

37th Midwest Deer and Wild Turkey Study Group Meeting
Allerton Park and Retreat Center, Monticello, IL August 18-21, 2013
Notes by Robert E. Rolley

The meeting was held at the Allerton Park and Retreat Center near, Monticello, Illinois.

Welcome to Allerton. We were welcomed by Derek Peterson who explained the history of the center and John Griesbaum who described the history of deer management and research on the park. Allerton Park was an un hunted refuge and the deer population grew through the 1980s and 1990s to a peak of 730 deer in 2004 (~75/mi²). Deer were causing extensive damage to the formal gardens and impacting the natural areas with significant mortality to oaks and ground flora. Bow hunting started in 2004, annual harvest ~100-150 deer. Hunting was supplemented in the early years with post-season sharpshooting. Deer counted on winter aerial surveys declined to 113 by 2012. Monitoring the response by spring wild flowers and hardwood regeneration. Surrounding farmers are satisfied with level of crop damage. Deer-vehicle accidents have declined. Number of hunters is restricted to 30, earn-a-buck policy is used, 30 hours of volunteer service is required in exchange for hunting opportunity.

Lymphoproliferative Disease in Wild Turkeys, and Update from Missouri and National Trends – Jason Isabelle, Missouri Department of Conservation. LPDV was first detected in Arkansas in 2009 and in Missouri in 2011. LPD is caused by a virus and produces pox-like lesions on the head and neck. Unlike avian pox lesions are also common on feet and legs. Yellow lesions in liver and spleen are common. LPDV has been documented in wild turkeys from 14 states from Maine to Georgia to Colorado. Prevalence rates have been as high as 40-50% but many birds did not show clinical signs of disease. LPDV was previously known from domestic turkeys in Europe and the Middle East. Missouri has been conducting surveillance by sending sampling kits to agency staff who are turkey hunters and having them submit bone marrow from leg bones. LPDV is not a threat to human health.

External Home Range Movements of White-Tailed Deer in an Agricultural Landscape and Effect of Mortality on Social Behavior of Groups – Matt Springer, Southern Illinois University. Described 2 studies that are underway at SIU. The mortality study is using GPS collars and proximity loggers to examine the dynamics of contact rates between social group members and non-members and how this changes with the mortality of particular individuals within social groups. Does the death of the matriarchal doe cause others in the group to mix more with non-group members, potentially increasing infectious contacts? The movement study is placing GPS collars on fawns to record details of dispersal and explorative movements. Documenting movement paths (step length and turning angles) and how these are affected by habitat features. Explorative movements have been documented in all seasons with some individuals making multiple movements in multiple directions. Plan to build an individual based movement model and compare it to an expert-based resistance map. Will use model to assess potential for disease spread.

Wild Turkey Ecology in Two Intensively Farmed Landscapes in Central Illinois – Patrick Hubert, Ontario Ministry of Natural Resources. Studied turkey population dynamics in 2 counties in central Illinois, primarily hen survival and reproduction. The counties differed in turkey harvest success and reported turkey observations by deer hunters. These 2 citizen-based index to abundance suggested difference in abundance. Hen survival was similar between counties, relatively low; most mortality was during nesting season, primarily due to coyote predation. Nesting rates were similar between counties, low nest success and poult survival.

Habitat quality was low, large home range size, high predator density. Population dynamics were similar between counties. Believed citizen-based indices from 1 county was affected by attitudes of residents, more protective, less likely to report their observations to state.

Interacting With the Press/Wildlife Photography – Chris Young, Illinois State Journal-Register. Chris talked about the importance of good photographs for telling our stories in the media. Videos of people doing conservation work are critical as are pictures of rare plants and animals to connect the public with the work we do and the places we protect. Chris has a number of tips for getting the press to pick up agency press releases.

Elk Restoration in Missouri – Lonnie Hansen, Missouri Department of Conservation. Elk feasibility study requested by Commission in 1999. DOC determined that a low density population could exist in the Ozarks. Mail/telephone surveys found general support by public but strong opposition was voiced at public meetings. Project was suspended. Interest was renewed in 2009. Obtained elk from Kentucky. Animals were held for 90-100 days in KY for disease testing and again in MO for soft release. Elk were released in 2011, 2012, and 2013. Survival of released elk was lower in 2012 (~60%) than in 2011 or 2013 (~90%). 2012 survival was affected by drought and brain worm. Documented mountain lion predation on brain worm affected elk in 2012. Known births were 9 in 2011, 26 in 2012, and 19 in 2013. Some births occurred inside of soft-release holding facility due to length of time elk were held. Research is documenting survival and reproduction, resource selection. All elk had GPS collars. Evaluating the use of aerial surveys without snow to monitor population size, potential competition between deer and elk. Considering creating food plots due to limited open habitat in area. Plan to start hunting as soon as possible; criteria of minimum population size, rate of growth, duration since release.

Elk Restoration and Management Q & A – Tina Brunjes, Kentucky Department of Fish & Wildlife Resources and Lonnie Hansen, Missouri Department of Conservation. Food plot creation may be controversial in southern MO. Population objective is 400-500 elk. KY has noted deer population decline in counties with elk, but whether there is significant competition is unclear. Elk love acorns. Some elk have moved out of MO's elk management zone, they have developed protocol for nuisance elk, includes hazing, trap and relocate, and as a last resort euthanasia.

Chronic Wasting Disease Management in Illinois – Nohra Mateus-Pinilla, University of Illinois - Illinois Natural History Survey. Described Illinois approach to CWD management, targeting specific sections where CWD positive deer have been identified for local culling while maintaining deer across broader areas. Compared prevalence trends between IL and WI. IL is showing a stable prevalence of ~1% while prevalence in WI is increasing. IL has seen a slight decrease in deer harvest in 2 of the 4 counties where most culling has occurred.

Deer Breakout Session

Deer Productivity by Age Class from Fetus Counts in Northern Illinois – Nohra Mateus-Pinilla, University of Illinois - Illinois Natural History Survey. Winter deer culling for CWD management has provided access to more than 4,000 fetuses during 2003-2013. The ability to detect pregnancy varied with calendar date, stabilized by February 1. Pregnancy rate was approximately 0.2 for fawns, 0.75 for yearling, and 0.82 for adult does. Mean litter size was 1.9 fetuses/pregnancy. Fetal mass was not affected by number of offspring. CWD positive and negative does had similar pregnancy rates and litter sizes. Sharpshooting intensity did not affect litter size or pregnancy rates.

USDA Gap Analysis/Countermeasures Workshop on Orbiviruses – Jason Sumners, Missouri Department of Conservation. A workshop was held at the request of US Animal Health Association to determine research needs and identify and prioritize intervention strategies for EHD and Blue Tongue due to concerns about potential spillover to domestic livestock. A report is expected in October. Concern is increasing for potential effects to livestock producers, captive cervid industry and wild cervids due to increasing frequency of outbreaks, introduction of new serotypes, and geographic expansion of disease. This is a highly complex issue as there are 26 serotypes and antibodies to one serotype do not protect against other serotypes. There is lack of understanding about how exotic serotypes are introduced and questions about the potential role of other species as vectors. The geographic distribution of disease among cattle is poorly known. Potential to affect productivity of cattle, may have significant financial impacts. Current research is suggesting that EHD is of African origin and was introduced to Florida and Texas in late 1800s. In the Midwest EHD results in infrequent but severe outbreaks, cycles of 8-10 years, long enough that antibodies are not sustained in the population. The 2007 outbreak was mostly EHD2 while the 2012 outbreak included EHD6, lots of 2 and some 1. Florida maintains numerous serotypes but most have not yet spread. There is work on vaccines based on live viruses, but there is concern about incomplete attenuation of viruses and potential to spread disease. There are currently no good tools for vector control. Developing surveillance strategies for both viruses and vectors. A better understanding of impacts to deer populations and livestock is needed.

Deer Status Reports

Illinois. Total deer harvest ~180,800 (39% antlered, 61% antlerless). Total deer harvest peaked in mid-2000s at ~200,000 and declined gradually since then. The rate of deer-vehicle accidents have declined to goal levels. Removed 10 counties from the late-winter antlerless only season. IL hosted 5 open houses in June to provide information to and answer question from citizens interested in deer management; 117 people attended. Requests for permits to address deer damage were higher in 2012; these requests tend to increase in drought years. Thirty-two permits were issued to municipalities, airports, etc. for deer removal with 1,341 deer removed and donated to charity. Tested ~8,200 deer for CWD, 36 tested positive. CWD was detected in 2 new counties. Continued use of late winter sharpshooting to help control disease. EHD suspected mortalities were reported from 87 counties with ~1,000 citizens reporting ~3,000 dead/dying deer. Serotypes 2 and 6 and BTV-13 were documented. Their previous significant outbreak was in 2007. Legislation made crossbows legal for everyone to use in the late archery season. The number of deer killed by crossbow hunters increased slightly, but this appeared to be compensated by a reduced kill by compound bow hunters.

Iowa. Reported total deer harvest ~115,600 (41% antlered, 59% antlerless). Estimated total harvest adjusted for non-reporting ~144,500. The number of hunters has been stable at ~180,000 for last 8 years. Estimate that populations are at or near goal in 81 counties and declining toward goal in 18 counties. Reducing antlerless harvest quotas as populations near or reach goal. The early antlerless season was discontinued. Winter aerial surveys were discontinued in 2013. Bowhunter observation survey has become operational as an index of population trends. Other indices include spotlight surveys and roadkill data. Bowhunter observations were increased, suspect that drought and poor mast crop increased deer movements. 2012 was Iowa's largest EHD outbreak with nearly 3,000 suspected mortalities reported. Maximum reported mortalities reported in 1 county was 570. CWD was identified in 3 captive facilities in 2012, a total of 13 captive deer tested positive. Tested 4,400 wild deer in 2012-13 and CWD was not detected. Total wild deer tested to date is ~47,000.

Indiana. Total deer harvest ~136,200 (34% antlered, 66% antlerless), highest reported harvest on record. Mix of in-person, on-line, and telephone registration. 60% of deer registered in-person, <1% by phone because there was a \$3 charge for telephone registration. Introduced a new license bundle with 2 antlerless tags and 1 antlered tag, tags were good in any season. This was very popular. Crossbows were permitted in the early archery season for the first time and crossbow harvest increased from ~1,000 to >8,000. Added a late antlerless gun season in late December-early January in ~70 counties. EHD was reported in 67 of 92 counties in 2012. Serotypes 1, 2, and 6 detected with 6 associated with greatest effects. Doing surveillance for CWD and bovine TB but have not detected either to date.

Kansas. Total deer harvest ~94,000 (~91,300 WTD [53% antlerless], 2,700 MD [16% antlerless]). Growing interest in use of crossbows resulted in legislation mandating a 2-year trial in 4 deer management units of allowing crossbow use during the archery season by people of any age or physical condition. A survey of crossbow users found that 88% would use them in future years. The legislature mandated a pre-rut antlerless-only firearm season. Kansas had regulations on specific caliber and cartridge case lengths for firearms for deer hunting but has relaxed them to allow use of any center fire rifle or handgun. EHD was widespread in 2012 with 1,274 suspects reported from 46 counties, but hunter harvest and deer-vehicle crashes did not change notably. Due to elimination of federal funds CWD surveillance was substantially reduced. The number of deer tested during 2003-2011 ranged from 2,000-3,000 while the number tested in 2012 was only 425. Seven positive deer were detected. KS conducts landowner deer surveys every 5 years. In 2012 fewer landowners reported deer damage than in any year since 1985. The majority of landowners were satisfied with the number of deer and hunters in 2012.

Kentucky. Total deer harvest ~131,400 (~56% male, 44% female), a record harvest. The high harvest was attributed to good weather conditions on all 3 weekends of the November gun season and rebound of populations following the 2007 EHD outbreak. Mean harvest per successful hunter was 1.3 deer. Assessing fawn survival in SE KY where population has declined. EHD occurs annually, 2012 was slightly above average. Tested 713 hunter-harvested, targeted, and roadkills for CWD in 2012-13, all negative. Five captive facilities have received deer from other facilities near positive farms in Iowa and Pennsylvania. KY has a reduced cost senior (65)/disabled license (\$5 versus \$30 for statewide deer permit). Sales of senior license are increasing while regular deer permit sales are decreasing as the population of hunters is aging. Will be requesting an increase in license fees.

Michigan. Total deer harvest ~418,000 (~54% antlered, 46% antlerless). Deer populations have increased in northern 2/3s of state due to 3 mild winters. Southwestern Michigan was hit hard by EHD with an estimated 30-50,000 deer killed but southern populations are believed to still be fairly high. 2012 was first year of mentored youth hunting open to youths 9 and under. Youth season harvest increased 72%. Crossbows were permitted for use by everyone starting in 2010 during the entire archery and firearm seasons in the Lower Peninsula and in the early archery season and November firearm season in the Upper Peninsula. An estimated 142,500 archers used a crossbow in 2012 and harvested ~59,800 deer. A dairy herd in Saginaw County was identified as bovine TB+, will be testing deer in this area the fall. Will conduct a 3 year trial of antler point restrictions in 12 counties in the northwestern portion of the Lower Peninsula after a survey of area hunters found 68% of hunters supported the restriction. There is a proposal to expand APRs to the rest of the Lower Peninsula.

Minnesota. Total deer harvest ~184,700 (~52% antlered, 48% antlerless). Deer population goals were revised in 2005-06. Goals in the forested and mixed forest/ag DMUs were reduced or maintained while goals in many of the farmland DMUs were increased. Deer populations in most

forested DMUs are at or near goal while populations in many ag units are below goal. Bovine TB was detected in 2005 but no new detections have occurred since 2009, TB reduced to undetectable levels. Will end TB monitoring. Will continue CWD testing in southeast MN where a single wild positive was detected and will test around a CWD+ captive red deer herd near the Twin cities. Have used antler point restrictions (APR) in 11 DMUs in SE MN for a 3-year trial. APRs reduced total buck harvest and reduced the percentage of yearling bucks in the harvest from 42% to ~20%. Hunter support for APRs increased from 48% to 62%. Will continue to use APRs in SE and are relaxing the requirement for in-person registration. A stakeholder round-table process in 2012 in SW MN generated results that were difficult to apply to management ~50/50 split between those who thought that deer populations were about right and those who thought populations were too low. Mail surveys of both landowners and hunters in the region showed that most hunters were satisfied with deer population size while landowners were either satisfied or wanted populations reduced. Conducting research to assess effectiveness of depredation permits for controlling deer damage.

Missouri. Total deer harvest ~309,900 (~40% antlered, 61% antlerless). Deer harvest increased substantially in southern MO due in part to poor acorn production that altered deer movements and vulnerability to harvest. Harvest in northern MO declined, reflecting reduced population size. EHD and bluetongue were widespread, all counties reported cases; more than 10,000 suspected cases were reported. Expect to see reduced harvests 2-3 years following outbreak. Tested ~3,200 deer for CWD in 2012, 1,700 from the containment zone, 1 deer from the hunting season tested positive and 4 positives were removed by the focused culling. All positive deer were in close proximity to a positive captive cervid facility. MO removed the antler-point restrictions from the CWD containment zone to increase harvest of yearling bucks. They also prohibited the placement of feed, salt, and minerals. There has been an increasing trend in overall archery hunting participation over the past 9 years. Sales of youth archery permits and youth antlerless archery permits increased 10 and 21%, respectively, between 2011 and 2012. The number of hunters who purchased a firearms permit increased 1%/year for the past few years.

Ohio. Total deer harvest ~217,200 (~37% antlered, 63% antlerless). Harvested peaked in 2009. Regulations have been stable for 6 years, enacting a number of changes in 2013. Maximum county bag limit was 6, will reduce to 4. Mean harvest per successful hunter was 1.3; less than 1% of successful hunters harvested more than 4 deer. The higher bag limit contributed little to the total harvest yet was a major concern of hunters. Ohio established an early antlerless-only muzzleloader season in mid-October. Ohio currently manages by 88 counties; research is underway to create fewer, larger deer management units. Next will be a project to develop management goals. Deer damage complaints have declined from peak levels during the mid-2000s. CWD surveillance was limited to sampling 600 roadkilled deer. EHD was detected in a few counties, mostly in NE Ohio.

Nebraska. Total deer harvest ~60,800 (~51,300 WTD [49% antlerless], 2,700 MD [21% antlerless]). Deer harvest decreased 30% from 2011, largely due to EHD. Approximately 6,000 suspected cases were reported in 2012 and estimated 30% population reduction. Bi-weekly reports of suspected EHD mortalities peaked in late September with 1,841. Reduced antlerless permit allocation in 2013, typically takes 3-5 years to rebuild populations. Long-term mule deer decline believed to be due to meningeal worm, CWD, drought, and predation. Sampled 1,300 deer for CWD in 2012 with 10 new positives and 4 new counties. Will be suspending CWD sampling for a few years then will retest high prevalence areas. Hunter interest in donating deer to the deer exchange program was down substantially due to reduced antlerless harvest.

South Dakota. Total deer harvest ~69,400 (~61,100 WTD [52% female], 8,300 MD [44% female]), a decrease of 19% from 2011. Populations of both species peaked in 2005-06. Severe winters in 2009-10 and 2010-11 contributed to population declines. Most deer management units are below population objectives, working to rebuild deer populations. Experienced a significant EHD outbreak in 2012, with 3,700 suspected cases reported. Highest mortality was in SE part of the state, but reports of dead deer were received from 51 counties. EHD-2, EHD-6, and Bluetongue 3 and 13 were documented. Unsold permits were withdrawn from a number of counties and refunds were offered to hunters that wanted to return their licenses. CWD sampling was mostly limited to voluntary submission of heads by hunters due to lack of federal funds. Samples were obtained from 128 elk, 24 MD and 81 WTD with 6 WTD, 1 MD and 5 elk testing positive. SD conducts fall classification surveys during September and October to estimate fall recruitment rates. They are starting research to estimate survival of WTD and MD fawns in various habitats and geographic areas of SD. Other research projects are developing aerial survey methods for MD, studying population dynamics in the Black Hills and evaluating herd composition surveys. The governor requested a review of the big game management program due to public concerns with reduced populations of elk, deer, and pronghorns. The Wildlife Management Institute received the contract to conduct the review. Expect to receive the report this fall.

Business Meeting

Missouri is planning to host next year's meeting.

Updates were provided regarding the landscape genetics study being conducted at Iowa State University and the Midwest Wild Turkey Consortium housed at Michigan State University.

South Dakota with help from Bill Jensen and staff (ND) has developed a web site to post past proceedings and meeting notes and to provide information about upcoming meetings <http://mdwtsg.org/>.