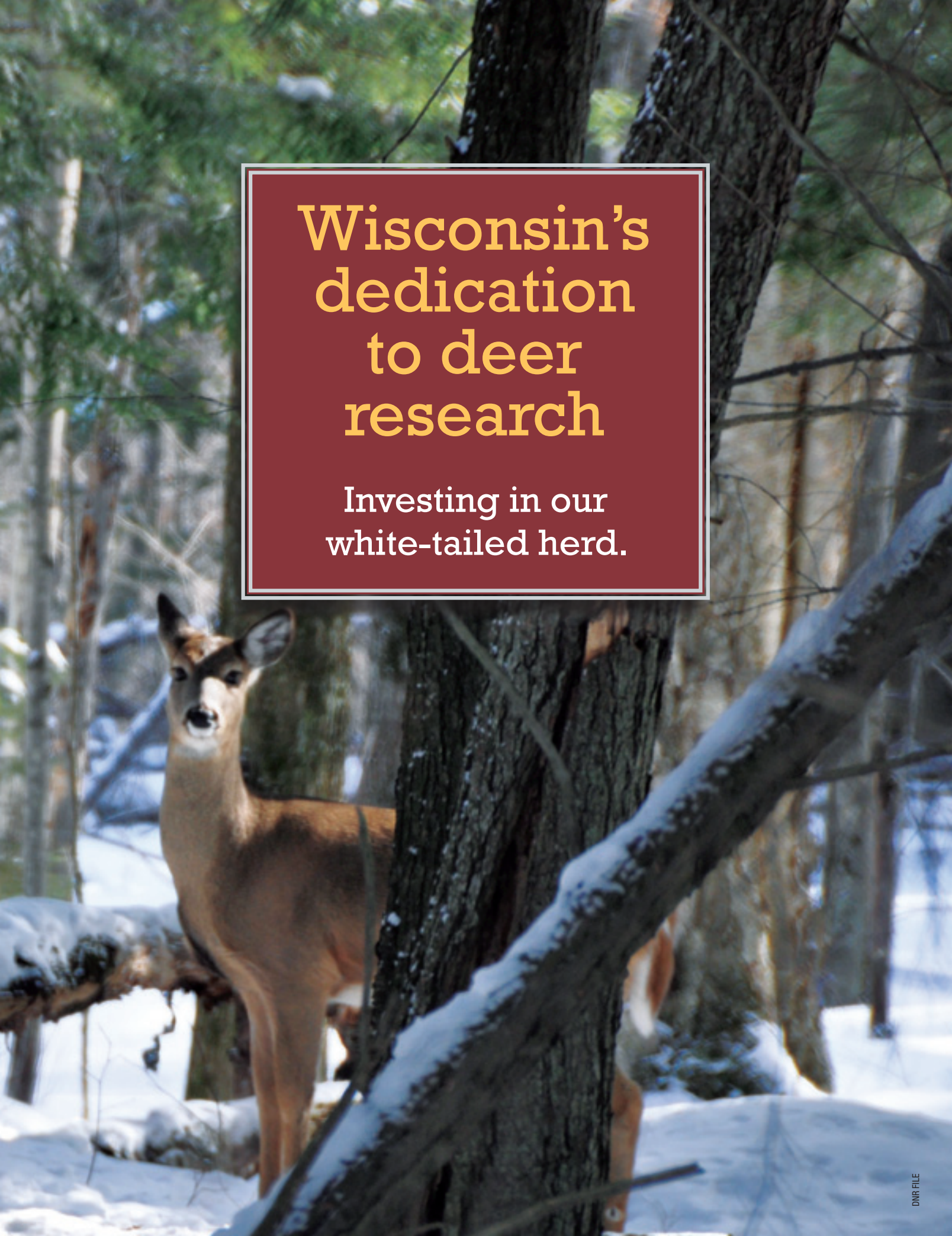


A photograph of a white-tailed deer standing in a snowy forest. The deer is brown with a white underbelly and a white patch on its hindquarters. It is looking towards the camera. The background is a dense forest of evergreen trees covered in snow. A large tree trunk is in the foreground, partially obscuring the deer.

Wisconsin's dedication to deer research

Investing in our
white-tailed herd.



In 2010, the DNR began its greatest investment ever in Wisconsin deer research. Federal Wildlife Restoration Act funds are being used to conduct a number of research projects to improve our understanding of deer populations.

A state treasure

Research to improve management.

DNR FILE

Dan Storm

It's hard to overstate the importance of white-tailed deer to the people of Wisconsin. To the hunter, the farmer, the forester, the wildlife watcher and anyone who takes to the roads: deer matter.

Given the intense interest in deer in Wisconsin, it's not surprising that there is interest in deer management and deer research.

The Wisconsin Department of Natural Resources attempts to manage deer populations and balance the many positive benefits of having deer with the very real negative impacts associated with too many deer. Achieving this balance is tricky for a variety of reasons, not least of which is the uncertainty surrounding the number of deer that inhabit Wisconsin woods and fields.

The ability to estimate deer populations is important because the Department of Natural Resources is required by law to manage deer at prescribed population size goals.

The Department of Natural Resources

estimates deer populations using a formula called the Sex-Age-Kill (SAK) method, which uses the number of harvested deer and the age and sex structure of the harvest, along with a number of supporting assumptions to reconstruct the deer population size.

There has been considerable public distrust of DNR deer population estimates, which led to an audit of the SAK method that was conducted by a panel of wildlife population experts. The audit results were published in 2007. One of the primary recommendations was to conduct an adult buck mortality study. This study topic is important because knowing the proportion of bucks that are harvested during hunting seasons — versus those killed by predators, cars or winter weather — is crucial in using SAK to estimate deer populations.

Additionally, there have been well-documented increases in wolf populations and changes in black bear populations in the state, which has led to concerns about the role that predation plays in influencing deer populations, especially through predation on very young and vulnerable fawns.

In 2010, the Department of Natural Resources, in cooperation with the University of Wisconsin-Madison, initiated a large-scale research study, designed



Department and University of Wisconsin staff are working to review past research and develop models to better understand the impacts of bears, bobcats, wolves and coyotes on deer in Wisconsin.

HERBERT LANGE



Starvation and disease are factors in the short and long term health and size of the herd.

DNR FILE



Deer-vehicle collisions are a significant cost to society.

DON BLEGEN



A bobcat will look for sick, injured, very young or old white-tailed deer if a rabbit meal isn't easily available.

HERBERT LANGE



Coyotes are a predator of deer, especially fawns.

HERBERT LANGE

Study areas



to improve population estimates and to better understand how predators may be impacting deer populations.

In two study areas — one near Shiocton, the other near Winter — DNR personnel and an army of dedicated volunteers set about capturing and radio-collaring deer, both adults and newborn fawns.

The Department of Natural Resources chose these two locations because they serve as a good cross-section of the various types of deer habitats found in Wisconsin — farmland and forest. Using radio-telemetry, DNR researchers are able to tell the proportion of deer that die each year and how they are dying (e.g. from hunting, predation, starvation or other means).

These research projects represent the latest in a long line of research efforts that

the Department of Natural Resources has undertaken, all with the goal of informing and improving management.

The Department of Natural Resources is proud of its legacy of deer research, and believes that these projects are strongly in line with this legacy. Read on to learn more about how the Department has invested in white-tailed deer research in Wisconsin.

Dan Storm is DNR's lead deer and elk researcher. Storm works on projects such as the study of buck and fawn mortality and the nutritional condition of deer. He is also the deer trustee liaison for the DNR science and research action team and a key consultant to wildlife management on deer and elk issues.

Deer life stages

Fawn

0-12
MONTHS

Yearling

12-24
MONTHS

Adult

2+
YEARS

Researchers categorize deer into three age groups, fawns, yearlings and adults.

These groups are important in understanding the age structure of the herds, which plays into how rapidly the herd can grow.

MICHAEL FRASSETTO



Funding for deer research

Karl Martin

Funding for the fawn and buck mortality studies has been provided by the Federal Aid in Wildlife Restoration Act also known as Pittman-Robertson Funding (P-R) named after Senator Key Pittman of Nevada and Congressman Absalom Willis Robertson of Virginia, the original sponsors of the wildlife excise tax in 1937.

These funds are generated by a federal excise tax on ammunition, firearms, bows and arrows and is collected directly from sporting goods manufacturers.

In addition to wildlife research, P-R funding has been used for wildlife habitat and restoration, public shooting range development, endangered wildlife and wildlife health monitoring.

In 2008 and 2012, there were unprecedented increases in the purchasing of ammunition and firearms, which resulted in a significant bump in P-R funding.

This "bump" in funding was allocated as a grant to the Wisconsin Department of Natural Resources to initially fund deer research projects (that you will read about in this publication) in 2009 with additional funding for deer research in 2013, including implementation of new deer research.

For more details about P-R funding go to dnr.wi.gov and search "deer research."

Karl Martin is the DNR wildlife and forestry research section chief.

75 Years of the Federal Aid in Wildlife Restoration Act (P-R)–1937-2012

"What began as a federal-state partnership to conserve game species has evolved into a highly sophisticated, science-based program to keep American wildlife populations of all kinds in healthy balance."
-Steve W. Miller, former director, Bureau of Wildlife Management, DNR

Wildlife Funding

- 1939 - Wisconsin's first apportionment was ≈ \$31,000.
- Total to date has been in excess of \$197.5 million for habitat development, land acquisition, research, hunter education, restoration, wildlife health and many more benefits to all Wisconsin citizens.

Wildlife Habitat

- Scattered around Wisconsin are more than 180 Wildlife Areas that cover approximately 620,000 acres of land. All Wildlife Areas are managed to sustain the wildlife and natural communities found on the properties and to provide a full-range of traditional outdoor recreational uses. The Pittman-Robertson excise tax played a direct role in acquiring half of those acres and plays a pivotal role in their continued management.

Wildlife Restoration

Wild Turkey:

- 1881 - Last native wild turkey reported killed.
- 1976 - Wild-trapped turkeys reintroduced.
- 2011 - ≈ 45,600 turkeys harvested.

Elk:

- 1886 - Last native elk reported killed.
- 1995 - Wild trapped elk (25) reintroduced.
- 2011 - Elk herd recorded at 161 animals.

Fisher:

- 1921 - Declared extirpated.
- 1956 -1967 - Wild-trapped fishers (120) reintroduced.
- 2011 - Fisher population estimate: 6,900.

White-tailed Deer:

- 1937 - Some in the public predicted deer would soon pass with the buffalo and passenger pigeon.
- 2011 - Deer hunters harvest ≈ 346,000 deer.

Wildlife Research

- Approximately 350 wildlife research projects have been funded.
- Over 70 years of deer research; approximately 65 studies on habitat, populations and CWD.
- Developed models to identify potential wolf den, rendezvous sites and crossing sites in future highway projects.
- Over 60 annual wildlife and hunter surveys to estimate size and abundance of wildlife populations and harvest.
- Supplemental stocking and monitoring of American marten.
- Establishing a long-term mercury monitoring and ecological risk assessment program in the Great Lakes.
- Estimating productivity of ducks in relation to wetland and grassland habitat restoration.

Hunter Education

- 1967 - Voluntary hunter education program began.
- 1971 - Received its first Pittman-Robertson allocation of \$110,000.
- 1985 - Hunter education required for hunters born on/after January 1, 1973.
- 2011 - One millionth hunter education student certified in Wisconsin.
- 2012 - P-R funding exceeds \$1 million to administer, manage and run the statewide hunter education program, and to manage hunting and shooting sports recruitment and retention efforts.

Endangered Resources

Gray Wolf:

- 1960 - Declared extirpated.
- 1975 - Began to recolonize, listed as a state endangered species.
- 2011 - Population recorded at 782-824 wolves in Wisconsin.

Bald Eagle:

- 1972 - Listed as a state endangered species.
- 1989 - Reclassified to state threatened species.
- 1997 - Removed from state endangered species list.

Trumpeter Swan:

- 1987 - Recovery program initiated.
- 2011 - Population recorded at 201 nesting pairs.

Whooping Crane:

- 2001 - First flock of reintroduced whooping cranes trained to follow an ultralight aircraft on migration to a wintering ground in Florida.
- 2011 - Population recorded at 103 birds in Wisconsin.

Wildlife Health

- Developed a wildlife health database to capture and analyze wildlife health data.
- Developed an education and outreach plan to reduce the amount of lead ammunition and fishing tackle released into the environment.
- Developed a beach transect surveillance program to monitor botulism-related mortality in waterbirds.
- Monitored the impacts of lead exposure on the wildlife of Wisconsin.
- Evaluated environmental contaminants in Wisconsin waterfowl and formulation of consumption advisories.
- Administered CWD eradication and control program.



Turning the pages

A history of deer studies.

Keith R. McCaffery

Early in the 1900s, and well before game or wildlife management became a recognized profession, deer populations had been driven to very low numbers mainly as a result of market hunting before 1897 and subsistence hunting that continued thereafter.

Deer in the farmlands were nearly wiped out by 1910, so protecting and restoring deer numbers became the goal for the next several decades.

Remaining deer were mostly in the northern and central forests of Wisconsin. Hunting bag limits were progressively restricted from no limit to two deer in 1897, to one deer in 1909, and then one antlered buck in 1915. Alternate closed seasons took place from 1925 to 1935.

Refuge areas were established and many southern counties were closed to hunting. The Conservation Department (which would become the Wisconsin Department of Natural Resources) was not

formed until 1927, so law enforcement was limited.

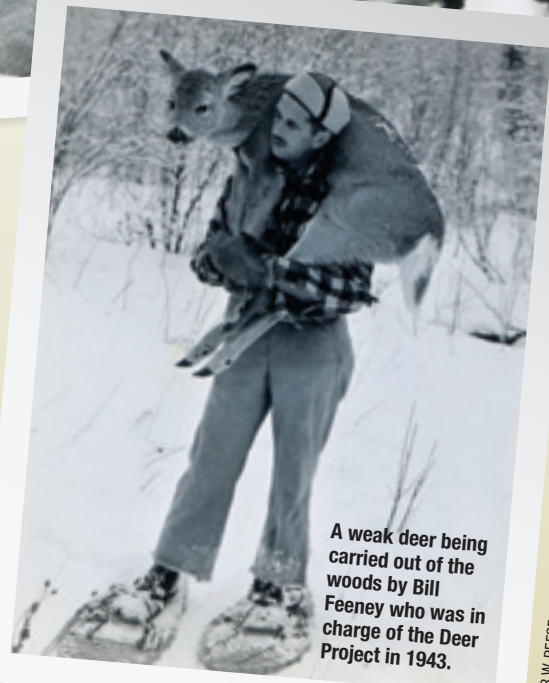
Despite few Department staff to see to its preservation and growth, the deer herd increased in the forested regions. Protection, plus the fact that recent logging and fires had turned most Wisconsin forests into a deer pasture, resulted in rapid herd growth. By the mid-1930s there were reports of winter deer starvation in the north and these reports were common for the next several years.

Efforts to begin estimating deer abundance were started by using Civilian Conservation Corps (CCC) crews to conduct deer drives. Emergency feeding began as there were yet no established deer population goals. The former scarcity of deer apparently had most people still thinking that more deer was better. Talk of herd reduction was fiercely opposed by groups like "Save the Deer Club."

Early research

Deer research began as a recognized

Burt Dahlberg (kneeling left), was a researcher in the DNR's early Deer Project. He and Ralph Guettinger summarized the work of the Deer Project in their classic book in 1956, *The White-tailed Deer in Wisconsin*.



A weak deer being carried out of the woods by Bill Feeney who was in charge of the Deer Project in 1943.

activity in Wisconsin with the hiring of W.S. "Bill" Feeney in 1940 and the initiation of the "Deer Project." Feeney's initial agenda was very ambitious and included studying everything from herd size to habitat conditions, but focused on how winter range conditions affect deer populations.

Findings from the Deer Project with support from the Citizen's Deer Committee, chaired by Aldo Leopold, led to hunting seasons to reduce the herd. The peak all-time deer population in northern Wisconsin likely occurred in fall of 1942 or 1943.

STAGER W. REESE

STAGER W. REESE



STABER W. REESE

Virgil Dickenson addresses a group of citizens who have gathered to discuss deer problems. This photo was taken in 1947 near Fairchild in Clark County.



Checking deer's teeth to estimate deer age at the Sandhill Wildlife Area near Babcock in Wood County in 1970.

DEAN TVEDT

The 1943 split season, which permitted the taking of antlerless deer for the first time since 1914, caused a huge negative public reaction, but was followed again by very generous seasons from 1949 to 1951. Deep snows coincided with these harvests and herds were reduced.

The Deer Project continued even though Feeney left the Department in 1947. The Project documented deer life history and movements, as well as habitat conditions. While recognizing that the forest was changing, the emphasis remained focused on winter range conditions.



STABER W. REESE

A deer browse line in balsam firs in 1943 near Perch Lake, Bayfield County, was evidence of the state's all-time high deer population.

Changing forest and focus

A transition in thinking took place about 1960. Researcher Burt Dahlberg had observed that the carrying capacity, or the amount of deer a given habitat can sustain, in the northern forest was declining. Deer yards had been abused by overabundant deer, but the growth of the forest was also redefining the balance between winter and summer ranges.

The amount of premier summer range was declining as the forest regrew. Sunlight no longer reached the foraging strata for deer. Deer researchers Art Doll and Bill Creed began to think more about the need to study the relationship of upland forest cover types to deer carrying capacity.

At the same time, these investigators were also involved in completing the first

deer plan to include unit-specific deer population goals in 1962. This was a major breakthrough for deer management because goals provided direction for both habitat and harvest management. The Legislature also authorized the Department to prescribe unit-specific antlerless quotas; another breakthrough.

Mandatory harvested deer registration began in 1953 and provided minimum counts that greatly aided in monitoring deer population trends. By 1962, Creed had adapted a population monitoring system, Sex-Age-Kill (SAK), for use in Wisconsin that was based on work done in New York and Michigan. It converted a trend indicator to unit-specific population estimates, and remains the foundation of

our deer monitoring system in Wisconsin today.

A winter severity index developed by Bruce Kohn greatly facilitated predicting herd responses to winter and setting harvest prescriptions. Modern improvements to Creed's and Kohn's models have been added in recent decades by Dr. Robert Rolley.

These developments that began in the early 1960s resulted in Wisconsin being a model for deer population management in North America, a position it has maintained into the 21st century. This is affirmed by the number of times Wisconsin research biologists are invited to contribute to regional symposia and to books on deer management.

Meanwhile, studies that began on



A biologist determines the age of a deer by checking its teeth at a roadside checking station in Stevens Point in 1953.

forest openings led to forest habitat management guidelines for Wisconsin that were also quickly adapted for use by Michigan and Minnesota. These guidelines, and the resulting programs, emphasized the importance of maintaining specific compositions of aspen, oak and grassy openings for the benefit of deer, as well as other wildlife species.

John Kubisiak conducted studies related to deer numbers and habitat at the Sandhill Wildlife Area starting in 1962, and oversaw the celebrated "total removal" hunt in 1972. The enclosed herd enabled verifying methods for determining deer ages and for validating inputs to the SAK population model. A "trophy" buck management demonstration proved both the potential for producing larger antlers, but also the cost of doing so.

Some of the first deer research in southern Wisconsin began in 1976 and was led by C.M. "Chuck" Pils. He documented food habits of deer in south-central Wisconsin and deer population characteristics in Governor Dodge State Park.

New initiatives

Research priorities had been developed primarily by researchers working with wildlife managers to anticipate and define information needs. While this still remains true, stakeholder groups began playing an increasing role in the 1990s. The "Deer

2000" initiative beginning in 1998 involved mainly hunters, and they helped prepare a list of research priorities.

The discovery of chronic wasting disease (CWD) in 2002 changed funding and research priorities in Wisconsin. At one point there were 46 CWD-related research projects in the United States and 34 of those were being conducted in Wisconsin. The vast majority of these studies were being conducted by agencies other than the Department of Natural Resources, but CWD clearly increased competition for staff and research dollars. Ten years into these studies, a lot more is known about CWD.

In 2007, as a result of hunter unrest over deer population management, an outside review of the SAK population model was completed by a panel of internationally renowned experts. Among their findings was a need for empirical data on harvest rates.

About the same time, there was growing concern among the hunting public about wolf recovery, coyote abundance and an upward revision of the bear population estimate. The 2007-08 winter in northeast Wisconsin combined with a



Conservation Department trucks at the Brule Ranger Station loaded with alfalfa hay for deer feeding in spring of 1938.

DEAN TVEDT

EUGENE SANBORN

generous harvest resulted in a significant downswing in deer populations. This change was interpreted by many hunters to be the result of increased predation.

The recent increase in the amount of P-R dollars allocated to Wisconsin enabled funding for the largest deer research project in state history. This project involves radio-tagging large numbers of deer to determine their ultimate fate. Not only will this study document predation rates, but it will also provide hard data on buck harvest rates. The study involves a host of volunteers in addition to DNR staff and will continue through 2014.

Additional studies being developed will seek to quantify the relationship between known numbers of deer and their habitat. Research priorities are dynamic and the DNR looks forward to the next chapter in deer research.

Keith R. McCaffery is a retired white-tailed deer researcher for the Department of Natural Resources and then a volunteer in deer research with 51 years of experience.



Following the signal

What buck mortality tells us about the deer herd.

Closed box trap with deer feeding around it. Drop nets and netted cage traps are also used to capture deer.

Eric Verbeten

Dan Storm is out to solve the mystery of life and death for Wisconsin's bucks. Every year, tens of thousands of bucks are killed in Wisconsin by hunters, predators and vehicles. Storm and his team of deer detectives use techniques such as footprint identification, to figure out what percentages of factors make up the total annual deer kill.

"We know that some deer are harvested by hunters, some get hit by cars, some succumb to predation and others to starvation," says Storm, DNR's lead deer and elk researcher. "What we didn't know was just how important each cause was, relative to the other causes. This study can tell us that. For instance, it's a common belief that predators, especially wolves, kill a substantial percentage of deer in certain areas. With this research, we can



Blindfolding the deer reduces handling stress during collaring and before it is released.

determine whether that belief holds true."

Gathering the mortality data relies on a variety of tools and gadgets, and most importantly, the help of Wisconsin's volunteers. Volunteers often brave the elements to work with researchers to help capture, tag and collar male deer.

The radio collar is an important piece of equipment worn around the deer's neck and is used to alert the DNR team when and where the deer has died. Each week researchers use radio receivers to scan the airwaves to locate a signal from each collar. When the deer has been motionless

for four hours, the collar emits a different signal, known as a "mortality signal." The transmission represents the end of the buck's life, and the beginning of the team's task to understand how it died.

Once on the scene, the deer detectives go to work ruling out causes of death by using clues located on and around the carcass. In the case of suspected predation, footprints, fur, scat and teeth marks indicate the kind of animal that attacked the buck. A number of predators such as coyotes, wolves and bobcats are responsible for killing adult bucks each year.

Each type of predator has its own way of eating its prey. Bobcats, for example, hide their prey in caches. Researchers try to differentiate between deer killed by predators or eaten by scavengers by doing field necropsies to search for the presence of bleeding on tissue.

Given that hunting is an integral part of Wisconsin's culture, Storm and his team are highly interested in understanding the effects hunting has on the deer population each year, along with the other causes of death. This is doubly important as the buck harvest rate is a key input into the SAK population estimate model. Storm encourages hunters to treat radio-collared deer like any other deer they might find while hunting.

"Hunters often wonder if they are allowed to shoot a radio-collared deer, and the answer is, 'Yes!'" says Storm. "With our research, we need the fates of our collared deer to mirror those of the population at large. The best way for that to happen is for hunters to ignore the collar and hunt deer as they normally would."

Anyone harvesting a collared deer is asked to call the number stamped on the ear-tag or collar and report the kill. Radio-collars can be turned in at local registration stations.

Results

Since field work for the buck mortality study began in 2011, the research team and volunteers have helped tag a combined total of over 400 bucks from the northern and eastern study areas. It is still too early for results from the 2013 season, but the 2011 and 2012 seasons have



Over 750 white-tailed deer were ear-tagged and radio-collared across the two study areas between 2011 and 2012. Researchers rely on support from landowners, hunters and volunteers to help capture deer and report mortalities from marked deer.

EMILY ANDERSON/DNR FILE

revealed the following trends:

2011:

- Hunting was the leading cause of mortality for male deer across both the forested northern area and the farmlands of the eastern area.
- In the northern forest, secondary causes of mortality were predation, starvation and poaching.
- In the east, secondary causes of mortality were vehicle collisions followed by wounding loss.

2012:

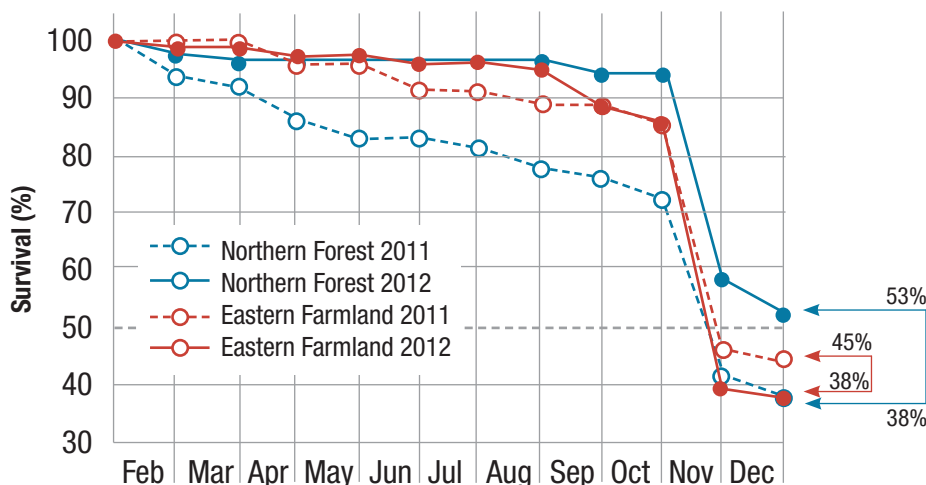
- Hunting was again the leading cause of mortality for male deer in both



DNR FILE

The buck mortality study was designed to provide rigorous estimates of the buck recovery rate and its components (buck survival and cause-specific mortality), and hence increased accuracy of SAK population estimates.

Buck survival

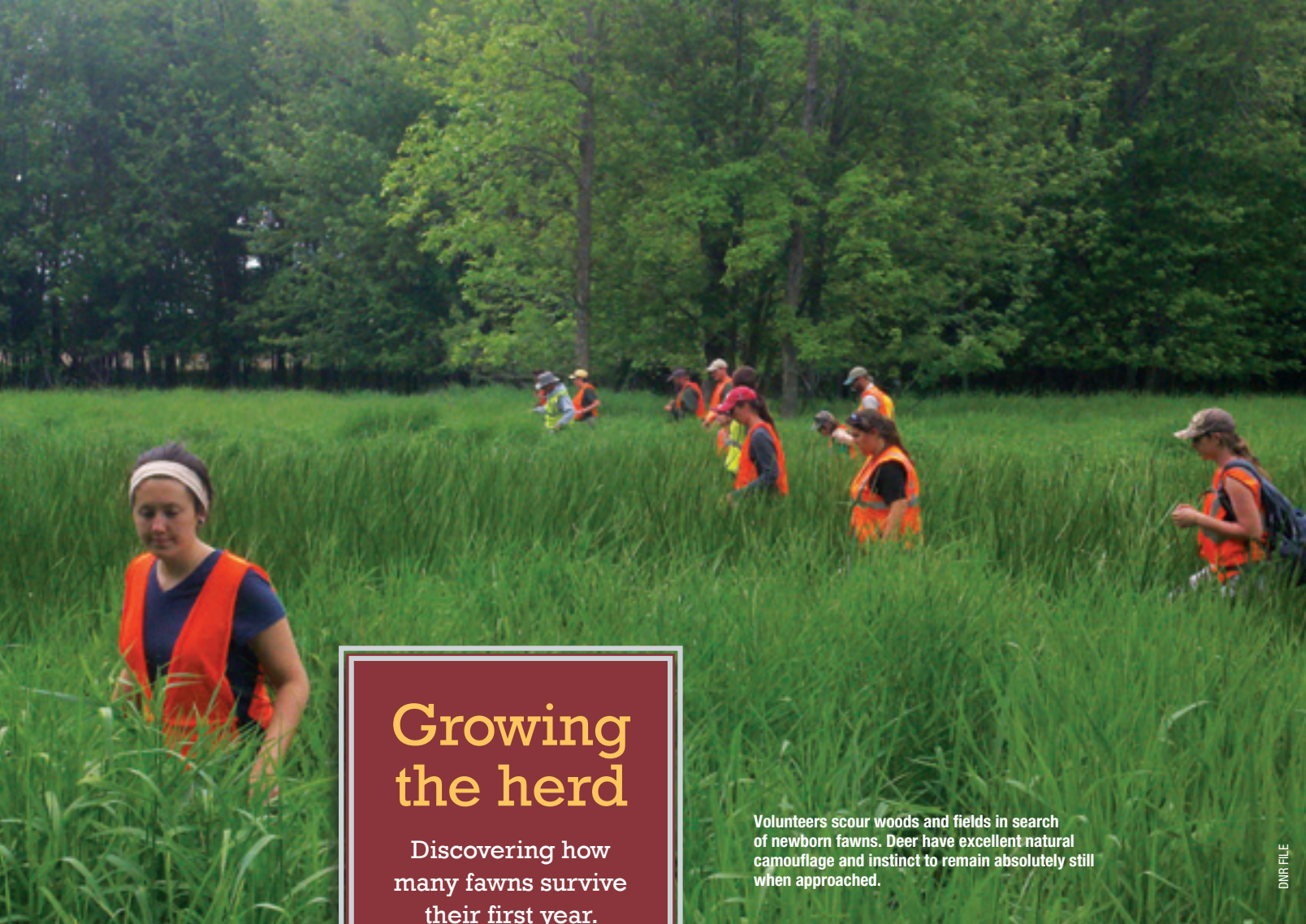


the northern and eastern study areas, followed by predation in the north, and vehicle collisions in the east.

The buck mortality study is currently at the halfway point and will end in 2015. The information learned from this five-year study will ultimately improve the model used by DNR deer management teams to estimate the overall herd population.

"So far the buck mortality study has been a great success thanks to the volunteers and landowners who have helped out," says Storm. "Our team is looking forward to working with them again and seeing what new trends will be revealed as we continue our work."

Eric Verbeten is a communications specialist for the Office of Communications. He covers DNR Science Services research.



Growing the herd

Discovering how many fawns survive their first year.

Volunteers scour woods and fields in search of newborn fawns. Deer have excellent natural camouflage and instinct to remain absolutely still when approached.

DNR FILE

Kathryn A. Kahler

The high schoolers moved quietly through the woods in a line, about 15 or 20 feet apart, eyes scanning the underbrush for any sign of their quarry. All of a sudden, one raised his hand and called out, “Fawn!” The high-schooler was the first of four that Memorial Day weekend in 2012 to spot a fawn as part of DNR’s fawn mortality study.

The group of 30 students from Wisconsin Rapids Lincoln High School has participated in the DNR’s fawn study for three years, and will be sad to see it end.

When DNR researchers began studying the causes of buck and fawn mortality in Wisconsin in 2010, they recruited groups of volunteers like the students



A volunteer releases an ear-tagged fawn.

SCOTT STANKOWSKI

from Wisconsin Rapids. At the time they had little hard evidence of the effect of predation and needed to find newborn fawns so they could track them and find out the cause of death of those that eventually died.

This was crucial to understanding the fawn survival piece of the recruitment puzzle. Deer biologists typically define recruitment as the number of fawns per doe that survive to the hunting season. Knowing the factors that influence recruitment helps DNR researchers understand the causes of deer population change.

Study methods

Researchers used two methods to find fawns. One was to comb likely habitats in late-May and early-June with teams of volunteers, searching for the tell-tale spots hidden motionless among the grass.

To counter this needle-and-haystack challenge, they got a bit of help from technology. During winter captures, when researchers were focusing on trapping and radio-collaring bucks that they could monitor throughout the year, they also captured females which they tranquilized and blindfolded. The does were then scanned with a portable ultrasound to see if they were pregnant, and if so, were fitted with a radio collar and vaginal implant transmitter. The radio collars helped locate the does if they died so researchers could determine the cause of death. The vaginal implant transmitters were pushed out when fawns were born, helping locate them in the field.

Once found, newborn fawns were blindfolded, ear-tagged and fitted with radio collars designed to fall off as the fawns grew. Researchers recorded information about each fawn — weight, sex, age — and other incidental and environmental factors that could help the overall study. They paid attention to factors such as how the fawn behaved while it was handled, the vegetation at the bedsit and how close it was to habitat edge or water. These factors would help determine the fawn's nutritional condition and its risk for predation.

After fawns were collared, their movements were tracked through August using aerial and ground telemetry. Just like the adult deer, a mortality signal alerted researchers to a potential fawn death, and an investigation proceeded.



Vaginal implant transmitters are used to track pregnant deer.

DNR FILE



Investigating predator signs gives clues to potential predators.

DNR FILE



Checking a fawn for overall health.

DNR FILE



Does captured during winter trapping were scanned with a portable ultrasound, and if pregnant, fitted with collars and vaginal implant transmitters to help locate their fawns in the spring.

DNR FILE



Fawns are fitted with expandable mortality-sensing radio collars and ear-tagged with individually identifiable metal ear tags.

DNR FILE

View a video of a Wisconsin fawn study in progress at youtu.be/3vMGw20wPaQ

What researchers learned

In general, the researchers found:

- Most fawns were born during late-May in both study areas, typically around Memorial Day weekend.
- 228 newborn fawns — 89 in the north and 139 in the east-central area — were radio-collared and ear-tagged.
- Eastern farmland survival for the first three months was 58% in 2011, 62% in 2012 and 59% 2013.
- Northern forest survival was 22% in 2011, 52% in 2012 and 42% in 2013.
- Leading sources of mortality in the north were predation by black bear, canids and bobcat.
- Leading sources of mortality in the east were starvation followed by coyote predation.

What students learned

Besides the rare experience of getting to find a newborn fawn in the wild, the students who volunteer to help with the study are surprised to learn how most of the fawns died. That changes a lot of perceptions and opinions for the students who participate and is a lesson that will stick with them for a long time.

Kathryn A. Kahler is an editorial writer for Wisconsin Natural Resources magazine.



A graduate student uses a receiver to track a collared deer.

DNR FILE

Fawn mortality factors

Of the 228 newborn fawns radio-collared, the breakdown of how they died is shown in the following graphs:



BENJAMIN PIERSON

Creating citizen scientists

Volunteers are key to deer research success.

Robert Manwell

Our volunteer “citizen scientists” have become invaluable given the growing size of research projects and increasing costs for wildlife and habitat management. Science is a foundation of modern wildlife management and the deer research project has relied heavily on volunteers to capture, collar and ear-tag adult and new-born deer.

Jim Binder is one of those volunteers. Although he majored in environmental science and wildlife biology in college, he’s a state trooper in his “day job.” He is also a landowner who has opened his land to DNR researchers.

“What is really interesting to me is how, by collaring or ear-tagging deer on my land, I’ve learned so much more about

To date over 1,000 volunteers have assisted with deer capture efforts, more than 175 landowners have graciously granted the Department access to their properties.



DNR FILE

DNR researchers and volunteers weigh a fawn. Interested in volunteering? Contact Dan Storm at Daniel.J.Storm@wisconsin.gov.

DNR FILE



DNR FILE

If you are interested in volunteering as a citizen scientist or have any questions or comments please visit: dnr.wi.gov and search "deer research."



DNR FILE

Wisconsin deer research volunteers are joined by volunteers from Minnesota, Illinois, Michigan and Indiana.

their behavior and habits," said Binder. "It's stuff I've read about or learned in school, but this really brings it home."

Binder is also not shy about sending some praise in the direction of the limited term employees (LTEs) and interns working on the project.

"The interns and LTEs working on this project are amazing. The energy and enthusiasm they bring to this job, which let's be truthful here, is hard work that will leave you dirty and dog-tired after a half day, but these youngsters go at it eight to 10 hours, day after day, during fawning season."

The project has also generated opportunities for students and teachers.

Scott Stankowski is a high school science teacher and an avid outdoorsman. He and his sons first volunteered in the fawn study and after his first day, he knew he wanted to bring his students out.

"It was way more than what I expected. I never expected the Department of Natural Resources to be so open and so willing to share everything about what they were doing with the project. I thought maybe I'd be allowed to watch and ask some

questions. I never thought that as a volunteer my students and I would be involved at such a hands-on level. This is truly a once-in-a-lifetime opportunity.

"Like the first time a DNR researcher and I were the only ones in the blind, in winter, and we'd just dropped the net over two deer that'd walked in. We jumped out of the blind, ran to the net and I wrestled an adult deer to the ground...how many people can say they've done that? And in the spring, catching a days-old fawn with my hands; it was amazing! I was struck by the contrast between the strength and toughness of the adults and the delicate fawns."

As an educator, Stankowski says this is one of the most unique educational opportunities he's ever been able to use in his teaching.

"I've taken several of my classes out to work on the project. It's tough and tiring, but the kids are learning so much and it is such a unique education experience,



DNR FILE

Wearing protective gear is a good idea in case a captured deer gets jumpy.

so out of the realm of most other educational environments, that as an educator I couldn't pass it up.

"It is amazing to watch how this experience opens kids' eyes to nature and resource management. It engages multiple senses and leaves them with happy memories. It's likely that most will never, ever handle a live whitetail again in their lives. I had one girl who pretty much said 'ick' to everything in my classroom, but once in the field, she handled deer and snakes and loved it. Another said, 'You know, Mr. S., if you didn't take me on this kind of thing I would never get outdoors.'"

Robert Manwell is a public affairs manager for the Wisconsin Department of Natural Resources. He works in Fitchburg.

Partnering with passion

Thanks for your
continued support.

Dan Storm

The research projects highlighted in this publication have allowed scores of volunteers to have similar experiences to people like Jim Binder and Scott Stankowski and his students.

Over 1,000 volunteers have joined DNR researchers in either winter capture for adult deer or spring fawn captures. These volunteer opportunities not only represent a unique chance for “civilians” to participate in research, they provide crucial manpower which allows the Department of Natural Resources to collect more data at a lower cost than would be possible relying on DNR staff alone.

These projects simply wouldn't be possible without significant public participation. In some ways, the buck and fawn survival projects represent a new way of doing deer research in Wisconsin; one that emphasizes partnering with our passionate and dedicated public to accomplish great things.

So what's on the horizon for deer research in Wisconsin?

Last spring, in an effort to better understand deer health and reproduction, the Department of Natural Resources began a project in which researchers assess the fat reserves of does killed by cars and the number of fetuses those does were carrying.

Admittedly, though, public involvement may not work as well for this project since it involves the messy work of cutting into road-killed deer.



DNR FILE

Since discovering chronic wasting disease (CWD) in the state, the Department of Natural Resources has been actively testing for it. Test results are important for understanding changes in CWD transmission and prevalence rates and the effectiveness of management efforts.

But a project that Wisconsinites will be heavily involved with is a statewide wildlife survey using trail cameras. Across the state, volunteers will deploy trail cameras to document all manner of wildlife. With regards to deer, this effort may provide additional data on fawn recruitment as well as distribution and abundance of predators.

Lastly, we hope to expand our buck and fawn mortality studies to different parts of the state, possibly where chronic wasting disease is most common. This could help us learn about how the disease is impacting deer survival and reproduction.

As the Wisconsin Department of Natural Resources embarks on new research projects, we continue to address critical information gaps and strive for a better understanding of deer populations



DNR FILE

The Department of Natural Resources is encouraging all interested hunters and citizens to get involved in trapping, handling and tracking deer by volunteering with DNR researchers in capturing and collaring deer. The Department also needs hunters to participate in searching for fawns and placing radio collars on them.

and their interactions with the plant, animal and human communities to which they are inextricably linked.

The common denominator of these studies is to include Wisconsinites whenever and however we can. Thanks for your continued support!

Dan Storm is DNR's lead deer and elk researcher.



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