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MINUTES

1963 GREAT LAKES DEER GROUP MEETING
TREES FOR TOMORROW CAMP, EAGLE RIVER, WISCONSIN

September 17, - Tuesday Evening Discussion Session

35 people signed the attendance roster, a copy of which is attached. Handouts were provided by each state and province on results of 1962 hunting seasons and 1963 regulations.

1. THE WISCONSIN DEER MANAGEMENT PROGRAM - Arthur D. Doll, Wisconsin Conservation Department.

As a demonstration of an approach used by the Wisconsin Conservation Department to sell the current deer management program to the public, the standard slide-illustrated lecture and discussion used by Department personnel was presented. This included some principles of deer ecology, hunting-season histories, and recommendations for future herd management and harvest quotas. The first major step toward the management goal of a sustained statewide harvest of 70,000 to 100,000 deer annually will be taken during the 1963 season with the authorization of 5,600 party permits. Each permit will allow its holder to take one deer of either sex in one of five quota areas in addition to the regular deer bag limit.

September 18 - Wednesday Morning Discussion Session

1. THE EFFECT OF NATURAL AND STIMULATED BROWSING ON MOUNTAIN MAPLE - Milton Stenlund, Minnesota Conservation Department, and Larry Krefting, U.S. Fish & Wildlife Service.

Mountain maple is an important deer food in the Lakes States. Our study was designed to determine the "browsing-tolerance" point of maple. The first part consisted of measuring annual browse production and subsequent removal by deer browsing from 48 clumps of maple for 11 years. Although browse production increased and decreased as browse removal increased and decreased in 9 of 11 years, there was no apparent significant relationship between browsing intensity and amount of regrowth. The second and third parts of our study consisted of an evaluation of two fenced areas, each enclosing 28 clumps of maple which were subjected to various intensities of hand clipping ranging from 20% to 100% of annual growth. Again, there was no significant relationship between browsing intensity and regrowth. Browsing is not a dominant factor affecting regrowth of mountain maple.

2. MISSOURI DEER POPULATIONS AND PROBLEMS - Dean A. Murphy and George P. Dellinger, Missouri Conservation Commission.

Missouri had good deer populations in the early days up to 1890, but they declined to a low in the 1920s. From 1935 to 1957, 2,300 deer were transplanted throughout the state. By 1960, deer were found in all counties except the ex-

treme southeast. Over-populations have occurred only on refuges. Recent gun harvests on refuges ranged from 16 to 99 deer per square mile in the first year of hunting. Deer occupy a wide variety of habitats, from open prairie and cotton country to the Ozark Mountains which are 90% wooded. There are no snow problems; may have four 4-inch falls per winter. There is no winter range as such. Mast is the big fall and winter food; also greens such as forb rosettes. Woody plants are browsed when mast is short. In the River Border and Prairie habitat types, farm crops make up 1/3 of the deer diet; in the Ozarks, crops 5% and oak mast and browse are 50%. Ozark deer are smaller than in the rest of the state. The first any-deer season was in 1951 in 15 counties. Seasons and harvests have been expanding since. In the 1940s, about 1,000 bucks per year were shot. North to south through the state, the ratio of fawns per 100 does varies from 114 to 153. From ovulation checks, fawn breeding varies from 32% to 73% from north to south. Even on the Drury Refuge with more than 100 deer per square mile, deer were not killing any of the preferred browse species, which included 3 species of sumac, pine, red cedar, coralberry, poison ivy, blueberry and sassafras. In 1962 there were 92 any-deer counties, almost the entire state. The remaining counties were open to buck hunting. 1962 kill was 16,000. Hunting success in 1951 was 20%; in 1962, 19%. Archers took 270 deer in 1962. Missouri has a hunter-distribution problem. Deer may be overharvested in central areas where hunting success is dropping off. (Murphy).

The Missouri Commission has a cooperative management agreement with the U.S. Forest Service. Trespass grazing is a major problem, although it is decreasing. The habitat management program is aimed mainly at turkeys, which is one of the reasons why deer on refuges were heavily hunted. Water holes for turkeys are being built. An attempt is being made to convert the forest type from oak to pine in many areas to get more wood products and deer forage. (Dellinger).

3. DISEASES OF WISCONSIN DEER - Daniel O. Trainer, Jr., University of Wisconsin.

A cooperative program between the Department of Veterinary Science of the University of Wisconsin and the Wisconsin Conservation Department is attempting to determine what deer diseases are present in the state, how prevalent they are, and how important they are. Three approaches are being used: a diagnostic service for field personnel, a serological survey, and evaluation studies of specific diseases. A series of slides on deer diseases and parasites found in Wisconsin was shown. Special caution was advised against using "fluffy face" or red bone marrow alone as diagnostic of starvation. These symptoms may have several other causes.

4. PANEL DISCUSSION ON PUBLIC RELATIONS PROBLEMS - Ilo H. Bartlett, Michigan Department of Conservation; B. A. Fashingbauer, Minnesota Conservation Department; Blair Dawson, Ontario Department of Lands and Forests; Arthur D. Doll, Wisconsin Conservation Department.

Each panel member described the program and problems in his state or province. Mr. Bartlett's write-up for Michigan is attached. Several common needs and successes in public relations were brought out by the panel.

Successes -

1. Long-term changes toward more understanding by the public of deer problems.
2. Use of news releases, television, and radio to reach the public.
3. Effectiveness of public presentations with a local slant by local personnel.
4. At least partial success with "show-me" trips and workshops.

Needs -

1. Convert legislative opinions; too often pronouncements and actions by individual legislators represent their personal opinions rather than their constituents.
2. Unify the methods, materials, and opinions used by Department personnel in public contacts. The public only gets confused when each Department man is telling a different story.
3. Keep public contacts on a local level as much as possible. Local personnel can influence local opinion much better than main-office people or strangers.
4. Recognize that public opinion can't be changed overnight.
5. Evaluate the effectiveness of existing programs.
6. Contact more of that large group of people who have no opinions at present.

September 18 - Wednesday Afternoon Field Trip

To the Argonne Experimental Forest, a unit of the Nicolet National Forest. John Cooley and Forest Stearns of the Lake States Forest Experiment Station demonstrated and described their browse production studies in northern hardwood and swamp conifer types. Natural and managed openings for wildlife in the Forest were also observed. Browse studies were outlined in the summary sheet provided in the field by Mr. Stearns.

September 19 - Thursday Morning Discussion Session

1. DEER USE ON THE ARGONNE EXPERIMENTAL FOREST - John H. Cooley, Lake States Forest Experiment Station.

In 1961 one hundred clusters of five 1/100-acre permanent plots were established on the Argonne Experimental Forest to test the effectiveness of pellet-group counts as a method of estimating deer populations and use patterns on a restricted area. These plots were recounted in the spring of 1962 and, at that time, browse data were gathered on milacre plots centered in the 1/100-acre pellet-group plots. For analytical purposes plot clusters were grouped into three broad strata designated as upland, swamp and mixed type.

Since the primary objective of cutting on the Experimental Forest is research rather than timber production, many stands have received no treatment. Cutting tends to be restricted to small study areas and is likely to be sporadic. Stand densities are high on the average, except in the swamp type, consequently seedling stem densities are quite low. The browse data showed less than 1000 stems per acre between two feet and seven feet tall in all types.

In 1961 the overall population estimate for the Argonne Experimental Forest was essentially the same as the estimate for deer management unit 39A which surrounds the forest. In 1962, the estimate for the Forest exceeded the estimate for unit 39A by approximately 50 per cent. The increased use on the Experimental Forest in 1962 is a reflection of tighter yarding conditions indicating that the Forest is a winter concentration area.

The estimates by types showed that in 1961 the deer use in the upland types was lightest, swamp was intermediate and mixed was highest. In 1962 the upland was again lightest but the swamp and mixed types were the same. However, the browse data, taken in 1962, indicated a higher occurrence of browsing in the upland type, intermediate occurrence in the mixed type and lightest occurrence in the swamp type. Even when browsing was analyzed on the basis of established preference ratings, it did not correlate with the use based on pellet-group counts.

Even though browse occurrence does not necessarily reflect browse utilization, the lack of correlation noted in these data raises some question concerning the use of the pellet-group technique in estimating the impact of browsing by types. Apparently, in this case at least, the impact of browsing is greatest where the pellet-group counts indicate the least time spent, and the impact is least where pellet-group counts indicate the most time spent. The reasons for this disparity were not established by this survey.

2. U.S. FOREST SERVICE RANGE SURVEYS - Herman F. Olson, U.S. Forest Service.

Greater emphasis on range surveys is required as a guide to more intensive deer management. Factors which stress this need are:

1. Herd management programs are being attained. Managing at carrying capacity will require better basic information than that needed to support overpopulations.
2. Habitat management and improvement are receiving increasing emphasis and public support, and likewise require more intensive surveys to guide realistic programs.
3. Conservation agencies are adopting a more positive approach to wildlife management, as illustrated by the Federal Multiple Use-Sustained Yield Act of 1960, which directs the Forest Service to manage wildlife as one of five resources of the National Forests.

The member States and Provinces have not been entirely satisfied with a wide variety of survey methods they have used. The three eastern Regions of the Forest Service have recognized a special problem in big game surveys, because they cannot incorporate with range management surveys as is done in western Forests. The natural association is with timber management rather than range. At an inter-Regional meeting on the Nicolet National Forest next week, Region 9 will present general ideas for big game surveys, as follows:

1. Extensive Forest survey in conjunction with the 10-year timber management inventory.
 - a. Separate forage production survey as was conducted on the National Forests in the Missouri Ozarks in 1961 (see Dean Murphy's comments, following).
 - b. Concurrent (see Robert T. Radtke and George Irvine comments following).
 - c. Development of browse production factors as a separate project for forest types and condition classes, and apply these factors to the typed acreages as determined in the 10-year Forest inventory.
2. Intensive compartment examination. Include analysis of wildlife habitat conditions in the periodic (10-year) intensive surveys of compartments, and plan the improvement by both coordination and special direct project work to be carried out in the next 10-year period.
3. Key area studies. Representative areas would be selected for study, which are productive of browse and are receiving moderate to heavy winter deer use. The studies would attempt to appraise condition and trend. - Is the managed deer herd giving proper utilization without damage to Forest reproduction or other browse plants?
3. DEER DAMAGE AND PRODUCTION SURVEY ON THE OTTAWA NATIONAL FOREST IN MICHIGAN - Robert Radtke and G. W. Irvine, U.S. Forest Service.

A deer damage and browse production survey (stem counts) conducted concurrently with timber management's 10-year inventory, utilized Forest cover types and condition classes to estimate:

1. Deer browsing and its effect on stand regeneration;
2. Deer browsing and its effect on favoring less desirable tree species;
3. Available deer browse by preference rating (preferred, acceptable, or poor), and also by relationship to deeryards;

4. Degree of utilization by preference classes for deer and hare.

Survey plots were taken in conjunction with timber survey data. Deer damage was evaluated similar to the procedures outlined by the Wisconsin Voluntary Committee on Deer Damage to Forest Reproduction. Susceptibility to damage was considered.

Browse survey data (mil-acre) were taken at each timber-inventory sample plot. One disadvantage recognized was that survey crews worked year-long, necessitating an adjustment in growth-utilization measurements.

The survey results have not been fully evaluated; however, the following was noted:

1. Of approximately 350,000 acres of commercial Forest land on the Ottawa National Forest:

- a. Deeryards - 17.4 %;
- b. Intermediate zone (one mile from yard) - 9.4%;
- c. Outside deeryard - 73.2%

2. Approximately 5% of the total area was classified as receiving some deer damage. Severe damage amounted to 2-3%, being heaviest in the deeryard and intermediate zones.

3. Available browse (1 - 7 feet) for all timber types averaged about 4,700 stems per acre. Data were recorded by stand stocking (adequate or inadequate) and density (3 classes).

4. Forest-wide, about 10% of the stems rated as preferred, 65% as acceptable, and 25% as poor. The proportion by timber type varies greatly. However, it is interesting to note that for the three zones (yards, intermediate, and outside) the relative per cent of preferred, acceptable or poor browse is about the same.

The survey was designed to give long-term (10-year) indications of the change in browse conditions. It is felt that this type of survey will reveal important long-term trends, which will affect management programs.

4. FORAGE PRODUCTION SURVEY ON THE NATIONAL FORESTS IN THE MISSOURI OZARKS - Dean A. Murphy, Missouri Conservation Commission.

This cooperative survey of the National Forests, Central States Forest Experiment Station and Missouri Conservation Commission involved 1,350 plots of eight quadrats each on the one and one-third million acres of National Forest land in the Missouri Ozarks.

Production in pounds of grasses, forbs, and current year's growth of browse was recorded on IBM cards, with the forage on one of each eight quadrats clipped for weighing, for training and correction of forage production on the remaining estimated plots. The following additional information was collected on each plot: Forest type, stand size, stocking class, site class, aspect position on slope, percentage slope, livestock use, fire history, logging and TSI history, soil ratings, basal area of overstory and understory, and percentage crown cover.

Information on the major results was presented, and the possibilities for more detailed use of the data were explained.

5. SUMMER DEER RANGE STUDIES IN WISCONSIN - William A. Creed, Wisconsin Conservation Department.

Field investigations were begun in 1963 on the relationships of deer populations and deer activity to forest openings and cover types. Openings were located, examined, and selected in two neighboring areas in northern Wisconsin. One of the areas, located in Iron County, is forested primarily with northern hardwoods and is believed to have a low deer population. The other area, located in Ashland and Sawyer Counties, has a relatively high deer population and a good interspersed of upland and lowland conifers, aspen, and northern hardwoods. An attempt is being made to determine deer summer range requirements and preferences based on activity indices which will disclose differential deer use within the study areas. Our primary effort this summer has been on night-lighting and track counting. So far our data suggest a definite summer preference by deer for aspen or aspen mixed with other types. The distribution of tracks relative to forest condition classes and presence of deer in openings, as revealed through shining, are expected to direct and concentrate our efforts in specific areas as the study progresses.

September 19 - Thursday Afternoon Field Trip

To multiple-use management demonstration areas on the Eagle River District of the Nicolet National Forest. Leon Kridelbaugh and Terry Moore of the U.S. Forest Service led the trip. Emphasis was placed on the programs for wildlife openings and hunter access trails. Maps and other visual aids were handed out and used in the field.

September 19 - Thursday Evening Special Program

Helmuth Strandgaard of the Danish Wildlife Research Station lectured and showed slides on the several species of deer in Denmark, their population dynamics, herd control measures, and hunting seasons.

September 20 - Friday Morning Final Session

The annual business meeting considered the following matters:

1. Larry Krefting reported for the Research Program Analysis Committee that a second rough draft of the Analysis was awaiting final revisions and editing by several Committee members.

2. A discussion was held on future programs for the Great Lakes Deer Group. Several possibilities were discussed, although no final action was taken on any of them. They included:

- a. Possible uses of the Group's Research Program Analysis, including development of cooperative research approaches between agencies, and more consideration for forest game species other than deer.
- b. Formation of an Information Committee to act as a clearing house for printed materials published by the various Group members. James Hale of the Wisconsin Conservation Department volunteered to take on this function on a trial basis until the next Group meeting and recommended that 50 copies of all materials for distribution to the Group be sent to him.

c. A proposal to meet every other year instead of annually was not favored by a majority of the opinions expressed.

3. The 1964 annual meeting will be held in Ontario, probably in the western part of the province, during the third week of September. The Ontario Department of Lands and Forests will be the host.

4. The meeting adjourned at 11 a.m.

Minutes prepared by James B. Hale with the help of program participants.

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September 19 - Thursday Evening Special Program

Helmut Stenlund of the British Wildlife Research Station joined and showed slides on the several species of deer in Britain, their population dynamics, herd control measures, and hunting seasons.

September 20 - Friday Morning Final Session

The annual business meeting considered the following matters:

ATTENDANCE ROSTER - 1963 GREAT LAKES DEER GROUP MEETING, EAGLE RIVER, WISCONSIN

<u>Name</u>	<u>Mailing Address</u>
Larry Krefting	U.S. Fish & Wildlife Service, 204 Green Hall, St. Paul Campus, University of Minnesota, St. Paul 1, Minnesota
Robert Radtke	U.S. Forest Service, 710 N. 6th St., Milwaukee, Wisconsin
James B. Hale	Wisconsin Conservation Department, Rt. 2, Madison, Wis.
Helmuth Strandgaard	Danish Wildlife Research Station, Kalo pr. Ronde, Denmark
Robert Payne	R.R. 2, Sault Ste. Marie, Michigan
Arthur D. Doll	Wisconsin Conservation Department, Box 450, Madison, Wis.
Blair Dawson	Fish & Wildlife Branch, Southern Research Station, Department of Lands & Forests, Maple, Ontario
Robin L. Hepburn	Research Branch, Department of Lands & Forests, Maple, Ontario
Daniel O. Trainer, Jr.	Dept. of Veterinary Science, University of Wisconsin, Madison, Wisconsin
Howard Sheldon	Chequamegon National Forest, Park Falls, Wisconsin
Les C. Tiews	Wisconsin Conservation Department, Ranger Station, Ladysmith, Wisconsin
George Hartman	Wisconsin Conservation Department, Black River Falls, Wis.
Kent E. Klepinger	Wisconsin Conservation Department, Box 355, Princeton, Wis.
Walter Petraborg	Minnesota Conservation Department, 1423 Mary Street, Brainerd, Minnesota
Robert F. Wendt	Wisconsin Conservation Dept., Woodruff, Wisconsin
Clifford E. Germain	Wisconsin Conservation Dept., Box 527, Waterford, Wis.
Bernard Bradle	Wisconsin Conservation Dept., Box 907, Crandon, Wis.
Robert K. Train	U.S. Forest Service, 412 Douglas St., Rhinelander, Wis.
Ben F. Carson	U.S. Forest Service, 270 5th Ave. No., Park Falls, Wis.
Vern Gunvalson	Minnesota Conservation Department, 2114 Bemidji Ave., Bemidji, Minnesota

ATTENDANCE ROSTER - 1963 GREAT LAKES DEER GROUP MEETING, EAGLE RIVER, WISCONSIN

<u>Name</u>	<u>Mailing Address</u>
John H. Cooley	Lake States Forest Experiment Station, Marquette, Michigan
Louis J. Verme	Cusino Wildlife Experiment Station, Shingleton, Michigan
F. W. Stuewer	Game Division, Michigan Department of Conservation, Lansing, Michigan
Ken Butterfield	Nicolet National Forest, Rhinelander, Wisconsin
W. E. Laycock	Game Division, Michigan Department of Conservation, Marquette, Michigan
Ilo H. Bartlett	Michigan Department of Conservation, Lansing, Michigan
Forest Stearns	Lake States Forest Experiment Station, St. Paul Campus University of Minnesota, St. Paul 1, Minnesota
Dean A. Murphy	Missouri Conservation Dept., Bouchelle & Williams, Columbia, Missouri
George P. Dellinger	Missouri Conservation Commission, West Plains, Missouri
B. A. Fashingbauer	Minnesota Conservation Department, Carlos Avery Research Center, Forest Lake, Minnesota
Herman F. Olson	U.S. Forest Service, 710 N. 6th St., Milwaukee, Wis.
John G. Appelget	Branch of Federal Aid, U.S. Bureau of Sport Fisheries & Wildlife, 1006 W. Lake St., Minneapolis, Minnesota
Milton Stenlund	Minnesota Conservation Dept., 111 Golf Course Road, Grand Rapids, Minnesota
G. W. Irvine	Ottawa National Forest, Ironwood, Michigan
William A. Creed	Wisconsin Conservation Dept., Black River Falls, Wis.

Michigan Department of Conservation's Public Relations
Program for Deer Management

I. Within the Department

A. Meetings

Deer investigations, research, range conditions, and herd and range management are a regularly scheduled portions of many district, regional, and Lansing office staff meetings. This tends to keep Department personnel abreast of current needs and conditions and up-to-date on policy matters. Such programs need to be enlarged but present activities have greatly improved the understanding of the deer problems by the Department in general.

B. Printed material

1. Statements of deer policy and other important items of deer information are occasionally sent to all Departmental employees direct from the Director's office.

2. Technical, semi-technical, and popular reports, papers and related items from within and from outside the Department are frequently distributed to appropriate Departmental mailing lists maintained for this purpose.

II. The General Public

A. Newspapers

1. News bulletins, most of which contain items on deer, are distributed weekly to more than 200 daily, weekly, and monthly papers and magazines in Michigan.

2. Mats - Occasional (3-6 times per year) important items in printed and graphic form are distributed to the 200 papers in the form of mats ready for printing.

B. Airways

1. Radio. Current items on deer in the form of 10, 20, 30, or 60 second news "spots" are distributed to about 50 Michigan radio stations.

2. T.V. Television "shorts" --30, 60, 90 seconds -- are furnished to a number of stations at more or less regular intervals.

C. Publications

1. Major summary report --Roughly 1 every 10 years; 10,000 to 50,000 printed for Departmental and general distribution.

2. Annual 3-5 per year on populations, kill, and other technical aspects, various numbers printed --1,000 to 3,000--for Departmental and general distribution.

Michigan Department of Conservation's Public Relations Program for Deer Mgmt. 2.

3. Leaflets--3-5 per year on various items--5,000-10,000 printed general distribution.

4. Occasional articles in Departmental bi-monthly magazine.

D. Meetings

1. Conservation School--Deer discussions with 1-2 groups per month meeting at the Conservation School. These include:

a. sportsmen's organizations

b. service clubs

c. other groups interested in conservation

2. Field men (30+) average 1-2-3 deer meetings each per month.

3. Experiment Station personnel (10+) average 1+ deer meetings per month.

4. Division office-Lansing-(3+) average 1+ deer meetings per month.

E. Organizations - constant contact and liaison, (with varying degrees of success) with--

1. sportsmen's clubs

a. Michigan United Conservation Clubs --310 clubs--60,000 members.

b. Northern Michigan Sportsmen's Association

c. Greater Michigan Conservation League

2. Grange

3. Farm bureau

4. Federated garden clubs -- In 20 years donated a total of over \$65,000 for 2,400 one-week conservation school scholarships for high school biology teachers.

5. Michigan legislature

F. Miscellaneous

1. Movies - 2
2. Tape--Slide shows - 2
3. Slide shows - numerous
4. Scheduled conducted "Show Me" trips--shining, winter yards
5. Demonstrations
 - a. Deer census drives
 - b. Exclosures
 - c. Experiment stations

I. H. Bartlett

3-18-64

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