

NEWSLETTER OF THE CENTRAL MINNESOTA AUDUBON SOCIETY

Volume 44

Editor's Note... by Nicki Blake-Bradley



Easy Come, Easy Go... or NOT?

Hello my fellow Auduboners. Have you missed hearing from us? If you have, please accept my apology! We did NOT intend to leave you waiting for a newsletter that didn't come as anticipated.

As you may have guessed or expect, this newsletter is not produced by a corporation. My ancient computer gave up functioning after our last newsletter, when I pledged to send out guarterly newsletters while the COVID-19 pandemic was/ is raging through our world. It took all my work with it to the electronic grave. Unfortunately, it took some time for me to replace the computer and even longer to replace (and re-learn) the software to bring the newsletter back to you. Software has had updates. Those of you who know me, know that technology is not where my skill set lies. Enough said about that!

Has anyone been seriously suprised, as I was, at how quickly products became scarce? I'm not talking about the great toilet paper shortage of 2020 (although that had my husband seriously freaking out as I rationed our supplies) but electronics (computers and circuit boards, for example), appliances, even vehicles and wood just to name a few.

COVID-19 put a serious time delay on shipments of goods from, well everywhere, but primarily the Asian countries that produce so much of what we consumers use today. It has changed the way that businesses are conducting their work and continues to affect many aspects of our lives, even as new variants arrive on the heels of the last.

Have you made adjustments in your life? Are you making due with less consumables? Perhaps you're finding new ways to enjoy life without all the trappings of commercialism or looking at whether you really need to replace that item for a newer model. If so, great job! Keep it up!

Looking for ways to make a difference?

Donations are welcome for our fund to assist with continuing to bring the newsletter and (when we can return to having "in person" meetings) quality speakers to the meetings. If you choose to help out, please make out a check to Central MN Audubon Society (CMAS) and send it to our Treasurer, Kathy Doyle. THANK YOU SO MUCH!!

Calendar *NOTICE: Our meetings would normally be held at the Unitarian Fellowship Hall in St. Cloud. The church is not allowing gatherings or meetings at this time due to the pandemic. The Board is looking for a way to safely meet in person, but (for now) plans to continue sending out newsletters. Watch for calendar changes to include a meeting date

and potentially new location.



Saturday, December 18th **CMAS Christmas Bird Count**



Fall, 2021

7:30 a.m. - noon, St. Cloud and surrounding area No experience necessary. Inexperienced birders will be paired with experienced volunteers.

Contact Brian Jungels for details at 320-469-0876

Sharp-Tailed Grouse, Lek Attendance, and Disturbance

Sharp-tailed Grouse have experienced a population decline by more than 50% in the last 10 years in Minnesota. This equates to a loss of more than 30 leks (which is a BIG decline). A lek is an area where males will display in an attempt to win females. Sharp-tailed Grouse prefer open areas for their leks, similar to prairie chickens. The habitat for Sharp-tailed Grouse is openland and brushland areas.

Viewing blinds are used for educational outreach and viewing and were put out at several leks. They tend to be popular with photographers and educators. Several questions were raised such as whether human disturbance will affect leks in a population declining so quickly and how does lek attendance differ after disturbance? Will return times differ after disturbance?

Dr. Charlotte Roy, with DNR Fish and Wildlife, designed a study with two arrival times at blinds on leks (15 minutes before sunrise and 90 minutes after sunrise) to simulate late arrival of observers and early departures of observers from blinds. She conducted two treatments on leks each of six days each week and alternated the order of which lek was visited first each week. Sixteen leks in East Central MN were studies with one control lek per week. The control lek was accessed with arrival during the dark and then researchers stayed until all the birds left.

On experimental study leks, regardless of early or later arrival times, the birds' return times were similar. Return times were two times longer in response to human disturbance than compared to disturbances by predators. The males returned the fastest in late April. More birds avoided coming back if flushed late, but sometimes avoided returning even when flushed early. They tended to be absent 15 minutes longer if flushed for any reason later in the morning. The birds were never observed mating when disturbed that morning.

(continued on page 2) In every encounter, we either give life or we drain it, there ís no neutral exchange. ~ Brennan Manning

Central MN Audubon Society Officers

Brian Jungels, President John Peck, Vice President **Open Position: Programs/Publicity** Linda Peck, Conservation Nicki Blake-Bradley, Newsletter

(H) 320-469-0876 (H) 320-685-3365

(H) 320-685-3365 (H) 320-259-5524 Open Position, Membership Kathy Doyle, Treasurer Dan Kneip, Secretary Hank Schreifels, Member at Large Audubon MN Office

(H) 320-470-0942 (H) 320-761-8202

1-651-739-9332



Assessing Fawn Survival and Movement in MN's Farmland Region

2016 MNDNR Deer Population Management legislation suggested the need to collect additional field data to improve the deer population model to improve harvest recommendations. Fawn survival was last estimated about 20 years ago. Coyote densities have increased substantially from the last time fawn survival was estimated and therefore the impact of coyote predation on fawn survival is outdated. Previous work conducted regarding fawn survival relied upon using GPS collared does, or does with transmitters on them to locate fawns. Another method used opportunistic searches to look for fawns, but that is very time intensive.

DNR Wildlife Biologist, Tyler Obermoller has led a study using drones with thermal infrared imaging to locate fawns for capture. The study area was in the heavily row-cropped area of south central Minnesota, primarily on Wildlife Management Areas (WMAs) in Redwood to Nicollet Counties (and south of there).

Sunlight was an issue for thermal signatures, so DNR staff worked earlier in the day to optimize thermal images. They were able to use a split screen with a color picture to verify the thermal signature was a fawn they had located. Thermal infrared technology had not been used in this manner in the past, so there was a bit of a learning curve regarding efficiency. In 2019, when the study first started, they were able to cover 4 - 5 meters per second (m/s) at a height of 45 meters. They were able to move to 60 meters in height and increased speed to 6 - 7 m/s by the end of the season. In 2020, the height was kept at 60 meters and speed moved to 7 - 9 m/s. In 2021, the staff's speed was steady at 9 m/s.

When a heat signature registered, the staff would keep the height at 60 meters and zoom the camera to verify a fawn. Once verified, the location would be uploaded to a handheld GPS. Staff would then go out and catch the fawn, conduct a quick physical, take body measurements, and fit it with an expandable GPS collar. Workers wear gloves and blindfold the fawns to reduce their stress. Blood samples are collected to determine colostrum intake and any dietary deficiency. Hoof growth measurement and umbilicus condition help determine the age of the fawn. Body temperature, gender, and body measurements are also recorded. They predict larger fawns have better survival potential.

The collars will give six positions per day and will stay viable up to 18 months of age. The collared fawns are able to be harvested during hunting season, according to Tyler.

The study quantified the number of person hours per captured fawn as well as the number of hectares flown per hour. Doe presence, vegetation obstruction, and fawn response were all recorded. The following table summarizes the project logistics regarding efficiencies:

Year	2019	2020	2021
# of Hours	47	41	47
# of Hectares (acres)	792 (1957)	1640 (4052)	2072 (5120)
Hectares/hr (acres/hr)	17 (41.64)	40 (98.83)	44 (108)
# of Fawns Confirmed	29	71	75
# of Signatures	43	122	(?)77
Efficiency (person hrs/ confirmed fawn collared)	6.9	2.2	3.1

Issues that had to be overcome included sunlight affecting the thermal signatures, learning curves with regard to drone equipment and software, battery life, canopy cover, and fawn confirmation. When cameras weren't on the drone as one unit, it was much harder to confirm fawns. This improved in 2021 when the thermal imaging and color camera were combined to one unit.

Overall, using drones was very efficient. It allowed fewer people to conduct the work more efficiently and resulted in low fawn disturbance. Five people collared 75 fawns in 2021! Tyler believes thermal imaging with drones is applicable to other species as well. The Wildlife Society approves this methodology.

Goals of the study aim to quantify relationships between bed site characteristics and survival, to identify how landscape attributes affect neonatal fawn movement and survival, and to examine characteristics influencing survival and causes of mortality. As fawn age increases, they adjust from hiding behavior to following the doe. Bed site choice could be important for survival.

(continued in second column)



Raptor Food Needed

Linda Peck has been a licensed wildlife rehabilitator for many years and has rehabbed injured creatures or raised young animals and birds to the point of being able to be released as "adults". She still has educational birds and needs your trapped (not poisoned) mice and road kill rabbits, gophers, chipmunks and squirrels (or window killed birds). She has three raptors that are very hungry! A huge THANK YOU goes out to Linda for all her work and dedication to those who cannot verbally express their thanks!



Assessing Fawn Survival... (continued)

When fawns are captured, the site is flagged so that the researchers can return later to collect more information about slope and aspect of landscape position as well as vegetation type and height.

More than eight hours without collar movement indicates a mortality, but the fawns are not always dead. Upon locating mortality sites, they are compared to live fawns' bedding sites. If a fawn has died, the researchers attempt to determine whether it was a kill or scavenge and if remains are still available, saliva swabs are collected from the bite wounds to determine the predator (whether it's a dog versus coyote, for example).

Of 75 collared fawns in 2021, 75% were in grassland areas with 95% being bedded. They averaged 4.5 kg (9.9 lbs) and 5 days old. Fourteen deaths were attributed to coyote (78.6%), vehicles (7.1%), disease (7.1%) and infection (7.1%). The 2021 average survival rate at 30 days was 85.6% (as compared to 83.4% in 2019). Researchers didn't see a "pulse" of mortality until sometime after the capture so human (research) interaction with the fawns was not expected to be a factor in the death totals.

Tyler noted that five days of age is the "highest hazard" time but 15 days of age may also be hazardous because they are starting to move around. Eight fawns slipped their collars (due to premature expansion or fence snagging). The starting circumference may have been too big for some of the smaller fawns. Tyler added that 75 is a large sample size. He hopes to continue the

study for two more field seasons (3 years total).



Buckthorn Bustin' Covid-Style

CMAS has provided volunteers for years at Rockville County Park, removing invasive buckthorn, under the leadership of John and Linda Peck during October. 2020 was an especially difficult year. Thus, changes are being made to how the work is being done. John and Linda are not having regularly scheduled times for removal but will gladly schedule a time with anyone who wishes to make a difference in the park by working to remove this nasty shrub. All equipment and herbicides are provided by Stearns County Parks Department.

Volunteers should bring gloves and dress in layers (you will get warm).Please call the Pecks at 320-685-3365 to arrange a time.Then grab friends and/or family for a "feel good" time pushing back the invasives to let the native plants breathe! Buckthorn removal is a challenge because new growth can occur every year...seeds remain viable in the soil for up to five years.The smaller the shrubs, the easier the removal. Please help when you can, where you can!

(Sharp-tailed Grouse ... continued from page 1)

There was inconsistent lek attendance. On 32 occasions, there were no birds on the leks when researchers arrived. As might be expected, average return times were shorter in the peak of the mating season (late April to early May). Dr. Roy noted that after an acclimation period to the blinds of approximately 3 days, the sharp-tailed grouse were landing on the blinds, indicating that the blinds themselves do not appear to disturb the birds' activity, but rather that the birds are responding to human presence. Males occupying the center of the lek are usually the most successful at mating and are likely the ones to return, although females don't always come back.

Four public viewing blinds were set up for reservations. The blinds were set close to the leks so birds would be more visible. The trail cameras, placed to observe the blind door and the lek, provided some valuable insight and interesting situations. One example was a grouse having a standoff with a wolf. Unfortunately, the trail cam did not show the outcome of the standoff. Another unfortunate observation from the trail cam photos was discouraging. Adherence to wildlife manager guidance given to individuals who reserved blinds to arrive in the dark to not disturb birds was poor. At one of the four blinds, sixteen observer visits were captured and time spent in the blinds ranged from 26 - 214 minutes. 68% of the visits were under two hours. 31% of observers arrived during the dark, 63% arrived in semi-light, and 6% arrived during daylight. Inconsistent lek attendance appeared to be exacerbated by observer disturbance; people were seen wandering the leks and flushing birds or leaving early. The benefits of blinds remains difficult to guantify.

Local Membership Available: Some CMAS members may wish to only belong to and support our local Audubon Society, without belonging to National Audubon and receiving Audubon magazine. This option is available at only \$20 per year and local members do receive our Green-Backed Gazette. Please let Kathy know if you want this option. Thank you!