Assessing a Lesser Prairie-Chicken Translocation in the Sand Sagebrush Prairie Ecoregion

Elisabeth Teige, Liam Berigan, Carly Aulicky, David Haukos, Kent Fricke, Kraig Schultz, Jonathan Reitz, and Liza Rossi
Why the Sand Sagebrush Prairie Ecoregion?

- The sand sagebrush had the greatest lesser prairie-chicken density of any ecoregion until the early 1990s.

- The population declined ~98%
  - Extreme drought and winter storms
Estimated minimum number of LEPCs attending leks 1964-2012 in Sand Sagebrush Ecoregion. Adapted from Haukos and Boal 2016.
Why the Sand Sagebrush Prairie Ecoregion?

- Translocation proposed to boost Sand Sagebrush population once drought conditions improved
  - Southern part of the ecoregion - Comanche and Cimarron National
Translocation to the Sand Sagebrush Prairie Ecoregion
Capture: Location

- LEPCs captured in 4 counties in Northwest Kansas
- Collaborative Capture effort KDWPT, CPW, KSU and volunteers
Fall 2016 Capture Leks
Spring 2017 Capture Leks
Spring 2018 Capture Leks
Spring 2019 Capture Leks

- Fall 2016
- Spring 2017
- Spring 2018
- Spring 2019
Capture: Methods
Translocation to the Sand Sagebrush Prairie Ecoregion
Total Birds Translocated

<table>
<thead>
<tr>
<th></th>
<th>Kansas</th>
<th></th>
<th>Colorado</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
<td></td>
</tr>
<tr>
<td>Fall 2016</td>
<td>13</td>
<td>0</td>
<td>13</td>
<td>1</td>
<td>27</td>
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<tr>
<td>Spring 2017</td>
<td>16</td>
<td>19</td>
<td>29</td>
<td>19</td>
<td>83</td>
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<tr>
<td>Spring 2018</td>
<td>32</td>
<td>37</td>
<td>39</td>
<td>36</td>
<td>144</td>
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<td>Spring 2019</td>
<td>40</td>
<td>49</td>
<td>22</td>
<td>46</td>
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<tr>
<td>Total</td>
<td>101</td>
<td>105</td>
<td>103</td>
<td>102</td>
<td>411</td>
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</tbody>
</table>

This exceeded the 390 birds proposed
Monitoring

Telemetry
• 1-5 points per individual bird per week
• Birds are located with omni and yagi antennas
• CPW aircraft also used to locate individuals

Satellite
• Transmitter locations – 8-10 locations a day

Vegetation Surveys
• Extensive Veg. Surveys – Transects and Points
Confirmed Leks with Male High Counts 2018 - 2019

<table>
<thead>
<tr>
<th>Location</th>
<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td>Kansas</td>
<td></td>
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<tr>
<td>Lost</td>
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</tr>
<tr>
<td>Broken Windmill</td>
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<tr>
<td>T3</td>
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<td>Circus</td>
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<td>Kanarado</td>
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<td>Wheaties</td>
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<td>Conestoga</td>
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<td>Chihuahua</td>
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<tr>
<td>Boston</td>
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<tr>
<td>White Cow</td>
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</tr>
<tr>
<td>Santa Fe</td>
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<td></td>
</tr>
<tr>
<td>Red Roof</td>
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<td></td>
</tr>
<tr>
<td>Little Silo</td>
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</tr>
<tr>
<td>Colorado</td>
<td></td>
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</tbody>
</table>

Individual Males
Results

Mortality Locations 2017-2019
Causes of Mortality 2017 - 2019

- Avian Predation: 61
- Mammal Predation: 70
- Unknown Predation: 23
- Unknown Cause: 63
- Precipitation Event: 4
- Slipped Transmitter: 8
- Censor Death: 32
- Capture Myopathy: 1
- Fence Collision: 1
- Vehicle Collision: 1
Total Known Chick Survival at 35 days

<table>
<thead>
<tr>
<th></th>
<th>Kansas</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
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<td>16</td>
</tr>
<tr>
<td>2018</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>2019</td>
<td>18</td>
<td>41</td>
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</tbody>
</table>
Conclusions

• Persistent leks show promise

• Extensive monitoring will continue through August 2020

• Future lek counts will be conducted to monitor the population into the future
Thank you!

Landowners of western Kansas and eastern Colorado

David Haukos  
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Dan Sullins  
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Current and Former  
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Photo Credit: Carly Aulicky, Liam Berigan, Nicholas Parker, JoJo Morelli, Anna Wiebe, Trent Delehanty
Questions?

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