

Volume 64

January/February 2011

## MANAGING THE WHITETAIL DEER POPULATION

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Whitetail Deer are the most numerous large mammals in the Great Swamp National Wildlife Refuge (GSNWR) in New Jersey. They are beautiful and graceful animals. It is a pleasure to watch whitetails, especially the

fawns in the spring and bucks in the fall. Whitetails can run as fast as thirty-five miles per hour and jump a fence eight feet high. They are reddish brown in the spring and summer. Their coats turn a dark, grayish brown in the fall. When frightened or uncertain they will occasionally snort and stamp their hooves before running away with their tails erect displaying their name-sake white underside. I remember how thrilled I was to see a Whitetail Deer in my yard for

the first time about twenty-five years ago. Now I am ambivalent as these stately animals arrive frequently near dawn or dusk in gangs of six or more to feast on my shrubs and flowers.

Whitetail Deer are browsers. They will eat most green plants including aquatic ones in the summer. They prefer acorns, other nuts, bird seed and corn in the fall. During the winter they will eat the bark of trees and buds



from bushes and trees. In the Great Swamp an over-abundance of Whitetail Deer will browse much of the vegetation in the refuge. Deer will eat tree saplings preventing natural regeneration. Plants that deer avoid such as

Japanese Barberry will become the predominate vegetation in the understory. This reduces the diversity of vegetation and wildlife. Left unchecked the deer population could increase until starvation trims their numbers during a severe winter. Wolves and Mountain Lions that are efficient deer predators have been eliminated from New Jersey. There are relatively small populations of Black Bears, Coyotes and Bobcats in New Jersey. They are, however, opportunistic predators and only take a fawn or injured adult. They do not impact the deer population.

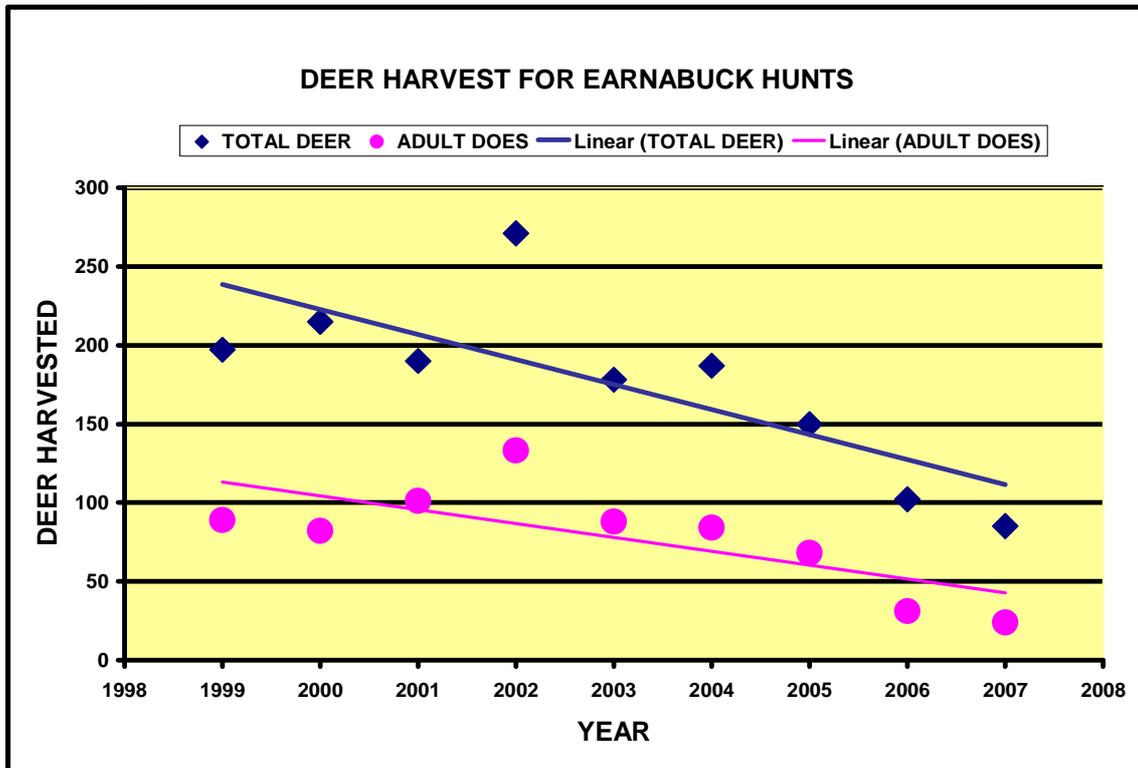
The mission of the United States Fish and Wildlife Department is to manage the GSNWR to sustain a diverse and viable wildlife population. An annual four day deer hunt, open to the public, was initiated in 1974. The objective of the hunt was to stabilize the deer population in the Great Swamp so that both the vegetation and the deer herd are maintained in a healthy condition. The income from hunting licenses also benefitted the refuge. The average annual deer harvest for the first twenty-five years of the hunt was 170 deer. The deer population was stabilized but at too high a level to prevent over browsing of refuge vegetation.

The initial deer hunting system was called "hunter's choice". Under this program a hunter could harvest two deer of either sex each day. In theory a hunter could harvest eight bucks and no does during the four day hunt. On average about an even number of antlered bucks and adult does were harvested.

A new hunt program was started with the 1999 hunt. The new system is called the "earn-a-buck" program and was aimed at reducing the doe (adult female) population that annually can have twins or even triplets under favorable conditions. This program requires a hunter to first harvest an adult doe before earning the right to harvest a buck. In addition a hunter was permitted to harvest an unlimited number of antlerless deer but only one buck per season.

Protesters that picketed the annual hunt since its inception ceased their activities in 1999. Perhaps they were supportive of the new hunt rules. More likely they had lost sympathy with Whitetail Deer that were over browsing their own yards.

While it took more years than expected, "earn-a-buck" program has accomplished the objective of reducing the herd. In addition to anecdotal observations of reduced browsing,



two sources of data measure the trends in the GSNWR deer herd population. Both indicate a decline in the deer population over the nine years of the earn-a-buck hunts. The chart (previous page) graphs the annual data for the total deer harvest (diamonds) as well as the doe harvest (circles) for the period 1999-2007. The total deer numbers include antlered bucks, adult does and fawns. A linear regression of the hunt data was used to develop the trend lines shown in the chart. The total deer and adult doe harvests are trending lower. The deer harvest for 2007 was eighty-five deer. This is the lowest yield of all the thirty-four annual hunts. Interestingly, the line for the total deer harvest is noticeably steeper than for the adult doe line. This is understandable because adult does typically have twin fawns in the spring. Harvesting an adult doe during the fall hunt potentially reduces the herd by three deer in the spring.

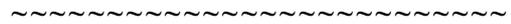
Every August evening spotlight surveys are conducted to assess the deer population in the GSNWR. August is well before the deer rutting (mating) season. Deer are not prone to roam widely during this time. The surveys are done for as many as five evenings over the same route every year to assess the deer population trend on a consistent basis. The survey does not measure the absolute GSNWR deer population. Adult bucks and does are counted at specific locations on the route. This survey data is very consistent with the hunt results and confirms the decline in the herd.

To sustain the deer population at current levels, hunters will be limited to taking two deer in future hunts. The hunter will be able to harvest a buck after first taking an antlerless deer.

Adult does and their female offspring occupy territories of about 300 acres. Bucks range over much wider areas especially in the fall in search of receptive does. Reducing the number of does in an area will keep the deer population depressed for a number of seasons as does from other areas will not immediately move in to take advantage of the available habitat. This is good news for vegetation in

the GSNWR but not so for the surrounding suburbs that will not benefit from a lower density of deer in an adjacent territory.

While a sport hunting program has been successful and cost effective in managing the herd in the refuge, it is not practical to use this technique in populated suburbs where housing density restricts the use of shotguns. Professional hunters have been used by some townships in New Jersey. Homeowners have used passive measures such as netting, fencing, and spraying to protect their shrubs and flowers. Excessive deer populations in the suburbs present a health hazard from ticks that carry Lyme disease and from their not infrequent encounters with autos.



#### LILLIAN STONER AWARDEE

[Editor's Note: The Lillian Stoner Award helps pay the expenses for an "outstanding student" to attend the Annual Meeting of the New York State Ornithological Association. Students are nominated by member clubs of the NYSOA and chosen by the NYSOA. In 2010 Society nominee Jacob Drucker was selected as one of the awardees to attend the meeting in Auburn, NY.]

I owe an enormous thank you to the Linnaean Society for nominating me for the Lillian Stoner award. The NYSOA conference in October in Auburn was an absolutely incredible experience and complete success. The presented papers continue to instill thought on the various intriguing subjects, and spending time with "birder celebrities" was absolutely stunning. It is hard to believe that on Friday night several of my peers and I were talking to Bill Evans, one of the key pioneers to understanding nocturnal migration and flight calls, about his work while he demonstrated it and gave examples of the beauty and mystery of night flights. Not just my young peers but Bill himself pondered why Dickcissels are heard regularly on the east side of Cayuga Lake, but are practically un-

documented on the west side. We wondered about Austral nocturnal migration, most suboscines in North America rarely give flight calls, so being that many Austral migrants are suboscines, flycatchers or ovenbirds, what is the situation down there? That night I went to bed dreaming of negritos and Dickcissels, anticipating the promising birding for the day to come. As luck would have it, Saturday was a truly unforgettable day. Spending much of it learning first-hand from the famed birder Richard Crossley was merely a bonus. We started at the main portion of Montezuma NWR, and birded the visitor's center and the wildlife drive, where people are prohibited from leaving their cars. But my friends and I figured birding from the back of a pickup truck wouldn't be an issue! We indulged in fabulous views of Hudsonian Godwit, hundreds of Ring-necked Ducks, White-rumped and Pectoral Sandpipers, Redhead, top notch views of pipits, and a plethora of waterfowl. Continuing on to the Knox-Marcellus Marsh, a well-known spot for geese and waterfowl, we were greeted with more breathtaking spectacles. Thousands of geese were in the various pools of accumulated rainwater and runoff. I quickly found my life Trumpeter Swans, and Richard Crossley pointed out the single Tundra Swan amongst their ranks. Had it not been for this valuable lesson, who knows if we would've picked out that Tundra! The personal highlight of that stop for me was the two Ross's Geese we picked out from the 500 or so Snow Geese. I had been longing to see them for years, and it was fantastic to finally have practice picking them out of the flock and studying them for myself. Amidst the many Canada Geese we were also treated to a few Cackling Geese too. Some Sandhill Cranes also flew by, allowing gorgeous looks against the colored fall backdrop. While all this was happening, more Pectoral Sandpipers than I have ever seen in my life combined scurried around on the embankments and mud. We left Mr. Crossley here amongst the geese, where he wished to stay. Several minutes later, we learned this was a mistake.

The biggest species highlight of the trip was a total surprise. En route to another birding location, my group of young birder friends and I were driving through the town outskirts of Savannah, NY when we saw Dominic Sherony, a well-known upstate birder and a member of NYSARC frantically beckoning to us to pull over. We did, and all I heard was "kingbird." A Western, I assumed, as I watched it alight in a Catalpa tree on an otherwise barren lawn. Then we all heard Mr. Sherony say it was a *Gray Kingbird*, up until that day recorded only four times in New York State. We all toppled out of the car, set up scopes and cameras and were fixed on the bird, which would occasionally hawk insects from the lawn. After four minutes of stellar, definitive looks at the huge bill, mask, gray back, worn brownish median/lesser covert edges, dark tail and off-white underparts, and taking a few quick photos, the bird flew to the southwest, never to be seen again despite searching of some of New York best birders. Luck was certainly on our side!

That night, Mr. Crossley, the keynote speaker of the conference gave an inspiring talk, as did my other fellow recipients of the Stoner award, which we all received at the dinner and awards ceremony. Though I could not stay for the trips on Sunday morning, it seemed as if that day would be impossible to top. I had seen several not just incredible, but rare birds for our region in one day in the company of some of my closest friends. All of this was supplemented by the presence of some of birding's all-time great people.

I would not have experienced any of this if not for the generosity and consideration of the Linnaean Society.

My sincere thanks,

Jacob Drucker

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**LINNAEAN NEWS-LETTER**

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