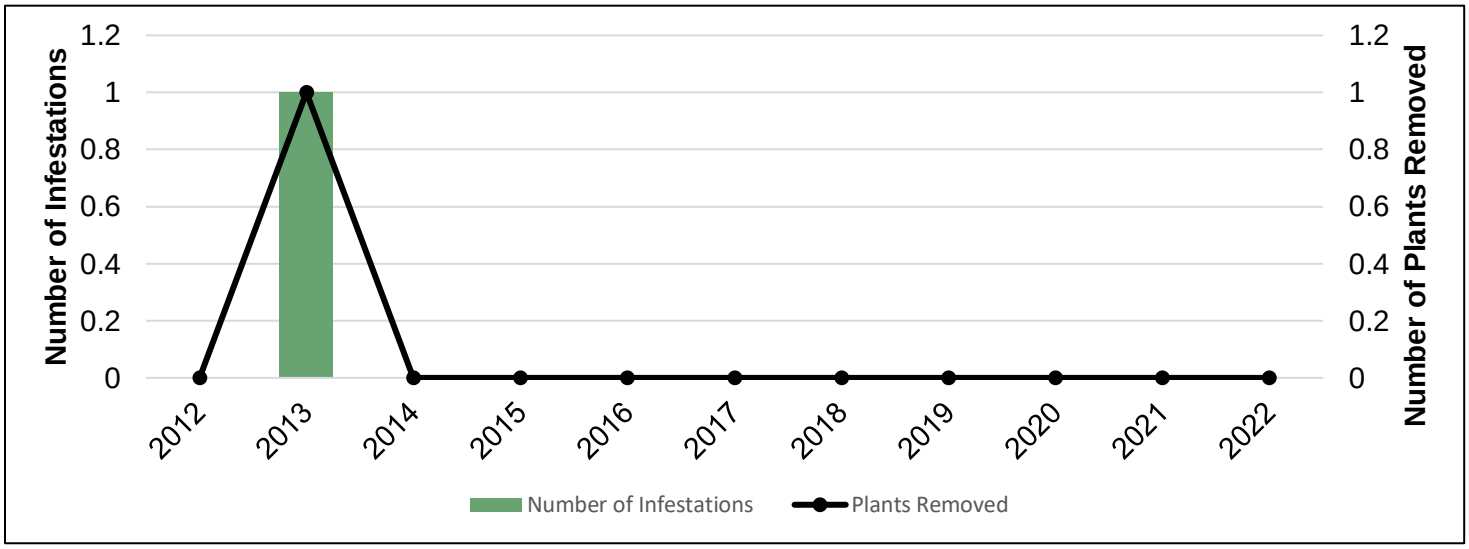


Figure 15. Garlic mustard distribution and management progress at Sacandaga Campground.

Recommendations:

Japanese tree lilac was observed just upstream from this facility in 2021 and should be monitored along the river in future years. Although garlic mustard is deemed locally eradicated, survey efforts should continue to quickly address any reemergence. It is recommended that the knotweed herbicide treatments continue as the area of the infestation is greatly reduced. Bush honeysuckle monitoring should continue with management of isolated individuals.

Mason Lake Primitive Campsites & Perkins Clearing Tract Conservation Easement

Invasive Species Distribution and Management Overview:

Garlic mustard was mapped and removed at campsite 5. There was a total of five plants removed.

Purple loosestrife was mapped and observed near the shoreline by the picnic area. The plants were not manageable due to the high-water level being.

Reed canary grass was mapped and observed along roadside near campsite 9.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
37	PLANTS REMOVED	5

Recommendations:

While garlic mustard remains below peak infestation levels, and the number of plants removed has decreased, management should remain a top priority at this facility, along with purple loosestrife. Local eradication may be possible with ongoing efforts.

Photo credit: Adirondackexperience.com

Potsdam Working Circle

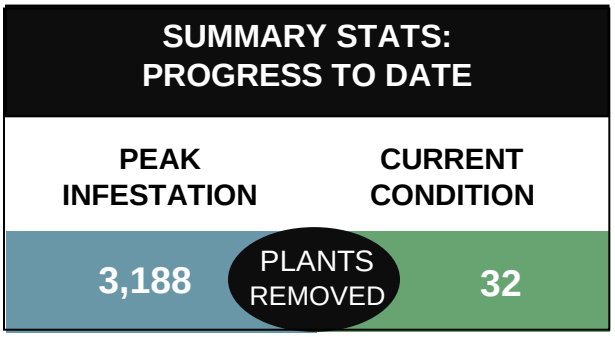
The Potsdam Working Circle contains one campground, Cranberry Lake. This section contains the individual report for the campground. For a comprehensive summary of the campground, see Appendix Table 4. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 5. Potsdam Working Circle distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Cranberry Lake	Bush honeysuckle Common buckthorn Garlic mustard Reed canary grass	0 0 32 0

Cranberry Lake

Invasive Species Distribution and Management Overview:



Bush honeysuckle was observed near the Bear Mountain trailhead parking area and was not managed due to size.

Common buckthorn was mapped at site 55 and was not managed due to size.

Garlic mustard was mapped and removed from sites 24, 39, 100, 131,136, 148, and 149. Infestations along a roadside, in the maintenance parking lot, and near site 24 were not managed as the plants had already set seed. A total of 32 plants were removed from seven sites (Figure 16).

Japanese knotweed was not observed in 2022. One single plant was removed near the bathroom closest to site 21 in 2021.

Reed canary grass is growing sporadically throughout the campground and was not managed.

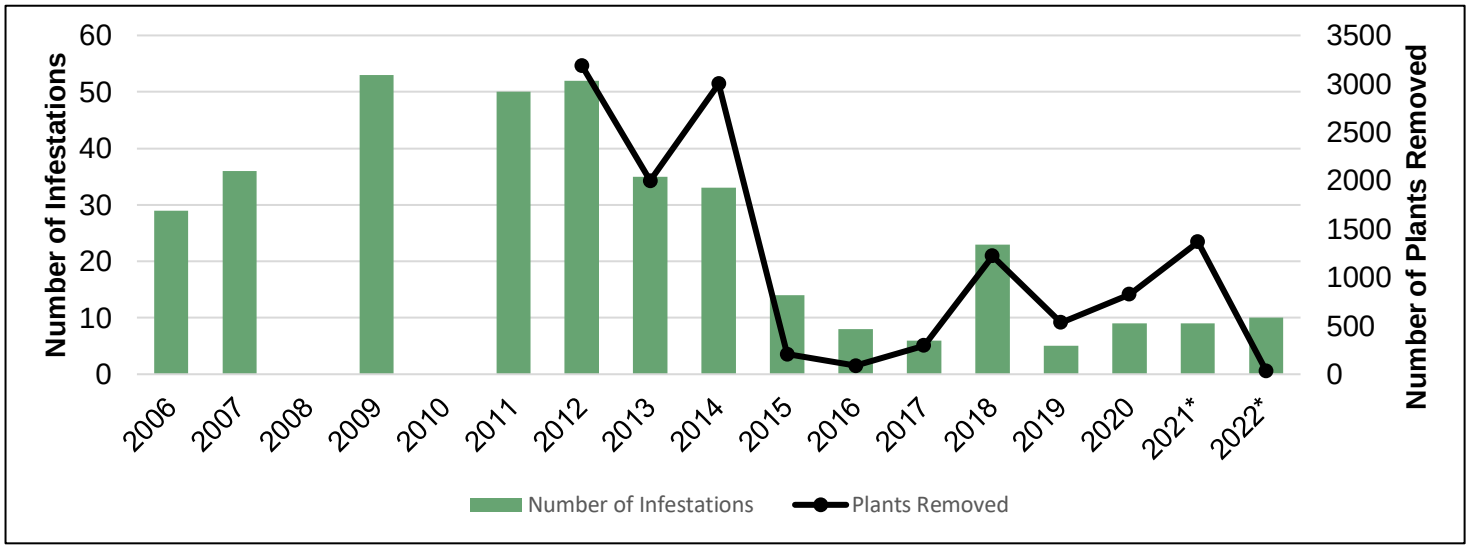


Figure 16. Garlic mustard distribution and management progress at Cranberry Lake Campground. * indicates years in which control of all known infestations was not completed.

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Recommendations:

While garlic mustard remains below peak infestation levels, the number of plants removed has increased in recent years and management should remain a top priority at this facility. Local eradication may be possible with ongoing efforts. With the introduction of Japanese knotweed, surveying for this species should be a top priority for early detection. Management of woody shrubs and reed canary grass is not recommended at this time given the likelihood of reintroduction.

Ray Brook Working Circle

The Ray Brook Working Circle contains 17 campgrounds: Ausable Point, Buck Pond, Crown Point, Fish Creek Pond, Frontier Town, Lake Eaton, Lake Harris, Lincoln Pond, Meacham Lake, Meadowbrook, Paradox Lake, Putnam Pond, Rollins Pond, Saranac Lake Islands, Sharp Bridge, Taylor Pond, and Wilmington Notch. Poke-O-Moonshine is no longer administered as a campground; however, it is open and accessible as a day use facility. The Floodwood Road Primitive Campsites are also in this region. Numbers for these facilities are not included in the campground totals but are summarized in this section. This section contains the individual reports for each of the campgrounds. For a comprehensive summary of these campgrounds, see Appendix Table 5. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 6. Ray Brook Working Circle distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Ausable Point	Bush honeysuckle	0
	Common buckthorn	0
	Glossy buckthorn	0
	Japanese barberry	0
	Oriental bittersweet	0
	Purple loosestrife	0
	Reed canary grass	0
Buck Pond	None observed in 2022	
Crown Point	Bush honeysuckle	0
	Common buckthorn	0
	Common reed grass	0
	Garlic mustard	51
	Oriental bittersweet	0
	Purple loosestrife	28
	Reed canary grass	0
	Wild parsnip	125
Fish Creek Pond	Bush honeysuckle	0
	Norway maple	0
	Reed canary grass	0
Floodwood Road Primitive Campsites	Bush honeysuckle	0
Frontier Town	Bush honeysuckle	0
	Purple loosestrife	0
	Reed canary grass	0
Lake Eaton	None observed in 2022	
Lake Harris	Bush honeysuckle	0
	Purple loosestrife	0
	Reed canary grass	0
Lincoln Pond	Bush honeysuckle	0
	Garlic Mustard	3
	Oriental bittersweet	0
	Purple loosestrife	0
	Reed canary grass	0

Campground	Invasive Plants Present	Total Plants Removed
Meacham Lake	Japanese knotweed Purple loosestrife Reed canary grass Wild parsnip	0 5 0 2
Meadowbrook	Autumn olive Bush honeysuckle	0 0
Paradox Lake	Bush honeysuckle Garlic mustard Purple loosestrife Reed canary grass	0 162 0 0
Poke-O-Moonshine	Common buckthorn Oriental bittersweet	0 0
Putnam Pond	Garlic mustard Multiflora rose Reed canary grass	32 0 0
Rollins Pond	Bush honeysuckle Winged euonymus	0 0
Saranac Lake Islands	Japanese Knotweed	0
Sharp Bridge	Bush honeysuckle Multiflora rose Purple loosestrife	0 0 0
Taylor Pond	Purple loosestrife	51
Wilmington Notch	None observed in 2022	

Ausable Point

Invasive Species Distribution and Management Overview:

Bush honeysuckle is widespread throughout the campground and was not managed.

Common buckthorn is widespread throughout the campground and was not managed.

Glossy buckthorn was observed for a second year in one site near the beach area and was not managed.

Japanese barberry was mapped in site 31 and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
1000	PLANTS REMOVED	0

Oriental bittersweet is widespread throughout the campground and was not managed.

Purple loosestrife was mapped along the campground entrance road, as well as in sites 99 and 101 (Figure 17). Plants were largely left unmanaged due to biocontrol presence, and some areas requiring a canoe or kayak were not accessed this year.

Reed canary grass was mapped near the campground entrance and was not managed.

Wild parsnip was observed for the first time at this campground in 2021, with one plant being removed near the day use parking lot entrance. However, in 2022 it was not observed.

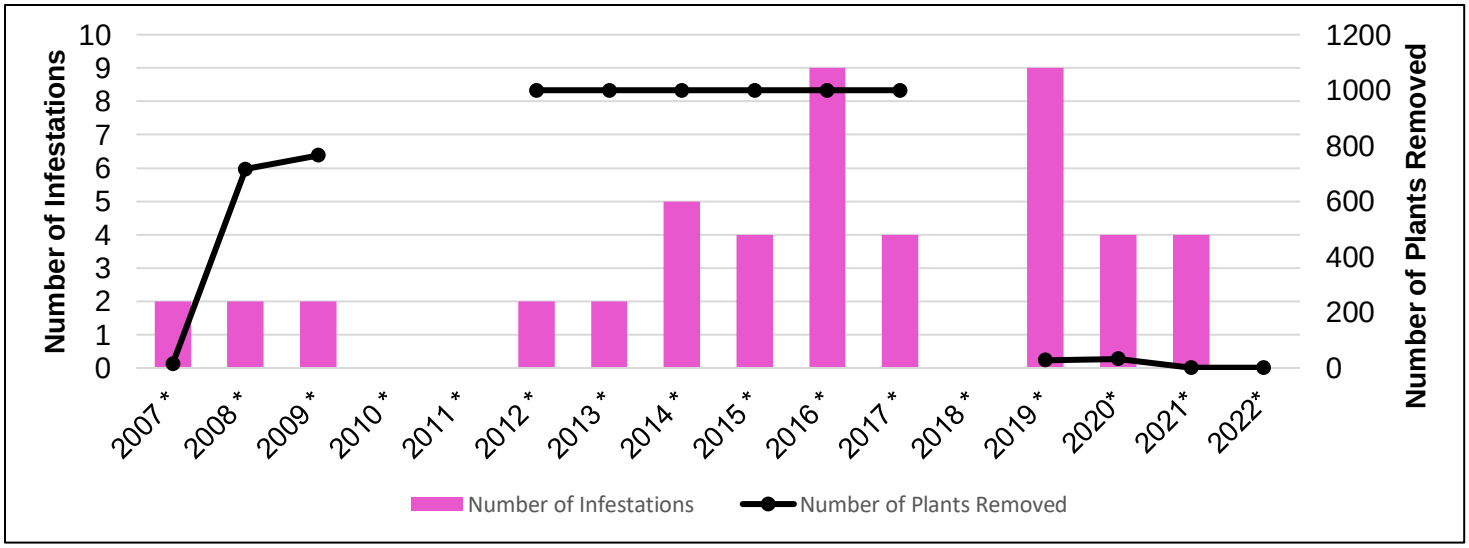


Figure 17. Purple loosestrife distribution and management progress at Ausable Point Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

As a new observation of wild parsnip was recorded at this campground in 2021, management of wild parsnip should be a top priority in 2022. Monitoring of purple loosestrife and levels of *Galerucella* presence should continue to be another top priority at this facility. Given the historic management data, it is recommended that the current low levels of remaining loosestrife be left to provide habitat for *Galerucella*. Given that Oriental bittersweet, reed canary grass, and the woody

shrub species are widely distributed, management of these species is not recommended at this time.

Buck Pond

Invasive Species Distribution and Management Overview:

No target invasive species were observed at this campground in 2022 for the eleventh consecutive year.

Recommendations:

Surveys should continue to ensure early detection and rapid response for new infestations.

Crown Point

Invasive Species Distribution and Management Overview:

Autumn olive was not observed at this location.

Bush honeysuckle is found growing sporadically throughout the facility but was not managed.

Common buckthorn was mapped near the lighthouse and was not managed.

Common reed grass (*Phragmites*) was mapped in a ditch along Bridge Road.

Garlic mustard was mapped in site 14 and a total of 51 plants were removed (Figure 18a).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
1,860		204

Japanese barberry was observed in 2020 but could not be located in 2021 and 2022.

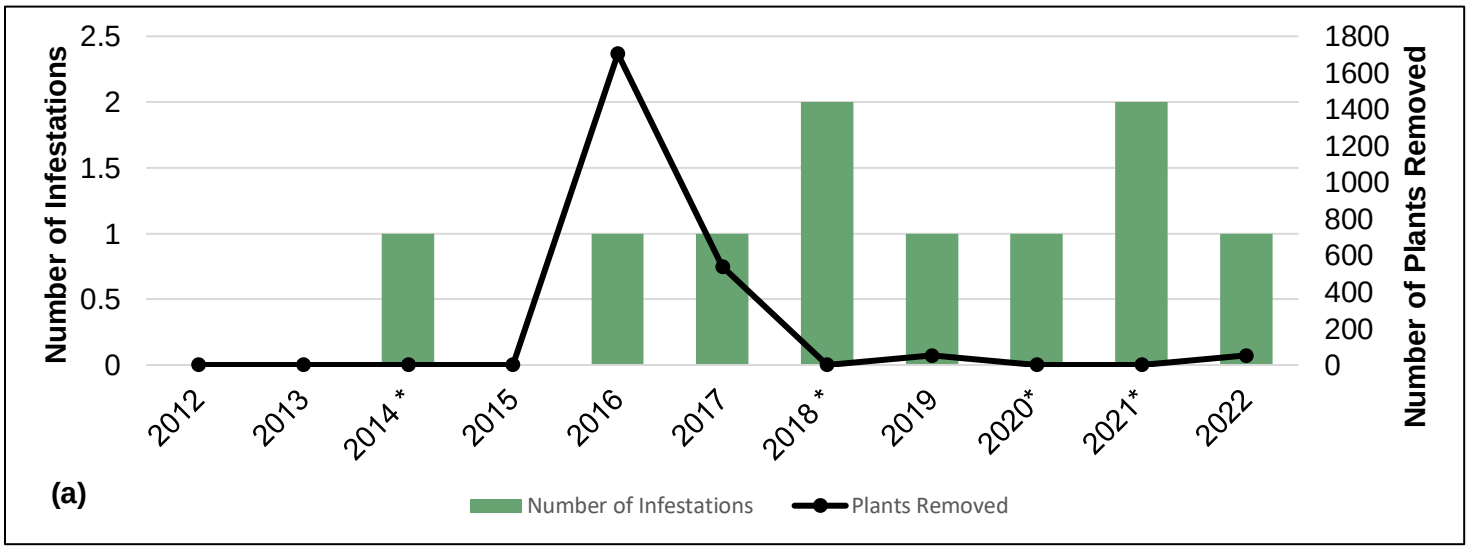
Oriental bittersweet was mapped near the lean-to and was not managed due to size.

Purple loosestrife was mapped and removed in site 58, in the field next to the lighthouse, downhill from the lighthouse and brick building along the shore, near the maintenance area bathroom, down the stairs from site 35, and near the boat dock (biocontrol present). A total of 28 plants were removed from six sites (Figure 18b).

Reed canary grass is widespread throughout the campground and was not managed.

Wild parsnip was mapped and removed from the road to the boat launch, sites 3, 6, 9, 15, downhill from the lighthouse, and at the maintenance center. A total of 125 plants were removed from seven locations (Figure 18c).

Yellow iris was not observed in 2021 and 2022 (Figure 18d).



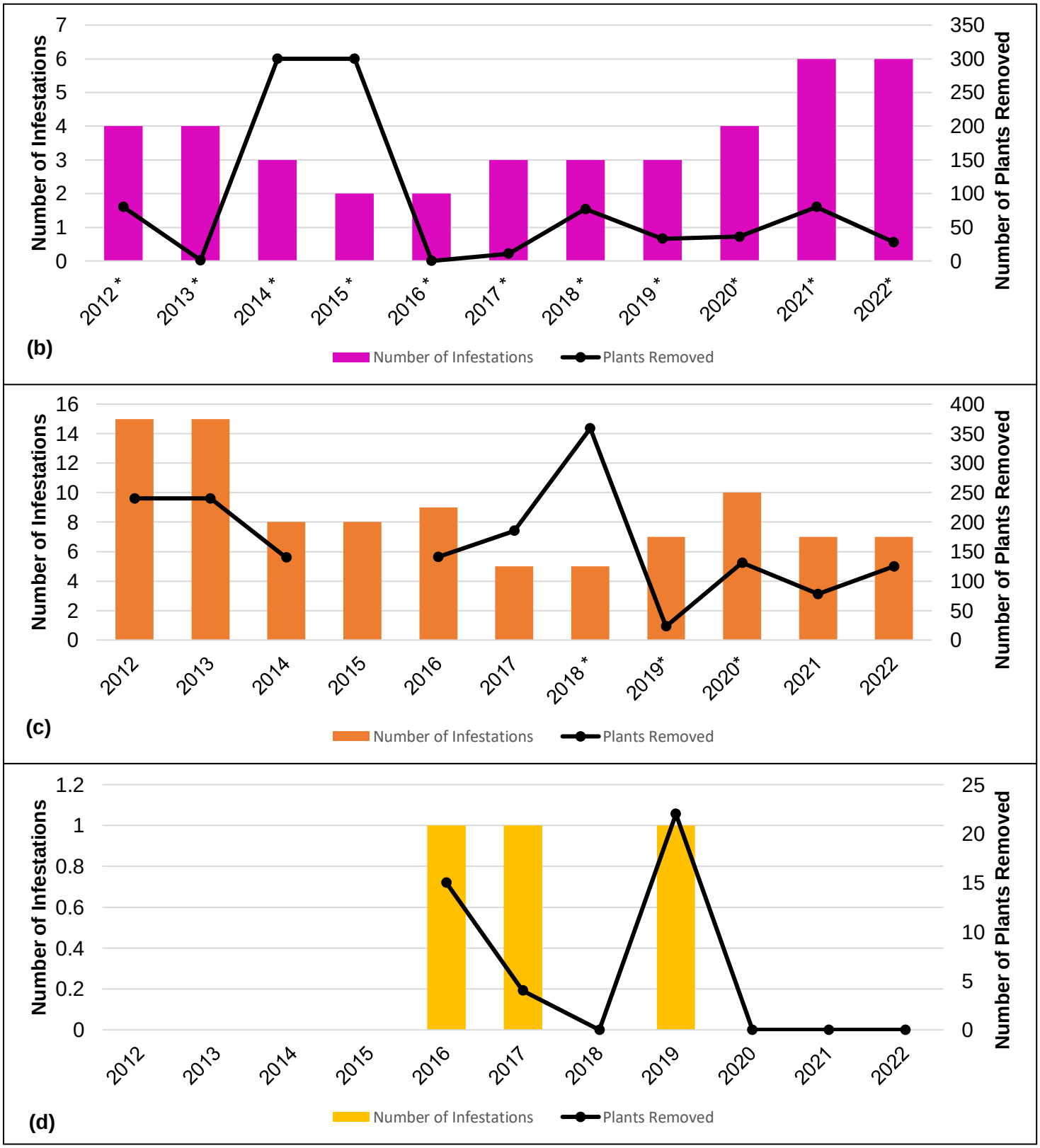


Figure 18 a-d. Garlic mustard (a), purple loosestrife (b), wild parsnip (c) and yellow iris (d) distribution and management progress at Crown Point Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management efforts should be prioritized earlier in the season before plants set seed. Purple loosestrife management should remain a priority in areas without *Galerucella* presence. As wild parsnip numbers increased in 2022, management should remain a priority to ensure numbers decrease in future years. Yellow iris monitoring along the shore should continue as well. Management of the woody species is not recommended at this time. Mechanical treatment of common reed grass is ineffective and should be prioritized for chemical control.

Photo credit: New York State Department of Environmental Conservation

Fish Creek Pond

Invasive Species Distribution and Management Overview:

Bush honeysuckle was mapped near the boat launch bridge and in site 137 and near turn off to Rollins Pond by a building and was not managed due to size.

Norway maple was mapped near the boat launch and was too large for management.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
8		0

Purple loosestrife was not observed in 2022 for the third consecutive year and is now considered locally eradicated (Figure 19).

Reed canary grass is growing along the bike path near State Rte. 30 and was not managed.

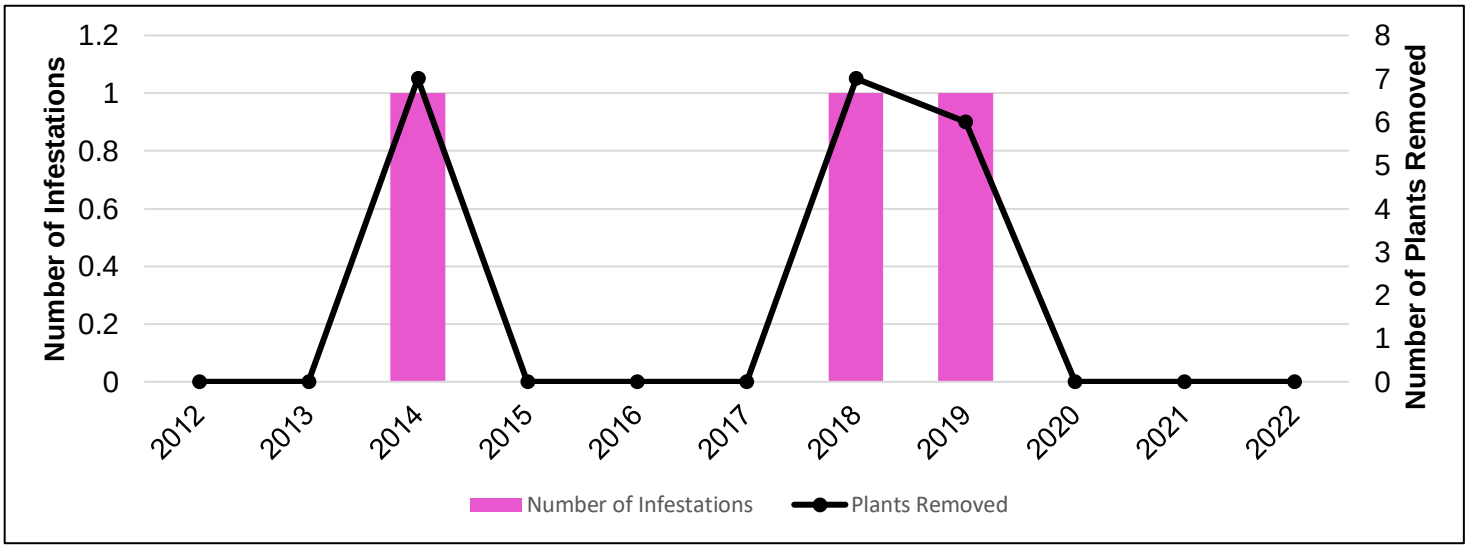


Figure 19. Purple loosestrife distribution and management progress at Fish Creek Pond Campground.

Recommendations:

Purple loosestrife should remain the top survey and management priority at this facility. The management of the woody species should be considered for future years.

TNC Conservation Associate Dana Holmlund assisted in survey and management efforts at this facility in 2022.

Floodwood Road Primitive Campsites

Invasive Species Distribution and Management Overview:

Bush honeysuckle was mapped near the canoe carry to Long Pond, east of site 6, near site 12 and along the road near Floodwood Pond and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
0		0

Recommendations:

Surveys of this area should continue as it is a high use area and introduction of new species is likely.

Photo credit: New York State Department of Environmental Conservation

Frontier Town

Invasive Species Distribution and Management Overview:

Bush honeysuckle is growing near the bathrooms in the day use area and was not managed due to size.

Purple loosestrife was observed near maintenance building 22. A total of one plant was mapped but not managed due to presence of biocontrol. (Figure 20).

Reed canary grass is widespread throughout campground and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
3	PLANTS REMOVED	0

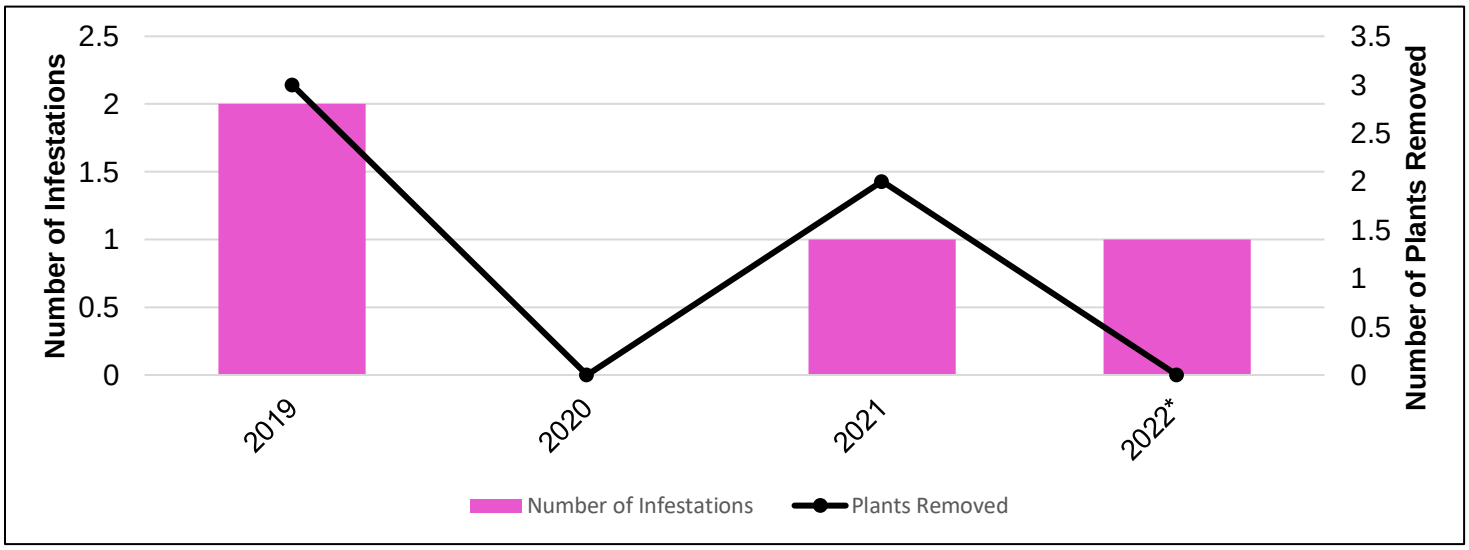


Figure 20. Purple loosestrife distribution and management progress at Frontier Town Campground. * indicates years in which control of all known infestations was not completed

Recommendations:

The first survey of this facility took place in 2019 after it initially opened to the public. As purple loosestrife was observed in 2021 and again in 2022, it should remain a top priority to ensure quick management of reemerging plants. Early detection of new invasive species is important at this facility as construction and increased visitor use serve as likely sources of invasive plant material.

Lake Eaton

Invasive Species Distribution and Management Overview:

Bush honeysuckle was not observed for the fifth consecutive year and is presumed to be locally eradicated.

Garlic mustard was not observed in 2022 (Figure 21).

Reed canary grass was found to have been previously misidentified and was not observed in 2022.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
250		0

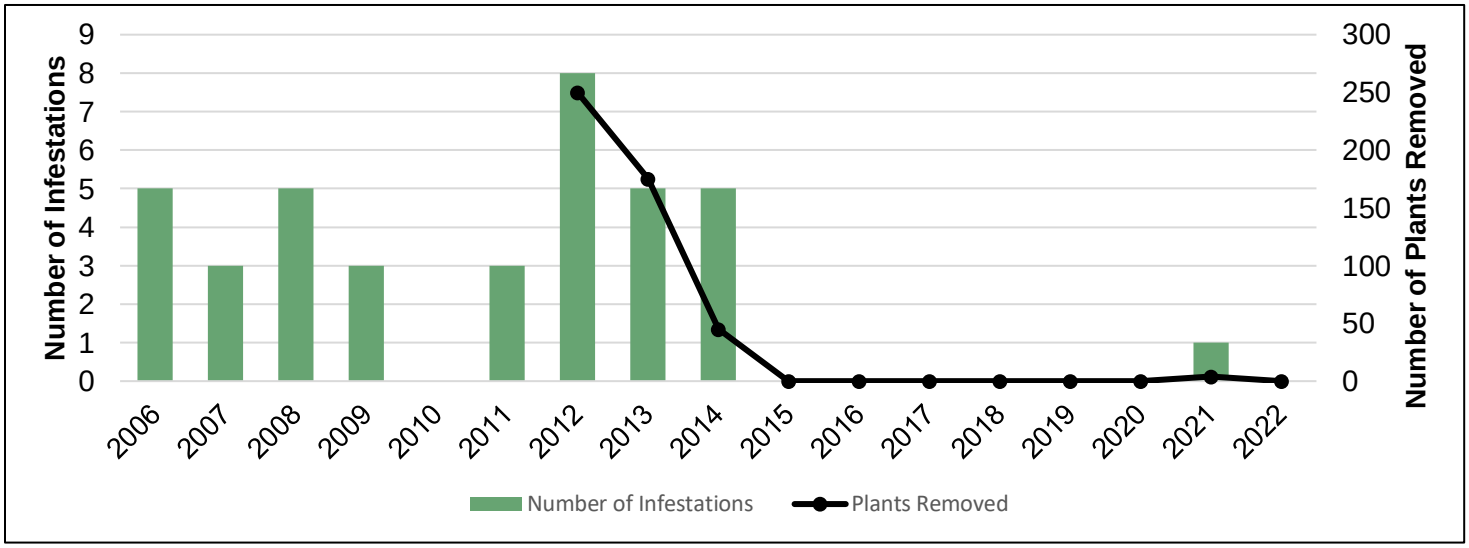


Figure 21. Garlic mustard distribution and management progress at Lake Eaton Campground.

Recommendations:

Garlic mustard surveillance should remain a priority at this campground to ensure quick management of any reemerging plants. Early detection surveys should continue for new species.

Lake Harris

Invasive Species Distribution and Management Overview:

Bush honeysuckle is scattered throughout the campground and was not managed.

Purple loosestrife was mapped along the lakeshore between sites 12-20, at site 9, and near a small boat launch on the eastern shore. Flower heads were removed in areas with biocontrol presence (Figure 22).

Reed canary grass was mapped near the former lifeguard cabin and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
1,155		0

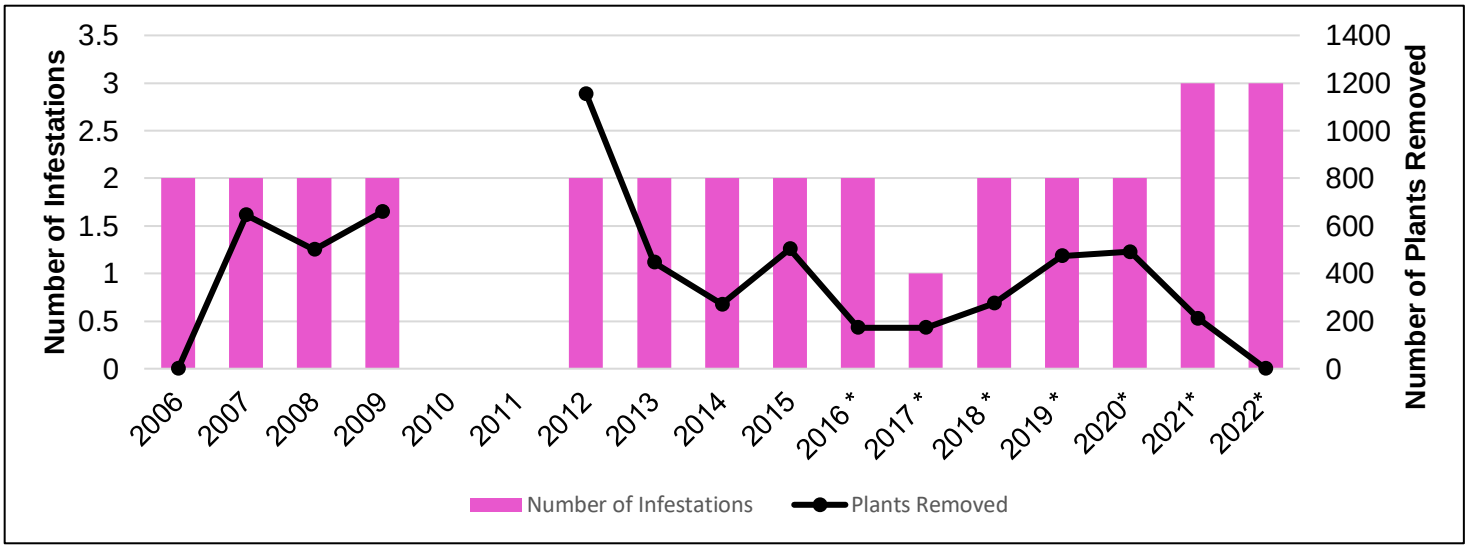


Figure 22. Purple loosestrife distribution and management progress at Lake Harris Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Purple loosestrife management should remain a top priority at this facility with the consideration for biocontrol release in the future. Management of bush honeysuckle and reed canary grass is not recommended at this time as reintroduction is likely.

Lincoln Pond

Invasive Species Distribution and Management Overview:

Bush honeysuckle was mapped at sites 8 and 23 and was not managed due to size.

Common buckthorn was not observed this year. This species was possibly misidentified in 2019.

Garlic mustard was observed and three plants were removed at site 17 (Figure 23a).

Oriental bittersweet was mapped near site 17 and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
172		3

Purple loosestrife was mapped near the canoe/kayak rental area. Purple loosestrife was not managed due to potential presence of biocontrol and time restraints (Figure 29b).

Reed canary grass is growing sporadically throughout the campground and was not managed.

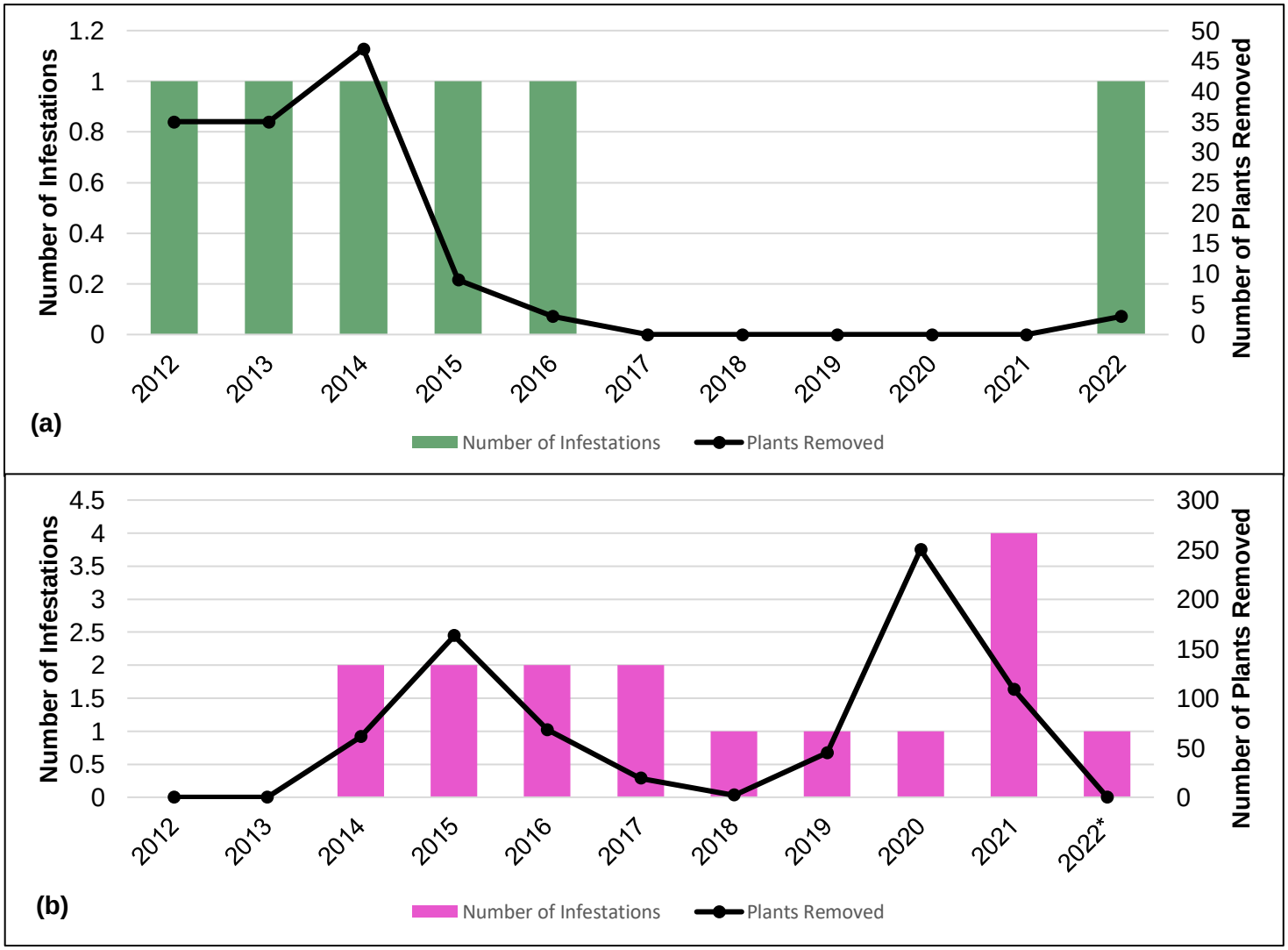


Figure 23 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Lincoln Pond Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Purple loosestrife should remain the top management priority at this facility. It is recommended that remote site boat surveys continue in 2023 due to three new observations near remote sites in 2021. It is also recommended that a release of biocontrol beetles is conducted at this facility in the future. Although garlic mustard was considered locally eradicated in the past, survey measures should continue since there was a small presence this year in 2022.

Photo credit: See/Swim

Meacham Lake

Invasive Species Distribution and Management Overview:

Garlic mustard was mapped and managed in 2006 but has not been observed since and is considered locally eradicated (Figure 24a).

Japanese knotweed was mapped behind a sand pile near the parking lot across from the swimming area.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
15+		7

Purple loosestrife was mapped and removed around the main boat launch parking area. A total of five plants were removed from one site. Flower heads were removed from another site near the boat launch, as *Galerucella* beetles were released at this facility in 2022 (Figure 24b).

Reed canary grass is present in a spoils pit near a parking lot and was not managed.

Wild parsnip was mapped in five sites. Due to size and phenology, plants were only removed from one site, with a total of two plants removed (Figure 24c). Flower heads were removed from the remaining sites

**All invasive plant infestations are located within the main campground of Meacham Lake. Meacham Lake West was also surveyed where no invasive plants were observed.

Photo credit: New York State Department of Environmental Conservation

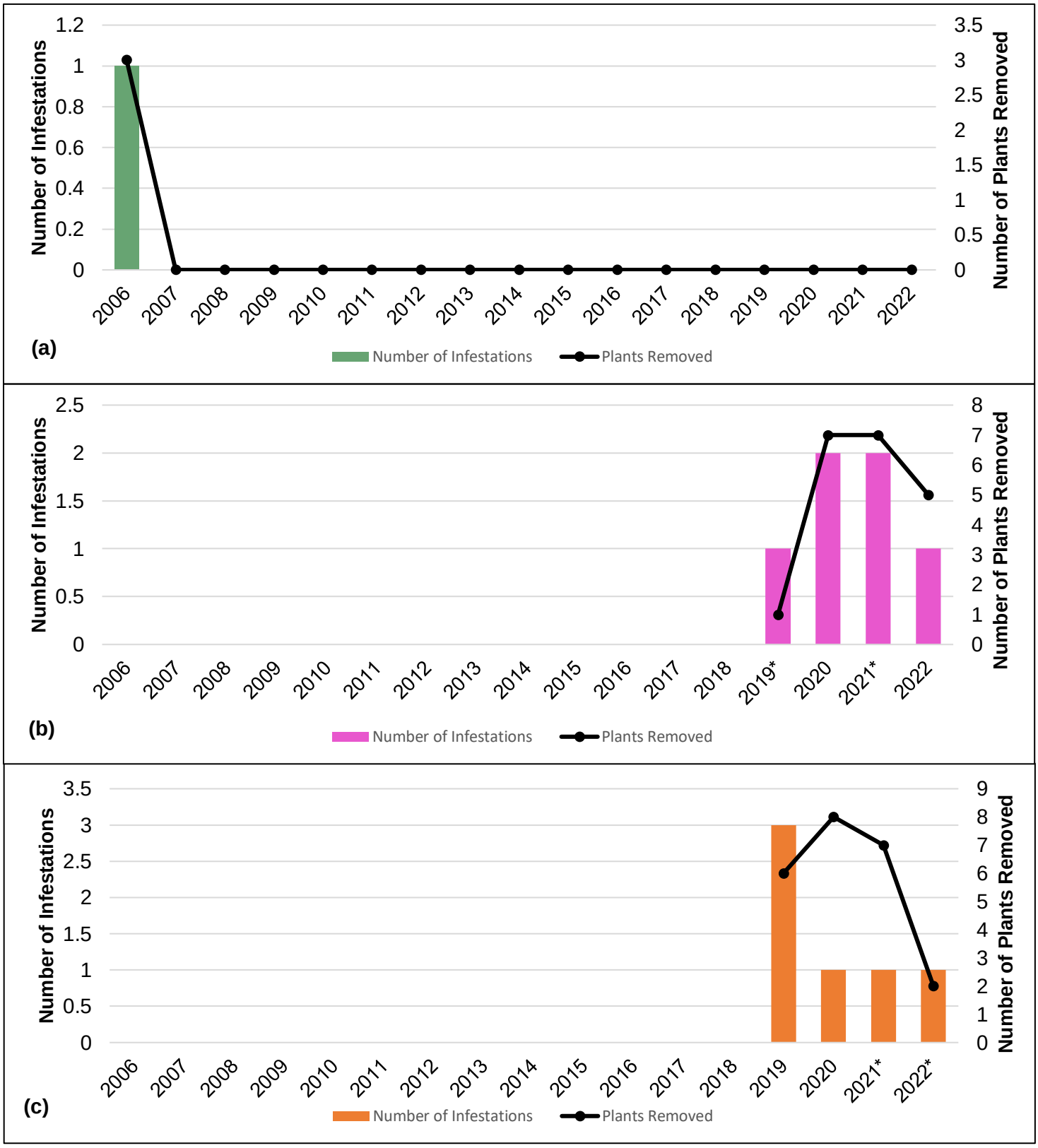


Figure 24 a-c. Garlic mustard (a), purple loosestrife (b), and wild parsnip (c) distribution and management progress at Meacham Lake Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

As garlic mustard reemergence is unlikely, focus should be shifted to prioritize the management of purple loosestrife and wild parsnip. The boat launch area is heavily infested with wild parsnip and should be surveyed early in the season before plants grow too large for mechanical management. A steep hillside presents a barrier to manual management of purple loosestrife, making this facility a suitable release site for *Galerucella,* although loosestrife populations are relatively low. The knotweed infestation should be prioritized for chemical treatment.

Photo credit: New York State Department of Environmental Conservation

Meadowbrook

Invasive Species Distribution and Management Overview:

Autumn olive is present near the entrance but is too large for mechanical removal.

Bush honeysuckle was mapped behind site 60 and near the trail to the Scarface Mountain trailhead but was not managed.

Garlic mustard was not observed for the eighth consecutive year and is considered locally eradicated (Figure 25).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
70		0

Japanese barberry was not observed for the seventh consecutive year and is considered locally eradicated.

Reed canary grass has been mapped historically but was found to be misidentified.

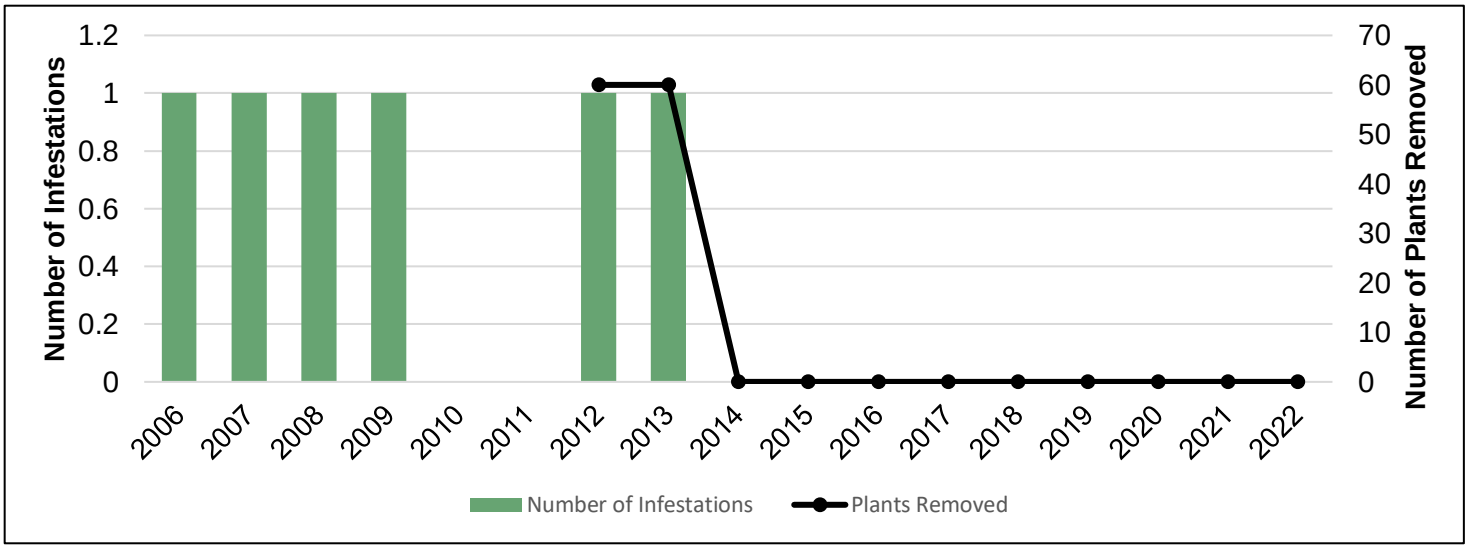


Figure 25. Garlic mustard distribution and management progress at Meadowbrook Campground.

Recommendations:

As garlic mustard reemergence is unlikely, efforts can be shifted to managing infestations of bush honeysuckle. Autumn olive should continue to be monitored for spread throughout the campground.

Paradox Lake

Invasive Species Distribution and Management Overview:

Bush honeysuckle is growing sporadically throughout campground and was not managed.

Garlic mustard was mapped and removed from sites 14, 30, and by a bathroom near a culvert. A total of 162 plants were removed (Figure 26a).

Purple loosestrife was mapped along the shoreline north of the boat launch, south of the boat launch, and north of the swimming area. Biocontrol was present so no plants were removed at this site.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
2,380		162

Reed canary grass is widespread throughout the campground and was not managed.

Photo credit: New York State Department of Environmental Conservation

Figure 26 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Paradox Lake Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

With the increased occurrence of garlic mustard, this species should remain a top priority for survey and management. As the purple loosestrife infestations had presence of biocontrol, management efforts should focus on removing flower heads and new emergences. This facility may serve as a potential site for biocontrol collection or release in the future, depending on levels of *Galerucella* presence. Management of bush honeysuckle and reed canary grass is not recommended at this time as reintroduction is likely.

Poke-O-Moonshine

**This facility is no longer administered as a public campground; however, it is open and frequently visited as a day use facility by land-based outdoor recreationalists. Numbers for this facility are not included in the campground totals.

Invasive Species Distribution and Management Overview:

Common buckthorn is growing sporadically throughout the facility and was not managed.

Oriental bittersweet was found growing in an old campsite and towards the ranger trail and was not managed due to size.

Reed canary grass was not observed, as it was found to have been previously misidentified.

Recommendations:

Although this is no longer used as a campground, the popular facility remains open for day use and should continue to be monitored for the introduction of new invasive species.

Photo credit: Adrian of Climb and Punishment Blog

Putnam Pond

Invasive Species Distribution and Management Overview:

Autumn olive was not observed. The 2019 observation may have been misidentified.

Garlic mustard was observed for the first time since 2016 at site 21 in 2021 and again in 2022. A total of 32 plants were removed from this one location (Figure 27a).

Multiflora rose was mapped in one location and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
331		32

Purple loosestrife was not observed in 2022 and is considered locally eradicated (Figure 27b).

Reed canary grass is scattered throughout the campground and was not managed.

Photo Credit: Becca Tamagna

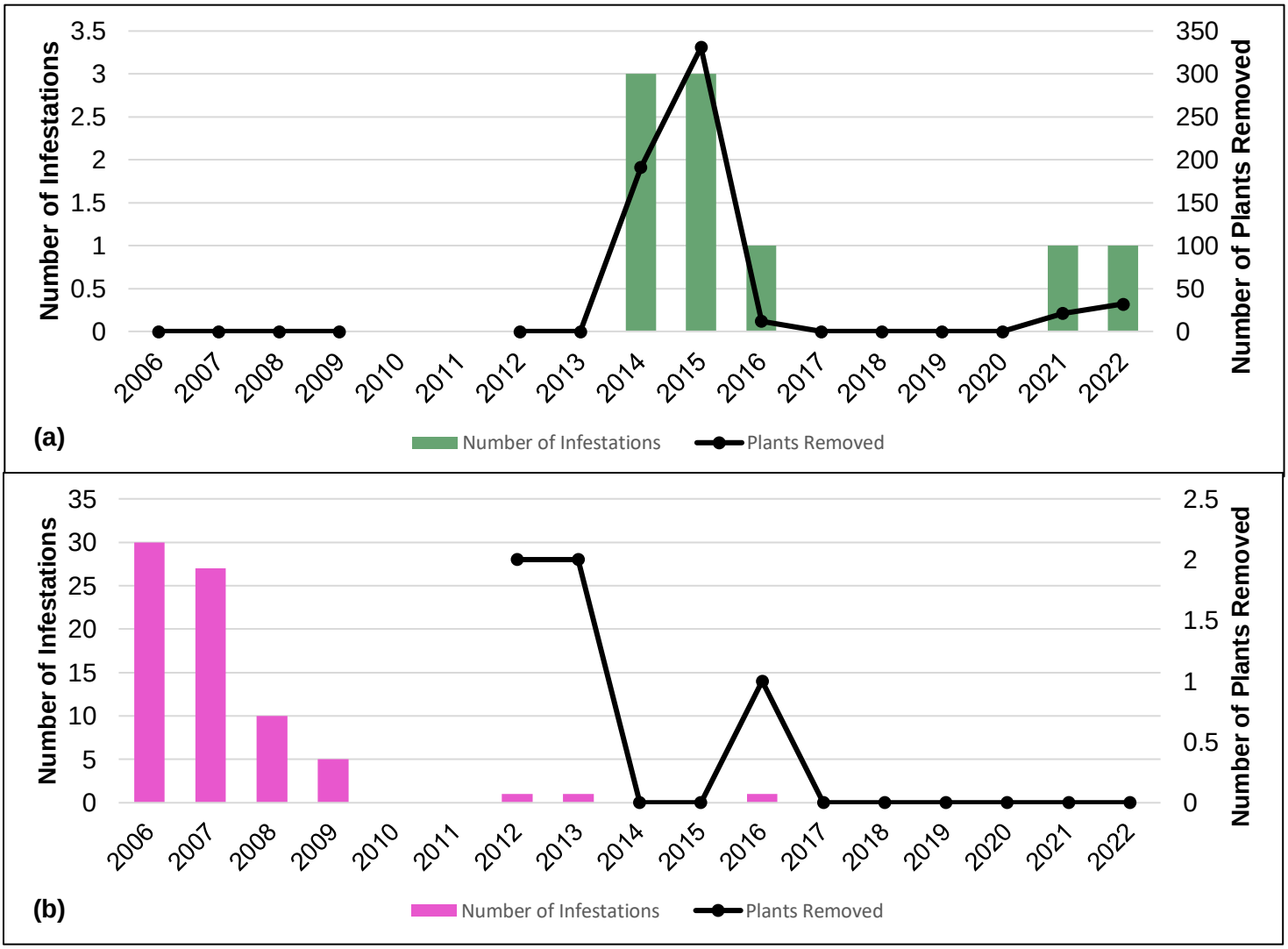


Figure 27 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Putnam Pond Campground.

Recommendations:

Surveillance for garlic mustard should remain a top priority since it was observed in 2021 and 2022 for the first time in five years. Surveillance for purple loosestrife should also remain a priority to monitor any possible reemergence. Management of woody species is not recommended at this time.

Rollins Pond

Invasive Species Distribution and Management Overview:

Bush honeysuckle was observed in site 28, A29, 230 and 238 and was not managed due to size.

Garlic mustard was not observed in 2022 and is considered locally eradicated (Figure 28).

Winged euonymus is planted ornamentally near the shower building and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
750	PLANTS REMOVED	0

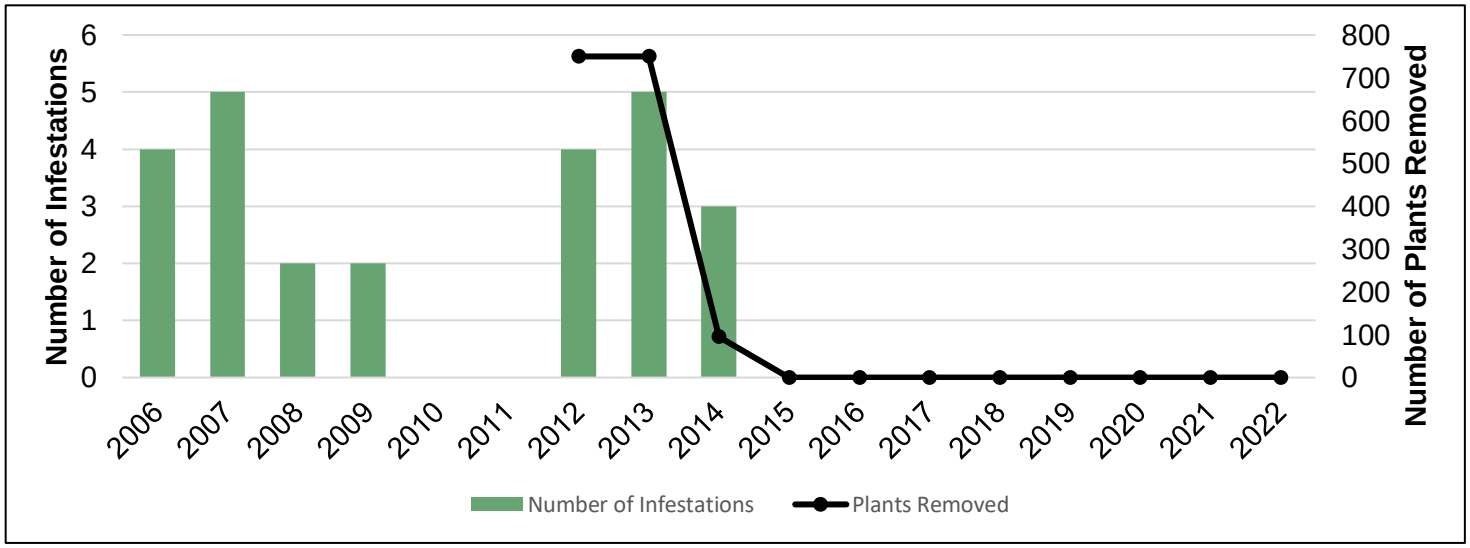


Figure 28. Garlic mustard distribution and management progress at Rollins Pond Campground.

Recommendations:

As garlic mustard is considered locally eradicated at this facility, focus should be shifted to early detection of garlic mustard reemergence and new invasive species infestations. Management of honeysuckle in certain sites should be prioritized, if time allows, as it has not yet spread to sites. It is recommended that the ornamental beds of winged euonymus be replaced with a native species.

Saranac Lake Islands

Invasive Species Distribution and Management Overview:

This facility is only accessible by motorboat and was first surveyed in 2022. Only a partial survey was performed due to NYSDEC staff time constraints.

Japanese knotweed was mapped at site 59.

Recommendations:

The Japanese knotweed patch should be prioritized for treatment in 2023, if time allows. In 2022, sites 59, 37-42, and Bluff Island were surveyed. A full day should be dedicated to surveying more sites in 2023.

Photo Credit: New York State Department of Environmental Conservation

Sharp Bridge

Invasive Species Distribution and Management Overview:

Bush honeysuckle was observed in site 6 and not managed due to size.

Multiflora Rose was observed in site 40 and not managed due to size.

Purple loosestrife was mapped along the Schroon River and downstream of the picnic area (Figure 29). Management was not completed due to heavy biocontrol presence.

Reed canary grass was not observed in 2022.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
667	PLANTS REMOVED	0

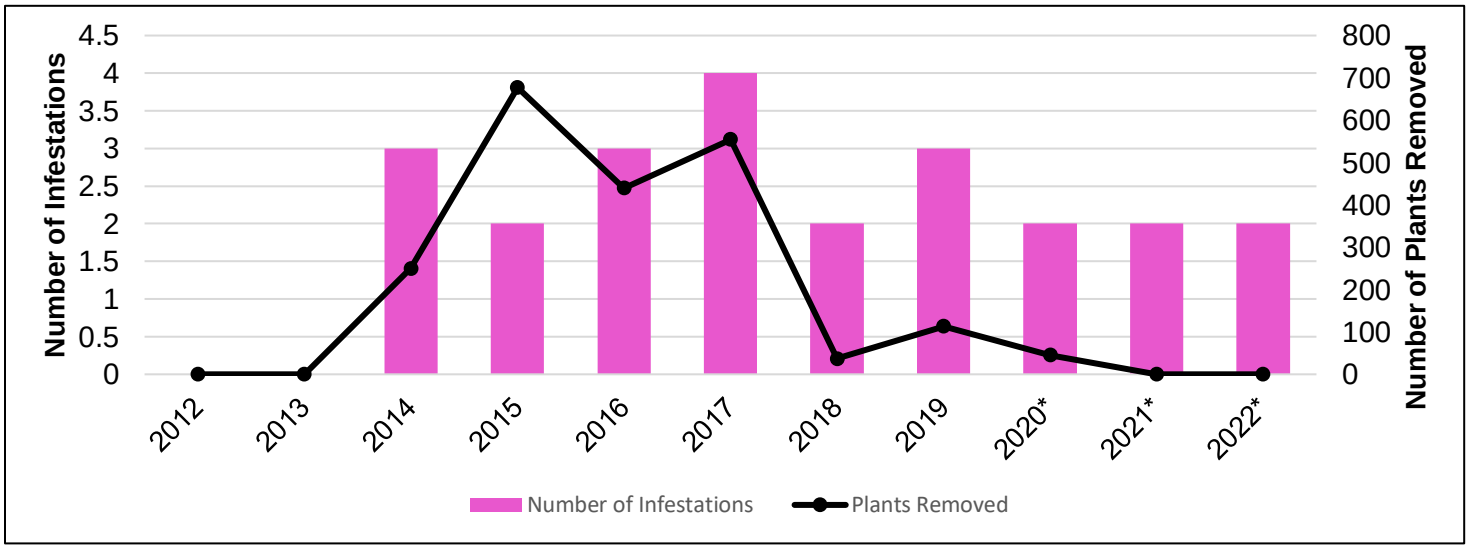


Figure 29. Purple loosestrife distribution and management progress at Sharp Bridge Campground. * indicates years in which management of all known infestations was not completed.

Recommendations:

Purple loosestrife management should remain the top priority at this facility in areas where biocontrol is not present. Heavy signs of insect damage suggest biocontrol were present and affected plants should be left as habitat. Early detection of new invasive species should remain a priority.

Taylor Pond

Invasive Species Distribution and Management Overview:

Purple loosestrife was mapped and removed along the beach between sites 20 and 21, and near the boat launch. A total of 51 plants were removed from two locations (Figure 30).

Reed canary grass was found to be previously misidentified.

**Remote sites 1 and 2 were surveyed in 2022 and no invasive species were observed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
800		51

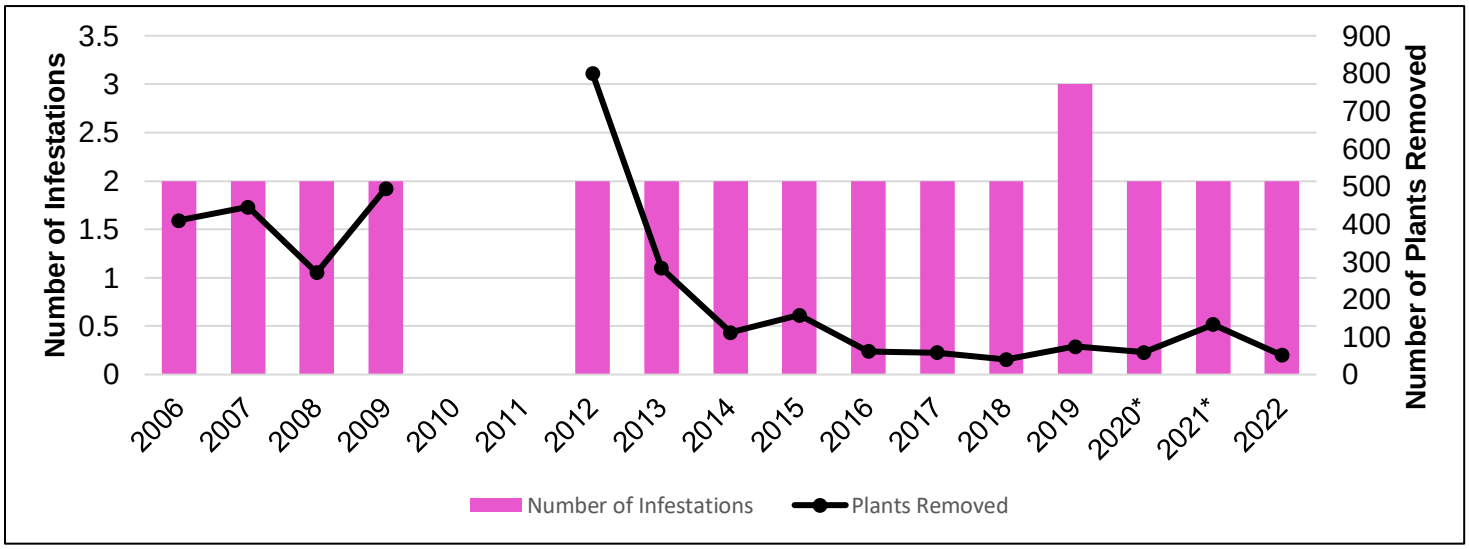


Figure 30. Purple loosestrife distribution and management progress at Taylor Pond Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Purple loosestrife should remain the top management priority at this facility, and these populations should be considered for *Galerucella* release in the future. All six remote sites should be surveyed in 2023, if time allows (these sites will require boat access).

Wilmington Notch

Invasive Species Distribution and Management Overview:

No target invasive species were observed at this campground in 2022.

Recommendations:

Surveys should continue to ensure early detection and rapid response for new infestations.

Photo Credit: See/Swim

Warrensburg Working Circle

The Warrensburg Working contains seven campgrounds: Eagle Point, Hearthstone Point, Lake George Battleground, Lake George Islands, Luzerne, Rogers Rock, and Scaroon Manor. This section contains the individual reports for each of the campgrounds. For a comprehensive summary of these campgrounds, see Appendix Table 6. For a comprehensive summary of terrestrial invasive species distribution across trailheads, fishing access sites, parking areas, and boat launches in all working circles, see Appendix Table 7.

Table 7. Warrensburg Working Circle distribution and management summary.

Campground	Invasive Plants Present	Total Plants Removed
Eagle Point	Bush honeysuckle	0
Hearthstone Point	Autumn olive	0
	Bush honeysuckle	0
	Garlic mustard	261
	Japanese barberry	0
	Japanese knotweed	0
	Multiflora rose	0
	Norway maple	0
	Oriental bittersweet	0
	Winged euonymus	0
Lake George Battleground	Bush honeysuckle	0
	Garlic mustard	109
	Japanese barberry	0
	Japanese knotweed	0
	Norway maple	0
	Oriental bittersweet	0
	Winged euonymus	0
Lake George Islands	Bush honeysuckle	0
	Common reed grass	0
	Japanese barberry	0
	Japanese stiltgrass	0
	Multiflora rose	0
	Oriental bittersweet	0
	Purple loosestrife	0
	Wineberry	0
	Winged euonymus	0
	Yellow iris	0
Luzerne	Bush honeysuckle	0
	Garlic mustard	16
	Oriental bittersweet	0
	Purple loosestrife	0
	Reed canary grass	0

Campground	Invasive Plants Present	Total Plants Removed
Rogers Rock	Autumn olive Bush honeysuckle Common buckthorn Garlic mustard Japanese barberry Japanese knotweed Oriental bittersweet Reed canary grass Winged euonymus	0 0 0 2,678 0 0 0 0 0
Scaroon Manor	Autumn olive Bush honeysuckle Common buckthorn Japanese barberry Oriental bittersweet Purple loosestrife Reed canary grass Winged euonymus	0 0 0 0 0 0 0 0

Eagle Point

Invasive Species Distribution and Management Overview:

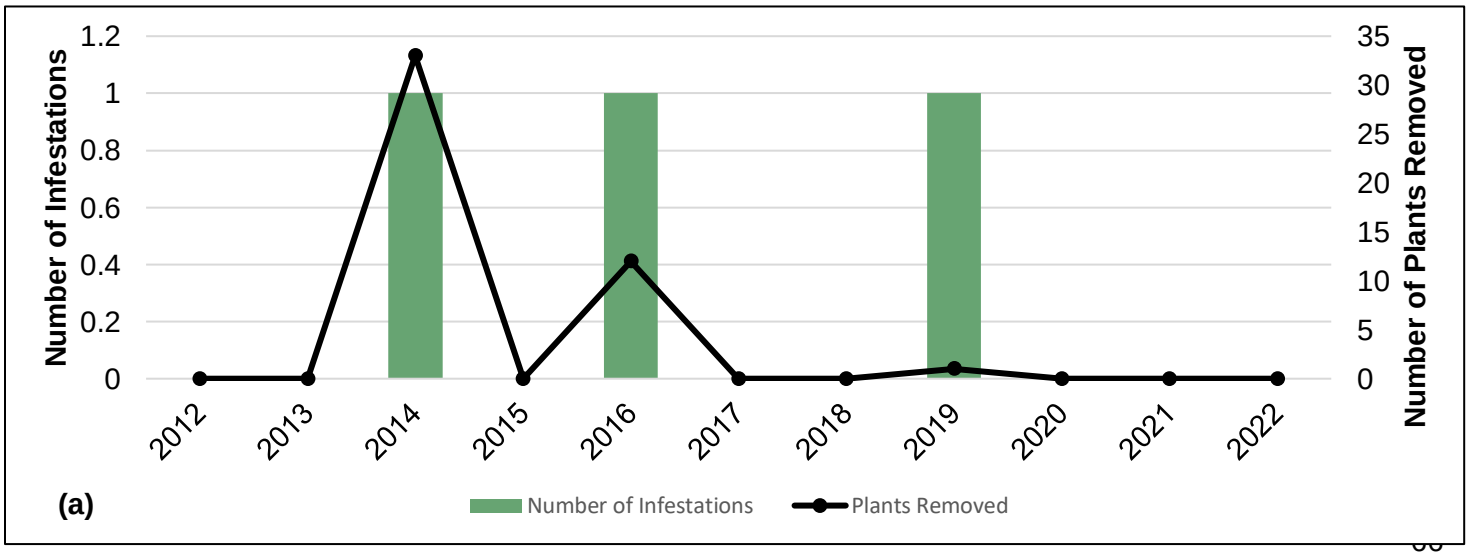
Bush honeysuckle was observed at sites 3, 7, and 57 and was not managed.

Garlic mustard has not been observed since 2019 and is now considered locally eradicated. (Figure 31a).

Purple loosestrife was not observed in 2022. (Figure 31b).

SUMMARY STATS: PROGRESS TO DATE

PEAK INFESTATION		CURRENT CONDITION
33	PLANTS REMOVED	0



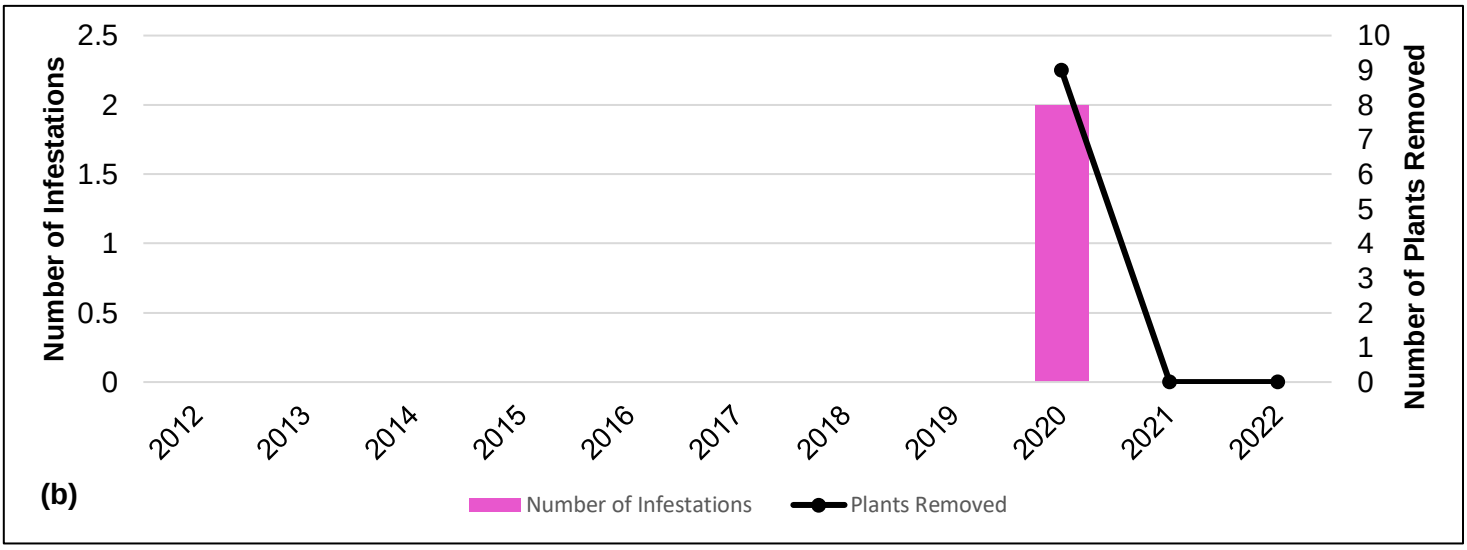
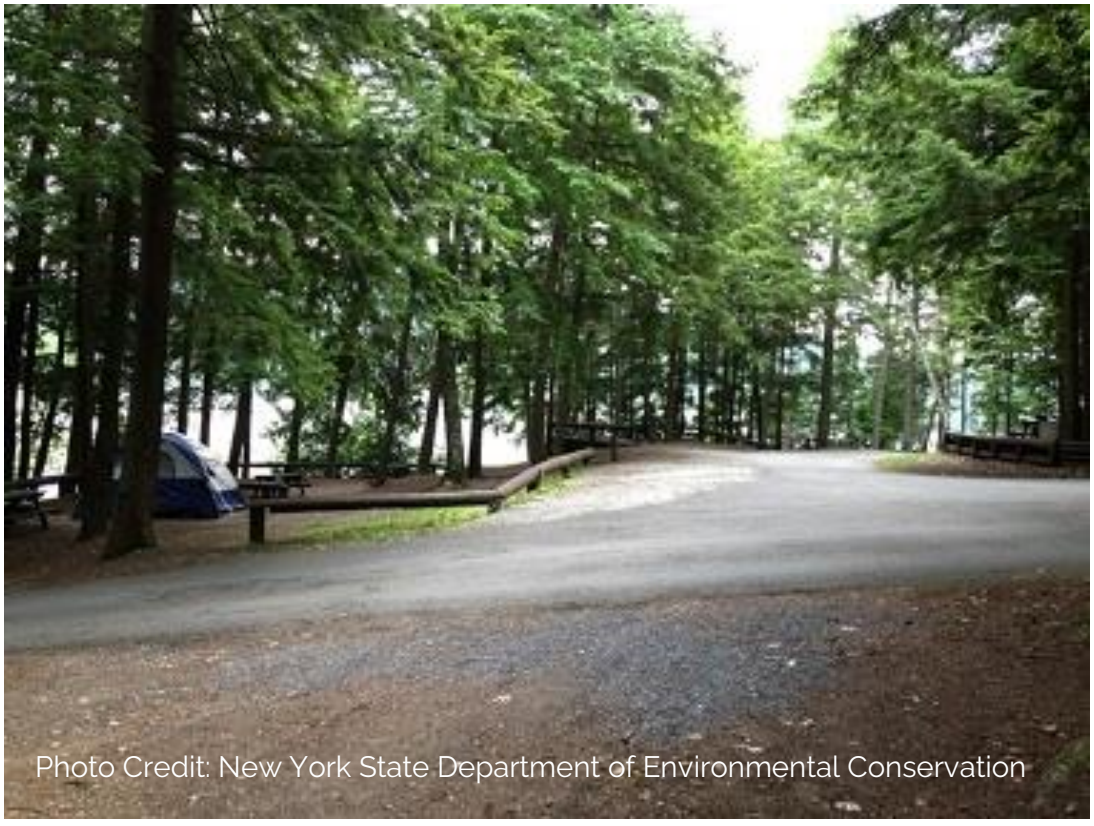


Figure 31 a-b. Garlic mustard (a) and purple loosestrife (b) distribution and management progress at Eagle Point Campground.

Recommendations:

Garlic mustard and purple loosestrife should remain a survey priority at this campground to ensure that newly emerged plants are managed before they set seeds. Management of bush honeysuckle is not recommended at this time.



Hearthstone Point

Invasive Species Distribution and Management Overview:

Autumn olive was mapped near a bathroom and was not managed due to size.

Bush honeysuckle was mapped across from site 158

Garlic mustard was mapped and removed from sites 49, 58, 62, 70, 73, near stone wall by site 78, 130, 189, and behind a dumpster. A total of 261 plants were removed from nine locations (Figure 32).

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
21,500		261

Japanese barberry is found sporadically throughout campground and was not managed.

Japanese knotweed was mapped along the road past site 73 and in the spoils area and was not managed.

Multiflora rose was mapped in sites 67, 192, and 198 area and was not managed due to size.

Norway maple was mapped in site 70 but was too large for management.

Oriental bittersweet is found sporadically throughout the campground and was not managed in.

Winged euonymus is found sporadically throughout the campground and was not managed.

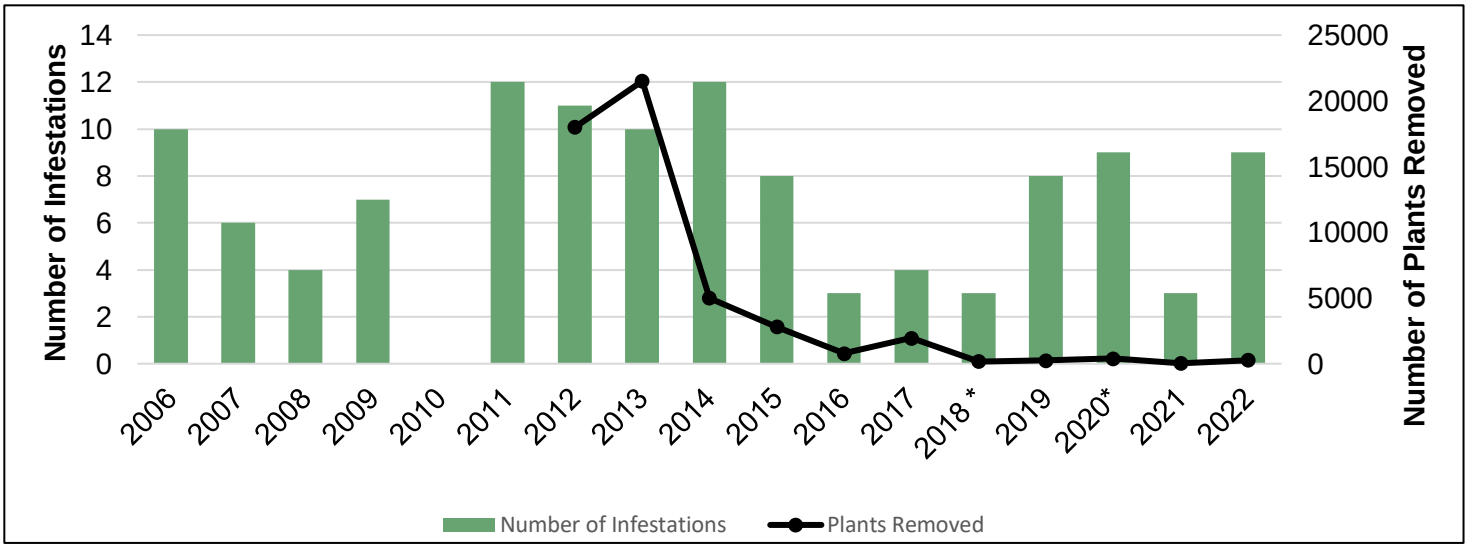


Figure 32. Garlic mustard distribution and management progress at Hearthstone Point Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management should remain the top priority at this facility. The knotweed infestations should be considered for chemical treatment. Japanese barberry, Oriental bittersweet, and winged euonymus are found throughout the campground and are not high management priorities. The autumn olive and multiflora rose should be cut in 2022, if time allows.

TNC Conservation Associate Dana Holmlund assisted in survey and management efforts at this facility in 2022.

Lake George Battleground

Invasive Species Distribution and Management Overview:

Bush honeysuckle is scattered throughout the campground and was not managed.

Garlic mustard was mapped and removed from site 20, across from site 20, and near the recycling center and behind sites 8-19. A total of 109 plants were removed not including first year rosettes from four locations (Figure 33).

Japanese barberry is scattered throughout the campground and was not managed.

SUMMARY STATS: PROGRESS TO DATE

PEAK INFESTATION		CURRENT CONDITION
21,500	PLANTS REMOVED	109

Japanese knotweed is present in a large patch in the woods behind site 19, closely following and extending over the property line.

Norway maple was mapped at site 58 but was too large for management.

Oriental bittersweet is scattered throughout the campground and was not managed.

Winged euonymus was mapped in site 7 and was not managed due time constraints.

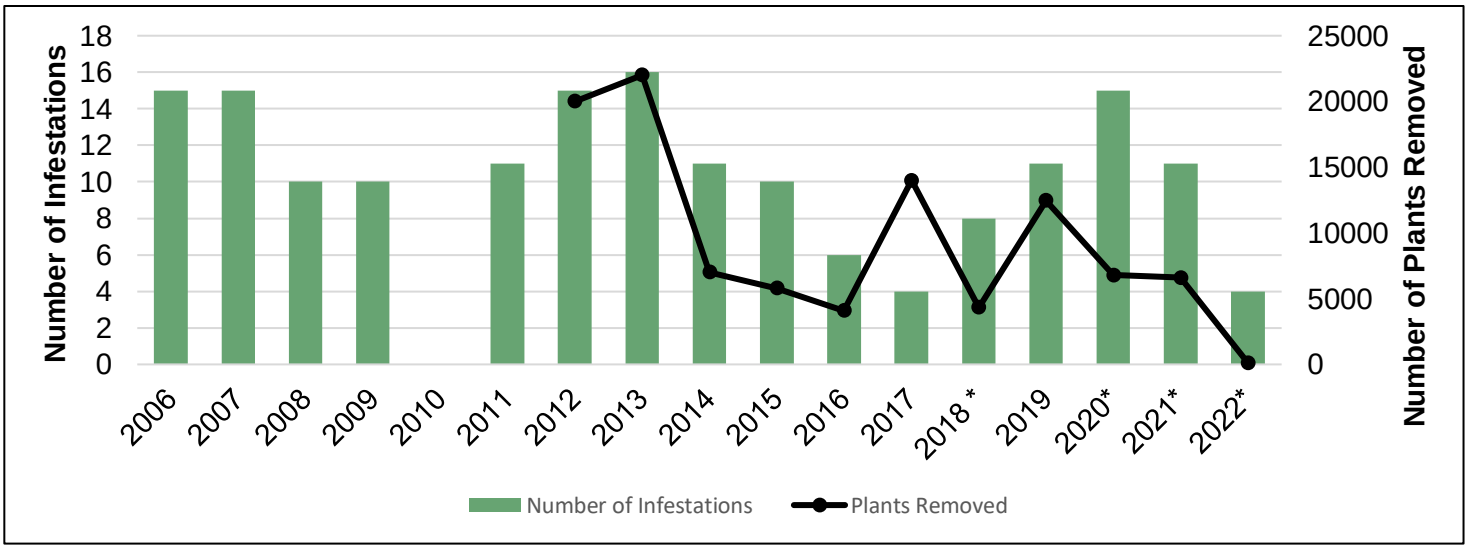


Figure 33. Garlic mustard distribution and management progress at Lake George Battleground Campground.
* indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard management should remain the top priority at this campground. The presence and density of garlic mustard extending onto adjacent private property makes eradication unlikely and APIPP will no longer manage garlic mustard in that location. It is recommended that the knotweed is chemically treated, if possible. The woody species are not high priority and management is not recommended at this time.

Lake George Islands

Invasive Species Distribution and Management Overview:

This facility is only accessible by motorboat and a partial inventory of the islands was prioritized in 2022. A partial inventory was also performed in 2007, documenting purple loosestrife, bush honeysuckle, Japanese barberry, Oriental bittersweet, and multiflora rose at various campsite at Long and Heck Islands. In 2022, Long, Speaker Heck, Narrow, Agnes, Odell, and St. Sacrament Islands were surveyed.

Bush honeysuckle was found near site 12 on St. Sacrament Island, near site 5 on Agnes Island, on an unnamed small island east of Agnes Island, near dock 1/2 on Odell Island, and was widespread on Long and Speaker Heck Islands.

Common reed grass was found on the southeast shore of Odell Island.

Japanese barberry was found near the cove of Speak Heck Island and was widespread on Long Island.

Japanese stiltgrass was found in two locations on the eastern shore of Speaker Heck Island and was widespread on Long Island.

Multiflora rose was widespread throughout Long Island.

Oriental bittersweet was found off the path running north from site 5 on Agnes Island, on the southeast shore of Odell Island, and was widespread on Long and Speaker Heck Islands.

Purple loosestrife was found to the left of the recycling center on Narrow Island.

Wineberry was found along the ATV trail on the southern end, near site 41, far behind site 28, behind the privy for site 26, and behind and north of site 24 on Long Island.

Winged euonymus was widespread on Speaker Heck and Long Islands.

Yellow iris was found along the shoreline of St. Sacrament Island

Recommendations:

The Lake George Islands should continue to be prioritized for survey in 2023, especially those islands that remain unsurveyed. Wineberry should be prioritized for chemical treatment.

APIPP Manager Tammara Van Ryn, APIPP Terrestrial Invasive Species Project Coordinator Rebecca Bernacki, APIPP Forest Pest Research Assistant Megan Grega, and APIPP Conservation and GIS Analysist Zachary Simek assisted with surveying these islands in 2022.

Photo Credit: Becca Tamagna

Luzerne

Invasive Species Distribution and Management Overview:

Bush honeysuckle is found sporadically throughout the campground and was not managed.

Garlic mustard was observed along the main road and the road past the Field of Dreams where the dirt side road rejoins the main road. A total 16 plants were pulled from these two sites (Figure 34).

Oriental bittersweet was mapped near the horse paddocks growing on an apple tree and was not managed.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION	PLANTS REMOVED	CURRENT CONDITION
310		16

Purple loosestrife was found for the first time at this campground in 2020 during a paddle survey for hemlock wooly adelgid and was still present in 2021. The patch is at the mouth of an inlet leading to a creek running through the campground and requires watercraft to access. This area was not managed in 2022 due to not having watercraft access at this time.

Reed canary grass is found sporadically throughout the campground and was not managed.

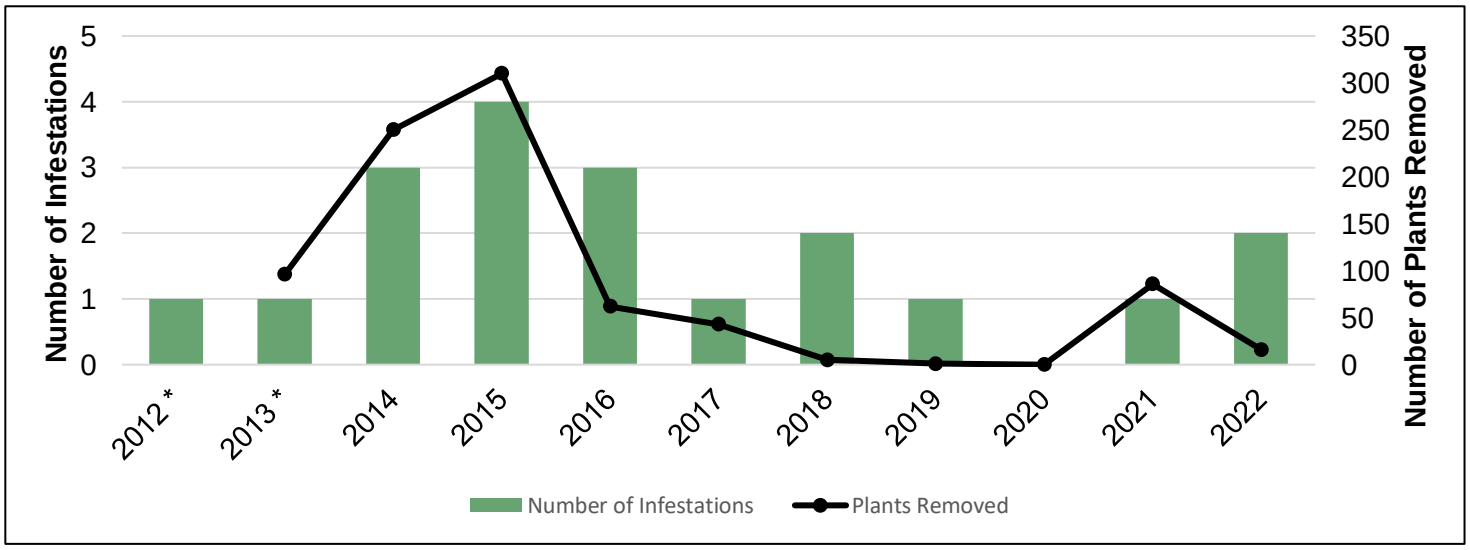


Figure 34. Garlic mustard distribution and management progress at Luzerne Campground. * indicates years in which control of all known infestations was not completed.

Recommendations:

Garlic mustard should continue to be a top survey priority given that it was observed again in 2022. With purple loosestrife being found elsewhere along Fourth Lake, early detection shoreline surveys should be done along the swimming area and along the creek running through the campground. Management of bush honeysuckle and Oriental bittersweet is not recommended at this time as reintroduction is likely.

Rogers Rock

Invasive Species Distribution and Management Overview:

Autumn olive is growing sporadically throughout the campground and was not managed.

Bush honeysuckle is growing sporadically throughout the campground and was not managed.

Common buckthorn is growing behind the recycling center and at the picnic area between the parking and boat launch. It was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
2,678	PLANTS REMOVED	2,678

Garlic mustard was mapped and removed from sites 3, 5-9, across from site 7, near the bathrooms by site 7, 11, 13, between sites 21 and 22, 32, 33, 55, 75, 76, 122, 124,134, 146, 166a, 163, 167, 169, 182, 201, 206, 209, and 259. A total of 2,677 plants were removed from 30 sites (Figure 35a).

Japanese barberry is growing sporadically throughout the campground and was not managed.

Japanese knotweed was observed near bathroom #6 and was not managed.

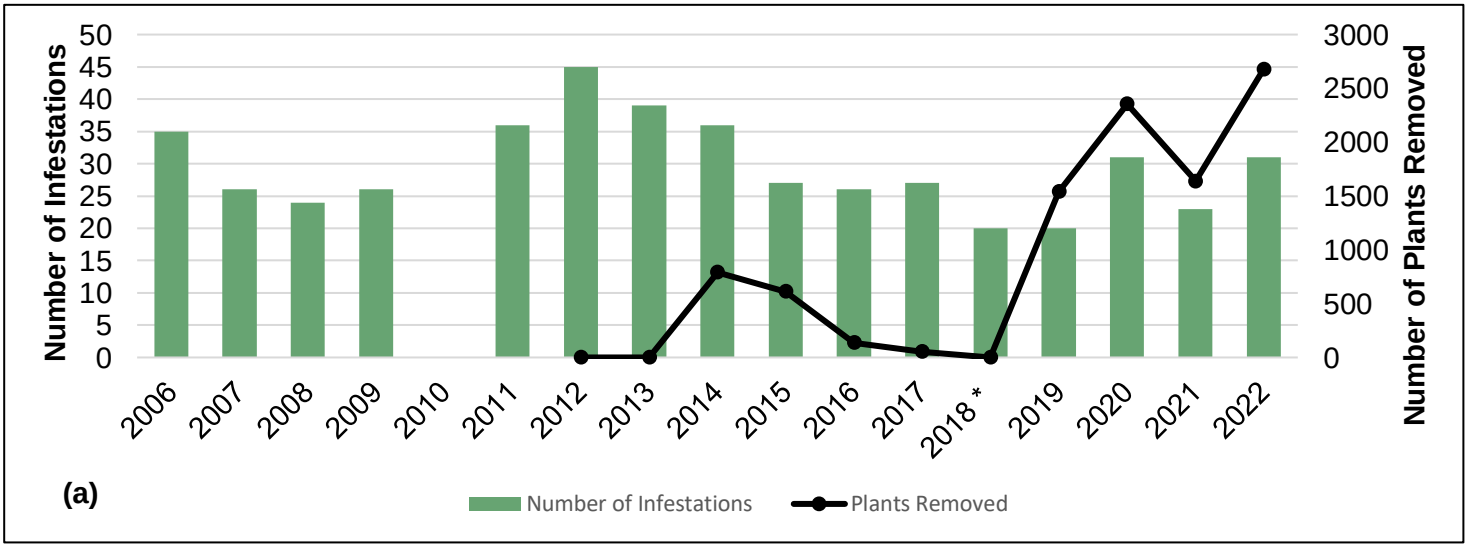
Oriental bittersweet is widespread throughout campground and was not managed.

Reed canary grass is growing sporadically throughout campground and was not managed.

Wild parsnip was not observed for a third consecutive year and is now presumed to be locally eradicated.

Winged euonymus was mapped and removed at site 223.

Yellow iris was not observed in 2022. (Figure 35b).



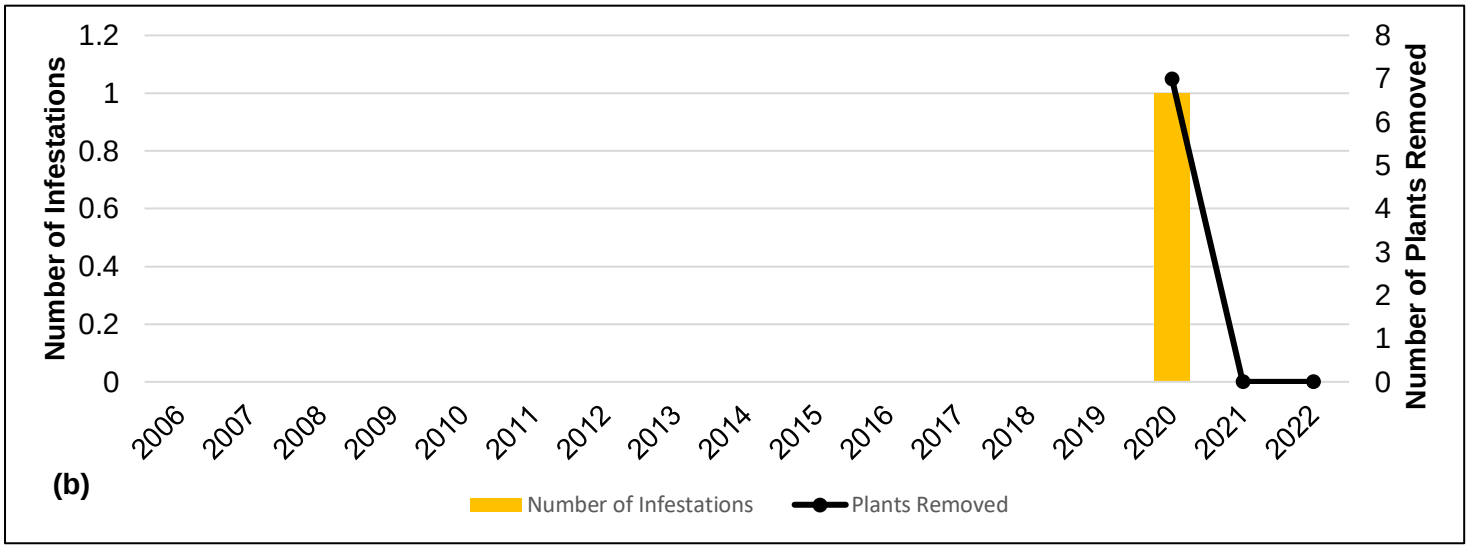


Figure 35 a-b. Garlic mustard (a) and yellow iris (b) distribution and management progress at Rogers Rock Campgroun
* indicates years in which control of all known infestations was not completed

Recommendations:

As garlic mustard levels spiked from 2021 to 2022, it remains the top priority at this facility. Management should be done early in the season to ensure garlic mustard does not go to seed. The shoreline should continue to be surveyed for reoccurrences of yellow iris. Knotweed should be prioritized for chemical treatment. Once garlic mustard levels have been reduced to a satisfactory level, the focus can shift to managing the woody species, but management is not currently recommended.


Photo credit: New York State Department of Environmental Conservation

Scaroon Manor

Invasive Species Distribution and Management Overview:

Autumn olive was mapped in site C12 in the Camp Cayuga primitive campsite area but was absent from the main campground.

Bush honeysuckle is widespread throughout the entire campground and was not managed.

Common buckthorn is growing sporadically throughout the main campground and was not managed due to size.

SUMMARY STATS: PROGRESS TO DATE		
PEAK INFESTATION		CURRENT CONDITION
791	PLANTS REMOVED	0

Garlic mustard was not observed for the fifth consecutive year and is presumed to be locally eradicated (Figure 36).

Japanese barberry was mapped across from site 9 but was not managed due to size.

Oriental bittersweet is widespread throughout the facility and was not managed.

Purple loosestrife was mapped at this campground in Camp Cayuga along the entrance trail, along the beach at site C10, and in one spot along the beach at site C11. The purple loosestrife observed along the entrance trail was not fully managed due to biocontrol presence, but flower heads were removed. The plants located along the shore of the primitive sites could not be accessed due to high water levels.

Reed canary grass is growing sporadically throughout the entire campground and was not managed.

Wild parsnip was not observed in 2021 and 2022 and may have been previously misidentified.

Winged euonymus is widespread throughout the main campground and was not managed.

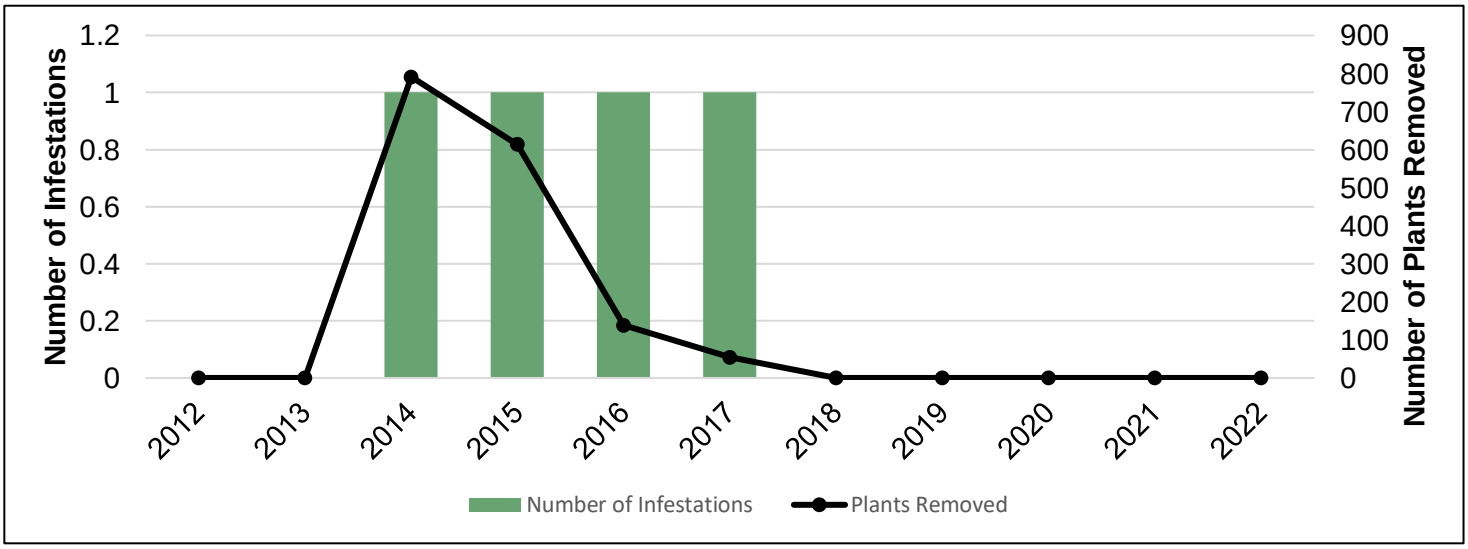


Figure 36. Garlic mustard distribution and management progress at Scaroon Manor Campground.

Recommendations:

Garlic mustard reemergence should remain the top survey priority for this facility as this species has not been observed since 2017. With garlic mustard considered eradicated, management efforts can shift to address less abundant woody species, such as Japanese barberry and winged euonymus. However, since these species can spread long distances via bird dispersed seed, reintroduction is likely. Purple loosestrife removal at Camp Cayuga should be a priority in 2023.

Photo credit: Reserve America

Conclusion

The invasive species campground stewards have achieved significant progress in documenting and managing terrestrial invasive species on NYSDEC administered lands throughout the Adirondack PRISM. The additional seasonal management capacity provided through this position has greatly increased APIPP's ability to reduce and/or eliminate priority invasive plant infestations and limit spread potential by land-based outdoor recreation. Since 2012, stewards have:

- Surveyed approximately 6,800 acres of priority areas (~600 annually).
- Documented over 1,500 infestations of 19 target terrestrial invasive species.
- Reduced garlic mustard abundance at NYSDEC campgrounds by approximately 91%. In 2022, only 6,393 plants were removed, compared to 68,048 in 2012 (Figure 37).
- Eradicated garlic mustard from seven campgrounds and documented one or two years of absence at three others.
- Reduced purple loosestrife abundance at NYSDEC campgrounds by approximately 98%. In 2022, only 93 plants were removed, compared to a peak of 4,956.

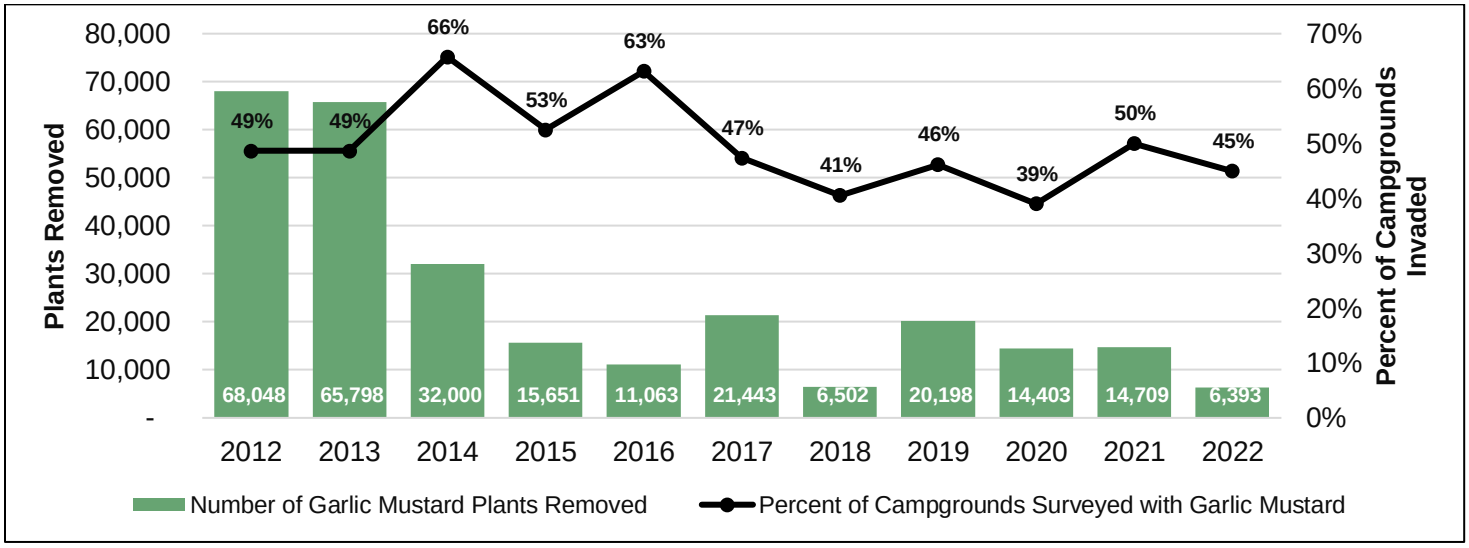


Figure 37. Garlic mustard management progress (2012-2022) at NYSDEC administered campgrounds in the Adirondack PRISM.

Trend analysis suggests that target species distribution and abundance at NYSDEC campgrounds will continue to decline with continued support and advancement of the program. Four campgrounds had significantly reduced levels of garlic mustard in 2022 compared to 2021 levels and are candidates for local eradication over the coming years. An additional six campgrounds had extremely low levels of purple loosestrife, which are expected to be locally eradicated over the coming years. Finally, many remaining purple loosestrife plants showed evidence of damage from the biocontrols *Galerucella* spp. or *Nanophyes marmoratus*. These plants were often not removed to help facilitate the spread of these vital biocontrols.

Appendix

Appendix Table 1. Invasive Species Distribution Across the Herkimer Working Circle.

COLUMN1	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
ALGER ISLAND CAMPGROUND																■
NICKS LAKE CAMPGROUND		■			■							■			■	
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1

■ indicates species presence

Appendix Table 2. Invasive Species Distribution Across the Indian Lake Working Circle.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
BROWN TRACT POND CAMPGROUND		■			■											
EIGHTH LAKE CAMPGROUND					■							■				
FORKED LAKE CAMPGROUND		■														
GOLDEN BEACH CAMPGROUND		■			■							■				
INDIAN LAKE ISLANDS		■										■				
LAKE DURANT CAMPGROUND	■	■			■					■						
LEWEY LAKE CAMPGROUND		■			■						■	■				
LIMEKILN LAKE CAMPGROUND		■			■							■				
MOOSE RIVER PLAINS WILD FOREST					■							■				
Total	1	7	0	0	7	0	0	0	0	1	1	6	0	0	0	0

■ indicates species presence

Appendix Table 3. Invasive Species Distribution Across the Northville Working Circle.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
CAROGA LAKE CAMPGROUND	■	■		■	■	■	■	■			■	■				
LITTLE SAND POINT CAMPGROUND		■			■		■					■				
MOFFITT BEACH CAMPGROUND		■		■	■						■	■				
NORTHAMPTON BEACH CAMPGROUND	■	■	■						■	■						
POINT COMFORT CAMPGROUND					■				■							
POPLAR POINT CAMPGROUND										■		■				
SACANDAGA CAMPGROUND	■	■										■				
MASON LAKE PRIMITIVE CAMPSITES & CLEARING TRACT CONSERVATION EASEMENT				■	■						■	■				
Total	3	5	1	3	5	1	2	1	2	2	3	6	0	0	0	0

■ indicates species presence

Appendix Table 4. Invasive Species Distribution Across the Potsdam Working Circle.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
CRANBERRY LAKE CAMPGROUND		■	■		■		■					■				
Total	0	1	1	0	1	0	1	0	0	0	0	1	0	0	0	0

■ indicates species presence

Appendix Table 5. Invasive Species Distribution Across the Ray Brook Working Circle.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
AUSABLE POINT CAMPGROUND		■	■			■				■	■	■				
BUCK POND CAMPGROUND																■
CROWN POINT CAMPGROUND	■	■	■	■	■					■	■	■	■			
FISH CREEK POND CAMPGROUND		■							■			■				
FLOODWOOD ROAD PRIMATIVE CAMPSITES		■														
FRONTIER TOWN CAMPGROUND		■									■	■				
LAKE EATON CAMPGROUND																■
LAKE HARRIS CAMPGROUND		■									■	■				
LINCOLN POND CAMPGROUND		■			■					■	■	■				
MEACHAM LAKE CAMPGROUND							■				■	■	■			
MEADOWBROOK CAMPGROUND	■	■														
PARADOX LAKE CAMPGROUND		■			■						■	■				
POKE-O-MOONSHINE CAMPGROUND			■							■						
PUTNAM POND CAMPGROUND					■			■				■				
ROLLINS POND CAMPGROUND		■												■		
SHARP BRIDGE CAMPGROUND		■						■			■					
SARANAC LAKE ISLANDS							■									
TAYLOR POND CAMPGROUND											■	■				
WILMINGTON NOTCH CAMPGROUND																■
Total	2	11	3	1	4	1	2	2	1	4	9	10	2	1	0	3

■ indicates species presence

Appendix Table 6. Invasive Species Distribution Across the Warrensburg Working Circle.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
EAGLE POINT CAMPGROUND		■														
HEARTHSTONE POINT CAMPGROUND	■	■			■	■	■	■	■	■				■		
LAKE GEORGE BATTLEGROUND CAMPGROUND		■			■	■	■		■	■				■		
LAKE GEORGE ISLANDS																■
LUZERNE CAMPGROUND		■			■					■	■	■				
ROGERS ROCK CAMPGROUND	■	■	■		■	■	■			■		■		■		
SCAROON MANOR CAMPGROUND	■	■	■			■				■	■	■		■		
Total	3	6	2	0	4	4	3	1	2	5	2	3	0	4	0	1

■ indicates species presence

Appendix Table 7. Invasive Species Distribution Across Recreational Access Points Such as Trail Heads, Parking Lots, and Boat Launches.

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
AMR PARKING LOT			■			■										
ANDREW BROOK PARKING AREA												■				
AUGER FALLS PARKING				■				■								
AUSABLE BRIDGE #1 RIVER ACCESS PARKING																■
AUSABLE BRIDGE #2 TRAIL PARKING												■				
ASRC TRAIL PARKING																■
BEAR MOUNTAIN TRAIL PARKING LOT																■
BELFRY MNT. TRAIL PARKING												■				
BERRYMILL FLOW TRAIL PARKING												■				
BOG RIVER FALLS PARKING AREA																■
BUCK MT./SHELVING ROCK ROAD PARKING AREA																■
BUCK POND BOAT LAUNCH PARKING																■
BURNT HILL PARKING LOT		■	■	■								■				
CADYVILLE UNIT PARKING	■											■				
CAMPSITE PARKING																■
CASCADES TRAIL PARKING LOT																■
CHAIN LINKS PARKING LOT																■
CHAPEL POND PARKING LOT												■				
CHERRY PATCH POND TRAIL PARKING												■				
CLAY MEADOWS OVERFLOW PARKING		■								■						
CLAY MEADOWS PARKING AREA																■
CLEAR POND PARKING LOT																■
CONNERY POND PARKING LOT		■										■				
CONNERY POND #3 TRAIL PARKING																■
CONNERY RANGE MISC PARKING																■
COOPER KILL POND TRAIL- BONNIEVIEW ROAD																■

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
COOPER KILL POND TRAIL- GILLESPIE DRIVE												■				
COPPERAS POND PARKING												■				
COPPER ROCK FALLS PARKING AREA																■
COUNTY ROUTE 55 PARKING LOT																■
CRANBERRY LAKE CAMPGROUND PARKING LOT																■
CRANBERRY LAKE CAMPGROUND MAINTENANCE PARKING LOT					■							■				
DEBAR MTN. PARKING LOT																■
DEER RIVER FLOW PARKING LOT																■
EAST BRANCH GORGE TRAIL PARK BOUNDARY SIGN																■
EAST MILL FLOW TRAIL PARKING												■				
EAST TRAIL TO GIANT MTN. PARKING LOT												■				
ELEPHANT HEAD TRAIL PARKING AREA																■
FIRST BROOK PARKING AREA																■
FOUTH LAKE PARKING LOT				■	■	■										
FRANKLIN FALLS POND FISHING ACCESS PARKING											■					
GEORGIA CREEK PARKING LOT																■
GILBERT TRACT PARKING AREA																■
GRIFFIN GORGE PARKING LOT AT ROUTE 8					■							■				
HAGUE BROOK PARKING AREA							■									
HAYS BROOK TRAIL PARKING LOT																■
HOFFMAN NOTCH BROOK TRAIL PARKING												■				
INDIAN RIVER PUT-IN PARKING LOT												■				
INMAN POND TRAILHEAD PARKING												■				
JACK RABBIT TRAIL PULLOFF																■
KING PHILLIPS SPRING PARKING LOT												■				
LAKE CLEAR BEACH PARKING																■

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
LAKE DURANT PARKING LOT		■														
LAKE FLOWER BOAT LAUNCH PARKING											■					
LINDSAY BROOK NORTH TRAIL PARKING																■
LOST POND/STONY POND TRAIL PARKING																■
MASON LAKE																■
MCDERMITT ROAD PARKING		■														
MONUMENT FALLS PULLOFF												■				
MOUNTAIN LANE TRAIL PARKING												■				
MT. ARAB PARKING AREA							■									
MUD POND TRAIL PARKING																■
NEWBRIDGE PARKING AREA																■
NORTH BRANCH BOUQUET RIVER PARKING LOT												■				
NORTH CONNERY POND PARKING LOT																■
NORTHVILLE PLACID TRAIL & WOODS LAKE TRAIL PARKING										■						
NORTHWEST BAY PARKING					■											
OSGOOD BOAT LAUNCHING PARKING LOT												■				
PANTHER MTN. PAVED PARKING LOT																■
PARKING AREA												■				
PERU DOCK BOAT LAUNCH PARKING		■	■								■					
POKE-O-MOONSHINE FIRE TOWER PARKING			■							■						
POLE HILL POND PARKING AREA																■
PORT HENRY BOAT LAUNCH PARKING			■													
QUARRY TRAIL																■
RAINBOW LAKE TO JONES CANOE CARRY PARKING LOT																■
RIDGE ROAD PARKING LOT												■				
ROARING BROOK FALLS PARKING LOT		■														

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
ROOSEVELT TRUCK TRAIL PARKING																■
ROOSTER COMB PARKING LOT	■	■	■									■				
ROUND POND PARKING LOT												■				
ROUTE 86, OLD LOGGERS RD. TRAIL PARKING												■				
ROUTE 374 PARKING LOT												■				
SAGAMORE ROAD PARKING												■				
SCAREFACE MNT. TRAILHEAD																■
SECOND POND BOAT LAUNCH PARKING												■				
SHANTY FALLS PARKING LOT												■				
SHELVING ROCK ROAD PARKING LOT																■
SHOULDER PARKING LOT												■				
SHOULDER PARKING FOR CATAMOUNT TRAIL HEAD																■
SILVER LAKE MNT. PARKING LOT												■				
SLY POND ROAD PARKING LOT											■	■				
SNOWY MOUNTAIN TRAIL PARKING												■				
SOUTH BRANCH BOUQUET RIVER PARKING LOT												■				
SPRUCE MNT. ROAD PARKING AREA																■
SQUIRE POND PARKING LOT																■
STATE 73 PARKING LOT																■
ST. REGIS TRAIL HEAD PARKING																■
TAYLOR POND LOOP PARKING LOT																■
TOOLEY POND CAMPSITE PARKING AREA																■
TOOLEY POND MTN PARKING AREA NORTH																■
TOOLEY POND PARKING AREA																■
TRAIL PARKING LOT																■
TURTLE POND ACCESS															■	

	Autumn olive	Bush honeysuckle	Common or glossy buckthorn	Common reed grass	Garlic mustard	Japanese barberry	Japanese knotweed	Multiflora rose	Norway maple	Oriental bittersweet	Purple loosestrife	Reed canary grass	Wild parsnip	Winged euonymus	Yellow iris	NONE
UPPER WORKS TRAIL PARKING						■										
WAKELY DAM					■								■			
WAKELY MOUNTAIN TRAILHEAD PARKING LOT																■
WAKELY POND ACCESSIBLE LAUNCH																■
WALKER BROOK PARKING LOT		■														
WATCH HILL PARKING AREA												■				
WICKHAM MARSH ACCESSIBLE VIEWING PLATFORM PARKING																■
WILMINGTON FLUME WEST												■				

■ indicates species presence