

MINUTES OF THE 1969 MEETING OF THE GREAT LAKES DEER GROUP

by H. Cumming

The meeting was held in south-eastern Ontario, starting at Pembroke on the evening of September 23. Discussions were held that evening and the following morning. In the afternoon of September 24 a field trip was conducted in a deer yard where habitat improvement work had been carried out. The meeting then shifted to Ompah, a small rural community, for an evening discussion. On September 25 the Ontario deer research program was outlined and a field trip was conducted in the study area. A final discussion period was held in the evening. On September 26 the participants wended their way home taking advantage of the opportunity to observe and discuss the points that deer biologists find so interesting.

These minutes were put together from the minutes recorded by A.B. Stephenson and A. Ruxton.

TUESDAY EVENING, September 23rd

The Chairman, Harold Cumming, called the meeting to order at 8.45 p.m. with 27 people in attendance. This number was increased as others found their way to the Ranger station. A list of those in attendance is appended.

The evening meeting was primarily a report and discussion on the 1968 deer seasons in the participating states and province. Milt Stenlund lead off with the Minnesota situation. The following is an abstract of his presentation:

"Minnesota 1968 hunting season and winter of 1968-69.

<u>Hunting Season</u>	<u>Licence Sales</u>	<u>Deer Harvest</u>	<u>% Success</u>	<u>1967 Harvest</u>	<u>1967 %</u>
Resident firearms	302,216	102,753	34.0	106,695	34.9
Non-resident "	1,442	490			
Resident Bow and non-resident					
Bow	20,480	819	4.0		3.2
		<u>104,062</u>			

There are 'any deer' seasons, from one to 9 days depending upon zone, with part of the southern agricultural area closed. The total kill declined in 1968 for the third straight year. A peak kill was recorded in 1965 with a harvest of 127,000 deer. Licence

sales held up over 300,000. This figure was reached in 1966 for the first time. Counting the winter of 1968-9, four of the past five winters have been more severe than average. As a result fawn reproduction has dropped as has the overall population.

Snowfall through January 31, 1969, broke all records in Minnesota and they were heading for the worst winter losses in deer that they had ever recorded. The weather changed abruptly the first of February and continued in favour of the deer until break-up.. The weather after February 1 was just as unusual as the weather before February 1. A maximum of 61 inches of snow on the level was measured on the Gunflint Trail in Cook County in January.

An emergency deer feeding program was initiated and financed by a \$100,000 appropriation from the legislature. At the peak of the program a total of 75 men were cutting deer browse in the northeast quarter of the State. Hundreds of volunteers with snowshoes and snowmobiles assisted with varying results. Direct losses to deer were minimal with most severe losses in Pine County in the east central part of the State. Because of the abrupt change in weather it is difficult to evaluate the effectiveness of the feeding program. Deer checks in these areas in the spring were not conclusive. No great numbers of deer were found and there was no strong evidence that losses were less where feeding was done.

Public relations-wise, the program was very effective and assisted in getting a major deer habitat improvement program under way with a \$600,000 appropriation over the next two years. The purpose of the program is to improve deer habitat through commercial timber sales, mechanical and chemical treatments, hand cutting, prescribed burns, and subsidizing private landowners."

Discussion: The use of snowmobiles by the many volunteers created some problems but also did some good by packing down trails which the deer used to reach the otherwise unavailable food.

There were some problems with volunteers cutting merchantable timber, felling trees the wrong way, cutting on private land, and cutting species of no value to deer, but generally the extensive nature of the cutting was probably beneficial. Four to five thousand acres of critical yarding area was worked on. Bulldozers were used just to open trails because snow depths were too great to enable heavy machinery to work effectively.

The reduction in deer harvest is a reflection of a reduced deer population. Hunting may have contributed to this decline in some local areas but the major factor in the northern deer range

has been lowered reproduction due to severe winters. The average winter has 24 - 26 inches of snow by mid-February and when snow reaches 30 inches it is a bad winter. In the last five years they have had four such winters.

They suspect that they are at maximum allowable harvest under an 'any deer' season with 300,000 hunters. In order to determine this they need more information of a local nature, that is why they re-introduced deer checking stations last year.

Wisconsin: Art MacArthur distributed a report "Deer Hunt '68" which contained all the pertinent facts on last year's deer seasons in addition to comparative figures from previous years. Art reviewed the report with the aid of charts and tables. In the last 10 years the legal gun kill had increased from a low of 39,000 in 1961 to a high of 129,000 in 1967. It dropped slightly to 120,000 in 1968. In 1964 the party permit system was introduced in order to harvest antlerless deer. This has contributed to 47,000 deer kills in the last two years. In addition archery hunting contributes about 7,000 deer to the annual harvest. Hunters have been increasing steadily from 234,000 in 1953 to 499,000 in 1968 excluding archers. They now have an average hunter density of about 20 per square mile and as high as 60 per square mile in some areas.

Deer management is based on 80 units. Specific information is obtained from many of the units. Ages of the deer kill are sampled in 46 units and spring pellet group surveys are done in 40 units. Harvest quotas are set in accordance with these findings and recommendations by the management unit personnel. They rely heavily on kill trends of bucks and manipulate antlerless kill by quotas based on history of the unit in an effort to stabilize the harvest.

Since 1966 the deer herd has dropped about 20% and possibly greater in the north where they have had three bad winters in the last five years. An estimated annual winter loss of 40,000 to 50,000 deer was attributed to these winters. In 1964 it was estimated that Wisconsin had over 700,000 deer before the season, in 1969 between 600,000 - 650,000 deer. The legal gun harvest takes about 20% of the herd but varies up to 30% in some areas. The predicted kill for 1968, based in part on these figures, was surprisingly accurate. In 1969 the predicted kill is expected to be lower, around 105,000 deer. In the high kill counties yearlings comprise the major portion of the kill. Yearling bucks represent 70 - 85% in some of these areas, while yearling does represent about 35% of the females. Bucks are always higher even in the 'any deer' areas because of the history of hunting in these areas. In the north yearling bucks usually comprise 50% of the kill but has dropped to 13% after severe winters.

Dense winter concentrations are not common. The average density is about 20 deer per square mile of deer range which is all forested land plus about 10% of forest "edge". This represents about 30,000 square miles of range. It is considered that losses from all causes remove about 1/3 of the deer each year. This amounts to about 200,000 deer; 120,000 by gun harvest, 7,000 by archery, 12,000 by automobiles and 20,000 to 50,000 from winter losses in addition to predation, poaching, accidents and other losses.

The variable party permit of four hunters per permit is working very satisfactorily and is considered to be their most effective management technique. It has enabled Wisconsin to stabilize its deer harvest in relation to the carrying capacity of the deer range. In 1953 compulsory deer registration was introduced which provides fairly accurate information on the deer kill by management units.

Michigan: Dave Arnold presented a summary of the 1968 deer season in Michigan. The 1968 deer harvest was approximately 103,000 which was down slightly from 1967. During the last five years the kill dropped from 144,000 in 1964 to 96,000 in 1966 and then recovered to over the 100,000 mark. Meanwhile the number of hunters have been increasing steadily and nearly 700,000 licences were sold in 1968. About 80% of the hunters live in the south and 80% of the deer are killed in the north. This provides an opportunity to check over 10,000 deer each year at checking stations. Hunter success and licence sales are used to compute kill data along with a mailed questionnaire. Permanent management units have now been established and individual party permits are used to obtain the desired harvest in each unit.

In the Lower Peninsula the deer herd has increased during the last five years at the rate of 14% per year. Hunting pressure in this area was heavy ranging from 10 to 40 hunters per square mile and in some areas there were 100 hunters per square mile. In the Upper Peninsula the herd has declined about 50% since 1959 and in the Lake Superior watershed it has decreased 70 - 80%. Hunter density is much lower here with 6 to 8 hunters per square mile. The decline is attributed to range deterioration as a result of maintaining too high a population in the 50's and the severe winters in the late 50's and during the past five years.

Hunting weather was not favourable in 1968 which probably reduced the kill. The outlook for 1969 is not particularly good because of the expected heavy loss of fawns following the winter of 1968-69.

Under the individual party permits they have about a 25% hunter success of antlerless deer. Quotas are set on the basis of management unit history and kill trends in addition to recommendations of the biologist and other personnel.

Ontario: Harold Cumming reviewed the 1968 deer season throughout the province. In general it was comparable to the situation in Michigan's Upper Peninsula. All areas showed a decline in hunter success as determined from checking stations in each district. Unfavourable hunting weather was blamed for the decline rather than a scarcity of deer. In two of the south central districts success figures for 1967 and 1968 showed a drop from 27% to 16% and 22% to 11%. Along the northern fringe of the deer range from North Bay to Sault Ste. Marie the success figures dropped in some places to less than 5%. However, in the West, north of Minnesota, success was much better being around 50%, although hunting pressure in this area was low.

The deer population in the north has never really recovered from the drastic decline following the two severe winters of 1958-59 and 1959-60. It was postulated that range conditions have changed during the period of low deer numbers and the habitat is now not as favourable as it was before 1960.

It is possible that there is over-hunting in some local areas but it is difficult to find any proof. Predictions can be made on the general type of season based on the severity of the winter and previous kill trends, but no accurate information is available on how many deer are killed and on hunting pressure. In 1968-69 a mail questionnaire was conducted for the first time to determine some of these facts.

Following this presentation there was a short discussion on how the various states collected harvest data. This included checking stations, road counts, registration and the mechanics of carrying out these procedures. It was agreed that a system of compulsory registration of deer could not now be implemented in Michigan (it was begun in Wisconsin when there were many fewer hunters and built up with the increase). Anyway, the Michigan people were quite confident their mailed surveys were providing adequate data on the kill.

The evening was finished off by a showing of the Minnesota deer film "The White-Tailed Deer".

SEPTEMBER 24. Morning session on Deer Habitat Manipulation.

Harold Cumming introduced the session with a brief history of the Ontario deer range improvement program. This program had its beginning in 1961 following the severe winters of 1959 and 1960. Initially it consisted of several small cutting operations to improve browse production adjacent to major deer wintering areas. In 1967 special funds were appropriated to improve the deer range over wider areas, and now 3,000 - 3,500 acres are being treated annually in Ontario. The work is organized and directed by the various district staffs, with advice and assistance from a team of head office specialists which includes a biologist, a forester and an ecologist.

Bert Post, the ecologist, indicated that the primary consideration for deer in winter was shelter and that deer would select suitable cover despite inadequate food supplies. The object of this program was, therefore, to retain suitable softwood cover in existing deer yards and to improve browse adjacent to or within these areas. At the present, efforts are being made to increase browse production by (1) cutting strips in a grid pattern on a five year cutting basis; (2) cutting strips around cover areas in a continuous or discontinuous manner depending on topography and vegetation; and (3) by bulldozing strips in and near yards. Efforts will be made to regulate the deer population in the treated areas to obtain maximum benefit from the treatment. Consideration is being given to planting hemlock as a potential cover species in existing shelter areas or to rejuvenate old stands. In the future the management of cover will be of primary importance.

Alex Matiece outlined the forestry aspects of the program. He indicated that 90% of the forested land is owned by the Crown and that the timber rights are leased to commercial operators. Thus the government can write certain conditions into the lease to have cutting done in a way which will improve existing deer yards. At the present time very few formal agreements have been made with commercial operators but good co-operation is being obtained on an informal basis. As a forester he provides a liaison between the Timber Branch and Fish and Wildlife Branch. Major concerns are (1) encouraging logging operations in or near deer yards for browse production and (2) retaining cover in the deer yards.

The planting of hemlock will be experimental. The tree nurseries are now producing this species and efforts will be made to re-establish this desirable cover tree. Wisconsin and Minnesota indicated that balsam is more important because of the

scarcity of hemlock. Michigan and Ontario indicated that they have lost some deer yards when the hemlock cover was removed. Doubts were raised, however, as to the practicability of planting hemlock because of its browse qualities.

Lionel Trodd of the Pembroke District outlined what they have been doing to improve deer range. From 1961 to 1966 they annually treated 25 to 50 acres with chainsaws and axes to provide browse for deer within the deer yards. During the last three years this has been increased to about 1100 acres annually, largely through extensive use of bulldozers to open up second growth hardwoods in patches of five to 20 acres. The cost of these operations was approximately \$25.00 per acre treated. The responsibility of assessing the value of these treatments in terms of changes in the deer population is up to the district biologist Mike Wilton. He presented an account of their surveys and population estimates which will be used to evaluate the effectiveness of the program in the future.

The morning session ended with an eight millimeter film made by Harold Cumming showing the deer range management work carried out in the various districts in Ontario.

WEDNESDAY AFTERNOON - SEPTEMBER 24th

Wisconsin Deer Range Management

Wisconsin Deer Range is in good condition due to large scale pulpwood operations. Thirty pulpwood mills are presently in operation in Wisconsin. Cutting restrictions are put on cedar areas where they are used by deer. Winter deer range work is restricted to emergency treatment in critical areas. Up to two hundred men work for two months during the winter months in areas where cutting is necessary to provide immediate food for deer.

The greatest deer range problem in Wisconsin is the conversion of aspen to northern hardwoods. A forest community of aspen, oak and jack pine produce the highest deer densities in Wisconsin. (Also a good combination for Ruffed Grouse production). In northern hardwood areas of Wisconsin, deer herds are considered poor (10 deer per square mile). The general trend is to a decreasing deer herd due to a decrease in good summer range. Problems in the winter range in Wisconsin are of short duration as compared to summer range. Management work is primarily directed to summer range.

This year, one hundred and twenty five thousand dollars was spent on the wholesale treatment of aspen areas which have converted to Northern hardwood. This was accomplished by knocking down the northern hardwoods mechanically and a limited amount of controlled burning.

Deer in Wisconsin are dependent on ground plants associated with thin-crowned aspen trees. Aspen leaves are heavily utilized by deer during the summer months.

Wisconsin realizes three million dollars annually from the sale of Deer Hunting Licences.

Michigan Deer Range Management

Six bulldozers equipped with rotary choppers are used for deer range treatment cutting in Michigan. Operations are carried out within one quarter mile of the yard. Four to seven thousand acres are treated annually in the best deer areas. The best deer areas are comprised of aspen 30%, oak 20% and pine 20%.

Greatest management problem in deer range is the conversion of aspen areas to northern hardwoods and oak areas to pine.

In northern Michigan, where snow is deep, the deer use coniferous cover and stay under the cover throughout the winter. In southern Michigan deer stay under cover on cold days and leave the cover on days when the temperature moderates.

In areas with 60 to 70 inches of snowfall the greatest concentrations of deer are found.

In the future, Michigan hopes to get one dollar for Management work from each deer licence sold. This would give them a budget of over one half a million dollars annually.

Michigan has seven million acres of public land. Eighty percent of the deer killed are taken on forty percent of the land; less than one half of this is public land.

During the winter of 1968-69, a crash program was carried out to help the deer through the winter. Roads were opened on private land and costs absorbed by the State if the landowner would carry out cutting operations which would benefit the deer and if the number of deer affected justified the cost. Some operations were carried out on private lands with public funds where it was necessary to provide food for deer. Only informal agreements with the landowner were used because of the emergency of the situation.

The remainder of the afternoon was spent on a tour of the Bonnechere Deer Yards.

Stop #1 - This stop was outside the boundary of the Bonnechere Deer Yard as it existed during the winter of 1968-69.

This stop was to look at an area treated by spraying with 2-4-D to kill brush in order to release natural pine regeneration.

The area was heavily grown up with Hazel. The 2-4-D appeared to have effectively top killed the hazel allowing the pine release. It did not appear to have affected the lesser plant species which provide food for wildlife. There was some concern expressed as to the dangers of the widespread use of chemicals in this fashion. The effects on birds and insects was questioned.

Stop #2 - This area was treated in 1967-68 by hand tools and is in the Bonnechere Deer Yard. The growth from this cutting is very prolific. The annual growth was estimated to be five hundred pounds per acre. The browse utilization by deer in this area was very light.

Stop #3 - This area was treated by bulldozers in the Bonnechere Deer Yard in 1967-68. The treatment was carried out near patches of cover in this area. The trees were bent over with the bulldozer blade, however, the trees were not killed. The trees show considerable sprouting around the base as well as shoots growing off the downed stems. The cost of this operation was twenty dollars per acre which is approximately one half the cost using hand tools and one quarter the cost of some emergency treatments. This type of operation can be carried out in areas such as the Bonnechere Deer Yard where the topography is flat with sandy soil and boulder free. The cover in this yard was poor being only scattered whit and red pine.

The group spent the remainder of the afternoon and early evening in motoring to Ompah in the Tweed District.

EVENING SESSION - WEDNESDAY SEPTEMBER 24th

Open discussion on tour of Bonnechere Deer Yard.

Bonnechere Deer Yard produces approximately one hundred and twenty thousand stems per acre with thirty percent browsing. The stems consist of 64% hazel, 23% maple. However, only 8% of the hazel and 67% of the maple are browsed.

In Michigan, cutting operations produce more food than is utilized. Red maple is utilized more than hard maple. The treatment in the Bonnechere Yard produced more browse than similar treatment in Michigan; however, the site in the Bonnechere Yard was better than most in Michigan. In Michigan's Upper Peninsula, aspen is heavily utilized the first year and to a lesser degree the second year. It is not possible to get much more than ten percent utilization on treated areas in Michigan. However, even if the utilization is light, the treatment is worthwhile as the second treatment is much less expensive. Parry Sound found this to be true also, in the Killbear Deer Yard.

Minnesota stated the treatment in the Bonnechere Yard produced a better variety and lusher growth of browse than equivalent treatment in Minnesota. They said the cover in the Bonnechere Yard was too old (seventy-five to ninety years). Cover should be in the forty to fifty year range for optimum deer protection. They expressed the opinion that enormous tracts of land would have to be treated to make any significant increase in the deer herds in Ontario through summer range improvement.

Lower Michigan has eight thousand lineal miles of Deer Yard edge and an estimated deer herd of three hundred thousand animals. Michigan Deer Managers feel that foresters must be convinced to cut commercially in areas adjacent to yards even if some of the areas are not as mature and suitable as desired.

Ontario and some parts of Michigan will have to accept from three to five and up to ten deer per square miles over summer range. Michigan at one time had deer densities of one hundred deer per square mile. (During the 1930's).

Wisconsin feels that summer range is more important and critical than winter range, particularly in northern hardwood areas.

Bonnechere Yard is an example of good summer range (openings with ragged edges and aspen and pine species of trees). The area through which the road runs from Vennachor Junction near Highway 41 to Plevna is poor summer range. The hardwood forest here is too well stocked, too even aged and too mature.

Ontario should be taking a serious look at their summer range as well as winter range.

Fire is the best improver of Deer Range. It triggers a greater nutrient release and removes physical obstacles. It is much more effective than cutting or fertilizing.

THURSDAY, SEPTEMBER 25th

During the morning Robin Hepburn described his research at the South Canonto Study Area. He stated that the study area had been chosen to include all areas with road access through a single point so a checking station could be used to record all deer removed by hunters. He described the area in detail including its extraordinary geology and rather surprising plant composition. Praising the co-operation of the local hunters without which the study would have been impossible, he stated that over the years hunting had removed about 20% of the deer herd (estimated from pellet group counts and checking station data). This was not sufficient to control the numbers of deer. The sources of

additional mortality had not yet been pinned down, but the answer to the primary question, whether hunting controlled the numbers of deer in this area, appeared to be that it did not.

During the afternoon Robin took us on a field trip through the study area pointing out the experimental cutting in cedar swamps reported in Research Section report #69. It was found that although some treatments were preferable to others, none of them was really large enough to provide conclusive results. This has important implications for deer range management where it might be tempting to restrict treatments to areas which are too small.

THURSDAY EVENING - SEPTEMBER 25th

An informative talk and slides on Moose in Norway and Sweden was given. Hunter success is exceedingly high and management of moose is primarily the control of the number of licences sold.

A talk on the importance of forest openings to deer was based on work described in Technical Bulletin No. 44, Department of Natural Resources, Madison, Wisconsin 57301 - Significance of Forest Openings to Deer in Northern Wisconsin by Keith R. McCaffery and William A. Creed. It was shown that deer make much use of openings which appear very important for summer range. It would require much experimental work to demonstrate the relation between openings to deer numbers.

HGC/il
August 4, 1970.

GREAT LAKES DEER GROUP 1969 MEETING

SUGGESTED AGENDA FOR GREAT LAKES DEER GROUP MEETING

<u>DATE</u>	<u>PLACE</u>	<u>TIME</u>	<u>PROGRAM</u>
Tuesday Sept. 23	Pembroke	Evening	Reports on hunting seasons.
Wednesday Sept. 24	Pembroke	Morning	Symposium and/or Discussion on Deer Habitat Manipulation.
		Afternoon	Visit Bonnechere Deer Yard
	Ompah	Evening	Dinner - 7 p.m. Bull session on Bonnechere Deer in Parks Films
Thursday Sept. 25	Ompah	Morning	Report on Deer Study by R. Hepburn Discussion
		Afternoon	Visit South Canonto Study Area.
		Evening	Effects of Winter Slides Research Reports of Interest to the Group. Tagging
Friday Sept. 26		Return Home	Optional Visit to Killbear Deer Yard near Parry Sound for those travelling north.