Project Report: Bonney Butte HawkWatch: Monitoring Raptor Migration and public outreach

Prepared by: Dave Oleyar, Senior Scientist
For: Oregon Birding Association

14 March 2018
Fall 2017 marked the 24th consecutive season of operation at the Bonney Butte HawkWatch. From August 27th through October 31st our five-person crew counts migrating raptors, traps and bands migrant raptors, and offers a unique outreach and education experience for visitors to the site. Observers counted a total of 430 hours during the 2017 season and documented 2,141 migrating raptors, and banding efforts captured 210 individuals (Table 1). Our model of operation also emphasizes professional development opportunities for the volunteer composed crew. These individuals provide an in-kind donation of their time that far exceeds the cost of living per diem they receive. Each crewmember has the opportunity to build identification, trapping and handling, outreach, and leadership skills during the season.

We held a migration festival this year for the first time, with activities in Government Camp and at the Bonney Butte HawkWatch. Over 150 people visited either the displays in town and/or the site. It was a great success for a first time festival and we look forward to growing it in 2019 and beyond. During the season, 207 people visited Bonney Butte HawkWatch, including an organized group from Portland Audubon and biology students from Pacific University.

A more detailed report on the raptor flight will follow at the end of April, but the 2017 total flight of 2,141 raptors was the second lowest in the 24-year history of Bonney Butte HawkWatch. There are many possible reasons for this, but early and late season wildfires in the immediate area and regions to the north likely played a role, either in the routes migrant took this season and/or in nesting success and fledgling survival for some species.

We would like to thank the USFS for being a long-term partner in these efforts. The Oregon Wildlife Foundation generously provided support for this year’s crew leader, Lauren di Baccarri. The Oregon Birding Association provided support for new lurebird aviaries (pictured).
Table 1. Summary of 2017 Fall Migration count and banding at the Bonney Butte HawkWatch.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mean Count ± 95 % CI</th>
<th>2017</th>
<th>% Change</th>
<th>Season</th>
<th>Year</th>
<th>Banded in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey Vulture</td>
<td>364.0 ± 66.9</td>
<td>474</td>
<td>30.2</td>
<td>790</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Osprey</td>
<td>68.4 ± 9.1</td>
<td>78</td>
<td>14.0</td>
<td>121</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Northern Harrier</td>
<td>26.5 ± 5.1</td>
<td>22</td>
<td>-16.9</td>
<td>56</td>
<td>1998</td>
<td></td>
</tr>
</tbody>
</table>

**Accipiters**

<table>
<thead>
<tr>
<th>Species</th>
<th>Mean Count ± 95 % CI</th>
<th>2017</th>
<th>% Change</th>
<th>Season</th>
<th>Year</th>
<th>Banded in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp-shinned Hawk</td>
<td>1122.1 ± 124.4</td>
<td>525</td>
<td>-53.2</td>
<td>1790</td>
<td>2004</td>
<td>92</td>
</tr>
<tr>
<td>Cooper’s Hawk</td>
<td>344.5 ± 37.1</td>
<td>347</td>
<td>0.7</td>
<td>485</td>
<td>2004</td>
<td>44</td>
</tr>
<tr>
<td>Northern Goshawk</td>
<td>27.3 ± 5.0</td>
<td>26</td>
<td>-4.8</td>
<td>53</td>
<td>2014</td>
<td>28</td>
</tr>
<tr>
<td>Unidentified accipiter</td>
<td>77.4 ± 17.0</td>
<td>33</td>
<td>-57.4</td>
<td>160</td>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>TOTAL ACCIPITERS</td>
<td>1571.3 ± 152.5</td>
<td>931</td>
<td>-40.8</td>
<td>2337</td>
<td>2004</td>
<td></td>
</tr>
</tbody>
</table>

**Buteos**

<table>
<thead>
<tr>
<th>Species</th>
<th>Mean Count ± 95 % CI</th>
<th>2017</th>
<th>% Change</th>
<th>Season</th>
<th>Year</th>
<th>Banded in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red-shouldered Hawk</td>
<td>1.1 ± 0.7</td>
<td>0</td>
<td>-100.0</td>
<td>7</td>
<td>2004</td>
<td></td>
</tr>
<tr>
<td>Broad-winged Hawk</td>
<td>6.0 ± 6.4</td>
<td>7</td>
<td>15.8</td>
<td>75</td>
<td>1999</td>
<td></td>
</tr>
<tr>
<td>Swainson’s Hawk</td>
<td>0.8 ± 0.5</td>
<td>2</td>
<td>155.6</td>
<td>4</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Red-tailed Hawk</td>
<td>553.7 ± 63.9</td>
<td>371</td>
<td>-33.0</td>
<td>932</td>
<td>1999</td>
<td>39</td>
</tr>
<tr>
<td>Ferruginous Hawk</td>
<td>0.3 ± 0.2</td>
<td>1</td>
<td>228.6</td>
<td>1</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>Rough-legged Hawk</td>
<td>11.1 ± 3.5</td>
<td>6</td>
<td>-46.1</td>
<td>30</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Unidentified buteo</td>
<td>25.3 ± 7.3</td>
<td>18</td>
<td>-28.9</td>
<td>58</td>
<td>1999</td>
<td></td>
</tr>
<tr>
<td>TOTAL BUTEOS</td>
<td>598.4 ± 70.2</td>
<td>405</td>
<td>-32.3</td>
<td>1090</td>
<td>1999</td>
<td></td>
</tr>
</tbody>
</table>

**Eagles**

<table>
<thead>
<tr>
<th>Species</th>
<th>Mean Count ± 95 % CI</th>
<th>2017</th>
<th>% Change</th>
<th>Season</th>
<th>Year</th>
<th>Banded in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golden Eagle</td>
<td>81.0 ± 12.6</td>
<td>27</td>
<td>-66.6</td>
<td>176</td>
<td>1999</td>
<td>2</td>
</tr>
<tr>
<td>Bald Eagle</td>
<td>53.4 ± 6.7</td>
<td>86</td>
<td>61.1</td>
<td>93</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>Unknown eagles</td>
<td>3.4 ± 1.3</td>
<td>2</td>
<td>-41.2</td>
<td>12</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>TOTAL EAGLES</td>
<td>137.7 ± 14.0</td>
<td>115</td>
<td>-16.5</td>
<td>231</td>
<td>1999</td>
<td></td>
</tr>
</tbody>
</table>

**Falcons**

<table>
<thead>
<tr>
<th>Species</th>
<th>Mean Count ± 95 % CI</th>
<th>2017</th>
<th>% Change</th>
<th>Season</th>
<th>Year</th>
<th>Banded in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Kestrel</td>
<td>17.6 ± 3.3</td>
<td>7</td>
<td>-60.1</td>
<td>35</td>
<td>1997</td>
<td></td>
</tr>
<tr>
<td>Merlin</td>
<td>75.2 ± 10.1</td>
<td>74</td>
<td>-1.6</td>
<td>114</td>
<td>2011</td>
<td>3</td>
</tr>
<tr>
<td>Prairie Falcon</td>
<td>4.7 ± 1.1</td>
<td>5</td>
<td>7.5</td>
<td>10</td>
<td>1998</td>
<td>2</td>
</tr>
<tr>
<td>Peregrine Falcon</td>
<td>9.1 ± 2.3</td>
<td>11</td>
<td>20.5</td>
<td>21</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>Unidentified falcon</td>
<td>4.2 ± 1.7</td>
<td>9</td>
<td>113.4</td>
<td>18</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>TOTAL FALCONS</td>
<td>110.7 ± 10.9</td>
<td>106</td>
<td>-4.3</td>
<td>148</td>
<td>1997</td>
<td></td>
</tr>
</tbody>
</table>

| Unidentified Raptor            | 19.4 ± 8.4           | 10   | -48.5    | 90     | 1997   |                |

**Grand Total**

|                                  | 2896.5 ± 260.4       | 2141 | -26.1    | 4133   | 1999   | 210            |