Regional Grassland Wildlife Recovery & Conservation Assessment Projects

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Wildlife Recovery and Conservation Assessment

Why smooth green snakes, meadow jumping mice, and least weasels?

- Grassland specialists/rare
- Small animals
- Limited dispersal
- Umbrella species for grassland conservation
Recovery Approaches

- Habitat conservation and restoration

Applied conservation tools:

- Zoo-breeding programs
- Headstarting
- Supplementation
- Reintroduction
Grassland Wildlife Recovery

Where are they now?
Founding fathers & mothers
Recovery planning
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Grassland Wildlife Recovery

Where are they now?
Founding fathers & mothers
Recovery planning

- How many?
- Where?
- How will we know if it worked?
Smooth Greensnakes

- Range-wide decline
- Began survey and recovery in 2010 in Lake County
- Expanded surveys to McHenry and DuPage Counties in 2013
- 5 of 16 sites in Lake County
- 2 of 9 sites in DuPage County
- 6 of 13 sites in McHenry County
- Headstarting for supplementation in Lake County and McHenry County
Smooth Greensnake Releases

- Compare release methods
- Similar movements and survival
- Mean home range 30 m²
- Long-term goal: establish population size of at least 100 snakes per site
- 36 headstarts released
Meadow Jumping Mouse Recovery

- Decline from habitat loss, isolation, and competition
- Meadow jumping mice captured in 8 of 14 sites
- Zoo breeding & headstarting
- Examine effects of release type on movements & survival
Lincoln Park Zoo

- Released 17 mice in 2013
- Radio-tracked to examine home range, movements, survival
How Far Do Jumping Mice Move?

• Mice moved an average of 20.2 m per day
• Hard-release mice had an average home range of 5,269 m²
• Soft-release mice had an average home range of 261 m².
Least Weasel Conservation Assessment

- Cryptic, status unknown
- Examine distribution and habitat use
- Detected in 6 grassland preserves between the Fox River and Des Plaines River since 2010,
- Radio-collared one 60 g adult male in Rollins Savanna and one 40 g adult male in Grant Woods
Table 1. Minimum convex polygon home range (hectares), minimum, and maximum distances (m) moved during daytime tracking and overnight for the Rollins Savanna and Grant Woods least weasels.

<table>
<thead>
<tr>
<th>Weasel</th>
<th>Home Range (ha)</th>
<th>Minimum Distance within a day (m)</th>
<th>Maximum Distance within a day (m)</th>
<th>Minimum Overnight Movement (m)</th>
<th>Maximum Overnight Movement (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rollins</td>
<td>37.88</td>
<td>371.1</td>
<td>609.5</td>
<td>201.0</td>
<td>531.3</td>
</tr>
<tr>
<td>Grant</td>
<td>9.34</td>
<td>33.1</td>
<td>209.0</td>
<td>81.0</td>
<td>123.0</td>
</tr>
</tbody>
</table>
Habitat Use

% Locations in Habitat Type

- Restored Prairie
- Restored Savanna
- Wetland
- Remnant Prairie
- Remnant Savanna
- Shrubs

- Rollins
- Grant
Summary

• Recovery projects require a team approach
• Long-term monitoring is imperative
• Experimental approaches should be integrated
Acknowledgements

Lake County Forest Preserve District
Staff: Tim Preuss, Gary Glowacki, Jim Anderson

McHenry County Conservation District
Staff: Cindi Jablonski, Ed Collins, Leslie Annis, Crystal Guy

Forest Preserve District of DuPage
County Staff: Dan Thompson, John Oldenburg, Tom Velat, Rachel Reklau, Scott Meister

Lincoln Park Zoo Staff: Animal Care Department, Urban Wildlife Institute, Alexander Center for Applied Population Biology

Field conservation interns: Lisa Raimondi, Michelle Gizowski, Meghan Jedloe, Katie Preston, Lindsey Gordon, Alyssa Lochen,