The Overwintering Habitat Of Blanding’s Turtles in Northern New York 2010

BRAYTON HILL
Blanding’s Turtle
Threatened in New York State
Threats
Background on Research

1998: Surveys

2002-2004: Movement & Habitat Characteristics

2006-2009: Nesting Surveys

2009: Road Study
My Involvement

Summer 08’ to Current:

- Began research
- Blanding’s habitat
- Nesting surveys
Presidential Scholars Project
Research Question: What is the overwintering habitat of the Northern New York Blanding’s Turtle?
Subjects
Transmitters
Study Area
Field Methods - Turtle Collection
Field Methods - Radio Attachment
Field Methods - Summer and Fall, Preliminary Tracking
Field Methods – Overwinter Locating
Field Methods - Overwinter Data Collection
Results: Overwinter Swamp Locations
• Same location as where they go in the summer.
• No movements once they chose a hibernacula
Results: Structural Features at Blanding’s Turtles Overwinter and Random Spots in NNY

<table>
<thead>
<tr>
<th></th>
<th>Turtle</th>
<th>Random</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (cm)</td>
<td>66 (4.01)</td>
<td>63.38 (4.59)</td>
</tr>
<tr>
<td>% Hummock/Shrub</td>
<td>59 (10.4)</td>
<td>27.6 (5.9)</td>
</tr>
<tr>
<td>~% Hummock/Shrub</td>
<td>66 (.09)</td>
<td>30 (.06) *</td>
</tr>
<tr>
<td>[excluding Reservation turtle]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Hummock/Shrub (cm)</td>
<td>226 (197)</td>
<td>239 (95)</td>
</tr>
<tr>
<td>~Distance to Nearest Hummock/Shrub (cm)</td>
<td>29 (7.1)</td>
<td>142.7 (38) *</td>
</tr>
<tr>
<td>[excluding Reservation turtle]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance to Shore/Land (meters)</td>
<td>43 (7.9)</td>
<td>33 (6.0)</td>
</tr>
</tbody>
</table>
Results: Environmental Variables - Temperature (°Celcius)

<table>
<thead>
<tr>
<th></th>
<th>Surface Temperature</th>
<th>Bottom Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turtle</td>
<td>6.21 (.86)</td>
<td>5.21 (.53)</td>
</tr>
<tr>
<td>Random Point</td>
<td>4.83 (.35)</td>
<td>4.83 (.32)</td>
</tr>
</tbody>
</table>
## Results: Environmental Variables - D.O.  
(Dissolved Oxygen - ppm)

<table>
<thead>
<tr>
<th></th>
<th>Surface  Oxygen Level</th>
<th>Bottom Oxygen Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turtle</td>
<td>3.71 (.69)</td>
<td>1.02 (.25)</td>
</tr>
<tr>
<td>Random Point</td>
<td>4.81 (.57)</td>
<td>.66 (.31)</td>
</tr>
</tbody>
</table>
## Results: Environmental Variables - pH

<table>
<thead>
<tr>
<th></th>
<th>Surface pH Level</th>
<th>Bottom pH Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turtle</td>
<td>6.4 (.15)</td>
<td>6.22 (.09)</td>
</tr>
<tr>
<td>Random Point</td>
<td>6.67 (.10)</td>
<td>6.27 (.05)</td>
</tr>
</tbody>
</table>
Hurdles:

- Amount of Turtle Subjects
- Small Window of Time
- Dissolved Oxygen Meter
Summary

- Same swamps as in the summer
- No under-ice movement
- Depth preference
- Structural Complexity
- Insignificant:
  - pH
  - Dissolved Oxygen
  - Temperature
Acknowledgements

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