

AN ASSESSMENT OF THE VEGETATION OF FAUNTLEROY PARK

FRIENDS OF FAUNTLEROY PARK, WINTER 2001-2002

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OVERVIEW

This vegetation assessment is the result of observations made while performing volunteer weeding in Fauntleroy Park - a natural by-product of our work. It was compiled to give our volunteer group a documented record of the current status of the park so as to monitor changes as they occur. We hope it proves a useful resource for others concerned about the health of the park.

The discussion about the health of park vegetation revolves around the damage caused by humans, namely logging, introduction of alien plants, sewer-pipe installation, and trampling by park users. Logging in the 1920s and 1930s caused the most severe damage by removing most of the forest canopy. Undergrowth was affected by this work as well but, since it was merely a minor obstacle to logging, no intentional alteration occurred. Presumably, the undergrowth in the park today is about the same as the original. A possible exception is that some uncommon species may have been lost to logging, disease, or plain bad luck. Since the area around the park now consists of yards filled with exotic plants, no adjacent reservoir of plants can be tapped to reintroduce lost species.

The canopy was probably re-established within a few years of logging, primarily by red alders and, to a lesser extent, by bigleaf maples and the conifers that were too young to be worth cutting. Now, 70 or 80 years later, the alders are mature and many are dying. One section of the park has already grown back a climax canopy of nearly all hemlocks and cedars. Other sections are well on their way and still others will need one or more generations of pioneers before achieving a climax canopy.

NATIVES -- INVENTORY

The following list documents the native plants found in Fautleroy Park today (excluding grasses, sedges, and mosses). After the name of each plant are two or three letters.

The first letter indicates the **distribution** of that species, i.e., where the plants are located. (See map on page 4.)

- T** throughout; found in every section of the park
- W** widespread; found in most areas; not localized to any section
- L** localized; grouped in certain locations, either by habitat preference or chance
- S** scattered; found in a few widely separated areas

The second letter indicates the **abundance** of that species, i.e., how many are present.

- A** abundant
- C** common
- F** fairly common
- U** uncommon
- R** rare; one or a few individuals

The third letter (when present) indicates the **source** of plants.

- P** all individuals of that species have been planted by people in recent years
- (P)** a significant number of individuals were planted and a few were naturally present

Large trees

Western hemlock, *Tsuga heterophylla* T A
Western red cedar, *Thuja plicata* W C
Douglas fir, *Pseudotsuga menziesii* W C
red alder, *Alnus rubra* TA
bigleaf maple, *Acer macrophyllum* W C
Pacific madrone, *Arbutus menziesii* S F
bitter cherry, *Prunus emarginata* S U
black cottonwood, *Populus trichocarpa* L R
Pacific flowering dogwood, *Cornus nuttallii* L R
grand fir, *Abies grandis* L R P
Sitka spruce, *Picea sitchensis* L R P (possibly never occurred naturally in this watershed)

Shrubs or small trees

red elderberry, *Sambucus racemosa* T A
hazel, *Corylus cornuta* T A
Indian plum, *Osmaronia cerasiformes* W F
vine maple, *Acer circinatum* S U
red osier dogwood, *Cornus stolonifera* L U
ocean spray, *Holodiscus discolor* S U
serviceberry, *Amelanchier alnifolia* S R (P)
cascara, *Rhamnus purshiana* S R
syringa, *Philadelphus lewisii* L R P
Pacific ninebark, *Physocarpus capitatus* L R P
tall Oregon grape, *Berberis aquifolium* S R (P)
western yew, *Taxus brevifolia* L R
highbush cranberry, *Viburnum edule* L R

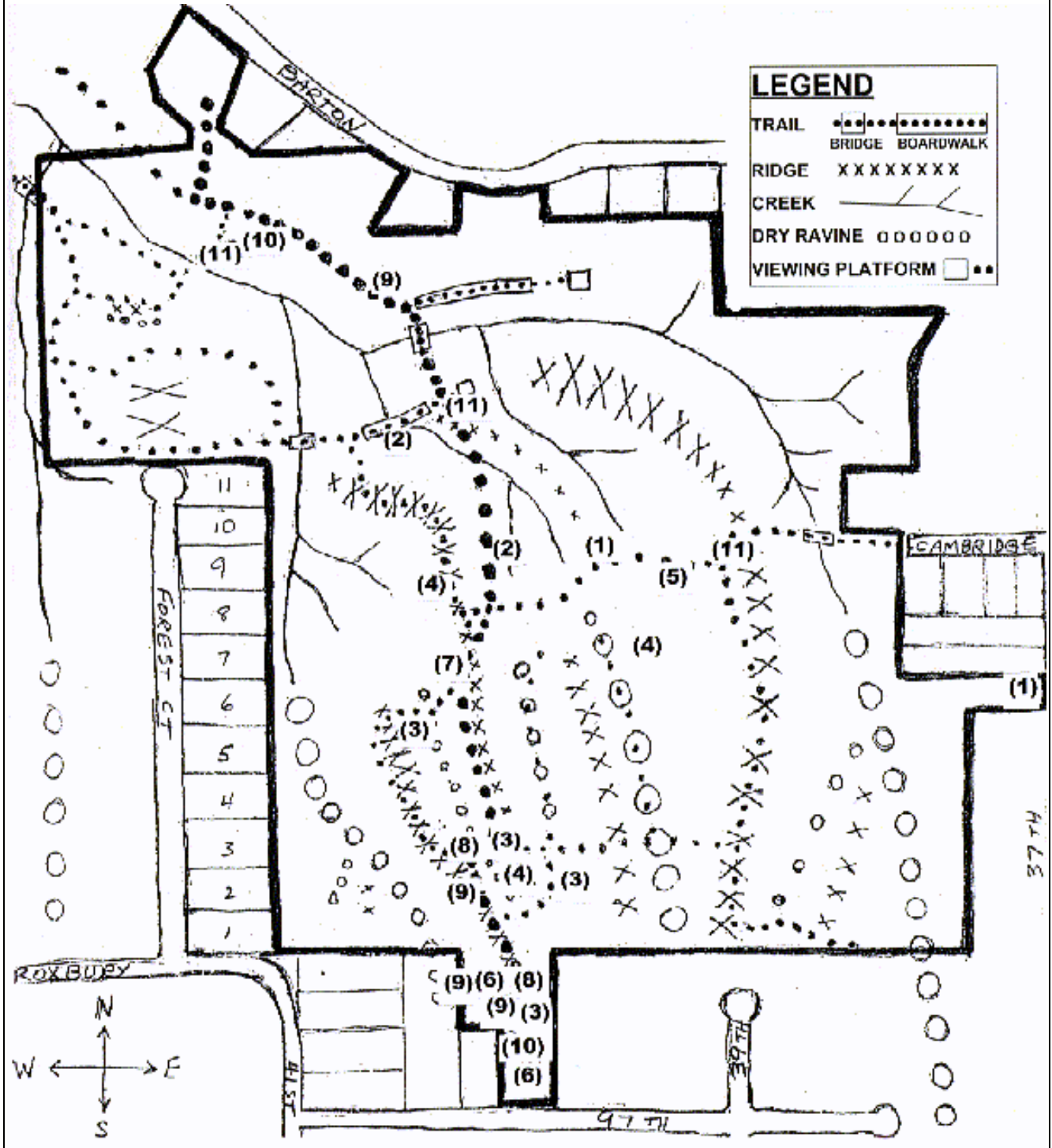
Low-growing plants

sword fern, *Polystichum rnunitum* T A
salmonberry, *Rubus spectabilis* T A
dewberry (Douglasberry), *Rubus ursinus macropetalus* T C
Cascade Oregon grape, *Berberis nervosa* T C
evergreen huckleberry, *Vaccinium ovatum* T C
red huckleberry, *Vaccinium parvifolium* T C
lady fern, *Athyrium felix-femina* T C
salal, *Gaultheria shallon* W C
trillium, *Trillium ovatum* W C
skunk cabbage, *Lysichitum americanum* L F
stinging nettles, *Urtica dioica lyalii* W F
bracken fern, *Pteridium aquilinum* W F
foam flower, *Tiarella trifoliata* S F
piggy-back-plant, *Tolmiea menziesii* S F
Oregon avens, *Geum macrophyllum* S F
mitrewort, *Mitella pentandra* S F
enchanter's nightshade, *Circaea alpina* S F
red-flowering currant, *Ribes sanguineum* L U (P)
snowberry, *Symphoricarpos albus* S U (P)
thimbleberry, *Rubus parviflorus* S U
black raspberry, *Rubus leucodermis* S U
horsetail, *Equisetum arvense* L F
vanilla leaf, *Achlys triphylla* L U
licorice fern, *Polypodium glycyrrhiza* L U
deer fern, *Blechnum spicant* S U
sweet-cicely, *Osmorhiza chilensis* L U
starflower, *Trientalis latifolia* S U
fireweed, *Epilobium angustifoliurn* L U
Pacific waterleaf, *Hydrophyllum tenuipes* L R P
rose, *Rosa sp.* S R (P)
wild ginger, *Asarum caudatum* L R P
false lily-of-the-valley, *Maianthemum dilatatum* L R
gooseberry, *Ribes sp.* L R
bleedingheart, *Dicentra formosa* L R P
western springbeauty, *Montia sihirica* L R

NATIVES

LOCATIONS OF SOME SPECIES WITH LIMITED DISTRIBUTION

- | | | |
|-----------------------|---------------------|---------------------------|
| (1) COTTONWOOD | (5) WESTERN YEWE | (8) RED-FLOWERING CURRANT |
| (2) RED-OSIER DOGWOOD | (6) PACIFIC DOGWOOD | (9) BLACK RASPBERRY |
| (3) SERVICEBERRY | (7) GOOSEBERRY | (10) VANILLA LEAF |
| (4) CASCARA | | (11) THIMBLEBERRY |



POSSIBLE MISSING NATIVE SPECIES

No one still living may remember all the plants that grew in the watershed prior to 1920, but here is a list of some whose habitat requirements could be met in the park and might have once grown here. After the invasives are removed, introducing some of these species (where noted) might be worthwhile. Many others could be added to this list.

| SPECIES | POSSIBLE HABITAT |
|---|--|
| devil's club, <i>Oplapanax horridum</i> | near the creek |
| Pacific rhododendron, <i>Rhododendron macrophyllum</i> | south edge |
| maidenhair fern, <i>Adiantum pedatum</i> | swamp areas |
| false Solomon's seal, <i>Smilacina racemosa</i> | |
| star-flowered false Solomon's seal, <i>Smilacina stellata</i> | |
| western trumpet honeysuckle, <i>Lonicera ciliosa</i> | |
| western white pine, <i>Pinus monticola</i> | ridge in southeast corner |
| black twinberry, <i>Lonicera involucrata</i> | |
| twinflower, <i>Linnaea</i> | |
| <i>borealis</i> bunchberry, <i>Cornus canadensis</i> | |
| Queen's cup beadlelily, <i>Clintonia uniflora</i> , and various other lillies | |
| various violets | |
| various orchids (lady's slippers or bog orchids) | |
| hairy manzanita, <i>Arctostaphylos columbiana</i> | probably too shady originally but now may thrive on south edge |
| mountain balm, <i>Ceanothus velutinus</i> | |

CANOPY -- CURRENT STATUS (Refer to the map on page 7.)

Section A: This section has a complete canopy that is about 90% hemlocks and cedars. Scattered among them are a few Douglas firs, madrones, alders, and bitter cherries. Seedlings and saplings of hemlocks and cedars are abundant, ensuring the continuing dominance of these two species. Some areas are so dense with conifers that undergrowth is greatly suppressed. However, in the last year or so the canopy has lifted somewhat in these areas, allowing more light to reach the undergrowth. The dominant understory plants are sword ferns, Cascade Oregon grapes, red and evergreen huckleberries, elderberries, and salal.

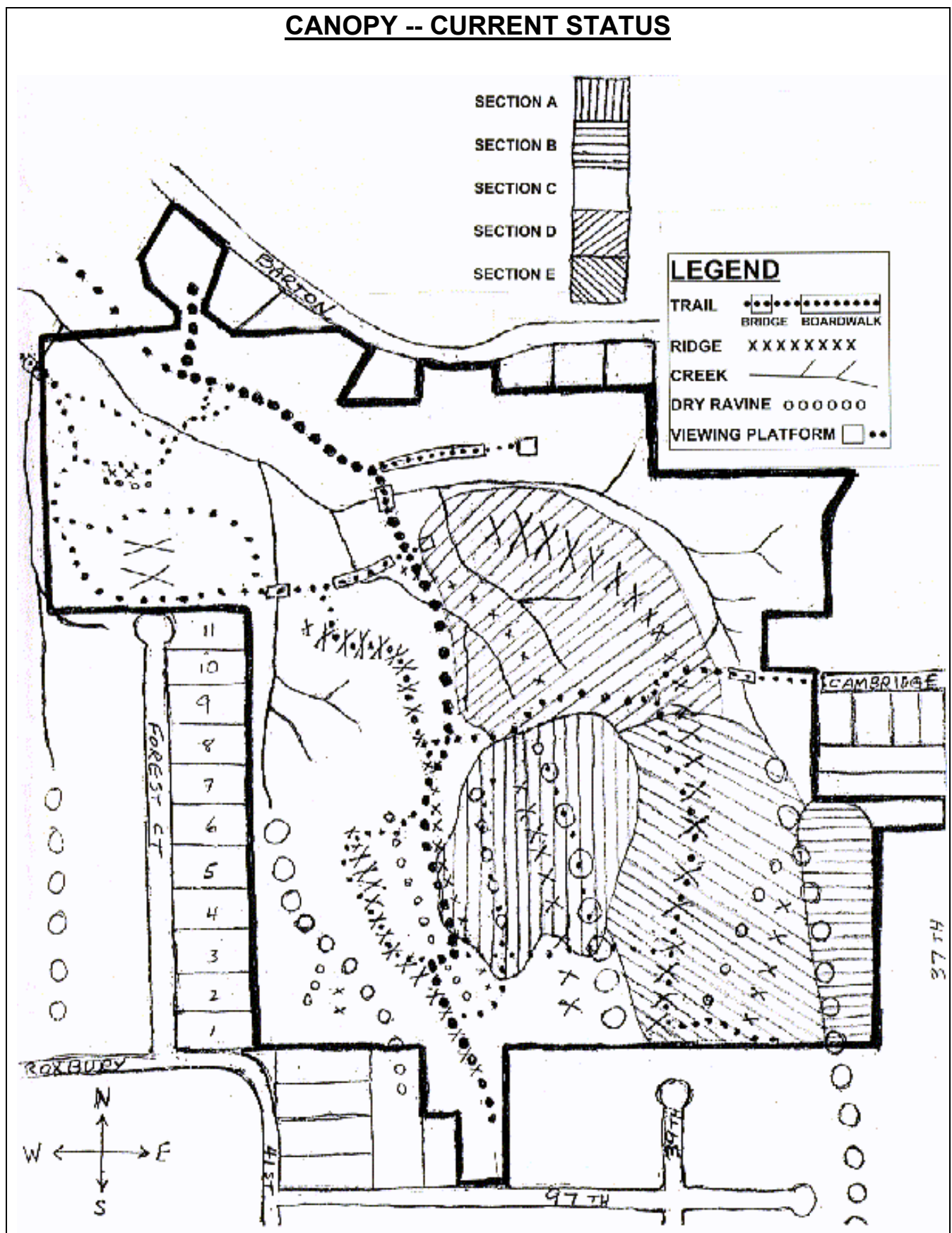
Section B: This slope along the western edge has a complete canopy that is about 90% Douglas firs with scattered hemlocks and cedars. Some seedling and sapling hemlocks and cedars are in the understory but very few firs. Douglas fir will dominate this slope for a long time but will eventually give way to hemlock. The dominant understory plants are sword ferns, Oregon grapes, and salal.

Section C: This largest section has a complete canopy of about 30% hemlocks, cedars, and scattered Douglas firs and about 70% alders and maples. Hemlock and cedar seedlings and saplings are throughout and common. When they mature, the canopy will probably be 70% climax and 30% maples. Sword ferns, Oregon grapes, red and evergreen huckleberries, salal, lady ferns, elderberries, and salmonberries dominate the understory.

Section D: The canopy in this area is only about 80% complete. The old red alders are dying and some of them are leaving holes in the canopy because the next generation is not quite ready to replace them. The canopy is about 10% hemlocks and cedars and 70% alders and bigleaf maples. Many seedling and sapling hemlocks and cedars are here, particularly on the two ridges. Much of the ground in this section is swampy, which undoubtedly contributes greatly to the tardiness of the return of the climax canopy. However, even in the swampy areas, cedar saplings are growing on the ground and hemlock saplings are growing on stumps, although they are many years away from contributing to the canopy. The next generation of canopy trees in this section will be primarily maples; many vigorous young maples and a smaller number of young alders are growing rapidly in the abundant light and water in this area. The swampy ground seems to be a problem for even the mature hemlocks in this section as several have blown over in recent years. Sitting in saturated soil may facilitate root disease, or the over-abundance of water fails to stimulate root growth sufficient for support during storms, or the soft muck just does not provide anything to hold onto when the wind blows. The dominant undergrowth in this section is dense thickets of salmonberries accompanied by lady ferns, sword ferns, skunk cabbages, hazel, elderberries, and a large patch of red-osier dogwood.

Section E: This section has a complete canopy that is about 15% Douglas firs, 10% madrones, and the rest alders and maples. The understory has a few hemlock and cedar seedlings and saplings and even fewer Douglas fir. Because of the scarcity of young hemlocks and cedars, this section will probably need another generation or two of maples before enough climax seedlings move in and begin to establish a climax canopy. Salmonberries, sword ferns, hazel, elderberries, and salal dominate the understory.

CANOPY -- CURRENT STATUS



INVASIVES – CURRENT STATUS (Refer to the maps on pages 9, 10, and 11)

The alien plants that pose the greatest threat to native vegetation in the park are (from greatest threat to least) English ivy, English holly, cherry laurel, Himalayan blackberry, clematis, and European bindweed.

Ivy grows throughout the park. It is most abundant at the periphery of the park where it has spread in thick blankets from adjacent yards. It also grows in the interior where it has been transported by birds that have eaten its berries. Once established, it spreads in all directions, growing more and more vines that build up into a dense blanket through which no seedlings can emerge. This process is the most lethal means at play for replacing native plants. Ivy also directly kills adult low-lying plants by growing over the top of them, blocking their light. Ivy sometimes grows between the branches of taller plants, weighting them down. When vines encounter a large tree, they attach themselves to the trunk with aerial roots and start climbing to the top and out to the ends of the branches, blocking the light to the tree's leaves. As the vines grow, they add greatly to the weight and wind resistance of the tree, increasing the tree's risk during high winds. They also bore their roots through discontinuities in the tree's bark, stealing sap and facilitating fungal infection and insect invasion. The vines sometimes branch, wrap around the trunk, and fuse back together on the other side, forming a constricting wooden collar. The combined effect of all these assaults shortens the lifespan of large trees. Because of this danger, volunteers have placed a high priority on cutting large vines we encounter climbing up trees.

Holly and laurel are spread throughout the park by birds that eat the berries and have the potential to grow into large trees. When they get established, they form dense, dark, spreading thickets that block the light to low-growing plants (although their shade is not as dense and lethal as that of ivy). Holly and laurel have little effect on mature trees but do negatively impact seedlings and saplings. Most of the large holly and laurel in the park have been cut but many still have live stumps.

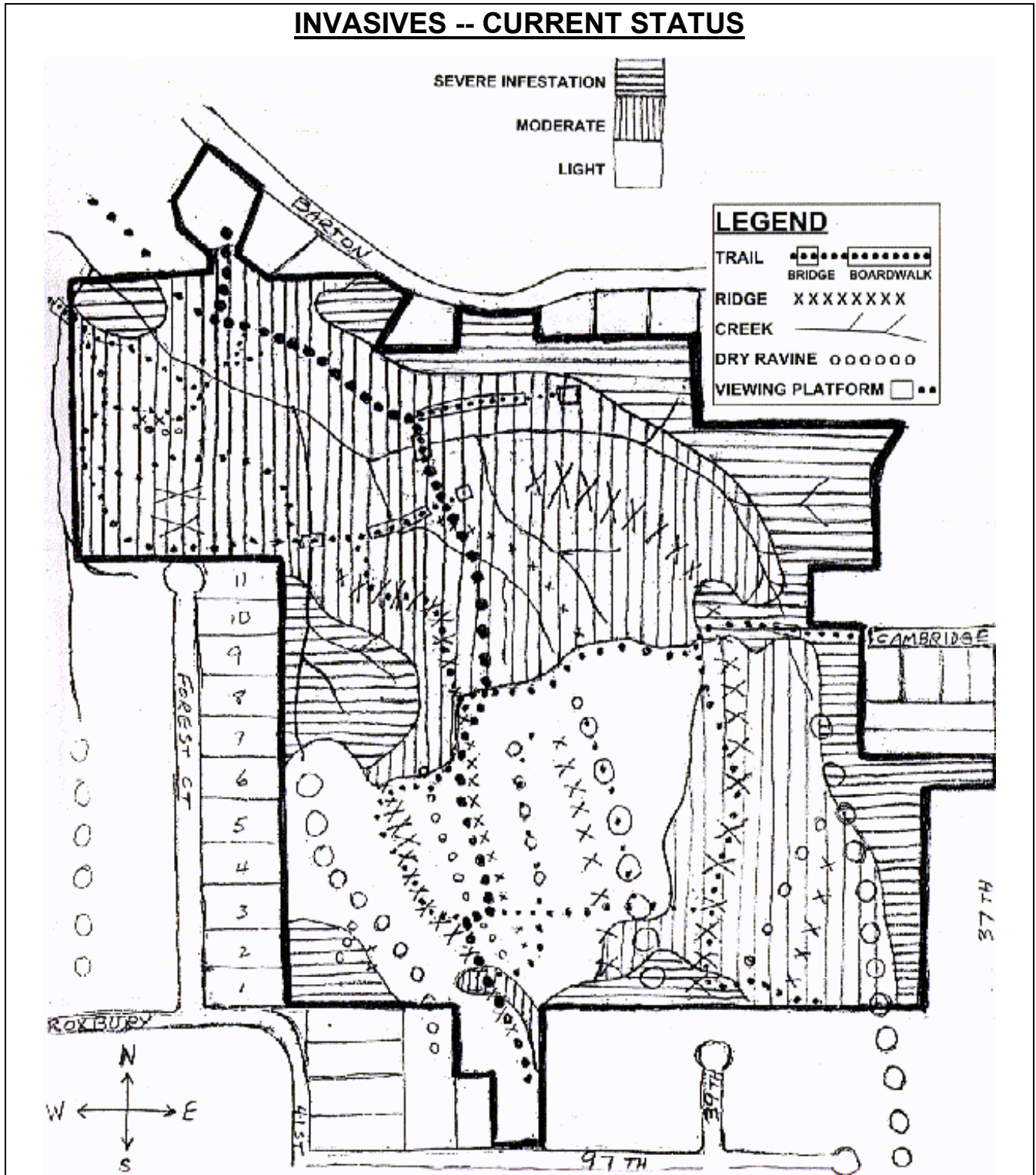
Himalayan blackberry is found throughout the park in moderate numbers and in high concentrations in a few areas. It spreads mainly by birds eating its berries. With its thinner, deciduous leaves, Himalayan blackberry does not create as dense a shade as the three evergreen invaders already discussed. However, in driving around the Puget Sound region, one sees many, many blackberry thickets that persist year after year, as if blackberry is the climax species in the replacement ecosystem after natives have been eliminated. Since its shade does not seem dark enough to prevent shade-tolerant seedlings from emerging through the thicket, blackberry must suppress competition by hogging all the ground moisture during the summer drought. Blackberry has no effect on mature trees and, in the shade of existing trees, is not likely to grow with the density and vigor necessary to become a major threat in the interior of the park. It is mainly a threat at the sunny edges.

Clematis and bindweed are established in a few locations in the park. Their presence there is not as detrimental to the health of other plants as the aforementioned species but they are difficult to eradicate.

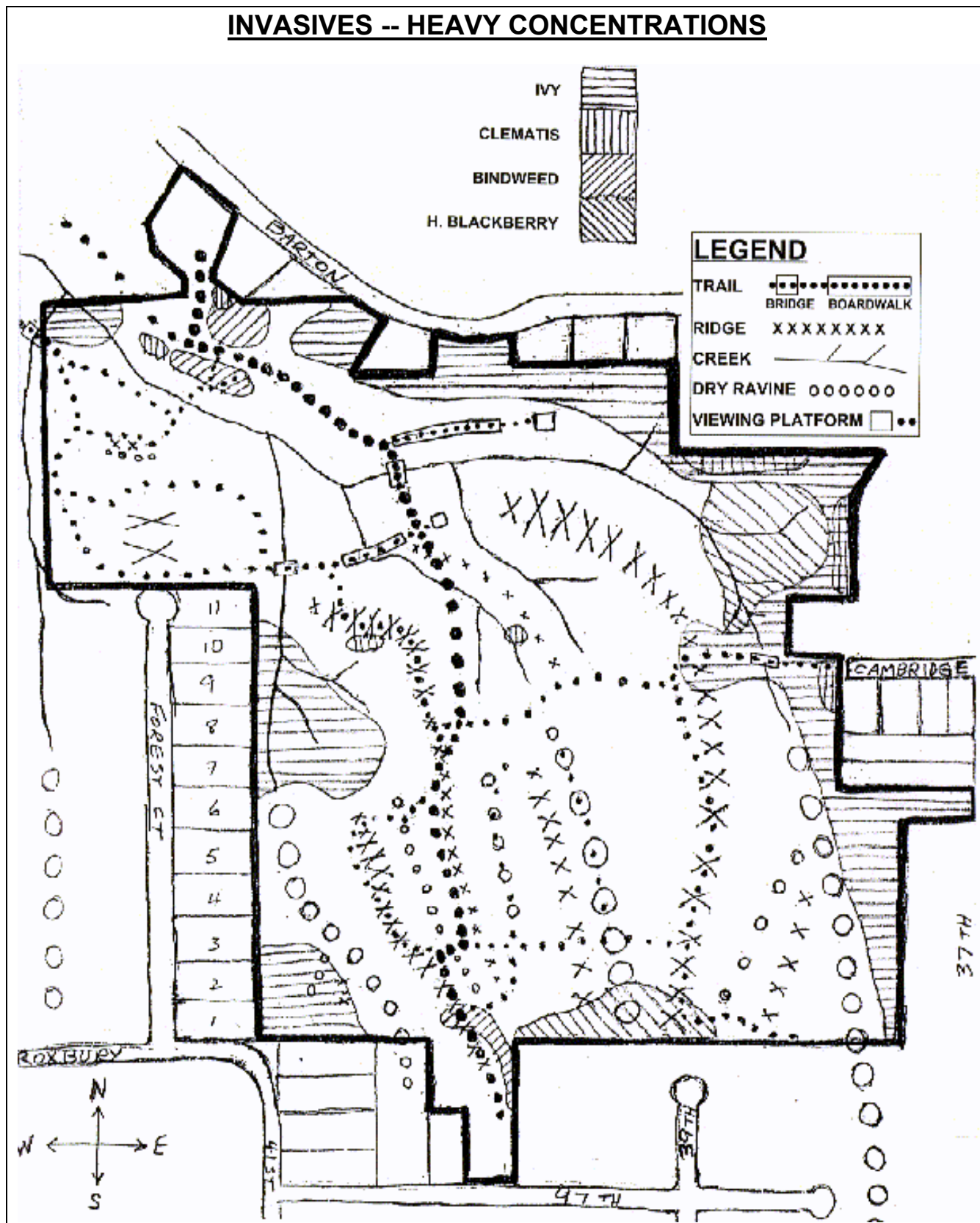
The section of the park shown on the map as having light infestation used to be heavily to moderately infested but has been weeded extensively. About the only invasives left in this area are holly and laurel stems that were too large to be uprooted. The need remains to

monitor the area for new invasions and to knock adventurous shoots from holly and laurel stems for several years until they are weakened enough to be uprooted.

The moderately infested areas defined on the map include areas that were never severely infested and areas that formerly were but have since been weeded (although less thoroughly than the previously discussed section). The remaining heavily infested areas are all toward the periphery of the park and will eventually be completed.

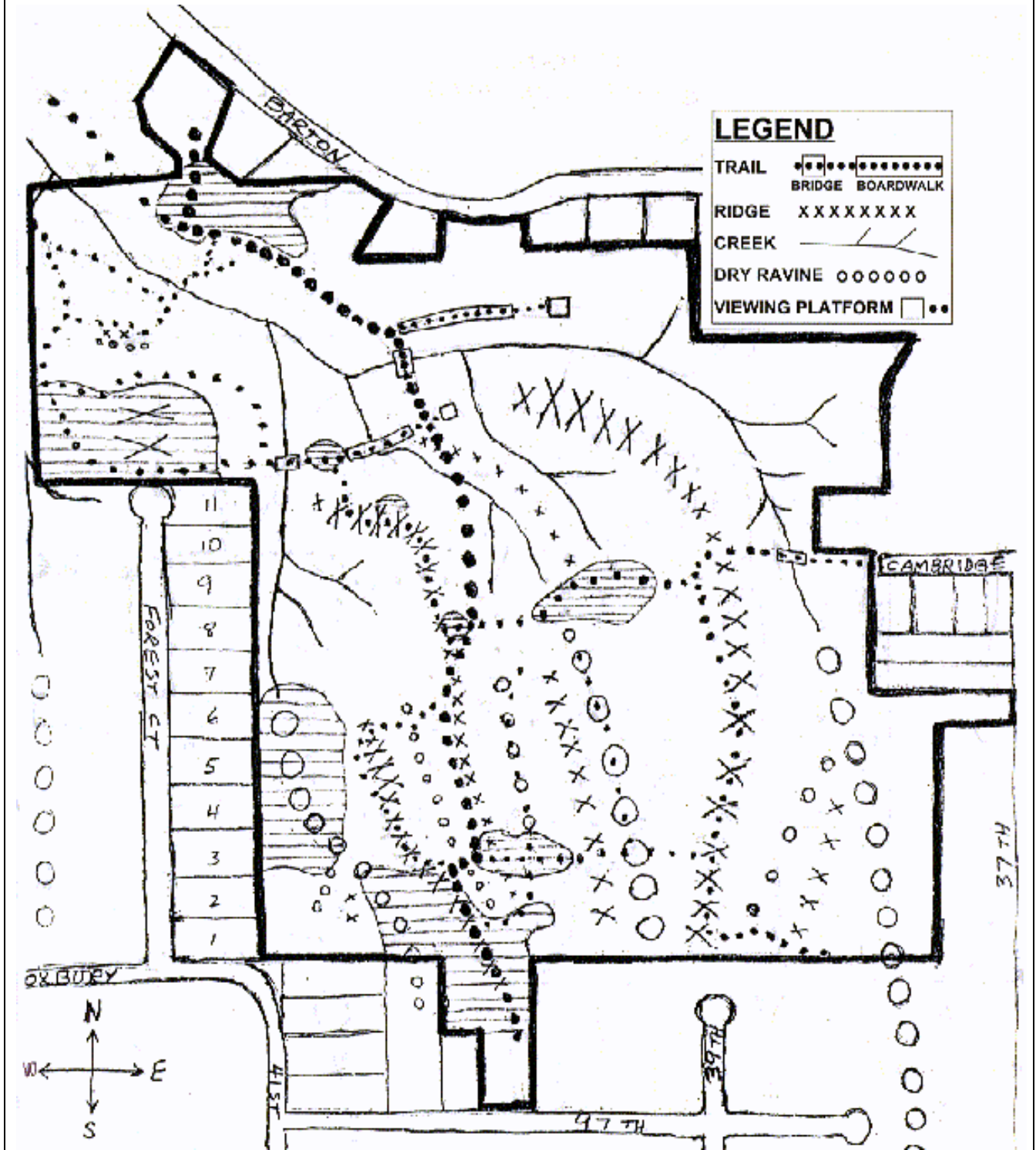


INVASIVES -- HEAVY CONCENTRATIONS



INVASIVES -- WEEDING

ONCE SEVERELY INFESTED AREAS THAT HAVE BEEN EXTENSIVELY WEEDED



ALIEN PLANTS GROWING IN FAUNTLEROY PARK

In addition to the invasives already discussed, the following alien species are present in the park and listed here from greatest to least threat to native plants:

European mountain ash (English rowan tree): a large tree spread by birds eating berries

domestic cherry: a large tree spread by birds and underground runners

giant knotweed: a large herb at the Barton entrance and by 41st and Roxbury

herb Robert: a small herb usually found along trails and disturbed soil; competes with small plants

nipplewort: a small herb usually found along trails and disturbed soil; competes with small plants

dandelion: a small herb invading at the 97th Street entrance now that the ivy and blackberries are gone

Lamium: a small herb spreading from gardens by the church and lower end of Forest Court.

Portugese laurel: similar to cherry laurel but less aggressive

bluebells: a small herb growing by the 97th Street entrance and below the old bike-jump area.

cleavers: possibly a native species but it climbs on other plants; abundant from the Barton entrance to the large bridge

creeping buttercup: a small herb usually found in wetter soils

curled dock: a larger but not very common herb

penny plant; a larger herb with the potential to be a problem; now at the end of Forest Court and at the 97th Street entrance

European wild lettuce: a larger but not very common herb

thistle: a large herb near the 97th Street entrance

shotweed: a small herb in various locations

cotoneaster: a small tree spread by birds in various locations

jewelweed: a larger possibly native herb near the Barton entrance

daphne: a small shrub in various locations

Ohio buckeye: a large tree spread by squirrels

redwood: a very large tree; cluster of five or six saplings near 97th Street entrance planted eight years ago

AREAS WITH HUMAN-CAUSED DAMAGE

- (1) **BIKE-JUMP AREA** - REPLANTED; NOW INVADED BY NIPPLEWORT, CLEAVERS, BUTTERCUPS, AND HERB ROBERT
- (2) **FIRE-PIT AREA** - RECOVERING; HEMLOCK AND RED HUCKLEBERRY SEEDLINGS ABUNDANT
- (3) **SLIDE AND ROPE-SWING AREA** - STEEP SLOPE DENUDED
- (4) **TOO-STEEP TRAILS**
- (5) **LANDSLIDE AREA**

