

DEER MANAGEMENT SERIES

A Comprehensive Scientific Assessment of the Pennsylvania Game Commission's Deer Management Program

**By
John Eveland**

November 25, 2014

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DEER MANAGEMENT SERIES

A Comprehensive Scientific Assessment of the Pennsylvania Game Commission's Deer Management Program

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INTRODUCTION

For over a century, the Pennsylvania Game Commission (PGC) has competently managed the wildlife resources of the Commonwealth – conserving game animals with respect for the ability of the forest to sustain harvests in the interest of sportsmen for recreational hunting, and preserving nongame birds and mammals for the benefit of all citizens. PGC's wildlife and forest management balance of art and science had maintained a biodiverse ecosystem rich with native flora and fauna, and a hunting reputation of national acclaim. For decades, Pennsylvania was recognized as one of the top deer-hunting states in the nation.

However, the turn of the new millennium witnessed a change in PGC's wildlife management philosophy that shifted the focus away from the pursuits of traditional game management and sport hunting, and toward nongame management and forestry interests. As a result, over a five-year period PGC implemented a drastic statewide deer herd reduction program and has kept the statewide herd at an exceedingly low level from 2001 to the present. Although the agency claimed that this unprecedented action was a scientific necessity, many sportsmen, legislators, and members of the agency's own board of commissioners questioned the wisdom of the new policy. Until independent scientific investigations were conducted that have culminated in this Deer Management Series, sportsmen and decision-makers within the State Senate and House of Representatives, the Office of the Governor, and PGC's Board of Commissioners have had little recourse but to trust in the integrity of the agency to honorably uphold its legislated mission. To date, little has been done either internally by the agency or by legislative action to resolve what has been deemed as the greatest conservation mistake in the over-one-hundred-year-history of the Pennsylvania Game Commission.

In 2000-01, John Eveland was asked by the Senate Majority Leader to assess PGC's deer-reduction program, and again was requested by the Office of the Governor and the Majority Leader of the House Game and Fisheries Committee in 2007. In 2010, members of PGC's Board of Commissioners asked Eveland to prepare a new deer management plan for them in the event that they could muster a majority of votes to halt the deer-reduction program. From Eveland's investigations, there are two over-riding conclusions: (1) that no significant benefits have resulted after 14 years of herd reduction—not for science, society, nor economy—while the negative impacts to the future of sport hunting and the Commonwealth have been great; and (2) that PGC's deer-reduction program is designed to serve foresters and fringe environmentalists at the expense of sportsmen and recreational hunting, and as such is in violation of PGC's legislated mission and state law. Therefore, there is no reason that PGC's deer-reduction program should have been initiated in 2000 or continued to the present, and there are overwhelming reasons for the program to be immediately ended.

Following is a series of 25 one-page articles that provide readers with a comprehensive assessment of PGC's unprecedented action. This Deer Management Series will leave no doubt that deer reduction was a politically-motivated agenda, concocted by only three people that has cost the Commonwealth billions in lost dollars and that remains unjustified on every front--science, society, economy, legality, public relations, and even common sense.

The complete DMS series and a detailed resolution plan are available at www.acsl-pa.org. John Eveland can be reached at 412.601.0077, or at jfeveland@acsl-pa.org. The DMS series is also available at www.gousp.org and www.acslpa.org.

DEER MANAGEMENT SERIES, No. 1: OVERVIEW OF THE PENNSYLVANIA GAME COMMISSION'S DEER REDUCTION PROGRAM

John Eveland
April 25, 2014

1. A few state employees have changed the mission of the PGC to fit their personal agenda.
2. The deer management program has been redesigned to serve the interests of foresters and environmentalists – not just **instead** of serving the interests of sportsmen for recreational hunting, but **at the expense** of sportsmen and recreational hunting.
3. This change in philosophy began in 1998 at the request of DCNR by eliminating the traditional, scientific **maximum sustained yield (MSY)** method of deer management (that had made Pennsylvania one of the top two deer hunting states in the nation), and replacing it with a new, value-laden style called **ecosystem management** (that favored nongame species of birds and mammals, wildflowers, and native shrubs).
4. This action represents a violation of Title 34 State Law: Section 322(c)(13).
5. Virtually no benefits were achieved by the action:
 - not to science.
 - not to the forest ecosystem.
 - not to commercial forestry.
 - not to biodiversity (nongame birds and mammals, wildflowers, and native shrubs).
 - not to deer health.
 - not to society and the commonwealth's economy.
 - and not to sportsmen and recreational hunting.
6. The need to increase forest tree-seedling regeneration was a principal reason PGC used to justify permanent reduction of the herd. However, after independent scientific assessment, the forest regeneration theory has proven to be a myth – false science.
7. The negative impacts to the natural ecosystem, society, and economy are severe, unjustified, and increasing yearly. The deer herd has been reduced to nearly unhuntable numbers in some areas. Upwards of 200,000 sportsmen have stopped hunting as a result of deer reduction, and the rate of youth-hunter recruitment is declining and unable to replace the loss of adults. Since 2001, over \$4 billion has been lost in Commonwealth economic activity due to deer reduction which is increasing at the rate of \$285-415 million each year. Deer reduction has become a crisis that likely represents the greatest conservation mistake in the over-100-year history of the Game Commission.
8. This crisis must now be resolved. No permanent solution will result from conciliatory remedial actions by the Commission. Considering that the agency has violated its public trust, it has become the responsibility of the Joint Legislature:
 - To return the agency to its legislatively-directed mission through passage of five deer bills.
 - To oversee future actions of the agency toward assuring compliance with Title 34 State Law.

Upcoming articles in this Deer Management Series will provide insight into whether the Game Commission's deer-reduction program is based on incompetence or deception.

DEER MANAGEMENT SERIES, NO. 2: GREEN CERTIFICATION

The Real Cause of the Deer-Reduction Program

John Eveland

May 5, 2014

In 1993, the Rainforest Alliance founded the Forest Stewardship Council (FSC) in Bonn, Germany. By 1995, FSC was influencing forest management throughout the world and had established Scientific Certification Systems, Inc. of Oakland, California as its U.S. Representative. By 1996, a Mr. Bryon Shissler (an independent Pennsylvania wildlife biologist who had spent much of his career culling urban deer herds) had been identified as their Central Appalachian Regional Representative.

In 1996, Mr. Shissler proposed to enroll the Pennsylvania Department of Conservation and Natural Resources (DCNR) into FSC's Green Certification Program as the first American enrollee – *"a case study for the rest of the nation."* The pilot study culminated in a July 1997 workshop in DCNR's Rachel Carson Building among Mr. Shissler, Dr. James Grace and Dan Devlin of DCNR, and foresters from other state agencies. When questioned by attendees about the lack of science and the subjective values of the auditor, Mr. Shissler responded *"We concoct scientific solutions based on what we are trying to accomplish – which, of course, are deemed on what we deem valuable."* Other attendees elected not to pursue FSC certification, stating: *"Criteria are too value-laden and not based on current forest science."* DCNR, however, elected to enroll all of its 2.1 million acres of Pennsylvania state forest lands into the program.

The annual "green certification" award was intended for two purposes:

- For money—to generate more revenue for DCNR from the sale of timber on state forest lands.
- For agenda – to change the focus of deer management from serving the interests of sportsmen to serving the interests of foresters and environmentalists. According to their assumed premise, more seedling oaks, nongame mammals and songbirds, and wildflowers should result by reducing deer. (Note that independent, scientific assessments have proven this premise to be a fallacy.)

It should be noted that this international "green-certification" scheme has no effect on the quality of lumber being sold domestically or in Eurasian markets – a 100-year-old black cherry log from a certified forest is no different than a 100-year-old log from Farmer Brown's uncertified woodlot.

Although Mr. Shissler could have chosen any number of criteria on which to evaluate DCNR's forest management activities (such as acid-rain remediation, improved timbering practices, or maintaining stream quality), he chose the issue that had dominated his career – deer reduction. Quoting from the SCS document awarding DCNR its first official certification in November 1998: *"The team leader was Bryon P. Shissler, consulting certified wildlife biologist, who had primary responsibility for forest ecosystem issues."* Shissler stated in this original report, *"If deer are not reduced, the ability of both public and private landowners in Pennsylvania to meet or maintain FSC standards will be jeopardized."* Further quoting the report, *"We recognize that the BOF (DCNR's Bureau of Forestry) has no regulatory authority over the deer resource on its own lands. The unnaturally high levels of deer herbivory ... is a deliberate consequence of the deer management program administered by another State agency, the PA Game Commission. The BOF's certification is therefore conditioned on the eventual resolution of this important matter."*

In 1998, PGC complied with DCNR's request to dramatically and permanently reduce the deer herd. As a result, in 1998 DCNR received its first Green Certification Award. In 2013, DCNR received its 16th consecutive award. PGC has repeatedly told sportsmen and legislators that the Green Certification program has had no role in deer reduction. It is left to readers to decide for themselves.

DEER MANAGEMENT SERIES, NO. 3: BETRAYING A TRUST

Deceiving Sportsmen and Legislators into Believing Deer Reduction was in Their Best Interest

John Eveland

May 20, 2014

By 1999, the Game Commission had complied with DCNR's request to permanently reduce the deer herd. Only three people were directly involved -- Bryon Shissler (the auditor for DCNR's Green Certification award), Daniel Devlin of DCNR, and Calvin DuBrock of PGC. In this scheme between foresters and environmentalists, PGC's Calvin DuBrock was faced with convincing sportsmen and legislators that the action was based on sound science and in the best interest of sportsmen. This would not be easy.

Changing PGC's Mission. The following statement was included in DCNR's 1998 first green certification award: *"steady and continuous progress is needed by the Commonwealth of Pennsylvania in order to develop and implement a deer management program that shifts from the current nutritional carrying capacity paradigm to one of diversity carrying capacity."* This represented a change of PGC's legislatively-directed mission from 'serving the interest of sportsmen for recreational hunting' to, instead, 'serving the interests of foresters and environmentalists'. It eliminated the science-based "maximum sustained yield" style of game management that had made Pennsylvania one of the top deer hunting states and replaced it with a subjective system called "ecosystem management" that favored biodiversity (nongame mammals, songbirds, and wildflowers). This new program, however, was illegal, but legislators trusted the agencies and had no way to scientifically assess agency actions.

Deceiving Sportsmen and Legislators. Calvin DuBrock switch Gary Alt from the bear program to head the new deer-reduction program and initiated a statewide tour because Alt was PGC's most respected staffer and, therefore, the person who was most likely to successfully convince sportsmen of the seemingly impossible – that deer reduction would be temporary and in their best interest.

Deceiving Sportsmen and Legislators Again. In 1998, a Deer Management Working Group was created by the PGC. It was chaired by Scot Williamson – a deer-reduction advocate. In 2000, Williamson presented the Board of Commissioners with recommendations for a deer-reduction program that included increased antlerless allocations, concurrent buck/doe seasons, increased DMAP, and large non-county-based WMUs. This implied that the deer-reduction program was the result of a panel's recommendations. It should be noted that in 2009 Scot Williamson was granted a \$92,000 contract to evaluate PGC's deer program. This represented an egregious conflict of interest and violation of state law.

Others Knew. In 2001, outdoor writer Dave Drakula had discovered the green-certification scheme and had published articles in the Pittsburgh Tribune-Review. He wrote, *"Pennsylvania State Forests received Green Certification. The Governor accepted the certification with fanfare amid a blizzard of news releases. Green Certification targeted deer reduction, and might be withdrawn without immediate deer reduction – an embarrassment to the current administration and its Department of Conservation and Natural Resources. Calling it politically damaging would be an understatement. It was no coincidence that a major effort to overhaul Pennsylvania's deer management program followed."* Drakula wrote, *"Commissioner Riley explained that the deer management plan is actually a forestry bureau issue, based on the state forest's Green Certification. The Game Commission is pushing the deer management plan because the state needs the deer herd reduced. It's all about the forestry resource. This isn't even a Game Commission issue, but we're making it that way."* Drakula continued, *"When asked if he now thought it would appear as though any commissioners voting in favor of the proposed deer management plan would be perceived as having a lack of integrity and to have been 'bought' by the forestry interests, Sam Dunkle, Board of Commissioners President, replied, "Yes, I guess it could appear that way". "*

DEER MANAGEMENT SERIES, NO. 4: A PERFECT STORM

PGC and DCNR Designed a Doomsday Scenario to Virtually Exterminate Deer

John Eveland
May 31, 2014

From 2000-04, PGC engaged in a relentless assault on does and fawns. Three deer-reduction mechanisms were deployed: (1) extremely high antlerless license allocations, (2) predation, and (3) antler restrictions.

The Impact of High Antlerless License Allocations. From 2000-04, antlerless licenses were issued at levels far exceeding impacts expected by sportsmen and legislators. Although members of PGC's Board of Commissioners privately stated a target goal of only 5-6 deer per square mile (dpsm), PGC admitted to have overshot this targeted number to only 1-2 dpsm in some areas. PGC privately stated, "*We've literally exterminated deer in some areas and still regeneration hasn't changed.*" From 2000-04, nearly a half million deer per year were reportedly harvested. Of this total, an average of 308,758 per year were does and fawns. Therefore, PGC claimed to have harvested about the same number of does and fawns per year from 2000-04 as the total number of deer annually harvested before and after this reduction period.

The High Impact of Predation. A PGC/Penn State study in 2000-01 indicated that 22.5% of the total fawn crop succumbed to predation – about evenly by bears and coyotes and a few to bobcats. For decades the bear population has remained relatively stable at 20-25 thousand bears, and it appears that prior to 2000 the deer population had been able to cope with the roughly 10% fawn loss attributed to bears. However, it is estimated that the coyote population has rapidly increased to as many as 250,000. The increasing impact by coyotes has likely exceeded the reproductive capacity of the herd to grow and possibly even to remain stable. Other studies indicate that coyote predation throughout the East currently accounts for 50% of fawns, while in the Southeast coyotes inflict a 75% early impact on fawns. The Southeast study concluded that when combined with doe hunting, deer populations are unable to sustain themselves in the face of such heavy coyote predation. A 12-year Quality Deer Management Association study confirmed that fawn predation in northern-tier Pennsylvania has increased from 25% over a decade ago to as high as 50-75% today. In contrast to Southeast biologists who recognize the seriousness of the situation, the leader of a proposed \$3.9 million PGC/Penn State predation study responded, "*Only an average of one in two (fawns) survives its first three months of life. Regardless, this number of fawns that survive generally is adequate to sustain nearly all populations.*" The accuracy of this statement, however, is questionable.

The Impact of Antler Restrictions. During Gary Alt's statewide tour to convince sportsmen that the deer-reduction program would be temporary and limited, PGC used the prospect of larger-antlered buck as an incentive (a "carrot") to entice sportsmen to accept reduction. However, a DCNR report revealed a more sinister reason for the antler-restriction policy: "*Increased restriction for antlered bucks made it harder to harvest a buck so hunters were more apt to harvest an antlerless deer instead.*" Additionally, in decades prior to the herd-reduction program (under the traditional, scientific "maximum-sustained-yield" method of deer management) about 90% of the overwinter herd consisted of does and fawns – thus maximizing the herd's growth potential. However, under the new antler-restriction policy, up to 40% of the overwinter population is designed to consist of adult buck, thus decreasing the productivity of the herd.

Conclusion. Along with predation, antler restrictions represent a biological "insurance policy" for PGC to prevent herd growth and maintain low deer population levels even if their own Board or the Legislature would mandate lowering the number of antlerless hunting permits. If PGC biologists have been aware of the extraordinarily high impact of combined hunting, predation, and antler restrictions over the past 14 years, then they are guilty of selective ignorance and deceit in not informing their own Board of Commissioners, sportsmen, and legislators, and for permitting the relentless assault to occur. If PGC biologists were unaware of this "Perfect Storm", then they are just as guilty of incompetence.

DEER MANAGEMENT SERIES, No. 5: BLOOD IN THE WATER

Sensing the Reality of Deer Reduction, Foresters and Environmentalists Circled like Sharks around a Sinking Ship

John Eveland

June 17, 2014

Before DCNR "purchased" its first Green Certification Award in 1998 from the German-based Forest Stewardship Council, FSC's auditor (Mr. Bryon Shissler) and DCNR's chief forester agreed to make the annual award contingent on the long-term reduction of the state's deer herd. Starting in 1999, anti-deer foresters and environmentalists initiated a series of events toward exacerbating and perpetuating the deer-reduction program and advancing their biodiversity and ecosystem-management agendas. PGC complied.

In 1999, Sierra Club and Audubon co-sponsored a *Conference on the Impact of Deer on the Biodiversity and Economy of the State of Pennsylvania*. Quoting: *"The truth is that we humans have knocked the natural system completely out of balance."* Speakers included Calvin DuBrock and five members of the Deer Management Working Group (Scot Williamson, Bryon Shissler, Susan Stout, Cindy Dunn, and Ben Moyer) whom PGC appointed to devise an "unbiased" deer management plan. Gary Alt gave the keynote speech.

From 2001-04, Audubon wrote a deer-reduction master plan (*Managing White-tailed Deer in Forest Habitat from an Ecosystem Perspective*) to promote their concept of ecosystem management – *to restore natural ecosystems, birds, other wildlife and their habitats...including native wildflowers*. Participants included Cindy Dunn, Bryon Shissler, Ben Moyer, Tim Schaeffer, and Susan Stout. Audubon acknowledged PGC participants: *"We are grateful to Robert Boyd, Calvin DuBrock, Chris Rosenberry, and Vernon Ross"*.

In 2004, The Nature Conservancy and DCNR's chief forester, Dan Devlin, designed a 500,000-acre system of old growth forests in Pennsylvania to be achieved through deer reduction. The plan concluded: *Reducing Pennsylvania's deer population will likely require a long-term political process. This will not be easy.*

By 2005, Bryon Shissler, Gary Alt, Tim Schaeffer, and Ben Moyer had organized their *Ecosystem Management Project* – a series of newsletters and lectures with its stated goal being: *"to assist state agencies and hunters in their goal of balancing the number of deer with their natural habitats."* Also, Bryon Shissler testified before the Agricultural and Rural Affairs Committee to encourage deer reduction, stating: *"We are not suggesting that people within the Game Commission or hunters are bad people. We need a wildlife agency that represents all the people not just deer hunters."*

A PA Biodiversity Partnership was created to promote the conservation of native species and their habitats. Quoting: *"Deer represent a major threat to biodiversity. There is much we don't know. Waiting for this information before reversing damaging patterns can be detrimental."* Members included: Carl Roe and Cal DuBrock, Audubon's Cindy Dunn, foresters Ken Kane and Blaine Puller, Ben Moyer, and Melody Zullinger.

Dan Devlin held a deer-reduction forum in 2009 entitled *"Monitoring Deer Effects on Forest Ecosystems in Pennsylvania State Forests."* In step with Audubon, DCNR changed from *"maximum sustained yield"* to Audubon's *"ecosystem management"* philosophy. Authors included Chris Rosenberry and Bryon Shissler.

Bryon Shissler conducted a Pinchot Institute study entitled *Managing Deer in the Commonwealth*, claiming that PGC was the most enlightened state game agency because unlike other states, the PGC had changed from the archaic *"agricultural paradigm"* (maximum sustained yield) method to ecosystem management.

Conclusion. Along with herd reduction, environmentalists successfully eliminated the traditional *"maximum sustained yield"* deer management philosophy and installed *"ecosystem management"* into DCNR and PGC. In an emotionally-charged and agenda-driven feeding frenzy, science and even state law were ignored to achieve a goal that is now proven to be a conservation, social, and economic catastrophe.

DEER MANAGEMENT SERIES, NO. 6: STACKING THE DECK

PGC Hired Three Deer Biologists Who were All Trained at Chesapeake Farms to Eliminate Deer Impacts by Eliminating Deer

John Eveland

June 18, 2014

Historically, foresters and environmentalists have long sought to dramatically reduce Pennsylvania's state mammal. It was always understood, however, that their goal was nothing more than a wishful dream. That is, until 1998 when the Green Certification circumstance removed deer management from the realm of science and made it a political issue that could financially benefit DCNR. Realizing the reality of deer reduction, following the departure of Gary Alt, PGC's chief of wildlife management quickly stacked the deck with a like-minded next-generation of deer biologists. In 2010, PGC's Board of Commissioners requested that the author of this article investigate this rumor. The following facts were uncovered.

PGC's Chesapeake Farms Connection. The Pennsylvania Game Commission lists three staff deer biologists (Chris Rosenberry, Bret Wallingford, and Jeannine Fleegle,) who report to Calvin DuBrock, Director of the Wildlife Management Bureau; and Robert Boyd, Bureau Assistant Director. It can be no coincidence that of the myriad accredited university degree programs throughout the nation which regularly produce thousands of professional wildlife biologists, that all three deer biologists employed by the PGC attained their graduate degrees from the same college (North Carolina State University), were mentored by the same NC State advisory staff members, and conducted their thesis deer research at the same small 5-square-mile Chesapeake Farms agricultural demonstration area on the Eastern Shore of Maryland. Their principal advisors were Richard Lancia and Mark Connor, Director of Chesapeake Farms, who lists his research interests as "*population ecology and management especially white-tailed deer, management of crop damage by deer, and wildlife in agro-ecosystems*".

At Chesapeake Farms, PGC's three deer biologists were trained in a deer management philosophy called Quality Deer Management—reducing deer impacts accomplished by increasing antlerless harvests toward decreasing herd size. Whereas students from most university wildlife degree programs are educated to view deer as an asset to the natural ecosystem and society, PGC's three deer biologists were trained in a setting that views deer as a negative impact-causing element with little to no emphasis placed on the value of deer, the tradition of recreational hunting, and sportsmen. Hence, PGC's deer biologists brought with them from Chesapeake Farms a wildlife management philosophy that was better suited for private organizations such as Audubon and the Sierra Club than for a traditional state game management agency.

Fleegle wrote in her thesis, "*More than any other wildlife, deer are perceived to cause the most damage to crops.*" In like fashion, Rosenberry wrote, "*Balancing white-tailed deer impacts is the fundamental issue affecting a majority of Pennsylvania's deer management decisions.*" Former Executive Director, Carl Roe, epitomized the deer team's negative view of deer and sportsmen when he told the Governor's Council for Hunting, Fishing, and Conservation that hunters are of no concern in deer management.

Conclusion. It is not likely that Calvin DuBrock could have succeeded for over a decade in decimating the Commonwealth's deer herd if he had not hired like-minded staffers to perpetuate the action. The three deer biologists and those in the PGC who hired them have adopted the deer reduction philosophy of Chesapeake Farms (eliminating deer impacts by eliminating deer), and appear to be using Chesapeake Farms as a template to systematically convert the state to this system. It is, therefore, evident that PGC's deer biologists were not hired to manage Pennsylvania's deer herd in the best interest of the resource or sportsmen, or to pursue the PGC's mission for recreational hunting as prescribed by state law. Instead, it appears that they were specifically hired to decimate the herd. This they have achieved.

DEER MANAGEMENT SERIES, NO. 7: CONCEALING A MISTAKE

Three After-the-Fact Goals were Concocted in an Attempt to Justify Herd Reduction

John Eveland

July 7, 2014

Once PGC's Calvin DuBrock had hired the three Chesapeake Farms students as deer managers to continue the Commission's deer-reduction policy, by 2006 three after-the-fact goals had been concocted in an attempt to justify the agency's controversial action. According to the Pennsylvania Game Commission, the new reasons for herd reduction were: (1) to improve the health of the forest, (2) to improve the health of deer, and (3) to reduce deer/human conflicts. However, it should be remembered that the real reasons for deer-herd reduction were designed in 1998 and are two-fold: (1) for "money", as a contingency for DCNR to achieve an annual Green Certification Award from a German-based environmental organization with the ultimate intent of increasing sales of DCNR timber products throughout America and the world; and (2) for an "emotional agenda" that assumed that as the number of deer were drastically and permanently reduced, a "utopian-style" ecosystem flourishing in a biodiversity of wildflowers, songbirds, nongame mammals, and native shrubs would result. Later, the three after-the-fact goals were designed to redirect the attention of sportsmen, legislators, and the agency's own Board of Commissioners to what was hoped to be more acceptable reasons for reducing the herd.

Regarding Forest Health. After 14 years of herd reduction, there has been little to no change in the status of Pennsylvania forests. PGC's chief forester has indicated that no significant trends have been identified regarding forest tree-seedling regeneration – that regeneration might be "up" in some areas in one year and "down" the next. Long-term Penn State studies indicate that any increases in red maple seedlings and decreases in the number of red oak seedlings are due to acid precipitation, and not to deer. In fact, concludes Penn State studies, deer prefer to browse on red maple over red oak. Therefore, PGC's claim that forest health would be improved by eliminating deer is unfounded – a scientific fallacy.

Regarding Biodiversity. Of the 464 species of other birds and mammals in the state, no significant improvements have been recorded for any bird or mammal as a result of herd reduction from 2001 to the present. In fact, several species are in decline. Therefore, PGC's attempt to improve biodiversity by eliminating deer is unfounded – a scientific fallacy.

Regarding Deer Health. PGC attempted to justify herd reduction based on the supposition that deer were in poor health. However, two after-the-fact PGC surveys covering a nine-year period failed to verify the agency's belief. In fact, the surveys revealed that deer were actually in "good" health in all 22 Wildlife Management Units in every one of the nine years. That deer were not in poor health but, instead, have been and remain in good health is an excellent indicator that the forest is also in good health. Therefore, PGC's attempt to improve deer health by eliminating deer is unfounded – a scientific fallacy.

Regarding Deer/Human Conflicts: As has been written in a previous Deer Management Series article (see DMS, No. 6), PGC's three deer managers were trained at Chesapeake Farms to devise methods for reducing deer impacts to agriculture. In this regard, in PGC's 10-year deer management plan, Calvin DuBrock and his three-member Chesapeake Farms deer management team wrote: *"Balancing white-tailed deer impacts is the fundamental issue affecting a majority of Pennsylvania's deer management decisions."* It needs to be understood that the Game Commission's state-law mission as directed in Title 34, Section 322(c)(13) is **"to serve the interest of sportsmen for recreational hunting."** It is not within the job description of PGC employees to arbitrarily ignore state law and to change the chartered mission of the agency at their discretion in order to advance their personal agenda. As such, the deer-reduction program remains scientifically unfounded and a violation of state law.

DEER MANAGEMENT SERIES, NO. 8: AUDUBON'S ROLE

Audubon Played a Key Role in Reducing Deer toward Promoting Ecosystem Management

**John Eveland
July 12, 2014**

In 1996, acting as a representative of the German-based Forest Stewardship Council (FSC), Mr. Bryon Shissler introduced the concept of a "green certification" award to Dan Devlin and James Grace of the Pennsylvania Department of Conservation and Natural Resources (DCNR). According to the green certification agreement, DCNR would purchase the award from FSC if, as a contingency, the deer herd was permanently reduced. Although DCNR's principal intent was to use the award to increase worldwide sales of state forest timber, Mr. Shissler's goal was to eliminate the traditional "maximum-sustained-yield" method of deer management and replace it with an "ecosystem management" style, which promoted biodiversity (nongame animals, songbirds, wildflowers, and shrubs). It was to be accomplished through deer reduction.

Toward advancing this fortuitous opportunity, by 2001 Mr. Shissler was serving on a Deer Management Forum for Audubon President, Cindy Adams Dunn, and was a co-author in a three-year Audubon endeavor that produced a 362-page master plan for ecosystem management – achieved by permanently reducing deer.

According to a 2004 Pennsylvania Outdoor News article by Bob Frye, Audubon funded \$1,360,500 for the deer-reduction effort over a three-year period using contributions from five foundations – the Heinz and R.K. Mellon endowments and three other anonymous foundations. Regarding the foundation/deer-reduction controversy, Cindy Adams Dunn (former Executive Director of Audubon and then Director of DCNR's Office of Communications and Partnerships) revealed in a testimony before the Legislative Budget and Finance Committee: *"Audubon handled the money for those projects because the foundations were uncomfortable giving the (deer-reduction) money directly to the Game Commission at a time when its board consisted of George Venesky, Steve Mohr, Nicholas Spock, Vern Shaffer, Bob Gilford and Sam Dunkle."*

In a 2004 Western Pennsylvania Conservancy publication, DCNR's Cindy Adams Dunn advanced her Audubon agenda by writing: *"Balance. That's what this department seeks as it tries to protect flora and fauna within its jurisdiction. It is a balance that requires liberal licensing of hunters...Our professional foresters characterize deer as one of the greatest threats to forest stability. DCNR was proud to achieve "green certification" of its state forestland...under FSC (Forest Stewardship Council) standards. One condition: DCNR must address deer overabundance."*

From 2001-03, Audubon wrote in its ecosystem-management/deer-reduction master plan: *"Deer densities should be reduced below levels that would be set solely by considerations of deer health and condition. This would require targets even lower than those PGC has been unable to reach in the past."* Audubon continued, *"With the reorganization in 1999 of the Wildlife Management Bureau (with Dr. Gary Alt named chief of the newly formed Deer Management Section) and the support of agency policy makers, PGC is poised to pursue a more aggressive deer management program that, in theory, can effectively reduce deer densities in many parts of Pennsylvania. Although the PGC staff is strong in the areas of deer biology and in implementing and enforcing regulations to make hunting safe, the current staff has limited expertise in the field of general ecology. At present DCNR cannot fully implement ecosystem management on its lands because it does not have the necessary authority to manage deer populations in state forests and parks."*

This circumstance, however, would quickly change. Bryon Shissler and PGC's Chris Rosenberry would soon co-author DCNR's ecosystem management plan for Dan Devlin, and PGC would adopt it. Once Bryon Shissler, DCNR's Dan Devlin, and PGC's Calvin DuBrock had successfully used the "green certification" award to set the deer reduction process in motion, the resources of Audubon were used to initiate "ecosystem management" and exacerbate deer reduction to a far greater level than was initially envisioned.

DEER MANAGEMENT SERIES, No. 9: DCNR'S PERSPECTIVE

DCNR Developed a Deer Management Plan that Supported Forestry and Audubon Goals

John Eveland
July 14, 2014

Quoting from a private forestry company publication: *"Hunting is the best way to curb unrestrained growth of white-tailed deer... As a forester, zero deer is a good number."* Audubon stated in a 362-page ecosystem management master plan: *"...deer will continue to decimate the flora and fauna in Pennsylvania's state forests without merger of P.G.C. with D.C.N.R. in a combined natural resource agency...achieving a change of this magnitude would require an improbably large expenditure of political capital."* Following are excerpts from DCNR's 2003 deer management plan: *Pennsylvania State Forests --- Deer Management --- A Plan for the Department of Conservation and Natural Resources.*

• *"This process found that the primary factor threatening the sustainability of these forests is overbrowsing of vegetation by white-tailed deer. In response to this threat, and as a condition for DCNR to retain (green) certification, the auditors (Scientific Certification Systems of Oakland, California and Mr. Bryon Shissler) required the following CAR (Corrective Action Requests):*

- *Solutions to the Pennsylvania deer density problem cannot be designed and implemented solely by BOF (Bureau of Forestry) because currently the Game Commission regulates deer seasons, bag limits, antlerless licenses and all other regulatory functions used to reduce deer density by hunting.*
- *Initiate earnest and aggressive strategic, public advocacy, and political actions aimed at liberalizing hunting regulations in ways that reduce the deer density of State Forests.*
- *Implement better utilization of the current DMAP program such that the program can be expanded to cover all appropriate District Forests in 2004 and succeeding years."*

• DCNR continued: *"The Pennsylvania Game Commission has begun to implement a variety of measures to bring the deer herd into balance (including) Gary Alt's multimedia huge public-information campaign; the switch from a two-week buck-only rifle season and a three-day antlerless season to a concurrent two-week buck and antlerless rifle season; a gradual increase in antlerless permits; switching from counties (WMUs); a one-week early muzzleloader antlerless deer season; a 3-day early antlerless rifle season for Junior and Senior hunters; and more restrictive buck antler requirements..."*

• *"All of these initiatives have been successful at providing tools for increasing the antlerless harvest. Increased restrictions for antlered bucks made it harder to harvest a buck so hunters were more apt to harvest an antlerless deer instead."*

• Under the heading *"Analysis of and requests for additional tools"*, DCNR listed other *"Potential Deer Management Tools:* • *Early, Extended Rifle Hunting* • *Multiple Permits per Hunter per DMAP Area* • *Eliminate the Tagging Requirement before Harvesting Multiple Deer* • *Party Hunting* • *Provide special incentives for individuals and hunting groups to get additional buck permits for meeting antlerless deer harvest quotas* • *Use of Bait to Entice Deer* • *Night Hunting* • *Semi-automatic sporting rifles* • *Use of Dogs* • *Professional Control of Deer."*

• Under the heading *"Challenges/Potential: The greatest challenges appear to be making the most efficient use of a shrinking hunting population ...The greatest potential lies in the growing group of hunters who appear willing to harvest multiple deer and finding tools that will make them more efficient..."*

Conclusion. It is apparent that DCNR's perspective of deer management is more receptive to the interests of foresters and Audubon than to the interests of hunters. Any future considerations toward merging Pennsylvania's three conservation agencies under a single, DCNR-led, agency should closely examine the potential effects to the future of sport hunting in the commonwealth.

DEER MANAGEMENT SERIES, NO. 10: DESTROYING A TRADITION

By the Numbers – How PGC Decimated Pennsylvania's State Mammal

John Eveland
August 19, 2014

Prior to Herd Reduction. During the 14-year period from 1986-99, the average deer harvest was estimated to be 379,137 deer per year. The statewide population was estimated to be 1.5 million deer. This number is consistent with the author's calculations, and accurately represents the size of the statewide herd that would have needed to exist in order to sustain this average annual harvest. As a result, Pennsylvania held the reputation as one of the top deer-hunting states in the nation.

The Intensive Deer-Reduction Period. This national reputation, however, abruptly changed in 2000 when PGC began a five-year campaign to dramatically and permanently reduce the size of the Commonwealth's deer herd. To facilitate herd reduction, PGC switched from the decades-old, science-based method of deer management called "maximum sustained yield" (that was designed to serve the interest of sportsmen), and adopted a value-laden, subjective method called "ecosystem management" (that was designed to favor foresters and environmentalists). This new non-scientific method assumed an emotional and unsubstantiated belief that if deer impacts were removed from the forest ecosystem, that forest health, deer health, and the health of nongame species of small mammals, songbirds, and wildflowers (referred to as "biodiversity") would flourish. Therefore, PGC's deer team had arbitrarily discarded the agency's legislated mission "*to serve the interest of sportsmen for recreational hunting*", and had adopted at their personal discretion a new agency policy -- representing a gross and deliberate violation of Title 34 state law.

From 2000-04, the average annual harvest had increased to 476,471 deer per year (eclipsing 500,000 in two separate years). PGC had accomplished this rapid herd reduction by combining the separate buck and doe seasons into a single concurrent season, and by increasing antlerless-license allocations. Thus, the harvest of pregnant does and fawns was increased by nearly 100,000 per year—an average annual antlerless harvest of 308,758 as compared to 212,418 per year from 1986-99. PGC's Board commented that in some northern-tier areas, PGC had "overshot" its target goal of 5-6 deer per square mile, and had reduced the herd to 1-2 dpsm. This represented a virtual biological collapse of the herd in these areas and a nearly unhuntable condition.

Maintaining Herd Reduction. From 2005-13, PGC claims that an average of 336,918 deer have been harvested per year. Under the newly-adopted "ecosystem management" method, PGC's goal has been to continue herd reduction to a point where forest health, deer health, and biodiversity improve. According to the premise, when an undetermined number of Indian cucumber roots, Canada mayflowers, and trilliums appear in the forest, then further reduction should be halted and the herd stabilized at that point. It should be noted that after-the-fact studies have since indicated that herd reduction had proceeded under a false premise – that neither the forest, deer, nor other nongame species were in poor health. In fact, after 14 years of drastic herd reduction no significant changes have occurred to forest health, deer health, nor biodiversity.

Conclusion. Consider the following: (1) that an estimated average of 476,471 deer per year were harvested from 2000-04 in order to drastically reduce the statewide deer population; (2) that PGC admitted to having over-harvested some north central areas to as low as only 1-2 dpsm; and (3) that a member of PGC's deer team stated, "*We've literally exterminated deer in some areas, and still regeneration hasn't changed.*" Then it is highly unlikely, and virtually impossible, that PGC's claimed average annual harvest of 336,918 deer per year from 2005-13 is accurate. As such, PGC is claiming that as many deer are now being harvested as had been harvested during the heydays of deer hunting during the 1980s and '90s. Considering the increasing impact of predation, such a high harvest would require a statewide population of 1.7 million deer – representing an average of 66 dpsm on all forestlands in the state, and 39 dpsm on every square mile of land area in the state. It is left to the reader to decide if PGC's false claims are due to incompetence or deception.

DEER MANAGEMENT SERIES, NO. 11: A FALSE PREMISE

Deer Reduction Resulted from Politics and an Emotional Environmental Belief

John Eveland
August 25, 2014

Beginning with the first 1998 Green Certification Award agreement between the German-based Forest Stewardship Council and the Department of Conservation and Natural Resources, less than a handful of individuals concocted a premise that deer were the root of an unhealthy forest – negatively impacting forest health, biodiversity (other species of nongame small mammals, songbirds, and wildflowers), and even the health of deer. According to their premise, this forest sickness could only be cured by reducing its cause – deer. Within the ensuing few years, the Sierra Club and Audubon were sponsoring conferences and forums toward culling Pennsylvania's deer herd in order to save our forests and wildlife. A newly created Pennsylvania Biodiversity Partnership that included PGC, DCNR, forestry companies, and environmental organizations stated that Pennsylvania could not afford to wait until studies were conducted – action was needed now. Emotional environmentalism is not new to American society, and it is too often responsible for ill-advised environmental and natural resources policies. Although the deer-reduction program resulted from a politically motivated agenda to achieve an annual Green Certification Award for DCNR, after 1999 it was being perpetuated by a growing emotional environmentalism that had risen to the level of a mob mentality. The movement succeeded by intentionally ignoring state law.

This DMS document will demonstrate with original quotations the emotional belief that deer were the root-cause of all forest maladies – an unverified supposition that resulted in deer reduction from 2000 to the present. In subsequent DMS reports, the author will use science to address this emotional myth.

Quoting Vern Ross (then PGC Executive Director) from a Potter Leader-Enterprise article: *"The 2001 firearm deer seasons are historic steps for the Game Commission in its efforts to balance the Commonwealth's whitetail herd. We expect to gradually start to reduce a longstanding deer overpopulation problem that has been impacting the state's wildlife, forests and residents, as well as the herd itself. We must all remember that whatever happens in the upcoming season is simply a first step toward establishing a healthier deer herd."* Note that although this story sounds noble, it simply isn't true.

Quoting Cindy Adams Dunn (Director in DCNR's Office of Education and former President of Audubon) in a 2004 article entitled 'Deer – A Crisis in Penn's Woods': *"Balance. That's what this department seeks as it tries to protect flora and fauna within its jurisdiction. It is a balance that requires liberal licensing of hunters...and the inception of new, and sometimes revolutionary, hunting laws to achieve larger annual deer kills. Our professional foresters characterize deer as one of the greatest threats to forest sustainability... DCNR was proud to achieve "green certification" of its state forestland. One condition: DCNR must address deer overabundance. DCNR must depend on the Game Commission to set hunting seasons. Still, DCNR has taken steps to increase deer harvests... DCNR enrolled 446,821 acres of state forest in the Game Commission's DMAP program. If hunters are to remain the primary controlling force over Pennsylvania's whitetail herd, they need the proper tools to fix the problem. We're hoping the PGC listens to possible game law changes being aired, such as hunting over bait; expanded DMAP provisions; group permits; longer seasons; Sunday hunting; and more license allocations."* Note that Dunn's DCNR/Audubon attitude is proof-positive as to why PGC and DCNR should not be merged.

Quoting Gary Alt in 2002: *"The benefits of a healthy herd balanced with its habitat justify our efforts to decrease deer populations...If you're interested in seeing bigger deer, and bucks with larger antlers, please give this program a chance to work. It should produce deer hunting opportunities unlike anything we have experienced in Pennsylvania in our lifetimes."* Note that Gary was correct; since 2002, deer hunting has been nothing like we, our fathers, and our grandfathers once experienced.

DEER MANAGEMENT SERIES, NO. 12: THE DEER HEALTH FALLACY

Science Indicates that Deer Reduction was not Justified on the Basis of Deer Health

John Eveland
August 26, 2014

There are two critical questions that need to be addressed regarding the deer-reduction crisis. First, after 14 years of herd reduction toward satisfying the emotional wishes of foresters and environmentalists in PGC, DCNR, and Audubon, have the goals for deer health, forest health, and biodiversity been achieved? Secondly, did problems with deer health, forest health, and biodiversity ever actually exist, or were they simply fabrications to justify herd reduction? Let's scientifically assess the deer-reduction issue – the greatest conservation mistake in the over-one-hundred-year history of the Game Commission.

Regarding Deer Health. One of the principal justifications for herd reduction was to improve the health of deer. To investigate the question of deer health, from 2000-2008 PGC conducted a nine-year embryo-count study. Therefore, the study began in 2000 (the year that herd reduction was initiated), and was not completed until four years after the end of the five-year intensive deer-reduction period. Because the forest was assumed to be in poor health caused by too many deer, it was, also, assumed that deer would be in poor health. Both of these assumptions, however, were not to be the case.

Quoting Christopher Rosenberry from a PGC study, *"For 2-year-old females, at least 1.5 embryos per doe was considered good and less than 1.1 embryos was considered poor."* In other words, if an average of 1.5 fawns were born per adult doe, then does, fawns, and the deer herd were considered to be in good health. If the average number of fawns born to adult does declined to less than 1.1 fawns per doe, then does and the deer herd were in poor health – also indicating that the forest would be in poor health and unable to sustain the population at that level. Based on the work of Downing and Guynn (1985): *"The target value of 1.50 was chosen because it corresponds to a population at maximum sustained yield."*

Therefore, after the statewide deer herd had been drastically reduced for nine years between 2000-08 in an effort to improve the health of deer, in 2008 it was learned upon completion of a 9-year after-the-fact study that over each of the nine years of the study deer had always been in good health in every one of the state's 22 Wildlife Management Units – ranging from 1.51 to 1.61 embryos per adult doe throughout all nine years of the study, and averaging 1.57 embryos per doe.

Analyzing each year's data separately, in 2000 the average number of embryos per adult doe for all 22 WMUs combined was 1.61. For 2001 it was 1.59, 1.55 for 2002, 1.61 for 2003, 1.51 in 2004, 1.56 in 2005, 1.56 in 2006, 1.55 in 2007, and 1.60 in 2008. Averaging nine years of data for each WMU provided the following embryo-count results: 1.55 for WMU 1A, 1.61 for 1B, 1.46 for 2A, 1.61 for 2B, 1.50 for 2C, 1.57 for 2D, 1.63 for 2E, 1.45 for 2F, 1.51 for 2G, 1.51 for 3A, 1.44 for 3B, 1.43 for 3C, 1.47 for 3D, 1.57 for 4A, 1.69 for 4B, 1.57 for 4C, 1.53 for 4D, 1.65 for 4E, 1.49 for 5A, 1.72 for 5B, 1.71 for 5C, and 1.84 for 5D. Please keep in mind that for deer (and, therefore, the forest) to be in poor health, embryo counts needed to decline to less than 1.10 per adult doe. Such a low count did not exist - not even close - in any year or WMU. This indicated that before and during herd reduction, both deer and the forest had been in good health.

In 2011, Deer Section Leader Chris Rosenberry stated, *"Annual herd reduction is based on accomplishing two goals: deer health and forest health. All WMUs are achieving deer health goals. Fawn/doe ratios have been stable and good since 2003."* Thus, Rosenberry had indicated that a second deer-health study lasting from 2003 to 2011 verified that deer had been in good health. Therefore, based on the deer health issue, there is no scientific justification for herd reduction.

The forest health issue is addressed in the next Deer Management Series, No. 13.

DEER MANAGEMENT SERIES, NO. 13: THE FOREST HEALTH FALLACY

Science Indicates that Deer Reduction was not Justified on the Basis of Forest Health

John Eveland
August 30, 2014

The Pennsylvania Game Commission has attempted to justify its deer reduction program on three issues – to improve deer health, forest health, and biodiversity. Deer health was addressed in the previous DMS No. 12.

Regarding Forest Health. A healthy forest is not achieved by uncontrolled seedling regeneration, but, instead, by accomplishing two goals: (1) establishing enough seedlings to fully restock the next generation of commercially harvestable forests, and (2) providing ample habitat (food and cover) for game and nongame species of wildlife. Multiple analyses indicate that blaming deer for destroying forest health is unjustified.

First, healthy pH-balanced forest soils have the capacity to regenerate tens-of-thousands of seedlings per acre. A single oak tree can produce 80,000 acorns per year. Considering that it requires only about 150-220 six-foot seedlings per acre to fully restock a forest with 80-120 mature trees per acre, then if it were not for deer and other wildlife eating excess mast (fruits, berries, and nuts) and seedlings, the forest could overstock and suffer from competition for nutrients, water, and sunlight. Although PGC and foresters demonize deer for eating mast and seedlings, herbivores provide a vital service toward achieving a healthy forest.

Secondly, a U.S. Forest Service survey indicated that Pennsylvania forests are about 90% fully to moderately stocked. The three predominate species are red maple (20% of trees), red oak (13%), and black cherry (12%) – two of which (red oak and black cherry) are the state's most marketable timber species. This indicates that Pennsylvania forests have been successfully restocking themselves throughout the past century.

Thirdly, a 2006 Browse Survey that was conducted by DCNR on over 47,000 plots throughout State Forests concluded that the deer herd had not been reduced far enough or long enough. However, at close inspection of the data, the opposite conclusion was discovered. Surveying all forest tree seedlings from 2" to 6' tall, 68% were unbrowsed; 22% were lightly browsed (a combined 90%); another 6% were moderately browsed (accounting for a combined 96% of tree seedlings); and only 4% of seedlings were heavily browsed.

Fourth, Bill Capouillez (PGC's Wildlife Habitat Management Director and chief forester) stated at a board of commissioners' meeting that there has been no change in the trends of forest regeneration after over 10 years of deer herd reduction: *"In some years regeneration is up in a particular WMU, and down the next."*

Fifth, regarding red oak propagation, according to a Penn State publication, *"Forest hydrologist William Sharpe – who has chronicled the effects of acid rain in Pennsylvania for several decades – also has watched as red oaks decline and red maples become predominant. He maintains that soils in many places have become too acidic to support adequate growth of red oak. According to Dr. Sharpe, large mature oaks are dying, and that cannot be blamed on deer. Penn State research in the 1970s found that deer actually preferred to browse red maple over red oak, so Sharpe does not subscribe to the deer hypothesis."*

Sixth, PGC's former chief forester notified commissioners: *"I am concerned AND angered by the mismanagement of the deer herd in PA under the guise of biodiversity. A feigned lack of forest regeneration never existed. Research by Penn State professors show acid rain, rodents, ferns, et. al. have more impact on a lack of new regeneration than deer. I saw this happening during my career, repeatedly."*

Therefore, based on the forest health issue, there is no justification for herd reduction. Nevertheless, foresters continue a relentless lobbying campaign for increased herd reduction, and PGC continues to comply with their demands. The biodiversity issue is addressed in the next Deer Management Series No. 14.

DEER MANAGEMENT SERIES, NO. 14: THE BIODIVERSITY FALLACY

Science Indicates that Deer Reduction was not Justified on the Basis of Biodiversity

John Eveland

August 31, 2014

From a 2012 news release: *"Say so long to the California Department of Fish and Game and hello to the state Department of Fish and Wildlife. The new law makes mandatory the use of ecosystem-based management. It will move the department away from practices that appear to favor the interests of hunters and anglers. It recognizes that California is internationally known as a hotbed of biodiversity."*

By 1998, the Pennsylvania Game Commission was already 14 years ahead of California. PGC's deer staff had arbitrarily eliminated the science-based, traditional "maximum sustained yield" method of game management (which had made Pennsylvania one of the top deer-hunting states in the nation), and adopted a biodiversity system called "ecosystem-based" management that favored the interests of foresters and environmentalists, especially Audubon. Quoting a recent statement by a state legislator, *"They (non-hunting factions) will want a seat at the table. This was tried once before with, I believe, Cal DuBrock behind it. He also wanted to change the name from the PA Game Commission to the PA Wildlife Commission."*

Regarding Biodiversity. PGC's board members and staff commonly state: *"The Game Commission is responsible for the well-being of all 465 species of birds and mammals in the state, not just deer."* One forestry-degreed commissioner claimed, *"We all know that all of the state's birds and mammals are impacted by deer."* On the surface, these noble-sounding statements may seem reasonable. However, at close scientific inspection, as an excuse for deer reduction they are without substance and entirely inaccurate.

There are about 400 species of birds in the state that can be divided into eight (8) taxonomic categories: (1) Loons, Grebes, Pelicans and their Allies; (2) Waterfowl (ducks and geese); (3) Raptors (vultures, hawks, and owls); (4) Upland Game Birds (turkeys, grouse, quail, pheasant, and woodcock); (5) Herons, Cranes, Shorebirds, and Gulls; (6) Pigeons and Doves; (7) Woodpeckers; and (8) Perching Birds (the songbirds). Of these 400 birds, only grouse and 18 species of songbirds (14 of which are common to the state) "might" be influenced by high deer populations, although there is no indication that any negative deer-related effects have been experienced by any of these species.

There are over 70 species of mammals in the state that can be divided into seven (7) taxonomic groups: (1) mid-sized mammals (opossum, skunks, raccoon, weasels, porcupine, and fisher); (2) small mammals (shrews, moles, bats, voles, mice, and woodrats); (3) gnawing mammals (woodchuck, chipmunks, squirrels, muskrat, and beaver); (4) predators (fox, coyotes, and bobcats); (5) cottontails and snowshoes; (6) elk; and (7) bear. Of these roughly 70 species, only the snowshoe hare "might" be influenced by high deer numbers.

In 2009, a multi-year wildflower diversity study was published by Susan Stout of the U.S. Forest Service – a staunch promoter of deer reduction. Her results indicated that plant biodiversity (including trilliums, Canada mayflowers, and Indian cucumber roots) had not improved 10 years following deer reduction. Would it not have been prudent to conduct this study prior to drastically reducing the deer herd?

Conclusion. Based on the biodiversity issue, there is no scientific justification for herd reduction. PGC initiated and continues to defend its deer-reduction program on three false and politically motivated assumptions – that deer health, forest health, and biodiversity (birds, nongame mammals, and wildflowers) would flourish if deer numbers were reduced. Not only has this not happened after 14 years of draconian herd reduction, it has been scientifically proven that there had never existed problems regarding deer health, forest health, and biodiversity – and especially no significant problems that had been caused by deer.

DEER MANAGEMENT SERIES, No. 15: A SOCIOECONOMIC DISASTER

State Study: Green Certification and Deer Reduction are Economic Boondoggles

John Eveland
September 18, 2014

In November 2012, the Legislative Budget and Finance Committee (a Joint Committee of the Pennsylvania General Assembly) released a report on the costs and benefits of a "green" certification agreement between the Department of Conservation and Natural Resources and the German-based Forest Stewardship Council (FSC), including the impact of certification on hunting. The results of the study indicated that the Game Commission's deer-reduction program was caused by DCNR's green-certification program, and that both the green-certification and deer-reduction programs are socioeconomic disasters for the Commonwealth.

According to the report, *"By 1999, DCNR had enrolled all of its 2.1 million acres of state forests in the FSC certification program. FSC certification was contingent upon DCNR reducing the number of deer in state forests. DCNR then worked with the PA Game Commission... Since there is little to no policing of the certified parties... certification amounts to little more than a right to use the FSC logo in marketing. In some cases, environmental activists use certification to place barriers on communities."* (Note that this happened in Pennsylvania when DCNR and PGC used green certification to achieve deer reduction.)

Quoting the LB&FC Report: *"The economic benefits of FSC certification are modest. Between 2001 and 2006, DCNR earned a premium of about \$7.7 million. DCNR has a 5-year contract for \$101,736. DCNR also incurs some indirect costs."* This represents an average annual gain of \$1,283,333, minus about \$200,000 in costs. Therefore, DCNR's net income from green certification is about \$1 million per year.

However, according to the LB&FC Report, the **social and economic costs** to the Commonwealth are exorbitant. *"The number of general hunting licenses sold by the PGC has fallen from 1.05 million in 2001 to about 933,000 in 2011. Nationally, however, hunting participation increased by 5 percent between 2001 and 2011. The U.S. Fish and Wildlife Service estimates average 2011 expenditures per hunter at \$2,484. The decline in hunter participation between 2001 and 2011 therefore represents a potential loss of \$285 million (per year) in direct economic activity."* Adding to that loss the 5 percent national increase in hunting that has not been realized in Pennsylvania, the annual economic loss for the Commonwealth is calculated to be about \$415 million per year. The cumulative economic impact to the Commonwealth between 2001 and 2013 as a result of the green-certification/deer-reduction program is calculated to be \$3.39 billion.

These socioeconomic costs are exemplified in northern-tier counties. According to Jack Krafft, owner of First Fork Lodge in Potter County, *"On Eleven Mile Run Road I counted only 9 vehicles in 11 miles on the first day of the 2004 deer season, and on the first Saturday only 1 vehicle in 11 miles. Traditionally the lodge has had the same 27 out-of-state hunters on the first week of rifle buck season. Combined, the 27 hunters saw only 10 deer during the week. Only 2 returned for 2005, representing a loss of \$60,000 for the lodge."* Jack lost 55 of 57 out-of-state bow hunters because of the lack of deer. There were nine motels for sale between Galeton and Coudersport. In 2013, Jack stated that over 60 of the 145 businesses belonging to the Potter County Visitors Association were for sale because of PGC's deer-reduction program. This does not count the small businesses that do not belong to the PCVA that have already closed or are for sale.

Conclusion. Deer Management Series, No.s 11-14 demonstrate that there have been no scientific benefits or justification for PGC's deer-reduction program—not for deer health, forest health, nor biodiversity. It is, herein, demonstrated that the modest \$1 million economic benefit from DCNR's green-certification program cannot begin to justify the great and lasting costs of deer reduction—the loss of upwards of 200,000 hunters, and a cumulative 14-year economic loss for the Commonwealth that has reached \$4 billion and continues to increase at the rate of \$415 million each year that the deer reduction program remains unresolved.

DEER MANAGEMENT SERIES, NO. 16: THE SCIENCE MISCONCEPTION

John Eveland
September 23, 2014

As has been documented within this Deer Management Series, the plan for the Game Commission's deer-reduction program was initially concocted in 1998 in order to assist DCNR in achieving a green certification forestry award. While DCNR's first green certification award was being broadcast with fanfare throughout the state, little mention was made of the original agreement's contingency clause that required reduction of the deer herd. Instead, PGC announced that deer reduction was a scientific necessity, and from 2001 to the present the agency has effectively perpetuated this misconception that "science" alone justifies herd reduction. It is a fallacy, however, that needs to be addressed.

"Science" can sometimes be a confusing and, even, intimidating subject – especially for those who are responsible for overseeing PGC policy. As a point of fact, the author was told that Calvin DuBrock, PGC's former Chief of Wildlife Management, said during a private meeting, *"I get whatever I want from the commissioners. I just baffle them with bulls__t."* This method of operation, including the deer-reduction program, has succeeded because decision-makers in the State Legislature, Office of the Governor, and on PGC's own Board of Commissioners trusted the agency to conduct its duties competently and honorably. Unfortunately, this circumstance has been all-too-well understood by PGC's deer team – and grossly abused.

Benefits and Costs. There are two questions that need to be answered in order for "science" alone to be considered as a justification for reducing Pennsylvania's deer herd:

- (1) Are there any significant scientific "**benefits**" that result from the deer-reduction program?
- (2) If so, do the scientific benefits offset the "**costs**" that might result from long-term herd reduction?

Regarding the first question, PGC has identified three science-based goals of the deer reduction program: improving the health of deer, improving forest health, and increasing biodiversity (primarily nongame birds and mammals, and forest wildflowers). Independent analysis has demonstrated that there have been no significant scientific improvements resulting from herd reduction – not for deer or forest health, and not for biodiversity. In fact, PGC's own studies that were conducted "after" implementation of the deer-reduction program indicate that no significant problems for any of these three issues had existed even prior to herd reduction. Therefore, using "science" as an excuse to reduce the herd is unjustified and a misconception.

Regarding the second question, it would require dramatic and unprecedented improvements for deer and forest health, and nongame animals would have needed to be in great and immediate peril in order to justify the loss of 100-200,000 sportsmen, virtually silent woods on state lands even during opening days of a concurrent season, empty hunting camps, bankruptcies and the loss of countless family businesses, and a \$4 billion loss to the state's economy since 2001 that's increasing at the rate of \$415 million each year that the deer-reduction debacle continues. It is irresponsible for PGC to mislead sportsmen and legislators into believing the misconception that deer reduction is warranted based on "science". Try convincing a farmer that it would be good for him to eliminate his cattle in order to grow more wildflowers in his pasture.

Again, even if some smidgeon of scientific relevance could be concocted from a 5-10 year study that PGC has recently proposed in order to find a new justification for their ill-conceived action, how could it begin to offset the great and lasting harm that has resulted from the biggest conservation mistake in the over-one-hundred-year history of the PGC? I'll take the return of 10 lost businesses in Potter County over the "potential" increase of 10 more Indian cucumber roots per acre -- anytime. A competent manager weighs and balances science with social, economic, and legal parameters. Attempting to justify more wildflowers over family businesses is the reason that natural resources policy should be determined by informed forest and wildlife managers instead of by the single-focused agenda of PGC's deer team.

DEER MANAGEMENT SERIES, NO. 17: FLAWED HARVEST CLAIMS

About 50 deer per square mile would be needed to sustain PGC's high harvest claims.

John Eveland
October 5, 2014

Since 2010, the author has scientifically assessed the Pennsylvania Game Commission's annual deer harvest estimates in order to determine their validity. In each of these four years, PGC has claimed increasingly higher annual statewide harvests: 316,240 deer in 2010, 336,200 in 2011, 343,110 in 2012, and 352,920 in 2013. This document provides an independent, scientific assessment of PGC's 2013 estimated deer harvest. It is intended to provide sportsmen and decision makers with sound scientific information toward making wise deer management decisions. Readers should remember that the projected herd sizes in this report do not represent the author's estimate of the actual number of deer that exist in Pennsylvania, but, instead, represent the number of deer that would be required in order for the PGC to sustain its claimed annual harvests. Two scenarios are considered: (1) a deer population and harvest dynamic that is uninfluenced by predation; and (2) separate calculations that include the impacts of predation. It should, also, be noted that the PGC does not consider the impact of predation in deer management decisions, stating, "*We have no evidence to suggest that fawn survival rates we observed were preventing population growth.*"

Scenario 1: Predation Is Not Considered. If predation by coyotes and bears had no impact on fawn survival rates (as is claimed by the PGC), then 1,422,011 deer would be required in order for the PGC to harvest 352,920 deer – the agency's published 2013 harvest estimate. The associated densities of deer that would be required to produce a harvest of 352,920 deer would be: (1) 54 deer per square mile (dpsm) on all forested land within the state; (2) 40 dpsm on all forest and agricultural lands, combined; and (3) 32 dpsm on all land area throughout the state (including developed areas, towns, and city streets).

Scenario 2: The High Impact of Predation. A PGC/Penn State study in 2000-01 indicated that 22.5% of the total fawn crop succumbed to predation – about evenly by bears and coyotes and a few to bobcats. For decades, the bear population has remained relatively stable at 20-25 thousand bears, and it appears that prior to 2000 the deer population had been able to cope with the roughly 10% fawn loss attributed to bears. However, it is estimated that the coyote population has rapidly increased to as many as 250,000. The increasing impact by coyotes could exceed the reproductive capacity of the herd to grow and possibly even to remain stable. Other studies indicate that coyote predation throughout the East currently accounts for 50% of fawns, while in the Southeast coyotes inflict a 75% early impact on fawns. The Southeast study concluded that when combined with doe hunting, deer populations are unable to sustain themselves in the face of such heavy coyote predation.

Using the 22.5% predation rate from PGC's 2000-01 study, 1,739,746 deer would be required in the state in order to provide a sustained harvest of 352,920 deer, and 2.2 million deer at the 50% fawn-predation rate. The corresponding densities of deer would be, respectively: (1) 66-83 dpsm on all forested land in the Commonwealth; (2) 49-62 dpsm on all forest and agricultural lands, combined; and (3) 39-49 dpsm on all land area within the state.

Conclusion. A PGC study indicated that 14 years ago 22.5% of fawns were being lost to predation. Since then, studies throughout the East have discovered a 50% fawn-predation rate, indicating that it is fairly certain that fawn predation in Pennsylvania ranges from 22.5-50%. Considering that 66-83 dpsm would be required on all forested lands within the state in order for the PGC to have harvested their claimed 352,920 deer in 2013, or 39-49 dpsm on every square mile of land within the Commonwealth, it is virtually impossible that PGC's deer harvest claims are accurate. Therefore, PGC's improbably high 2013 harvest estimate of 352,920 deer and other recent annual harvest estimates cannot be justified by scientific analysis, and can only be explained by incompetence or deception.

DEER MANAGEMENT SERIES, NO. 18: IGNORING HUNTER INTERESTS

John Eveland
October 13, 2014

Prior to his release from the Pennsylvania Game Commission, former Executive Director, Carl Roe, stated, *"Hunters are not a consideration in deer management."* PGC's disrespectful attitude toward hunters is diametrically opposed to the chartered mission of the agency and to state law as directed by the state legislature in Title 34: The Game Code. Section 322(c)(13) specifically indicates that *it is the duty of the PGC to serve the interest of sportsmen for recreational hunting.* Following are a few quotations from frustrated sportsmen whom PGC is, by state law, directed to serve—but, instead, chooses to ignore.

"It brings me close to tears at times when I remember the wonderful times hunting deer with my father and friends to see the state of deer hunting today. The first day of rifle buck season in 2013 I heard 4 shots all day. The first day of doe that Saturday, I heard 2 shots. If the legislators cared about us deer hunters, changes would have been made years ago. Do not expect any help. Tom Boop tried for 8 long years and he could not move the needle. Want a hunting cabin in Bradford, Tioga or Potter counties? We have lots of them for sale."
Jim Collins

"It's really sad that today's young hunters will never experience how hunting whitetails in Penns Woods once was, and not too long ago. We saw four deer between us during four trips to our camp. It's really sad, we are losing our heritage right before our eyes. We really need our state legislators to correct this before it's too late ---we need to go back to the Maximum Sustained Yield of managing our deer herd."

Peter Keruskin

"I think the game commission has ruined public land deer hunting and that hunters my age (65) will never see good public land hunting again in our lifetimes, even if a miracle happens and the commission reverses course."

Rich Tate

"Without question, when asked, most deer hunters 30 and older will insist that the Game Commission deer program has to stop. The deer season and deer management in general needs to go back to the way it was 15 years ago. The mountain counties have very few deer. The hunting camps that once were full 15 to 20 years ago now sit empty. This needs to change now before we lose our hunting heritage in Pennsylvania."

Dave Polonsky

"I live in a rural area in northern Cambria County where the deer numbers have dramatically declined. Case in point, in the 2009 season I discovered that the nearby small town which had three deer processors each of the prior seasons was now down to one operating processor. And that processor said he had fewer deer to process than the previous season! He had even fewer deer in 2010." Kris Howdyshell

"Eastern Pennsylvania Firearms Coalition is a coalition of 63 clubs in eight of the State's Eastern counties (and many more to reach out to). Our aggregate membership is estimated at approximately 150-175,000. This is in our memberships view a tragedy for Pennsylvania should it continue for a moment longer. We encourage the legislature to pass the following pieces of legislation: HB 870 -- Exclude public land from the DMAP program; HB 1370 -- Restricting the length of and start date of antlerless season; HB 1724 -- Redesigning WMUs and issuing antlerless tags on a county basis; HB 1146/SB 547 -- Remove antler restrictions; HB 1726/SB 1086 -- Direct deer program to be based on maximum sustained yield and enhancement of habitat."

Jack Iannantuono, Chairman

"I firmly believe they don't have a clue as to what they are doing when it comes to managing the deer herd."

Bill Briggs

DEER MANAGEMENT SERIES, No. 19: VIOLATION OF STATE LAW

John Eveland
October 17, 2014

Title 34, Section 322(c)(13) of the Game and Wildlife Code lists the specific duties of the commission:

"(c) In order to administrate and enforce this title, the commission through proper action shall:

*(13) **Serve the interest of sportsmen by preserving and promoting our special heritage of recreational hunting and furtaking by providing adequate opportunity to hunt and trap the wildlife resources of this Commonwealth.**"*

This amendment to Title 34 was enacted in 1996 to assure that the Pennsylvania Game Commission's game management policy would always *"serve the interests of sportsmen for recreational hunting"*. However, within four years PGC had violated this state law, and the agency remains in gross and deliberate violation of this Title 34 directive. PGC has ignored its legislative duty, and deliberately manipulated the wording of Section 322(c)(13) in order to deceive readers with the false impression that the deer-reduction program is operating in compliance with state law and the chartered mission of the agency. It is not! Three manipulations were included on the first page of PGC's 2009-2018 deer-management plan that was authored by the Commission's three deer biologists (Christopher Rosenberry, Bret Wallingford, and Jeannine Fleegle), and that was supervised, reviewed, and approved by Calvin DuBrock and Carl Roe.

First Manipulation. The deer team listed PGC's deer-management mission as follows: *"Balancing white-tailed deer impacts is the fundamental issue affecting a majority of Pennsylvania's deer management decisions."* No, it is not! PGC's legislated mission is to *"serve the interest of sportsmen for recreational hunting"*. It is not within the job description of the staff to arbitrarily rewrite PGC's mission at their discretion in order to achieve a personal agenda—the deer-reduction mission of Chesapeake Farms.

Second Manipulation. The deer team lists the Title 34, Section 322 mission as follows: *"...to manage wildlife populations and to preserve and promote our special heritage of hunting and trapping by providing adequate opportunity to hunt and trap the wildlife resources of this Commonwealth."* This is not, however, the Section 322 quoted directive (see the first paragraph). At their personal discretion the deer team removed the State Law directive to *"serve the interest of sportsmen for recreational hunting"* and replaced it with the phrase *"to manage wildlife populations"*. In so doing, these state employees ignored PGC's chartered mission and state law in order to advance their personal agenda to promote biodiversity at the expense of deer and sportsmen, and attempted to deceive sportsmen, legislators, the governor, and the agency's own board of commissioners into believing that their deer-reduction program was a legal action.

Third Manipulation. Article 1, Section 27 of the Pennsylvania Constitution states: *"Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of the resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."* This "environmental rights" section was ratified in 1971 to guarantee that public natural resources are not owned by the State, but are entrusted to the State by the people to be wisely managed for everyone. From Section 27, PGC has created a mission statement *"to manage all wild birds, mammals, and their habitats for current and future generations"*. Unfortunately, the deer team manipulated the original intent of the Constitution in order to mislead readers into believing that deer reduction is justified, and even directed by the Constitution. A summary review of Section 27 indicated that *"people often read this strong language as creating a constitutional right to halt natural resources actions and development. However, Pennsylvania courts are extremely reluctant to recognize such claims."* Nevertheless, this is exactly what PGC along with forestry and environmental special interests have attempted—and accomplished.

Conclusion. PGC's deer-reduction program is a gross and deliberate violation of Pennsylvania State Law.

DEER MANAGEMENT SERIES, No. 20: PROPOSED RESOLUTION PLAN

In 2010, Members of PGC's Board Requested a New Deer-Management Plan

John Eveland
October 19, 2014

During the past century, the Pennsylvania Game Commission has been a vital agency regarding the conservation (wise use) of the Commonwealth's renewable wildlife natural resources and the preservation of ecosystems rich with a diversity of nongame wildlife. This has been the agency's chartered mission as directed by Title 34 State Law and the Pennsylvania Constitution. However, the beginning of the new century ushered in a new Commission deer-management policy that has not proven to be in the best interest of those whom the agency is chartered to serve, the general citizenry, or even the Commission itself. Therefore, a new policy must be designed and implemented toward resolving the current deer-management dilemma, and toward securing the long-term integrity of the agency, the quality of Pennsylvania's wildlife resources, and the tradition of sport hunting throughout the new century.

In early 2010, members of the agency's Board of Commissioners requested that John Eveland prepare for the Board recommendations for a new deer management program. Toward this end, Eveland designed a new deer management plan and presented it to the BOC on March 7, 2010. After contemplating the task, Eveland realized that his newly proposed approach had many similarities to the traditional program that had been designed and implemented by the previous generation of wildlife biologists and game managers decades ago. This was no coincidence, in that prior to 1998 the deer management program consisted of a scientifically designed, data-driven method that had made Pennsylvania one of the top deer-hunting states in the nation. The success of this previous traditional program was the result of the expertise of wildlife biologists who were dedicated to serving sportsmen, the resource, and the chartered mission of the agency. Many were Eveland's professional peers and personal friends. Eveland's new plan, however, was designed to create an even better deer-management and deer-hunting condition than had existed for years prior to herd reduction.

Proposed Resolution Plan. Following are the fundamental elements of the 2010, nine-page, scientifically designed and socioeconomically sensitive plan – Recommended Pennsylvania Deer Management Plan.

- (1) Redesign the deer-management program to adhere to Title 34 State Law.
- (2) Secure a new agency goal "to provide the maximum sustained yield of deer for recreational hunting."
- (3) End the concurrent season concept and return to separate buck (two-week) and doe (2-3 day) seasons.
- (4) Scientifically determine forest carrying capacities, and deer numbers and densities within each WMU.
- (5) Scientifically adjust antlerless allocations to meet carrying capacities of the forest.
- (6) Increase carrying capacities with a new, state-of-the-art habitat enhancement plan (designed by Eveland).
- (7) End antler restrictions and eliminate AR impacts to herd growth.
- (8) End the indiscriminate use of DMAP, especially on public lands.
- (9) Implement an effective deer-management plan for urban areas.
- (10) Reconfigure WMUs based on county boundaries.
- (11) Improve public relations and return trust and confidence in the agency.
- (12) Restore 200,000 sportsmen who have been lost to the ranks due to deer reduction.
- (13) Create a next-generation of youth hunters.
- (14) Halt the Commonwealth's loss of \$415 million per year due to deer reduction.
- (15) Implement targeted and necessary deer and forest research toward improving deer management.

Conclusion. Eveland's 2010 deer management plan was designed to adhere to the Title 34 mission "to serve the interest of sportsmen for recreational hunting", and to respect the interests of foresters, biodiversity, and the general citizenry of the Commonwealth. The plan would have permitted the Board of Game Commissioners to internally resolve the deer-management crisis. However, the Board could not muster a majority of votes to halt the current program and implement these new remedial measures.

DEER MANAGEMENT SERIES, No. 21: PROPOSED LEGISLATION

In 2014, the PA Legislature Attempted to Resolve the Deer-Management Crisis

John Eveland
October 22, 2014

As described in the previous *Deer Management Series, No. 20: Proposed Resolution Plan*, at the request of members of the Game Commission's Board of Commissioners, in 2010 John Eveland prepared a new deer-management plan toward resolving the agency's deer-reduction crisis. Eveland's new deer-management plan was designed with two intents. First, the plan would return deer-management science and deer-hunting success to the level that existed in the Commonwealth for decades prior to herd reduction – to national deer-hunting prominence – without impairment to forests and forestry practices, wildlife habitat, and nongame wildlife populations. Secondly, additional state-of-the-art habitat enhancement techniques were designed to create a deer-habitat and management condition that would be even better than had existed prior to herd reduction – better for sportsmen deer-management goals (increasing the carrying capacity of the forest for higher densities of deer); better for DCNR and foresters' goals (maintaining high quality and productive timber management and creating a system of old-growth legacy forests); and better for PGC's biodiversity goal (improving habitat and increasing densities and diversity of nongame birds and mammals). Nevertheless, the Board could not muster a majority of votes to implement this new program.

Therefore, five separate deer-management bills were created toward resolving the deer-management crisis:

- HB870. Subject: Excluding public lands from the Deer Management Assistance Program (DMAP).
- HB1370. Subject: Restricting the length of and changing and start date of antlerless deer season.
- HB1724. Subject: Redesignating Wildlife Management Units and issuing antlerless deer permits on a county basis.
- HB1146 / SB547. Subject: Removal of antler restrictions.
- HB1726 / SB1086. Subject: Directing the maximum sustained yield method of game and deer management and the enhancement of habitat for deer and other wildlife.

Although extensive lobbying had confirmed that significant votes were available toward passage of the bills in late 2014, PGC's Board was successful in halting passage. At the request of the Board of Commissioners, Chairmen of both the House and Senate Game and Fisheries Committees refrained from introducing the bills for consideration and vote. Therefore, PGC has again successfully circumvented two separate attempts to resolve the agency's deer-reduction crisis, and continues to perpetuate the greatest conservation mistake in the over-one-hundred-year history of the Game Commission.

Summary and Conclusion. Two separate attempts have been made to resolve the deer-reduction crisis. First, Eveland designed a plan for the Board of Commissioners toward serving the recreational interests of sportsmen, reducing the impacts caused to society and economy, and providing scientific benefits for the resource and the ecosystem. It would have returned PGC to its Title 34 mission. While the plan offered the Board an opportunity to internally resolve the dilemma, a majority of commissioners could not be mustered to approve and implement this resolution plan. Therefore, five separate deer-management bills were introduced within the House and Senate Game and Fisheries Committees that included the fundamental elements of the 2010 plan. Although members of both the House and Senate were prepared to vote on this legislation, commissioners requested that committee chairmen refrain from bringing the bills to the floor – assuring legislators that commissioners would resolve the dilemma internally. Again, the PGC had successfully stalled attempts to resolve the deer-reduction crisis. Although PGC and its commissioners have assured legislators that remedial changes are up-coming, without legislative action that directs the Commission to implement significant changes to the deer-reduction program, any remedial internal attempts by the board will likely only represent a partial and temporary solution – stalling substantial resolution measures, perpetuating the deer-reduction program, and remaining in violation of Title 34 State Law.

DEER MANAGEMENT SERIES, No. 22: A PERMANENT SOLUTION

John Eveland

October 27, 2014

As has been described in previous Deer Management Series articles, politics, and not science, was the motivation behind the Pennsylvania Game Commission's deer-reduction program. The benefits for the forest ecosystem, for deer health, and for nongame birds and mammals have been few to nonexistent, while the costs to sportsmen, society, and the Commonwealth's economy have been exorbitant. The deer-reduction program has been, and remains, in violation of Pennsylvania state law. A new, remedial, deer-management plan was prepared for PGC's Board of Commissioners in an attempt for PGC to resolve the crisis internally. However, it was rejected. Secondly, the State Legislature attempted to resolve the crisis by passing five new deer-management bills. This attempt was, also, stonewalled. Therefore, a third attempt at a permanent solution represents, in the viewpoint of the author, the only real, comprehensive, and permanent solution to end the deer-reduction debacle and prevent its return in the future. This two-stage plan is, herein, presented.

Stage 1: The Need for Legislation. The five bills that were introduced for passage during the 2014 legislative session – House Bills 870, 1370, 1724, 1146, and 1726 – need to be reintroduced, and passed. The first four of these bills are designed to address social and economic problems caused by the deer-reduction program, while one bill (HB1726/SB1086) is designed to influence deer numbers. HB1726 consists of two parts. First, the bill would legislate the "maximum sustained yield (MSY)" method of deer management (Section 322(c)(14)). It is intended to return PGC's deer-management program to the science-based condition that existed for decades prior to deer reduction in 2001 -- a practice that resulted in Pennsylvania being one of the top deer-hunting states in the nation. The second fundamental portion of the bill (Section 322(c)(15)), would direct PGC to implement new habitat enhancements across the state's system of public lands that would improve deer management to an even better condition than had existed for decades prior to herd reduction – without impairment to forest health and timber productivity, and while improving the ecosystem for both game and nongame species. HB1726 is designed to serve the interests of foresters, environmentalists, sportsmen, and the public. However, two very practical problems stand as obstacles toward passage of this MSY/Habitat Enhancement Bill along with the other four deer-related bills: it has been stated that the General Assembly will not pass five separate but related bills within a session; and, secondly, PGC has stated in a legislative hearing that, if passed, the agency will not adhere to the precepts of the MSY bill (that sportsmen should be careful what they wish for in that PGC would apply MSY standards that would further reduce the herd below current conditions). In order to address the first problem, it is proposed that all five bills be combined into one comprehensive bill – a deer management accountability bill.

Stage 2: Legislative Oversight. In order to guarantee that PGC adheres to the MSY/Habitat Enhancement Bill, it becomes the duty of the Joint House and Senate to oversee compliance by PGC. However, this represents a daunting task for the Joint Legislature, in that PGC has breached its trust to honorably adhere to its state law mission, and the Joint Legislature lacks the scientific oversight expertise to recognize deceptions. Toward this end, it is necessary that an independent, scientific advisory service is established to annually conduct the essential forest health and carrying capacity research, to assess deer population densities, to calculate the number of deer that need to be harvested in order to maintain forest health and a maximum sustained yield of deer, and to determine the number of antlerless allocations that are needed in order to achieve this science-based MSY harvest. Toward achieving this goal, scientific MSY standards have already been established, as well as a state-of-the-art habitat enhancement plan. Such a Deer Management Advisory Service would annually provide the Joint Legislature, Office of the Governor, PGC's Board of Commissions, sportsmen, and the public with the necessary data and recommendations to assure scientific oversight of the agency and PGC compliance with its chartered mission and Title 34 State Law.

A permanent solution requires passage of five deer bills, and creation of an independent advisory service.

DEER MANAGEMENT SERIES, NO. 23: SUMMARY OF A TRAVESTY

**John Eveland
November 1, 2014**

For decades prior to 2000, Pennsylvania was recognized as one of the top deer-hunting states in the nation – achieved by operating a science-based, "maximum sustained yield" (MSY) method of deer management. In order to guarantee the continued success of the program, in 1996 the Legislature passed HB 1823 – the Title 34 mission (Section 322(c)(13)) that directs the PGC "to serve the interest of sportsmen for recreational hunting". Only two years later, DCNR entered into a Green Certification agreement with the German-based environmental organization, Forest Stewardship Council, toward increasing DCNR revenue from the sale of state forest timber. However, a contingency clause was inserted into the Green Certification agreement that required statewide deer reduction. In addition, another clause was included toward eliminating the MSY method of game management in favor of a biodiversity (nongame birds and mammals) style. Therefore, a deer-reduction strategy had been concocted to serve foresters and environmentalists at the expense of sportsmen. It succeeded in achieving the personal agenda of three men without regard for HB 1823 and PGC's Title 34 mission. As such, PGC has been in violation of Title 34 State Law since the year 2000.

From 2000-04, PGC conducted a devastating assault on does and fawns, killing an average of 476,471 deer per year and eclipsing 500,000 in two separate years. Although PGC's target density was only 5-6 deer per square mile (dpsm) in northern-tier areas, the agency overshot its goal to only 1-2 dpsm in some areas – representing a near collapse of the herd and a virtually unhuntable condition.

Toward perpetuating herd reduction, three North Carolina State University students were hired – all who had been trained on a small five-square-mile agricultural demonstration area in Maryland called Chesapeake Farms. Unlike conventional wildlife management students who are trained to view deer as a beneficial natural resource for sport hunting, at Chesapeake Farms students are taught the need to reduce deer impacts to forestry and agriculture by reducing does and fawns. The deer team succeeded in perpetuating deer reduction by hiding behind a veil of pseudo-science. However, an independent, scientific assessment of PGC's deer-management program discovered that there are few to no benefits that result from deer reduction – not for science, forest health, biodiversity, nor deer health; and especially not for sportsmen and the Commonwealth's economy. To the contrary; the costs of deer-reduction are exorbitant. A Pennsylvania Legislative Budget and Finance Committee study discovered that upwards of 100,000-200,000 sportsmen have quit hunting as a result of herd reduction with an economic loss for the Commonwealth of \$285-415 million each year and a cumulative 14-year economic loss of \$4 billion. As a consequence, hunting camps stand empty, bankruptcies abound with the loss of countless family businesses, and forests remain virtually silent on state lands even during opening days of a concurrent season. Nevertheless, PGC continues to claim high annual harvests that have eclipsed 350,000 as of 2013 – a circumstance that would require an average of about 80 dpsm on all forestlands, and 50 dpsm on every square mile of land area in the state. PGC's irrationally high harvest claims, therefore, can only be explained by incompetence or deception.

Unfortunately, the Joint Legislature had entrusted PGC to honorably uphold its mission, but lacked the scientific capabilities to recognize PGC's breach of trust and violation of Title 34. To resolve the crisis and prevent such a travesty from resurfacing in the future, a permanent solution has been designed and five deer-management bills written toward legislating the major features of the resolution plan. However, because PGC has stated that the agency will not comply with the essence of these new bills if enacted, it is necessary that an independent, scientific advisory service is created to provide the Joint Legislature with oversight data toward guaranteeing compliance with these pending new laws. Although PGC's Board of Commissioners has successfully stonewalled passage of the five deer-management bills by promising limited internal remedial measures, until these five bills are enacted and an independent advisory service is created, there will be no permanent solution to PGC's greatest conservation mistake in its over-one-hundred-year history.

DEER MANAGEMENT SERIES, No. 24: ON A PERSONAL NOTE

John Eveland

November 4, 2014

In 2000-01, I was asked by the senate majority leader to assess PGC's deer-reduction program, and again was requested by the Office of the Governor and the majority leader of the House Game and Fisheries Committee in 2007. In 2010, members of PGC's Board of Commissioners asked me to prepare a new deer management plan for them in the event that they could muster a majority of votes to halt the deer-reduction program. From my investigations, I have come to two over-riding conclusions: (1) that no significant benefits have resulted after 14 years of herd reduction—not for science, forest or deer health, biodiversity, society, nor economy—while the negative impacts to the future of sport hunting and the Commonwealth have been great; and (2) that PGC's deer-reduction program is designed to serve foresters and radical environmentalists at the expense of sportsmen and recreational hunting, and as such is in violation of PGC's mission and state law.

On a personal note, I am not a newcomer to forest and wildlife issues, and as a former Penn State scientist and independent wildlife biologist I have had a long relationship with DCNR and the Game Commission. I admit that some of my dealings with PGC have not always resulted in the fondest of memories. In this regard, a former PGC Commissioner wrote in an email: *"Some of my good information from inside the PGC came from folks that had paid their dues. They had 35+ years of PGC employment. They knew it all. I knew about John Eveland long before his name came up in the (deer management) audit proceedings. John was the brains behind the PGC bear program. Not Gary Alt. Gary Alt was handed the bear program on a silver platter. John was also the mastermind of the elk program. He handed it to Rawley Cogan, again on a silver platter. John was a marked man in the PGC. He was never given credit for his accomplishments. There was real bad blood with John and the PGC. John has enough info compiled to sink the PGC ship."*

That said, I have always felt that the PGC was a capable and necessary state agency. Some of my best, lifelong friends have been employed by PGC and DCNR – foresters, biologists, WCOs, administrators, and board members. I have sat in the homes of disgruntled WCOs and DCNR foresters contemplating resolution of the deer reduction program, and they in mine. These are good and honorable people, and I believe that a few bad apples should not be permitted to spoil the barrel. There are those in the legislature who desire to merge PGC with the Fish and Boat Commission, some who wish to roll PGC into DCNR, and others who seek to end PGC's independent status by making it a department within state government – the Pennsylvania Department of Fish and Game. In my mind, there would be great and lasting harm that could result for sportsmen and recreational hunting – especially for deer management. It is my hope that the deer-management debacle can be resolved without destroying the autonomy of the agency.

Some of the best days of my life have been spent hunting and fishing with my dad, grandfather, and brother. I cannot bear the thought that these days have already ended for many families and will continue to dwindle for many more because of the mismanagement of our deer herd – Pennsylvania's state mammal – for the dreams of ill-advised foresters and environmental ideologues. I have been fortunate during my career to have not only conducted Pennsylvania's vanguard research on both bears and elk, but to have also conducted forest, wildlife biodiversity, endangered species, and ecosystem research in over 30 states and provinces throughout North America. Because of this, I have concluded that any scientific benefits to the ecosystem or biodiversity that have resulted from deer reduction are few to nonexistent. After 14 years of over-harvesting does and fawns, PGC has gained nothing. However, the agency has lost much: 100,000-200,000 sportsmen lost from the ranks of hunters, empty hunting camps, untold bankruptcies and destroyed family businesses, a cumulative state loss of \$4 billion dollars since 2001 that continues to increase at the rate of \$415 million each year, and silent woods in the fall. Considering this, I would be remiss to turn my back on sportsmen and citizens. I, therefore, choose to continue in my pursuit to bring attention to this travesty until PGC's deer reduction program is resolved -- because it is the right thing to do. It's time for common sense to prevail.

DEER MANAGEMENT SERIES, No. 25: END OF A FAMILY TRADITION

John Eveland

November 7, 2014

This last installment of the Deer Management Series is intended to represent Pennsylvania sportsmen with a story that is all too common for us Pennsylvania hunters – a personal deer-hunting account.

I was born and raised in a small town in Columbia County. On one side flows the Susquehanna River, the Appalachian Mountains rise over a thousand feet only a mile on the other side of town, and surrounding areas are comprised of farms with scattered but plentiful woodlots. Deer hunting was always phenomenal there, and a tradition for nearly every father and son. It was not unusual to see herds of 20-30 deer. My grandfather, dad, brother, and I hunted there from the time I was able to get a hunting license.

Forty years ago this mountain habitat was in great shape; we often hunted the "slashings" – dense regeneration – along the sides and across the top of the mountain. We even hunted cottontails on the mountainside, a testament to the abundance of food and cover. Today, the forest and wildlife habitat looks as good as it did 40 years ago, except for the lack of deer. The herd has been decimated, and continues to be persecuted under the PGC's deer-reduction program. I ask myself why the PGC has decimated this herd, when there always was, and remains, textbook food and cover, and hence an extremely high deer carrying capacity. Obviously herd reduction has had nothing to do with science, and if PGC truly believes that it does, then the level of incompetence on Elmerton Avenue in Harrisburg is incomprehensible.

Two years ago we saw two deer on the first day of the concurrent season --a young 4-point buck and a doe. Last year we saw less. My brother and I used to muse about how it might be if buck and doe seasons were combined; we'd need to crawl through the woods to stay below the hail of bullets. Unfortunately, now that it's happened I hear fewer shots on opening day of the concurrent season than I used to hear on the second Thursday of buck season. I talked with a father and son who had traveled some distance to hunt the mountain for the first time. The father said that his traditional deer hunting area had been destroyed, and he was seeking a new area where his young son might get a shot at a deer. However, he and his son only saw two doe, and he didn't let his son shoot at them because he wasn't sure in which WMU they were hunting.

Things have gotten so bad that my brother, two sons-in-law, and I did not hunt there this year. It was a 45-year tradition that ended for my brother and me, and we had to seek a new area that still might have a huntable herd – as the father and son had tried to do the year before on our mountain. My son-in-law's boss and his 13-year-old son asked if they could join us; he has a cabin along the Allegheny River near Franklin, and has not seen a deer in the last two hunting seasons. My next-door neighbor said that his family gave up their camp in the northern-tier counties a few years ago because of the lack of deer, and they now hunt near Pittsburgh in WMU 2B. He said it doesn't feel like it's hunting anymore, but it's their only chance of seeing a deer. A friend said he's keeping his camp in Potter County for turkey hunting, but will no longer hunt deer there with his father, son, and daughter. Recently I spoke with a taxidermist who said that he can no longer make a living from his business. He said that he has seen overzealous deer biologists collapse herds in other areas of the country, and said they have now destroyed Pennsylvania's herd and his business.

My family's experience is a microcosm of what has happened, and continues to be prosecuted, throughout rural and wild Pennsylvania. There is overwhelming documentation that the deer reduction program is a ruse – a deceitful agenda-driven scheme that is devoid of science, and callous to the impacts on sportsmen, small businesses, and families. Yet the deer staff remains employed, and the program engaged. What have we permitted to happen to the Commonwealth?

Note that the complete 25-issue Deer Management Series can be reviewed at www.acsl-pa.org, at www.gousp.org, and at www.acslpa.org. John Eveland can be contacted at 412.601.0077 / jfeveland@acsl-pa.org.

ABOUT JOHN EVELAND

Forester, Wildlife Biologist, and Ecologist

Areas of Special Scientific Expertise: Big Game Management, Biodiversity and Ecosystem Management, Wildlife and Forest Ecology, Earth Systems and Environmental Quality, Endangered Species, and Energy/Environment Relationships

John Eveland is by education and profession a forester, wildlife biologist, and ecologist. Of the three big game mammals in Pennsylvania (white-tailed deer, black bear, and elk), he conducted the original statewide research, wrote the original state management plans, and was directly involved in the successful recovery of two of these species -- black bears and elk. From his Penn State research, his management recommendations and first population estimate of only 1600 bears in the Commonwealth were instrumental in closing Pennsylvania's bear season in multiple years during the 1970s and in changing from a one-week to a three-day season. As a scientist on the Penn State faculty, he conducted the first ecological research and population assessment of Pennsylvania's elk herd, discovered the brainworm disease in the elk herd, recommended the elk-hunting lottery system, and designed the original plan for PA Wilds and the Elk Country Visitor Center.

Eveland left the Penn State faculty to accept a position with Westinghouse Electric Corporation in Pittsburgh. There, John conducted environmental field studies and selected the sites for some of America's largest energy development projects, such as fossil fuel, nuclear, geothermal, and solar power generating stations; coal and uranium mines; energy transport systems; and the long-term impacts (to air, water, soils, and biological systems) of fossil fuel emissions.

His scientific experience includes studies for the U.S. Forest Service and the U.S. Fish and Wildlife Service, and for university, state and federal agencies, and private industries throughout North America. He has conducted scientific research on wildlife, forest ecology, natural ecosystems, endangered species, and energy/environment relationships within over 30 states and provinces of Canada, and hence is uniquely qualified as an ecologist with broad state, national, and North American expertise.

Regarding white-tailed deer (Pennsylvania's third big game mammal), Eveland was requested by the Majority Leader of the Senate, the Office of the Governor, and the Pennsylvania State Legislature's Game and Fisheries Committee to conduct a comprehensive assessment of the Pennsylvania Game Commission's deer management program.

John is an accomplished photographer of wildlife, wilderness, and the sea – including over 500 showings of his work, multiple national awards, and distribution of his work throughout America and worldwide. He is founder and chairman of The Terra Cor Institution – a private organization dedicated to science, education, environment, and the arts.

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