Midwest Deer and Wild Turkey Study Group Meeting

Rock Springs 4-H Center, Junction City, KS. September 13-16, 2009

Notes by Robert E. Rolley

The meeting was held at Rock Springs 4-H Center south of Junction City on the site of the Rock Springs ranch that is nestled in Kansas' scenic Flint Hills. The ranch dates from the 1850s.

Kansas Wild Turkey Research. Marc Chipault. University of Wisconsin. Research on survival and reproduction associated with 3 public hunting areas with various levels of hunting pressure. Capture success was higher on the lightly hunted area as was male survival rates. Hunting and wounding loss was responsible for 2/3s of mortality with predation responsible for 1/3.

Wild Turkey Research in South Dakota. K.C. Jensen. South Dakota State University. Continuing studies in the Black Hills of SD. Previous research documented high male mortality in southern Black Hills (42% annual survival, 73% mortality due to spring hunt). Current work is in northern Black Hills on both sides of the border with Wyoming. Approximately 75 males were radio-tagged on each study area in 2008 and 100 in 2009. Modeled effect of hunting and spring weather on survival using Program MARK. Harvest of 2+ year olds was high. Heavy snowfall just prior to spring hunting season, after birds left winter range and moved to breeding range in the mountains, resulted in significant adult mortality.

Marketing Spring Turkey Hunting in Kansas. Jim Pitman. Kansas Parks and Wildlife. Kansas has high turn-over and low retention of spring turkey hunters. Tested a direct mail marketing campaign directed at prior buyers of turkey licenses. Cost ~$10,000 to print and mail postcards, increased permit sales by 2.4%.

Deer Genetics and the Potential Impacts of Selective Harvest. Jason Sumners. Missouri Department of Conservation. Studied male paternity on King Ranch in Texas. Most bucks in population were successful breeders, 70% of males sired 1 fawn, few had multiple litters, 17% of breeding done by yearlings. Most breeding occurred in by early December and mature males cannot monopolize females. Large effective male population size contributes to genetic diversity.

Using GIS to Compare Landcover along White-tailed Deer Spotlight Survey Routes on Public and Private Lands in Kansas. Tyson Seirer. Kansas estimates deer density with spotlight distance surveys on 3-4 routes through private land and plus public land routes within each of the 13 deer management units. Tested whether habitat composition along survey routes were representative of habitats with the deer management units. Used GIS with a statewide landcover layer to buffer survey routes with a 300 meter buffer and classified habitats within buffer. Close correlation between habitat on survey routes and habitat within DMU.

CSI: Deer Camp: looking to criminology theory to enhance hunter compliance and cooperation. Brent Rudolph. Michigan DNR. Michigan banned baiting in TB area reduced large scale feeding activity but smaller scale baiting is hard to detect and enforce. There is a low risk of getting caught and the fine for baiting is small. Many hunters do not perceive a health risk associate with population size in the area where they hunt. Prior to the ban, surveys showed that 48% of hunters used bait and 61% approved of the use of bait. Plan to conduct human dimension research to examine current attitudes and beliefs associated with baiting ban and risks to deer herd of TB. Will explore ways to increase hunter cooperation and compliance with regulations.

North America Wild Turkey Management Plan. John Burk. NWTF. NTWF is coordinating with national and regional bird planning efforts in development of a management plan for turkeys. It will include regional and state plans. The Missouri state component includes goals related to habitat enhancement, hunter access, research, and outreach.

Environmental, Social, and Biological Factors Associated with Contact Rates Between Deer on Quivira National Wildlife Refuge. Kevin Blecha. Will be assessing factors that influence contact rates among deer and could promote disease transmission. Using GPS collars on males and VHF collars on females. Study is in early phase. Will be looking at direct and indirect (same location at different times) contact rates.

Spotlight Surveys in Iowa: out with the old and in with the new? Tom Litchfield. Iowa DNR. Iowa uses spotlight surveys along with aerial surveys, bowhunter observation surveys, and roadkill trends to monitor deer population trends. Trend data is used to calibrate population models. Current spotlight surveys are done in combination with surveys for raccoons and are placed in riparian forested habitats. Concern that they may be less sensitive to population change in less optimal habitats. Current routes 90 transects, 2250 miles. New routes 199 transects, 4742 miles, more representative of habitats within deer management units. Currently running both old and new routes. Old routes were provided simple counts, are testing distance sampling on new routes with laser rangefinders. Conducting in late March-early April. 2 people/vehicle. Only on gravel roads with very low traffic. New routes have lager sample size and are less variable than old routes. Variation in spring weather appears to affect dispersal and observability. No recreational spotlighting in spring so deer are less wary of spotlights than in fall. Hope data will provide more fine-scale picture of deer density variation. Not yet calculated density estimates from distance data.

Use of Distance Sampling to Monitor Deer Abundance in Kansas. Lloyd Fox. Kansas Parks and Wildlife. Been conducting spotlight surveys since 2002, 3-4 routes/DMU, 20 mile transects, count for 3 hours/night. Conduct in late October-early November. Also survey public hunting lands in DMU, 5+ miles of transects on public land, repeated 3 nights or until 60 groups observed. In 2008, 1824 miles surveyed, 234 hours, 2572 clusters observed, 5377 deer, ~3 deer/mile. Density much higher on public land than on private land (better habitat on public land), buck:doe ratios slightly higher on private land, fawn:doe ratios similar. Distance sampling pointing to higher statewide

deer populations than previously estimated by modeling. Looking to incorporate covariates of habitat and behavior into estimates. Use a platform in bed of truck for observers.

Deer breakout session.

Nebraska deer disease update. CWD, ~5000 deer sampled in 2008, 22 positives. No evidence of significant geographic expansion. Some mule deer have been affected by meningeal worms, 28 animals collected after reports of circling behavior. Some white-tailed deer have been found with heavy parasite loads. Bovine TB was confirmed in a captive cervid (elk and fallow deer) facility. 60% of elk and 60% of fallow deer had lesions when facility was eventually depopulated after previously been given TB-free certification. 42 wild deer were collected outside of facility and 0 were positive. TB was a cervid strain. Live animal test preformed poorly for cervids. Will be asking hunters to be aware of TB signs via mailings and news releases. Four mule deer were collected with hair loss syndrome, associate with lice. HLS has caused significant population decline in Washington State.

Iowa Deer Feeding Ban. Iowa has tested 29,000 deer and has not detected CWD or bovine TB. Current illegal to bait deer in Iowa, proposing to ban feeding. During recent governor's deer task force, farm bureau and cattlemen association were concerned about potential for TB. Modeling language after similar feeding ban in Illinois.

Illinois Agency Deer Culling for CWD Control. Sharpshooting has been effective at targeting deer removal in high prevalence areas, 25% of samples tested were collected through sharpshooting resulting in 50% of CWD positive deer. Multiple years of sharpshooting (3+ years) with cumulative removal of 25+ deer/sq mile are linked to local declines in deer density of up to 40%. They are seeing significant declines in prevalence among yearling deer and females. CWD management costs Illinois ~$1.3 million annually.

Quality Deer Management in Iowa. There is significant agreement between stated goals of QDMA and state agencies toward heard health, habitat quality and public perceptions of deer and deer hunting. However, there is often a big difference between what QDMA says and what is happening on the ground (trophy management). Adequate doe harvest is not occurring on many properties. Illinois has developed guidelines to encourage landowners with hunting leases to include an earn-a-buck provision in the lease if they believe they have too many deer and to treat inadequate doe harvest as a breach of contract.

Aerial and Ground Surveys for Population Estimation in Minnesota. Minnesota has numeric population goals for deer management units. Using helicopter quadrat surveys to estimate population size to calibrate models in forest-ag fringe DMUs. DNR has 3 helicopters. Quadrats based on PLSS sections, ~20% of unit surveyed, using stratified random design with optimum allocation based on percent woody cover. Attempting to estimate sightability with repeated counts at slower speed. Preliminary estimates range

from 65-85%. Costs are $400/hour, budget of $30-80,000/year, able to survey 4-8 DMUs per year depending on snow cover and competition for air time. They are investigating the use of distance sampling during roadside spotlight surveys to estimate density in agricultural units. Have purchased a FLIR unit and will be testing its usefulness.

Michigan landowner and human dimension issues. Michigan has adopted an early antlerless firearm season (September 17-21) on private land to aid with herd control. Also has a late firearm season and a 16 day muzzleloader season. Killed 13,000 antlerless deer in early season, a 10% increase, 17,000 in late season, and 22,000 in muzzleloader season. Beginning in 2009, crossbows are permitted to be used in firearm seasons, in the early bow season by hunters 50 years old or older, and in any season by hunters 12 year old and older in Zone 3. There is a 3 year sunset. Michigan has a number of deer management cooperatives that have formed, with increasing cooperation with QDMA. These cooperatives are resulting in lots of staff contact, staff are encouraging substantial antlerless harvest, not clear if adequate antlerless harvest is taking place. The DNR is considering developing a certification program with templates to certify deer management plans developed by these cooperatives.

Lead in venison. In North Dakota food pantries are accepting venison and labeling it with warnings to not feed small children and pregnant women. This remains a topic of concern among state agencies. Minnesota DNR conducted studies to compare bullet fragmentation and deposition patterns of rapid expansion lead bullets, controlled expansion lead bullets, copper bullets, lead slugs, and lead bullets from a .50 caliber muzzleloader rifle. Considerable fragmentation and migration of fragments were documented.

Urban Deer Management in Missouri and Kansas. The community of Town and Country is in Western St. Louis County and has significant problems with overabundant deer. Densities are about 70 deer/sq. mile. There has been strong opposition to lethal control. Previous research in the community demonstrated that trap-and-relocation resulted in high mortality and is not appropriate for urban deer control. Community is currently proposing a combination of sterilization and sharpshooting to reduce population size and reproduction. Approximately 100 adult does will be captured and sterilized and 100 will be shot. Control activities are scheduled for this winter. The agency is hoping this will evolve into a lethal control program, there is discussion about allowing archery hunting. Kansas is facing strong local opposition to lethal deer control in a suburb of Kansas City. Opponents are pushing for a trap, sterilization/contraception project. It is expected that EPA will soon license GonaCon for deer contraception: http://www.aphis.usda.gov/wildlife_damage/nwrc/research/reproductive_control/gonacon.shtml

Illinois deer task force. The primary concern was high numbers of deer-vehicle collisions. Recommended using DVCs as basis of deer population goals, wanting to reduce DVCs to level that occurred in late 1990s and early 2000s. Task force recommended an early antlerless only season in late October to increase antlerless harvest. This was overwhelming opposed by bowhunters and outfitters.