

## SUMMARY REPORT

1967 Great Lakes Deer Group Meeting - Wisconsin Rapids, Wisconsin - September 19-21

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This summary is based primarily on notes taken during the meeting by Mr. Patrick Karns of the Minnesota Department of Conservation. We greatly appreciate his willingness to share them with us.

In lieu of a formal business session at this meeting, J. Hale of Wisconsin, acting as chairman, had individual discussions with M. Stenlund of Minnesota, D. Arnold of Michigan, R. Hepburn of Ontario and F. Stearns of the U. S. Forest Service regarding the timing of future Group meetings. We were agreed that the functions and obligations of the Group could be adequately met by changing from an annual to a biennial meeting. The arrangement of consistently productive programs for annual meetings is becoming more difficult with the passage of the years. At the same time, much greater use of the mails can be made between Group meetings to keep participants informed of significant developments in their respective agencies. Because of these factors, we suggest that Ontario, the next Group meeting host, plan for a late-summer date in 1969.

### The 1967 Program Committee

James B. Hale, Chairman  
William A. Creed  
George F. Hartman  
Forest W. Stearns

#### EVENING SESSION @ The Mead Inn, Tuesday, September 19

Messrs. John F. Kubisiak, Clarence F. Smith and Benjamin W. Hubbard of the Wisconsin Division of Conservation reviewed the characteristics of central Wisconsin deer range and the Division's management and research programs for forest game species in this area.

#### MORNING SESSION @ The Mead Inn, Wednesday, September 20

#### Report on Activities of the Northeast Deer Group - David A. Arnold (Michigan Department of Conservation)

The Northeast Deer Group 1967 meeting was centered around the work being done with the captive deer herd at Penn State. Workers here have found that deer have the ability to store phosphorous in bones and draw upon this reserve as necessary, i.e. antler growth. They have tamed deer to use in the field as "lead" deer in determining summer food habits.

For handling deer, they regularly use succinylcholine chloride administered at the rate of 5 ugm. per hundredweight. They have developed a new dart of polyethylene for drug delivery that is more effective than those currently on the market.

The Group is currently undertaking a project to compile a handbook of noncommercial woody plants as an aid to land managers. It will be somewhat similar to the publication for the southeastern states put out by the U. S. Forest Service. A previous project of the Group was a study of the deer aging techniques used in the northeast and a standardization of these techniques.

Anticipated Changes in Central Wisconsin's Forest Resources - John W. Macon  
(Consolidated Papers, Inc.)

There is too much provincialism and specialization (foresters, game managers, etc.) in today's management of natural resources which is out of context with total resource management.

A 300% increase in the demand for pulpwood is anticipated. More emphasis is being placed on "home grown" pulp. In many cases, wood that was formerly of no commercial value is being used by local mills.

Changes are occurring in land use. Currently 80% of the forest lands of central Wisconsin are in private ownership which is often fragmented, making forest management difficult. The acreage of forest lands are declining as a result of increased agriculture, particularly on sandy soils which are being cleared and irrigated of increased grazing activity after the merchantable timber in farm woodlots is removed and of development of private and public recreation facilities.

Of primary interest to the pulp-using companies of the area are aspen and jack pine, the temporary species. The private landowner has little desire to practice management of this forest type.

Oak comprises the largest single type in this area. It is being high-graded for sawlogs and heavy pulp cutting is resulting in poorly stocked stands. Grazing of these areas after logging is increasing, and it is anticipated that 20-30% of these woodlots will be converted to pasture after logging. Oak wilt is currently a serious problem in this type.

The natural pine in this area of Wisconsin is jack pine, with some interspersion of white and red pines. As for jack pine, it is generally being cut at a poor time to insure natural regeneration. Present-day knowledge is sufficient for regenerating jack pine naturally. Of the 250,000 acres of pine plantation in this area, some 150,000 will eventually be available for commercial cutting. Considerable damage by deer to jack pine plantations and natural regeneration is now occurring.

Aspen growing on wet soggy sites must be clean cut when it is about 30 years old. Beyond this, the aspen deteriorate rapidly with no reproduction, the area going to grasses.

Discussion:

J. Hale (Wis.) - What about the use of fire by industry as a forest management tool?

Macon - Fire is a real possibility in managing the temporary types as aspen and jack pine; however, industry is not using it out of fear.

E. Collins (Necedah N.W.R.) - We are currently burning at a cost of 18¢/A.

T. Fairbanks (Mich.) - What is your company doing to perpetuate a pulp supply from private lands?

Macon - Nothing in comparison to the industry in Michigan. Some companies do give a bonus for wood taken off lands covered by a forest management plan. The competition for wood is keen here in central Wisconsin. Our research has also shown that the average black spruce rotation in northern Minnesota is longer than the life expectancy of a corporation.

Deer Hunting and Management on the Necedah National Wildlife Refuge - Ed Collins  
(Refuge Manager, U. S. Bureau of Sport Fisheries and Wildlife)

The Necedah Wildlife Refuge was established in 1939 with its primary purpose to serve as a waterfowl refuge. There are approximately 40,000 acres in the unit. The area which is now Necedah was a part of glacial Lake Wisconsin. At the time of settlement, sharptails and prairie chicken were abundant and deer were absent. In 1939, six deer per square mile were present or about 300 total animals. By 1940, there were 750 deer; 1942 - 2,000 and 1945 - 4,000 deer. Bow hunting proved to be an ineffective control; 2,000 bow hunters taking 46 deer in 1945. In 1946, the herd was estimated at 7,000 deer and 2,226 gun hunters harvested 1,636 deer for a success rate of 74%. Twenty-four percent of the 3,000 archers were successful in 1946. This hunt in 1946 served to bring the herd under control and the range has since recovered. Since 1945, 13,325 deer have been taken from the Necedah Wildlife Refuge. The current deer population is approximately 40 deer per square mile. The annual harvest now averages about 700 deer, 250-400 of these being taken by archers. The area is hunted in conformance with state law, which is usually a 9-day firearms season under the variable quota system and a three-month archery season.

The problems brought on by the hunter are generally greater than those posed by the animal. Some of the hunter-caused problems are littering, lack of respect for signs and boundaries, stealing of posts, disorderly conduct, inadequate equipment (particularly on the part of bow hunters using underpowered equipment), molesting of waterfowl and unsportsmanlike conduct. On opening day of the late bow season, approximately 6,000 hunters are present. This drops to 1,000 on the second day and 100-200 per day for the rest of the season. The crippling loss by bow hunters is approximately 30% of the legal harvest.

Current management is waterfowl oriented and 3,000 to 10,000 acres are being burned annually. The burning is done in periods of high burning indices and we have experienced no trouble with fires getting out of control. When burning in slash left by a logging operation, one fall burn does the work of three spring burns. I feel this acreage conversion from woods to open grassland will reduce our deer herd and its attendant problems.

Discussion:

J. Byelich (Mich.) - What is the effect of the high deer population on the waterfowl habitat?

Collins - I really don't know. Our best deer habitat is on the poorer waterfowl areas. The deer don't appear to be opening up these areas.

Present Systems of Harvest Management - A panel discussion led by D. A. Arnold  
(Michigan Department of Conservation)

Milt Stanlund - Minnesota Department of Conservation - We are limited by law to a season of no longer than nine days between the first to the twenty-first of November. By policy, it opens on a Saturday and we must take the latest Saturday possible. Any deer is legal in Minnesota. Our basic management tool is zoning of the state and regulating the season and firearms. The season varies from 1 to 9 days by zone and firearms are restricted in the southern areas to shotguns with a single slug. These zones vary somewhat on a yearly basis.

The basic 9-day season is the rule for all of the 7 northern counties and portions of others lying in the coniferous forest area of the state. About 80% of the deer are killed in this 9-day zone.

Deer license sales are increasing and are predicted to increase over the next few years. With this anticipated increase in deer hunting, management problems are expected.

George Hartman - Wisconsin Division of Conservation - The firearms seasons vary from 3 to 9 days. Basically it is a bucks-only season with antlerless permits issued to parties under our variable quota system. Fifty percent of these party permits are sold locally on a first come, first served basis, the other 50% being distributed from Madison. A drawing is conducted for oversubscribed areas. Undersubscribed areas generally occur in northwestern Wisconsin and along Lake Superior. Currently the minimum party size is four that can apply for an antlerless permit; we would like to reduce this to 2. Most deer taken under permit are taken home and divided amongst the hunters. Actually it is an outgrowth of Michigan's old camp deer law.

Under an any-deer law, we could expect 80-100 deer hunters per square mile in east central Wisconsin. Under such conditions, the quality of the hunt would be lost and we are avoiding it.

Deer hunting license receipts amount to 3 million dollars annually.

Population estimates are based on the sex and age composition of the registered kill and spring pellet counts. Each of the management units is surveyed at least once every five years. These data provide us with the basis for our management.

All deer shot must be registered at an official station. Last season there were 406 such registration points in the state, about 75% of these being private cooperators. These cooperators are paid at the rate of 10¢ per deer or \$10, whichever is the most. It is a costly system, but we feel it is very good. Non-registration is not a problem.

Permitted animal-damage claims were extended to include Christmas trees by the last session of legislature. These trees have a high stumpage value and problems are forthcoming if this law is not changed.

Dave Arnold - Michigan - Basically Michigan has a one-buck season with "specials." The firearms season is 16 days long, opening on November 18 this year. Next year we will go back to the November 15 opening for both peninsulas.

We use an area and quota system to hunt antlerless deer. These are changed annually to meet changing needs. Under our law, antlerless deer seasons may be conducted in areas with a food shortage, where there is damage to agricultural crops or where deer present a highway hazard.

About 600,000 hunters participate in the deer hunt. Two-thirds of the hunters live in the lower one-third of the state and hunt in the northern two-thirds. This presents some problems in distributing the hunter as they can hunt bucks anywhere.

The antlerless season is concurrent with the regular season. Enforcement problems are negligible.

We would like to open the deer season on some of the islands in the Great Lakes to more than one deer per hunter. Current laws prohibit this.

Harold Cumming - Ontario Department of Lands and Forests - The frequency of hard winters, not hunting, is the controlling factor of deer populations in Ontario. Based on this premise, we have tended to liberalize our seasons.

A continuing program of deer habitat management is being initiated in Ontario. It is intended to spend \$300,000 annually for the next ten years for the improvement of deer wintering areas.

An overall success rate of 20-25% is experienced by deer hunters. Approximately 140,000 deer licenses are sold annually. The use of dogs to hunt deer is permissible. Current moose kill is 15,000 animals annually.

Deer hunter success in percent for three districts is as follows:

<u>District</u>	<u>1965</u>	<u>1966</u>
Fort Francis	49	44
Kenora	48	43
Sioux Lookout	48	14

Discussion:

R. Hepburn (Ontario) - Why does the Wisconsin public like registration?

Hartman - For one thing, it gives the successful hunter a chance to show off. It's surprising the number of unsuccessful hunters that show up at the checking stations to view the proceedings and provide inter-hunter communications. It also gives Department personnel a chance to talk with hunters. The effort required on the part of the hunter to register his deer is minimal. It provides a provable minimum kill figure.

AFTERNOON FIELD TRIP, Wednesday, September 20, to the Sandhill Wildlife Demonstration Area and Meadow Valley Wildlife Area of the Wisconsin Conservation Division.

EVENING SESSION @ The Mead Inn, Wednesday, September 20

Recent Research on Deer Diseases and Parasites - Dr. Daniel O. Trainer (Department of Veterinary Science, University of Wisconsin)

Eighty percent of the deer parasites found on autopsy were found as eggs or larvae in feces. This formed a base for a parasite survey of deer in Wisconsin in which fieldmen collected pellet samples while doing routine pellet counts. Two new parasites of deer were found for Wisconsin; the meninges worm P. tenuis, and the thread-necked worm Nemotodirus sp.

Causes of fawn mortality are being studied at the Welder Wildlife Foundation in Texas. A total of 150 fawns were radio-collared over a three-year period. It was previously known that 70-80% of the fawns die before September of the year of their birth. Of 81 carcasses necropsied, the major mortality factor was predation by coyotes. Disease in the fawns generally was not a predisposing factor for predation; they were killed as healthy animals. Of minor importance as causes of death were Salmonella, abandonment by the doe, and abscesses of undetermined etiology. It was found that most mortality takes place within three weeks after birth.

Orientation for Thursday's Field Trip - Robert F. Wendt and John Berkahn (Wisconsin Division of Conservation)

MORNING SESSION @ The Mead Inn, Thursday, September 20

Selling Deer Management at the District Level - A panel discussion led by Clifford Wiita (Wisconsin Conservation Division)

1) What emphasis is to be placed on selling deer management?

Wisconsin - C. Wiita - In Wisconsin, the District Game Manager is responsible for arriving at quota figures for the harvest and is charged with the success of the deer management program. In essence, he is the main line of offense in deer management.

Michigan - T. Fairbanks (Michigan Department of Conservation) - Districts are the key points in selling deer management. The local public attitudes are determined by the activity of local District personnel and these people are responsible for making the deer management recommendations.

Ontario - D. Johnston (Ontario Department of Lands and Forests) - The southern deer range below the Precambrian shield of the Province also includes 95% of our human population. The district personnel here have to deal with County Councils in setting seasons. The emphasis is on the district to sell deer management rather than from the Toronto office.

Summary: Districts do carry the ball in deer management and program selling.

2) What tools are needed for management?

W. Wisconsin - C. Wiita - A solid basic management plan based on research and field data is needed and this must be presented to and have the support of all Department personnel. A graduated approach is needed in selling deer management as few people can readily digest the whole thing. The fact that we are implying control in the quota system may work psychologically to help sell our program.

Minnesota - V. Gunvalson (Minnesota Department of Conservation) - Greater flexibility is needed in laws for adequate deer management. In general, Minnesota has done little. Most effective tool is stumping the state and selling management. Everyone must sell on a district level.

S. Wisconsin - D. Owen (Wisconsin Conservation Division) - In selling, keep it simple. Visual aids, enthusiasm, repetition and simplicity are important in a selling program. "Show and tell and sell like hell."

Michigan - T. Fairbanks - The ability to transmit new ideas, research and management is important. The best tool is the ability to pick out the best route to get the story across in an understandable manner.

Ontario - D. Johnston - There are three basic needs to sell a deer season in an agricultural area:

- a) Accurate population data to convince people of need for management.
- b) An excellent public relations program. We have sold forest protection by talking to the people at their own level. The same should be done with deer management.
- c) A strong, well informed field staff is a must. Unfortunately, this segment often is not up to the technical level they should be.

3) What personalities become involved in selling deer?

W. Wisconsin - C. Wiita - Take 'em as they come. Loggers are key people in the north, particularly during the winter, and contact with Department personnel can be extremely important.

Minnesota - V. Gunvalson - You have a problem of changing attitudes which is particularly acute with the group known as the "chronic know-nothings."

S. Wisconsin - D. Owen - Only about 10% of the licensed hunters show up at the Conservation Congress meetings and they usually have an axe to grind.

Ontario - D. Johnston - Don't try to reason things out with people who have their minds made up, because the original information wasn't "reasoned in." Landowners often have a fear of property damage, caused by hunters.

Deer Behavior Research Based on Telemetry; Status Reports and Management Implications - A panel discussion led by John R. Tester (Museum of Natural History, University of Minnesota)

Orrin J. Rongstad (University of Wisconsin) - The Cedar Creek Natural History Area of east central Minnesota has a 250-300 acre area of cedar which serves as a wintering area for deer. During the winter of 1964-65, during which deep snows persisted, deer activity was related to the cedar as determined by radiotracking. During this winter, the home ranges of the deer decreased as the winter progressed. In December, 50% of the deer activity was related to the cedar area; this became 70% in February and March. The deer remained in the cedar area until the snow left the open fields in late April.

The majority of the deer tagged at Cedar Creek are killed within a ten-mile radius of the area.

Gene G. Montgomery (University of Minnesota) - Radiotelemetry equipment used on a deer study in southern Illinois had a range of 9 miles. At this range, however, accuracy was poor. The optimum range for this gear was 3 to 7 miles. Theoretical battery life of the transmitter was 18 months, the actual average life was 3½ months and many failed within 2 to 3 weeks.

It didn't appear as though deer movements were influenced by the 6-day Illinois deer hunting season. Deer hunter density was approximately 10 per square mile.

Robert Hawkins (Illinois Natural History Survey) - Thirty-five deer were translocated to the Illinois study area from 6 and 25 miles away. Of these deer 65% died or were killed within 173 days after transfer.

Daily activity of the translocated deer was less than 7,000 feet from the release site in any given direction. A portion of the translocated deer never did stabilize in an area. Two translocated deer returned to the capture site, one 6 air miles and the other 25 air miles.

Twenty-three deer were released at the same site. They moved in all directions until suitable habitat was found. As available niches became filled, the deer released at a later date had to move farther to find unoccupied habitat. Fifty-four percent of the adult females, no adult males, 100 percent of the female fawns and 50 percent of the male fawns remained in the vicinity of the release site. Does near parturition tended to stay in the vicinity of the release site. The released deer did not associate with the native deer.

Deer transplanted more than 25 miles tended to remain at or near the release site.

A Planner Looks at Deer Management - Stanley G. DeBoer (Wisconsin Conservation Division)

A few predictions regarding Wisconsin deer for the year 2000:

- 1) Economics and not biology will manage deer in Wisconsin.
- 2) Gun hunters will increase 50% to 730-760 thousand. Bow hunters will increase over 200%.
- 3) We will be paying forest owners to retain land for hunting, perhaps by a

dollar surtax on the license.

- 4) Hunting by the landowner will be permitted on a year-round basis.
- 5) Hunting season operations will consist of service and not surveillance.
- 6) There will be no forasters; they will be replaced by property or resource managers.
- 7) There will be deer shooting preserves and public deer hunting areas, primarily in the southern part of the state.

A new deer management program is due for every management compartment within the next three years, and these must be specific acre by acre plans integrated with other land uses. These plans will need a "we will do" attitude rather than a "we should do."

On the part of the biologist, he will have to be brave and convince his administrators. There is also a need to develop some rules of thumb that can be used by the man on the street; i.e. Bill Creed's multiplying the buck kill by 8 to establish the deer population for certain areas.

The resource planner will have to look at who is paying the bill. The benefits derived from deer affect each part of society and must be assessed accordingly, perhaps through general taxation or a surtax. Dedicated funds are probably necessary to insure constant revenue.

AFTERNOON FIELD TRIP, Thursday, September 21, to the Mead Wildlife Area of the Wisconsin Conservation Division.

ADJOURNMENT.

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Creed

Attendance List  
1967 Great Lakes Deer Group Meeting  
Wisconsin Rapids, Wisconsin

MICHIGAN

David A. Arnold  
Ralph E. Bailey  
John Byelich  
Ted Fairbanks  
Dale McCullough

Louis J. Verme

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Dept. of Conservation, Regional Office, Marquette 49855  
Game Division, Dept. of Conservation, Lansing 48926  
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MINNESOTA

Arthur Eustis

Vernon Gunvalson  
Pat Karns

Dick Mackie

Lester T. Magnus  
Gene G. Montgomery

John J. Mooty, Jr.

James Peek

Milt Stenlund

John R. Tester

Henry Wulf

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ONTARIO

Harold Cumming  
Robin Hepburn  
Don R. Johnston  
Peter C. Smith

Department of Lands & Forests, Maple  
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Department of Lands & Forests, Hespeler  
Department of Lands & Forests, Maple

WISCONSIN

Ray K. Anderson

Ed Collins  
Don Hagar  
Howard Lipke  
John W. Macon  
Herman F. Olson  
Orrin J. Rongstad

Howard Sheldon  
Forest Stearns  
Daniel O. Trainer

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Stanley G. DeBoer	Box 450, Madison 53701
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Edward J. Frank	Route 2, Madison 53713
John M. Gates	Route 2, Madison 53713
Frank Haberland	Box 309, Spooner 54801
James B. Hale	Route 2, Madison 53713
F. N. Hamerstrom, Jr.	Plainfield 54966
Frances Hamerstrom	Plainfield 54966
George F. Hartman	Box 450, Madison 53701
Ben Hubbard	Sandhill Wildlife Area, Babcock 54413
John F. Kubisiak	Box 121, Babcock 54413
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Harry Stroebe	Route 2, Madison 53713
Donald R. Thompson	Route 2, Madison 53713
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ILLINOIS

Robert Hawkins

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