Allerton Park Deer Population Management and Oak/Hickory Regeneration
History of Allerton Deer

- Deer thought to be extirpated from IL in early 1900’s, reintroduced in 1930’s
- Adapted well to fragmented landscape & row crop agriculture
- As Allerton population grew, hunting was only allowed on private property
Nixon Study 1980-1985

- Marked 286 deer, radio tagged 96 deer
- Dispersal and Migration behavior
- Social behavior
- Seasonal survival rates
- Birth/Pregnancy rates
- Population trends and density
- Recruitment
- Survival
- Seasonal movements
- Habitat selection
- Nutrition

1980 - 2015
Aerial Count and Harvest Totals

Year

Deer

Winter Aerial Count  Total Area Harvest  Allerton Park Harvest
Formal Gardens
Natural Areas

- 30 year floodplain/upland forest study (1976-2006)

- Over the 30 year study tree density has declined from 619 stems/ha to 447 stems/ha. Over the same period only 1 oak tree has survived beyond the seedling age class.
Survey Area
Natural Areas

• 100% Inventory of 40 acres of upland hardwood forest – Study includes a sub-sample of 63 5mX5m plots in which all seedling and saplings are identified. In 1987 the 63 plots contained 10 oaks and 85 hickories, in 2005 the plots contained 37 oaks and 4 hickories. (John Edgington)
  – 2005 Sampling was conducted 4 years post fire

• 2017 (8 oaks, 95 hickories)
  – 2017 Sampling was conducted the same year as prescribed fire.
1987 Subplot Data

- **Subplot Size**
  - 2sq meter: 9 trees (<0.5"")
  - 5sq meter: 16 trees (0.6"-2.4""")

- **Total Number of Trees**
  - 69 trees (2sq meter)
  - 17 trees (5sq meter)
2005 Subplot Data

<table>
<thead>
<tr>
<th>Subplot Size</th>
<th>Total Number of Trees</th>
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</thead>
<tbody>
<tr>
<td>&lt;0.5”</td>
<td>37</td>
</tr>
<tr>
<td>0.5”-2.4”</td>
<td></td>
</tr>
</tbody>
</table>

Subplot Size

- 2sq meter
- 5sq meter

Trees by Subplot Size:

- Oak
- Hickory
2017 Subplot Data

Subplot Size

- <0.5"
- 0.6”-2.4”

Total Number of Trees

Oak
Hickory

35
8
Natural Areas

• Deer Exclosure — In 2005 oak and Hickory seedlings were planted inside and outside of 6mX8m exclosures. After 1 year oak mortality outside was 71%, inside mortality was 39%. Oak height inside was 59cm compared to 35cm outside.
Outside the exclosure

Inside the exclosure
We knew something would have to change in order to manage the natural areas
Introduction of Hunting at Allerton Park

NOTICE

ARCHERY DEER HUNTING IN PROGRESS

October 1st – January 20th
Archery hunting by permitted hunters ONLY will be allowed in the park during this time. Recreational activities including: hiking, jogging and cross country skiing ARE permitted during this time.

Year round park rules apply and will be strictly enforced:

1) Stay on trails 2) All dogs must be leashed 3) No bicycles on hiking trails

Violators of park rules may be prosecuted

Hunter Harassment in Illinois
Interference with the lawful taking of a wild animal (Class B Misdemeanor)

• Interferes with the lawful taking of a wild animal by another with intent to prevent the taking.
• Disturbs or engages in an activity that will tend to disturb wild animals, with intent to prevent their lawful taking.
• Enters or remains on public lands, or upon private lands without permission of the owner or his agent, or a lessee, with intent to violate this section.

Questions or Concerns, Please Call 217-244-2149
Allerton Specific Deer Hunting Regulations

- 40 volunteer hours
- Antlerless deer before buck- “Earn-a-Buck”
- One buck limit
- Antler restrictions
  - (2004-2012)-no restrictions
  - (2013)-minimum of 4 points on one side
    • width of rack is even or outside the ears
2003 - Present

Aerial Count and Harvest Totals

Winter Count
Total Area Harvest
Total Allerton Harvest
Aerial Survey

- Visual Aerial Survey
  - (3-4 inches of snow)
Aerial Survey - FLIR

- No snow cover needed
- Counts conducted at night
- Video recorded to flash drive
- Resolution detailed enough to identify animals as small as pheasants
How Allerton and Area Benefits
Disease Monitoring

- Important aspect to wildlife management
- Samples taken from deer harvested in the park
  - Obex
  - Lymph Nodes
  - Blood
  - Ticks
  - Tongue
  - Tooth

Testing for
- CWD
- Bovine Tuberculosis
- West Nile Virus
- Blue Tongue
- EHD
- Lyme Disease
Deer – Vehicle Accidents

Allerton Area 2014
Deer Vehicle Accident Distribution

- 2014_DVC
- Interstate
- State Hwy
- County Road
- 2 Mile Buffer
- Sargenton River
- Allerton Park

Allerton Park & Retreat Center
Deer – Vehicle Accidents

Number of Accidents

Year

Allerton Area Accidents

Piatt Co. Accidents
Prairie Plantings
Over the 10 years of the volunteer requirement how many hours have our hunters volunteered?...
Over the 10 years of the volunteer requirement how many hours have our hunters volunteered?...Over 13,000 hours
Over the 10 years of the volunteer requirement how many hours have our hunters volunteered?...Over 13,000 hours! That is 325 work weeks!
Future of the Herd

- Population number between 150-250
- Management for more mature deer
- Incentives for our hunters

https://www.the-whitetail-deer.com/whitetail-deer-fawns.html
What Counts as Antlerless?

YEARLY BUTTON BUCKS HARVESTED

Season Year

Number Harvested

What Does “Antlerless” Truly Mean?

An antlerless deer is defined as a deer without antlers or a deer having antlers less than 3 inches long.-IDNR

2016 Archery season statewide
Antlerless deer harvested - 28,178
4.5 years

https://www.realtree.com/deer-hunting/galleries/photo-gallery-from-buttons-to-booner
Changes Throughout the Park

- Little to no damage of trees caused by buck rubs
- No browse lines
- More diverse and abundant wildflowers and forest plants
Overall Monitoring

**Deer**
- Aerial surveys (visual, FLIR)
- Deer-Vehicle Accidents
- Observation logs
- Hunter Effort
- Class structure

**Natural Areas**
- Wildflower abundance and frequency
- Hardwood regeneration (oak, hickory)