

INVASIVE SPECIES CONTROL HISTORY
TRYON CREEK STATE NATURAL AREA
As of January 2012

Invasive nonnative plant species have existed in the Park since before its establishment in 1971. Ring counts of English ivy stems cut on trees in the year 2000 were as high as 35 years. The earliest known attempts at control focussed on the ivy, the most visible and pervasive of the many nonnative species. In those days it was also the largest known threat to the ecosystem of the Park.

Elinor Levin started removing ivy occasionally in 1983, and more often starting in 1988. During her first few years of this effort, complaints about it at the front desk were common. At that time she collected the ivy in plastic bags for removal from the Park.

At a 1993 retreat, the Board of Directors of the Friends of the Park established a “Kill the Ivy” program under Elinor’s leadership. Thus began in 1994 the second Saturday (each month) community “ivy pulls” which were advertised for anyone to participate in. Help was also solicited from schools, some of which sent groups of students to perform community service under Friends’ leadership. The Multnomah County Community Corrections Dept. was also invited to send crews of people performing court-mandated community service, and did so at times.

Herbicide treatment of ivy was tested in a remote upland area of the Park with promising results. Due to concerns about effects on other species no broader application was tried.

In 1995 the Ivy Subcommittee was established after the Board retreat proposed developing an Adopt-A-Plot (AAP) program for control of ivy and other invasive nonnative plants. A draft proposal developed by Mel Taylor was reviewed by the Friends’ Board and Park staff, all supporting the program. Phil Hamilton agreed to coordinate the effort.

With these expanded efforts involving many people, the ivy pulled was no longer removed from the Park but was piled and left to die and compost. Second Saturday work parties cut mature ivy growing up trees in the vicinity of the Nature Center during the next few years and, with help from other groups, pulled ground ivy along trails in that area. The AAP program quickly grew to about 10 adopters, where it plateaued, with most plots near Tryon Creek or the Nature Center. Six of the adopters aggressively attacked their plots and made noticeable differences.

In 1997 Dave Kruse got involved in the effort and took over management of the AAP program in 1998 while Phil, as Eco/Trails (formerly Building & Trails) Committee Chair, coordinated the various other nonnative species removal efforts. Within a couple of years the AAP program had 20 adopters, with many of the new plots concentrated on the west side of the Park near adopters’ homes. Simultaneously, the effort to cut mature ivy infesting trees expanded, with a few dedicated individuals plus volunteer groups from PGE (enlisted by Dave) working throughout the Park to save trees.

Attention started to broaden to other nonnative species in 1999, first focussing on Himalayan blackberries along Tryon Creek, where George Toepfer and Brent Foster began digging them. Dave Kruse and Phil Hamilton continued this work and later got help from several others. In 2000 observers first became aware of the invasiveness of clematis vitalba, a vine from Europe which was threatening to overtop trees in some locations just as ivy was. At first the clematis patches, which were more scattered than ivy (though numbering about 600 patches), were cut, a parallel with the treatment of ivy on trees. After observing 50 or more feet of annual regrowth of cut vines, we shifted emphasis to digging its roots, often a major task as mature vines have very convoluted, overlapping roots

Garlic mustard, a biennial plant, was first noticed in the 1980s but was not recognized as invasive until 1999, when pulling efforts began. The other plant that was first noticed and dug about that time was knotweed, primarily a creekside invader. Scots broom was showing up between the bike path and Terwilliger Boulevard, and was promptly dug or cut. In several parts of the Park, Dave Kruse cut English holly and laurel, starting in 1999.

In the early 2000s Dave Kruse and Phil Hamilton aggressively pursued all recognized clematis patches except a number south of Iron Mountain trail and northwest of Boones Ferry Road. The latter group were attacked by 2004, while control of many of the ones south of Iron Mountain Trail also began then.

Community service crews from Multnomah County had helped with ivy control in the 1990s, but in 2002 they increased their participation, so progress against ivy in the upper loops around the Nature Center, as well as some locations west of the Creek, accelerated. Those crews also helped to substantially reduce Himalayan blackberry infestations west of the Creek and along the bike path.

Starting in 2001 Clackamas County crews joined the ivy control effort and also dug many blackberries, mainly along Iron Mountain Trail. In 2004 they dug a series of major clematis patches along Terwilliger Boulevard south of Iron Mountain Trail. Those were the last major patches in the main unit of the Park that had been visible to the general public, other than ones in the steep canyon just upstream from the Highway 43 culvert on Tryon Creek. In the winter of 2005-2006 they killed ivy on many trees south of Iron Mountain Trail and east of the Creek. Later in 2006 Phil Hamilton led a few other people to cut ivy on trees previously not saved on the steep slopes and near the Creek in this area.

The first major restoration planting effort in the Park took place early in 2000 when the Friends of Trees and the Boy Scouts collaborated to plant hundreds of bare-root conifers and hardwoods in easily accessible areas along the Creek where blackberries had been dug earlier in the winter. This was underplanting of deteriorating alder stands.

Soon after that, with grants from PGE and donations from two PGE employees, the Friends bought conifers (mostly western red cedar) for planting in forest canopy holes where blackberry and/or clematis thickets had been removed. The objective was to develop shade over time to minimize reinvasion by these sun-loving non-natives. Experiencing difficulties doing regular maintenance of plantings of bare-root and small (one gallon) potted plants, which suffered from shading by nettle, in 2001 the Friends started buying two gallon (4 to 5 foot) trees to plant in accessible locations. By late 2010 well over a thousand trees larger than bare-root had been planted, some having grown by then more than 20 feet tall.

Starting in 2004 willow and red osier dogwood cuttings were planted adjacent to Tryon Creek. From 2008 through 2011 other shrubs and some trees were planted inside the south and central parts of the North Horse Loop in locations where little understory remained after removal of ivy and blackberries.

The attacks on invasive species continued throughout the early 2000s. By the end of 2011 the status of control efforts was as follows:

Ground ivy: Less than 5% of the Park only slightly infested and untended, with an additional 30% of the Park initially controlled (pulled at least once). Ivy in almost all locations visible from the upper loop trails near the Nature Center, and along the Creek between Obie's Bridge and 4th Avenue, has been pulled at least once, and much of that area more than once. Recent efforts have extended north from the upper loop trails and in 2008 began moving into the North Horse Loop (NHL). By the end of 2011 almost three-fourths of the interior of the NHL had been initially controlled.

What became notable in the spring of 2003 was the recovery of the trillium. When first released from the smothering ivy, the trillium responded well, but mostly as single plants; by 2003 many had reproduced to form clumps.

At the end of 2011 there were about ten active adopted plots. The number of plots peaked at 32 in 2004, but many adopters quickly lost interest. Most long-term adopters are returning periodically to get resprouts and new seedlings, an essential maintenance step. Many areas west of the Creek which were pulled once aren't being maintained, due to abandonment of adopted plots.

Ivy threatening trees: Cut once in over 95% of the Park, with most remaining uncut areas being steep slopes or difficult to access. In 2010 cutting began in the largest uncontrolled area, the often steep slope between Lake Oswego's First Addition and the Creek. A second cutting has been done in over half of the portion of the Park where substantial ground ivy remains, with additional cutting of regrowth continuing where trees are threatened again or ivy on them is flowering. Cutting the regrowth (stems usually no more than an inch in diameter) is less time consuming than initial cutting of stems that were as large as seven inches.

Himalayan blackberry: Dug and controlled in much of the riparian zone of Tryon Creek north of Iron Mountain Trail and below the 4th Avenue entrance, and most large patches in the west side of the Park (a major exception being along the Creek above Boones Ferry Road). Some large patches remain on the east side, most being west of the bike path north of Iron Mountain Trail or east of the Creek south of that trail. Along the bike path digging has been done to reduce encroachment on the path. And, in a couple of areas, digging was followed by tree planting, so subsequent digs have been done to release the trees. Some ninety percent of the many North Horse Loop patches have been dug since 2005, with many already cleared of resprouts since the first dig. Locations where dense patches have been dug have been planted with conifers and shrubs and will need continuing maintenance to remove new blackberry plants until the planted trees create shade.

Clematis: North of Iron Mountain Trail all known patches (an estimated 600) have been dug at least once, and most, twice or more. Some are considered eradicated but ivy maintenance sweeps and early winter reconnaissance continue to find sprouts in many locations. In addition, previously unknown patches occasionally still are found and promptly controlled. South of Iron Mountain Trail many patches have been dug but some large ones near the Creek have not, particularly those in the canyon at the south end of the Park. Digging is progressing on a very large patch west of the Creek about halfway between Iron Mountain Bridge and Highway 43, but will continue slowly as soggy soils limit access to the driest time of year. A 2009 addition to the Park on the west side was heavily infested with clematis. Initial removal there was completed by the end of the year, with a second pass done in 2010.

Knotweed: Using herbicide injection many of the patches along the Creek were poisoned in 2004. Injection of stems large enough (a half inch or more) continued in subsequent summers. Three patches away from the Creek also have been treated. Stream surveys from 2007 through 2011 identified many small patches with stems too small for injection. In 2011 a City of Portland employee sprayed many of those patches plus a large patch on a steep slope far from the Creek. It is apparent that control efforts must continue for many years.

Garlic mustard, creeping buttercup and geranium Robertinium: Somewhat controlled along roads and trails near the Nature Center and on the upper loop trails, but regular maintenance is needed in those areas as, with a multi-year seed life, old seeds keep generating new plants. And they are continuing to spread along the edges of other Park trails, especially near the Park boundary, and to encroach into locations away from trails. Buttercup has become common in riparian zones and many lowland trail-sides. Garlic mustard has particularly infested the edges of the horse trails. A recent priority has been pulling garlic mustard and geranium Robertinium near trails in areas of recent ivy removal, to prevent their taking over the ground vacated by ivy pulling. The number of plants in most areas of multi-year control is declining but garlic mustard has occupied the edges of many trails where ivy has been removed in the last few years. From 2009 through 2011 there was a concerted effort to control all known infestations outside of the riparian zone. Surveys in 2011 showed a notable reduction in garlic mustard rosettes.

along many trails. A particularly difficult garlic mustard patch has been on the west side of the Creek, by the oxbow below Old Main Trail, where it is mixed with reed canary grass. A City of Portland crew sprayed that patch in 2011.

Laurel, English holly, sweet cherry and non-native hawthorn: Herbicide painting of stumps, immediately after cutting, began in 2002 and is continuing. Smaller trees are dug. East of the Creek the focus of control has been the area of the upper loop trails and further north where the first pass of ivy removal has occurred. Despite herbicide painting, holly often resprouts after initial cutting, but a prompt second cutting and painting is usually effective. Near the west side trails much cutting and herbicide painting took place from 2003 through 2006, but resprouts are rampant and little maintenance is occurring, except in one active adopted plot.