



Photo by Gigi Charters

# WHITE-TAILED DEER AND FOREST HEALTH IN NORTHERN VIRGINIA



Deer are beautiful, graceful,  
and . . .



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Photo by David Howell

... becoming more plentiful ...



Photo by Donna Owen

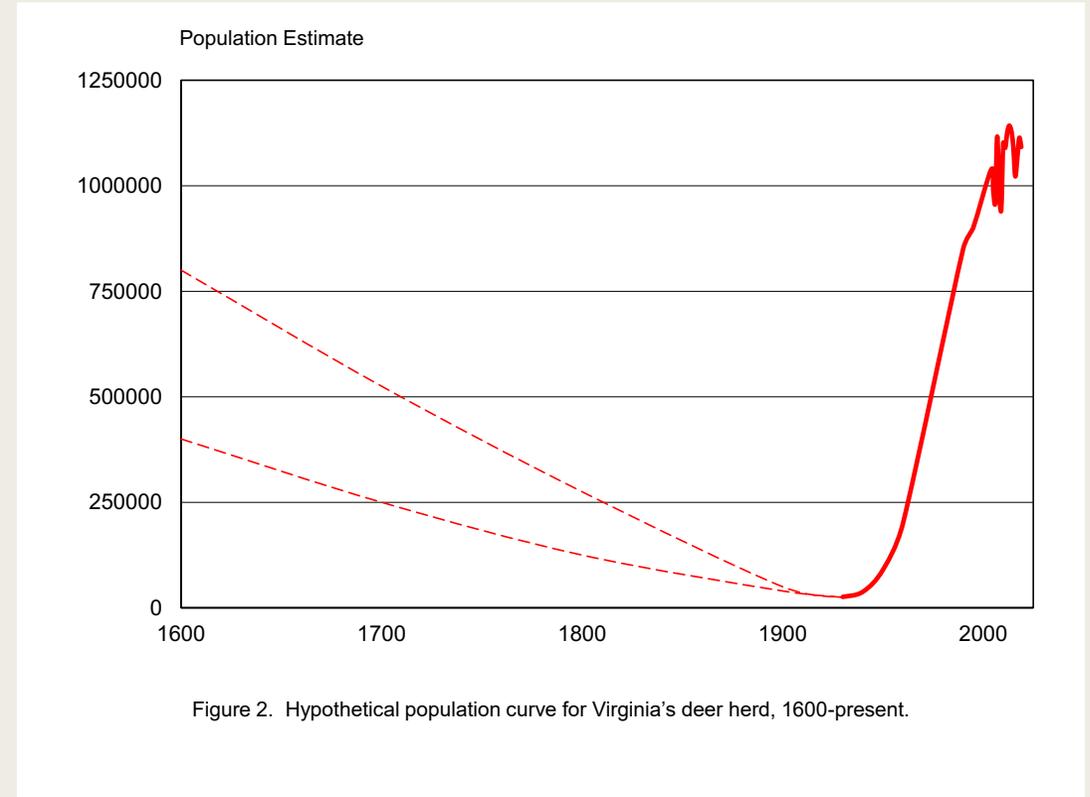


Figure 2. Hypothetical population curve for Virginia's deer herd, 1600-present.

Hypothetical Virginia deer population curve.  
Source: Department of Game and Inland Fisheries.

- Hunting and suburban development have been key factors in population fluctuations.

# Adult deer are eating machines



## Daily consumption



Photos by Bill Browning and Sandy Munnell



## Annual consumption

# Deer browse changes the forest structure



Left: Forest with healthy understory. Right: Over-browsed forest cannot regrow.

Photos by Charles Smith

# Deer browse affects bird habitat



Woodthrush, David Howell

- The Woodthrush nest ranges in height from 6 to 50 feet from the ground.
- It forages along the ground which exposes it to predators.

Source: The Birder's Handbook. A Field Guide to the Natural History of North American Birds. Paul R. Erlich, David S. Dobkin, and Darryl Wheye, 1988.

# Deer browse affects butterfly habitat

- The Spring Azure butterfly relies on dogwood (*Cornus spp.*), blueberry (*Vaccinium spp.*), and viburnum (*Viburnum spp.*)
- The Spicebush Swallowtail caterpillar feeds exclusively on spicebush (*Lindera benzoin*)
- Many pollinators in various instar stages rely on forest habitat



Photos by David Howell

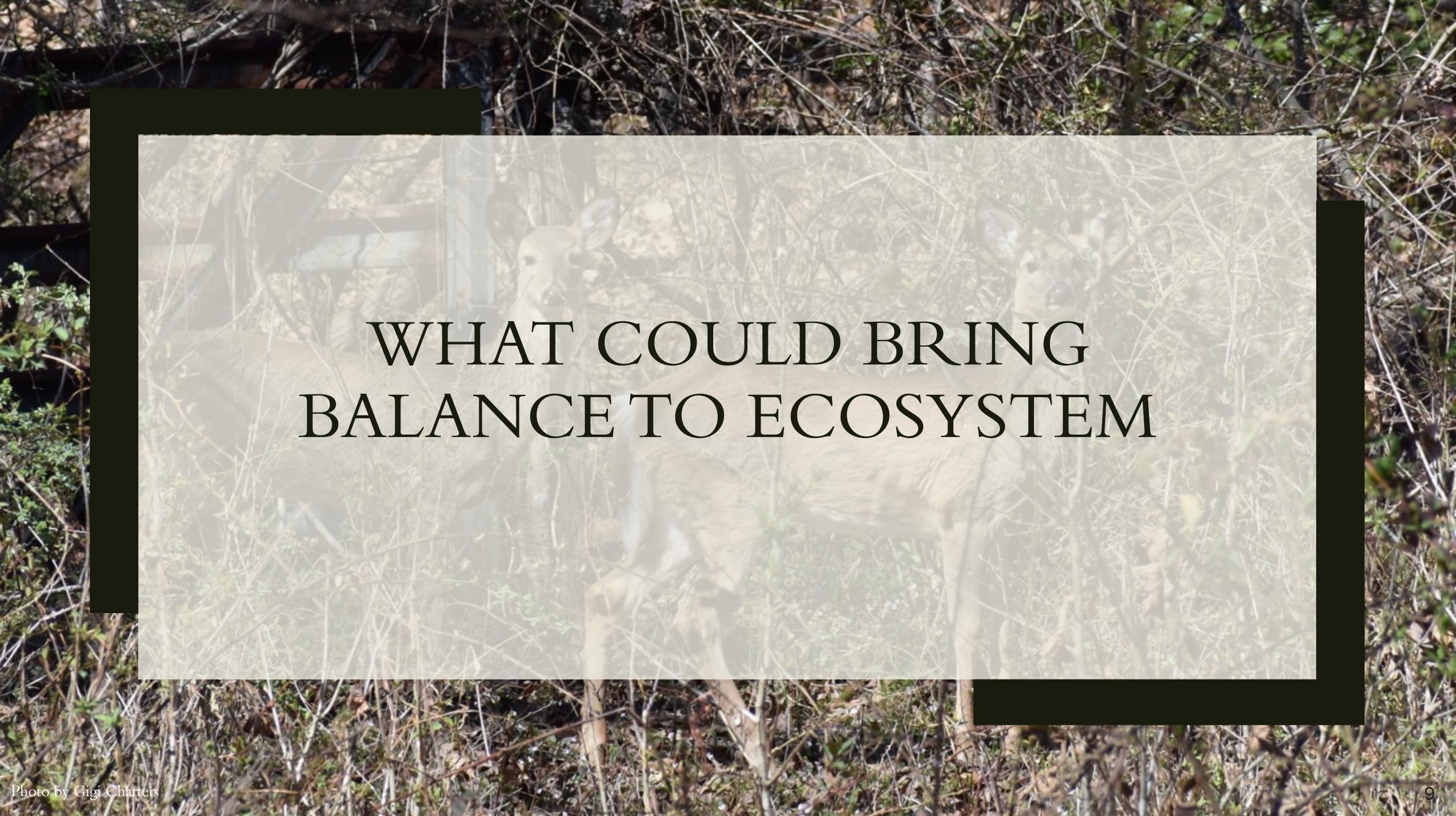
# Deer browse undermines our investment in our parks



Photo by Ron Battocchi



Photos by Bill Browning



# WHAT COULD BRING BALANCE TO ECOSYSTEM

# Effective predators to deer are extirpated from Virginia



Eastern Cougar



Gray Wolf

# Contraception and Sterilization Methods Do Not Work

- Immunocontraceptives
  - *PZP*
    - By hand or dart
    - Needs to be administered repeatedly
  - *GonaCon*
    - USDA approved
    - Must be administered by hand
  - *Not effective in open herds*
- Expensive—about \$1,000 per deer per year
- Deer are susceptible to capture myopathy



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# Hunting Can Control Deer Population



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- Humans have been hunting deer for thousands of years
- Death by hunting more humane than death by stress-inducing medical procedures

# Fairfax Program

- Deer management began in 1998
  - *Proven safety record*
  - *Includes archery, managed shotgun hunts, and police sharpshooting*
- Significant county oversight
  - *Implemented by police*
  - *Collaborate with park authorities*
- Hunters have to prove themselves
  - *Pass qualifications and frequently have to re-qualify*
  - *Complete educational courses*

# Montgomery Program

- County program to manage began over deer twenty years ago
  - *Culled 1,137 deer in 2019/20*
  - *Cover more than 50 percent of county parkland*
  - *Archery and sharpshooting used in urban areas*
- Zero public safety incidents
- Supplemented by private organization
  - *Hunt on lots as small as 1/5 acre*

# National Park Service Approach

- Rock Creek Park
  - *History*
    - Before 1960, there were no deer sightings in the park
    - By the 1990s, there were so many that they stopped counting
    - Nearly 100 per square mile a decade ago
  - *Public process resulted in deer management plan in 2012*
    - Goal was to reduce deer density to support native plants and promote a healthy forest
    - Have removed between 34 and 94 every year for last three years
    - Using trained firearms experts from USDA under NPS direction
      - *Conducting operations at night*
      - *No safety incidents in seven years*



# Other Jurisdictions

- Prince George's County—police sharpshooters and bow hunting in public parks
- Loudon County—private hunting permitted, generous limits
- Prince William County—pilot program
- Arlington County—no official program
- Alexandria City—no official program

# Key Takeaways

- Doing nothing means favoring deer over many other species of mammals, birds, and reptiles
- Doing nothing will allow the deer to continue to destroy our forests and jeopardize public and private landscapes
- Human intervention is needed to restore balance



“I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer. And perhaps with better cause, for while a buck pulled down by wolves can be replaced in two or three years, a range pulled down by too many deer may fail of replacement in as many decades.”

Aldo Leopold, *Thinking Like a Mountain*