Heritage plants at former homesteads in the Queets Valley, Olympic National Park

Natural Resource Data Series NPS/OLYM/NRDS—2015/968
ON THE COVER
Apple trees, Streater field (#20), 2010
Photograph by: M. Tetreau
Heritage plants at former homesteads in the Queets Valley, Olympic National Park

Natural Resource Data Series NPS/OLYM/NRDS—2015/968

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Fort Collins, Colorado
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# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figures</td>
<td>iv</td>
</tr>
<tr>
<td>Tables</td>
<td>iv</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Methods</td>
<td>2</td>
</tr>
<tr>
<td>Selection of homesteads for investigation</td>
<td>2</td>
</tr>
<tr>
<td>Information collected on heritage plants</td>
<td>2</td>
</tr>
<tr>
<td>Results and Discussion</td>
<td>4</td>
</tr>
<tr>
<td>Literature Cited</td>
<td>7</td>
</tr>
<tr>
<td>Appendix 1. Tabular information for heritage plants</td>
<td>8</td>
</tr>
<tr>
<td>Appendix 2. Photographs of Queets Heritage plants</td>
<td>11</td>
</tr>
</tbody>
</table>
Figures

Figure 1. Locations of former homesteads containing heritage plants in the Queets valley, Olympic National Park

Figure 2. Frequency distribution by dbh of fruit trees observed at former homestead locations

Tables

Table 1. Number of heritage plants observed by species

Table 2. Number of heritage plants observed by homestead location
Introduction

Stewardship of cultural resources is one of the core responsibilities of the National Park Service (NPS 2006). The cultural resources under the care of the NPS include biological entities such as plant communities and individual plants (NPS 1998). Individuals or groups of trees or other plants of economic or ornamental value during an historic period may constitute “biotic cultural resources” (NPS 1998, 2006). Historic orchards or individual fruit trees are examples of resources that may have value for preservation of genetic diversity and/or landscape features. The NPS has a capability to preserve such resources not available to other land managers (Dolan 2009), whether through management on site or propagation and maintenance elsewhere (NPS 2006).

Euroamerican settlement of the Queets Valley, now mostly within Olympic National Park, commenced in 1890 (Evans 1983). At the height of settlement, there were approximately 64 homesteads along many miles of the lower river (Williams 1975, Evans 1983). The homesteaders cleared land for subsistence farming and for livestock pasture (Williams 1975). For subsistence, the homesteaders grew vegetables and planted fruit trees. The community was active for approximately 50 years until President Franklin Roosevelt added the Queets river valley to Olympic National Park in 1940, an action that included the condemnation of many homestead properties. Settlers were relocated and by 1953 all of the homesteads had been vacated (Williams, 1975, Evans 1983).

The purpose of this report is to document the identity, location, and condition of culturally-significant plants in the former homesteads in the Queets valley which are legacies of the homesteading era (“heritage plants”). This work was carried out in conjunction with an inventory of invasive, exotic plants in the homesteads and the surrounding watershed (Acker et al. 2014).
Methods

Selection of homesteads for investigation
We made use of aerial photography and other geographic data to identify the persistent clearings associated with the former homesteads. The first step was to convert the maps from the only prior inventory of the homesteads (Williams 1975) into a data layer within GIS. Williams (1975) produced maps and calculated the approximate acreage of all 43 of the extant clearings using 1973 orthophoto maps and a dot grid. We rendered Williams’ field boundaries in GIS using landmarks (mostly trees and water features) that were visible in Williams’ sketch maps and oblique aerial photographs. The most current aerial photographs at the beginning of this study were from 2006. We used these photographs to establish current conditions as the basis for field sampling.

We selected for field observation all 19 fields determined to occupy an opening of at least one acre in 2006 (Figure 1). We established this lower limit as a consequence of the focus on invasive, exotic plants. We judged that openings smaller than one acre have a high probability of colonization by native tree species, and so are unlikely to require action to control invasive plants.

Information collected on heritage plants
We carried out field observations in 2009, 2010, and 2013, during the months of July and August. We recorded information on the heritage plants using a Thales Mobile Mapper GPS receiver and datalogger with a customized data dictionary, with positional data collected in post-processing mode. Points were occupied for a minimum of three minutes. Items recorded included category of plant, the identifying number for the former homestead from Williams (1975), and whether or not photographs were taken. Categories of plants in the data dictionary included fruit tree (or, if identifiable, apple, cherry, or pear tree), ornamental conifer, ornamental rose, daffodil, iris, or other. For fruit trees, a numbered tag was attached to the tree and the number was recorded using the data dictionary. In addition, diameter at breast height (dbh) and the crown form (vigorous or senescent) were recorded.
Figure 1. Locations of former homesteads containing heritage plants in the Queets valley, Olympic National Park.
Results and Discussion

We observed a total of 56 individual heritage plants, representing at least 11 species (Table 1). The one individual we were unable to identify was a fruit tree, possibly of the genus *Prunus* (i.e., either a cherry or a plum). Apple trees (including crabapple) accounted for more than half of the observed stems; fruit trees as a group accounted for almost 90% of the heritage plants (Table 1). More than half (56%) of the fruit trees observed had no visible fruit (see Appendix 1), making field identification questionable. Positive species identification for those trees will require future work to collect material for more detailed examination.

Table 1. Number of heritage plants observed by species.

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple (<em>Malus</em> sp.)</td>
<td>33</td>
</tr>
<tr>
<td>Boxwood (<em>Buxus sempervirens</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Cherry (<em>Prunus</em> sp.)</td>
<td>8</td>
</tr>
<tr>
<td>Hops (<em>Humulus lupulus</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Ornamental rose bush (<em>Rosa</em> sp.)</td>
<td>1</td>
</tr>
<tr>
<td>Pear (<em>Pyrus communis</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Plum (<em>Prunus</em> sp.)</td>
<td>6</td>
</tr>
<tr>
<td>Quince (<em>Cydonia oblonga</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Redwood (<em>Sequoia sempervirens</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Walnut (<em>Juglans regia</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
</tr>
</tbody>
</table>

We observed heritage plants in 10 of the 19 fields included in the study (Table 2). Heritage plants occurred over most of the length of river we studied, inasmuch as Anderson homestead was near the downstream end and Smith was the farthest upstream of the homesteads with openings of at least an acre (Figure 1; Acker et al. 2014). Most of the heritage plants were found in homesteads within the Queets corridor (i.e., downstream of the end of the Queets road). These included homesteads both north (both Streater homesteads, Dedman homestead), and south (Higley, Gwin, Barrington, and Cowan homesteads) of the river (Table 2). We noted no progeny of the heritage plants within any of the homestead openings and did not encounter any recruits in the surrounding vegetation on our travels to and from the homesteads.
Table 2. Number of heritage plants observed by homestead location.

<table>
<thead>
<tr>
<th>Field name</th>
<th>Reference number</th>
<th>Number of stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Streater</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Streater</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Gwin</td>
<td>21</td>
<td>8</td>
</tr>
<tr>
<td>Barrington</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Cowan</td>
<td>29</td>
<td>7</td>
</tr>
<tr>
<td>Andrews</td>
<td>34</td>
<td>2</td>
</tr>
<tr>
<td>Smith</td>
<td>39</td>
<td>2</td>
</tr>
</tbody>
</table>

Overall, the 50 fruit trees we observed were evenly split between those with senescent crowns and those with evidently vigorous crowns. For the pomes (apples and pears), just over half the trees had vigorous crowns (18 out of 35). For the stone fruits (cherries and plums), just under half the trees had vigorous crowns (six out of 14). The fruit trees ranged in dbh from 7 to 63 cm, though most were ≤ 30 cm (Figure 2). Median dbh was similar for pomes and stone fruits (17.5 cm and 16 cm, respectively). Nearly all of the fruit trees with dbh > 30 cm were pomes, the exception being the one fruit tree we could not identify to species.

Figure 2. Frequency distribution by dbh of fruit trees observed at former homestead locations.
The information we have gathered can serve as the foundation for additional study and management of heritage plants associated with the homesteading era in the Queets valley. We have established the existence, location, and approximate identity of these plants. Additional work such as propagation through off-site grafting or biochemical analysis would be required to identify the particular varieties represented by the heritage plants. Such specificity may be necessary to evaluate their historical, cultural, or economic significance. While some of the plants appear to be thriving, others show signs of decline and may not persist much longer in their original locations, so time may be of the essence.
Literature Cited


### Appendix 1. Tabular information for heritage plants

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Reference Number</th>
<th>Species</th>
<th>Tag Number</th>
<th>DBH (cm)</th>
<th>Date Surveyed</th>
<th>Crown Form</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderson</td>
<td>6</td>
<td>Cherry</td>
<td>177</td>
<td>20</td>
<td>8/15/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Anderson</td>
<td>6</td>
<td>Cherry</td>
<td>178</td>
<td>27</td>
<td>8/15/2013</td>
<td>vigorous</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Anderson</td>
<td>6</td>
<td>Apple</td>
<td>179</td>
<td>16</td>
<td>8/15/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Boxwood</td>
<td>n/a</td>
<td>n/a</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>possibly on former house site</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Ornamental rose</td>
<td>n/a</td>
<td>n/a</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>white flowers</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>161</td>
<td>17</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>162</td>
<td>16</td>
<td>8/12/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>163</td>
<td>16</td>
<td>8/12/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>164</td>
<td>15</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>165</td>
<td>17</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Plum</td>
<td>166</td>
<td>13</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Pear</td>
<td>167</td>
<td>41</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Redwood</td>
<td>168</td>
<td>203</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>big tree</td>
</tr>
<tr>
<td>Higley</td>
<td>10</td>
<td>Walnut</td>
<td>169</td>
<td>81</td>
<td>8/12/2013</td>
<td>vigorous</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Streater</td>
<td>17</td>
<td>Apple</td>
<td>240</td>
<td>17</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Cherry</td>
<td>231</td>
<td>30</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 20-25 m tall; large, sprawling tree; three main boles having the following diameters: south (with tag) - 76 cm, center – 51 cm, north – 69 cm; several large limbs have broken off</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Apple</td>
<td>232</td>
<td>19</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, formerly 15-20 m tall (now uprooted); still partially rooted at the base and has lots of green leaves; turning into a bush instead of a tree</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Apple</td>
<td>233</td>
<td>20</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>no visible fruit, 8-9 m tall; sprawling tree with good crown</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Apple</td>
<td>234</td>
<td>15</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>visible fruit, 8-9 m tall</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Pear</td>
<td>235</td>
<td>14</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>visible fruit, 8-9 m tall; large, open, rotting face on the bole</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Apple</td>
<td>236</td>
<td>10</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 8-9 m tall; sprawling tree with three main boles and thinning crown</td>
</tr>
<tr>
<td>Dedman</td>
<td>19</td>
<td>Apple</td>
<td>237</td>
<td>9</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>visible fruit, 6-7 m tall</td>
</tr>
<tr>
<td>Field Name</td>
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<td>Species</td>
<td>Tag Number</td>
<td>DBH (cm)</td>
<td>Date Surveyed</td>
<td>Crown Form</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>---------</td>
<td>------------</td>
<td>----------</td>
<td>---------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>Dedman</td>
<td>19 Apple</td>
<td>238</td>
<td>8</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>visible fruit, 8-9 m tall; large fork of the bole has broken off, leaving a rotted stub</td>
<td></td>
</tr>
<tr>
<td>Dedman</td>
<td>19 Apple</td>
<td>239</td>
<td>13</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>no visible fruit, 7-8 m tall; sprawling tree with fair crown; getting encroached upon by surrounding spruce</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Cherry</td>
<td>223</td>
<td>7</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 7-8 m tall; crown is declining and full of &quot;witches broom&quot;</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Cherry</td>
<td>224</td>
<td>7</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 7-8 m tall; crown is declining and full of &quot;witches broom&quot;; dead, broken bole leaning off of the main bole</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Cherry</td>
<td>225</td>
<td>9</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 7-8 m tall; crown is declining and full of &quot;witches broom&quot;; dead, broken bole leaning off of the main bole</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Cherry</td>
<td>226</td>
<td>7</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 7-8 m tall; crown is declining and full of &quot;witches broom&quot;</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Apple</td>
<td>227</td>
<td>18</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>no visible fruit, 7-8 m tall; tree appears healthy for its age with a vigorous crown</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Apple</td>
<td>228</td>
<td>12</td>
<td>8/11/2010</td>
<td>senescent</td>
<td>no visible fruit, 8-9 m tall; missing a large branch, but otherwise in good shape for its age</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Apple</td>
<td>229</td>
<td>18</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>visible fruit, 8-9 m tall; one side of the bole is gone and the remaining center of the bole is filled with decay and ants</td>
<td></td>
</tr>
<tr>
<td>Streater</td>
<td>20 Apple</td>
<td>230</td>
<td>11</td>
<td>8/11/2010</td>
<td>vigorous</td>
<td>visible fruit, 8-9 m tall; looks healthy for its age with a vigorous crown</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>215</td>
<td>43</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (red)</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>217</td>
<td>27</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (golden)</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>218</td>
<td>63</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (red)</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>219</td>
<td>27</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (golden)</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>220</td>
<td>62</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (golden); large tree mostly uprooted and lying on its side but still alive and bearing fruit</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>221</td>
<td>61</td>
<td>8/23/2009</td>
<td>senescent</td>
<td>visible fruit (red)</td>
<td></td>
</tr>
<tr>
<td>Gwin SE</td>
<td>21 Apple</td>
<td>222</td>
<td>50</td>
<td>8/23/2009</td>
<td>vigorous</td>
<td>visible fruit (golden, small, possibly crabapple?); big, vigorous tree</td>
<td></td>
</tr>
<tr>
<td>Barrington</td>
<td>23 Apple</td>
<td>170</td>
<td>39</td>
<td>8/14/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
<td></td>
</tr>
<tr>
<td>Barrington</td>
<td>23 Apple</td>
<td>171</td>
<td>22</td>
<td>8/14/2013</td>
<td>vigorous</td>
<td>visible fruit</td>
<td></td>
</tr>
<tr>
<td>Field Name</td>
<td>Reference Number</td>
<td>Species</td>
<td>Tag Number</td>
<td>DBH (cm)</td>
<td>Date Surveyed</td>
<td>Crown Form</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>---------</td>
<td>------------</td>
<td>----------</td>
<td>---------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>Barrington</td>
<td>23</td>
<td>Apple</td>
<td>172</td>
<td>25</td>
<td>8/14/2013</td>
<td>senescent</td>
<td>visible fruit</td>
</tr>
<tr>
<td>Barrington</td>
<td>23</td>
<td>Apple</td>
<td>173</td>
<td>13</td>
<td>8/14/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Barrington</td>
<td>23</td>
<td>Apple</td>
<td>174</td>
<td>12</td>
<td>8/14/2013</td>
<td>senescent</td>
<td>no visible fruit</td>
</tr>
<tr>
<td>Cowan</td>
<td>29</td>
<td>Apple</td>
<td>n/a</td>
<td>n/a</td>
<td>8/14/2013</td>
<td>senescent</td>
<td>no visible fruit; probably crabapple</td>
</tr>
<tr>
<td>Cowan</td>
<td>29</td>
<td>Apple</td>
<td>175</td>
<td>26</td>
<td>8/14/2013</td>
<td>vigorous</td>
<td>no visible fruit; probably crabapple</td>
</tr>
<tr>
<td>Cowan</td>
<td>29</td>
<td>Apple</td>
<td>176</td>
<td>13</td>
<td>8/14/2013</td>
<td>vigorous</td>
<td>no visible fruit; probably crabapple; group of 5 small trees</td>
</tr>
<tr>
<td>Andrews</td>
<td>34</td>
<td>Hops</td>
<td>n/a</td>
<td>n/a</td>
<td>8/22/2009</td>
<td>vigorous</td>
<td>visible fruit; climbing up spruce snag amidst blackberry thicket</td>
</tr>
<tr>
<td>Andrews</td>
<td>34</td>
<td>Quince</td>
<td>n/a</td>
<td>n/a</td>
<td>8/22/2009</td>
<td>vigorous</td>
<td>no visible fruit, 1.5 m tall</td>
</tr>
<tr>
<td>Smith</td>
<td>39</td>
<td>Unknown</td>
<td>213</td>
<td>34</td>
<td>8/21/2009</td>
<td>vigorous</td>
<td>no visible fruit; possibly a <em>Prunus</em>; many broken limbs and trunks</td>
</tr>
<tr>
<td>Smith</td>
<td>39</td>
<td>Cherry</td>
<td>214</td>
<td>21</td>
<td>8/21/2009</td>
<td>vigorous</td>
<td>no visible fruit</td>
</tr>
</tbody>
</table>
Appendix 2. Photographs of Queets Heritage plants

Field Name: Anderson  
Reference Number: 6  
DBH (cm): 20  
Species: Cherry  
Tag Number: 177

Field Name: Higley  
Reference Number: 10  
DBH (cm): n/a  
Species: Boxwood  
Tag Number: none

Field Name: Anderson  
Reference Number: 6  
DBH (cm): 27  
Species: Cherry  
Tag Number: 178

Field Name: Higley  
Reference Number: 10  
DBH (cm): n/a  
Species: Rose  
Tag Number: none

Field Name: Anderson  
Reference Number: 6  
DBH (cm): 16  
Species: Apple  
Tag Number: 17

Field Name: Higley  
Reference Number: 10  
DBH (cm): 13 to 17  
Species: Plum  
Tag Numbers: 161 to 166
Field Name: Higley  
Reference Number: 10  
Species: Pear (R), Walnut (L)  
DBH (cm): 41(R), 81(L)  
Tag Number: 167(R), 169(L)

Field Name: Streater  
Reference Number: 17  
Species: Redwood  
DBH (cm): 203

Field Name: Dedman  
Reference Number: 19  
Species: Cherry  
DBH (cm): 30  
Tag Number: 231

Field Name: Dedman  
Reference Number: 19  
Species: Apple  
DBH (cm): 19  
Tag Number: 232

Field Name: Dedman  
Reference Number: 19  
Species: Apple  
DBH (cm): 20  
Tag Number: 233

Field Name: Streater  
Reference Number: 17  
Species: Apple  
DBH (cm): 17  
Tag Number: 240
Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 234
DBH (cm): 15

Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 235
DBH (cm): 14

Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 236
DBH (cm): 10

Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 237
DBH (cm): 9

Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 238
DBH (cm): 8

Field Name: Dedman
Reference Number: 19
Species: Apple
Tag Number: 239
DBH (cm): 13
Field Name: Streater  
Reference Number: 20  
DBH (cm): 7  
Species: Cherry  
Tag Number: 223

Field Name: Streater  
Reference Number: 20  
DBH (cm): 7  
Species: Cherry  
Tag Number: 224

Field Name: Streater  
Reference Number: 20  
DBH (cm): 9  
Species: Cherry  
Tag Number: 225

Field Name: Streater  
Reference Number: 20  
DBH (cm): 12  
Species: Apple  
Tag Number: 228

Field Name: Streater  
Reference Number: 20  
DBH (cm): 7  
Species: Cherry  
Tag Number: 226

Field Name: Streater  
Reference Number: 20  
DBH (cm): 18  
Species: Apple  
Tag Number: 227
Field Name: Streater  
Reference Number: 20  
Tag Number: 229  
DBH (cm): 18

Field Name: Gwin SE  
Reference Number: 21  
DBH (cm): 39

Field Name: Streater  
Reference Number: 20  
Tag Number: 230  
DBH (cm): 11

Field Name: Gwin SE  
Reference Number: 21  
Tag Number: 216  
DBH (cm): 39

Field Name: Gwin SE  
Reference Number: 21  
DBH (cm): 43

Field Name: Gwin SE  
Reference Number: 21  
Tag Number: 217  
DBH (cm): 27
Field Name: Gwin SE  
Species: Apple  
Reference Number: 21  
Tag Number: 218  
DBH (cm): 63

Field Name: Gwin SE  
Species: Apple  
Reference Number: 21  
Tag Number: 220  
DBH (cm): 62

Field Name: Gwin SE  
Species: Apple  
Reference Number: 21  
Tag Number: 221  
DBH (cm): 41

Field Name: Gwin SE  
Species: Apple  
Reference Number: 21  
Tag Number: 222  
DBH (cm): 50

Field Name: Barrington  
Species: Apple  
Reference Number: 23  
Tag Number: 170  
DBH (cm): 13

Field Name: Barrington  
Species: Apple  
Reference Number: 23  
Tag Number: 171  
DBH (cm): 22
Field Name: Barrington  
Reference Number: 23  
Species: Apple  
DBH (cm): 25  
Tag Number: 172

Field Name: Barrington  
Reference Number: 23  
Species: Apple  
DBH (cm): 13  
Tag Number: 173

Field Name: Barrington  
Reference Number: 23  
Species: Apple  
DBH (cm): 12  
Tag Number: 174

Field Name: Cowan  
Reference Number: 29 (Crabapple)  
Species: Apple  
DBH (cm): n/a  
Tag Number: none

Field Name: Cowan  
Reference Number: 29 (Crabapple)  
Species: Apple  
DBH (cm): 26  
Tag Number: 175

Field Name: Cowan  
Reference Number: 29 (Crabapple)  
Species: Apple  
DBH (cm): 13  
Tag Number: 176

(average diameter of group of 5 small trees)
Field Name: Andrews  
Species: Hops  
Reference Number: 34  
Tag Number: none  
DBH (cm): n/a

Field Name: Andrews  
Species: Quince  
Reference Number: 34  
Tag Number: none  
DBH (cm): n/a
The Department of the Interior protects and manages the nation’s natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 149/129594, August 2015