

Deer Trapping and Tagging in Michigan

by  
Donald Y. McBeath

More than two thousand Michigan deer have been live-trapped and "ear-tagged." Each one of those deer had inserted in its ear an aluminum tag bearing a serial number and the statement, "Notify Department of Conservation, Lansing." The history of trapping and tagging operations dates back to the winter of 1928-'29. The deeryards of the Upper Peninsula were then being given their first real consideration by the Game Division. It was on one of these winter inspection trips that I. H. Bartlett and M. C. Wakeman visited the deer trapping operations conducted by the Cleveland-Cliffs Iron Company at their licensed game farm on Grand Island, just offshore from Munising. It was there that Bartlett and Wakeman conceived the idea of trapping deer and marking them so more could be learned about their movements, the winter and summer range they occupied, the distances they would travel, diseases, and any information that would point to an ultimate sound deer herd management program.

The first deer trap to be used by the Department was styled after the trap used on Grand Island. It was a box trap measuring twelve feet high, twelve feet long, five feet wide, and was open on the top. One of these traps was built in a wintering yard near Hulbert in February, 1929, and the same month one deer was caught. Unfortunately, the operator was unfamiliar with tagging methods, and the first deer trapped was released without wearing an "ear-ring." The following winter, a total of seven deer were trapped, one at Blaney Park, and six at the Hanson Refuge near Grayling. Such small returns might have been discouraging had not the men sincerely

felt that deer could be trapped in greater numbers. Their persistent efforts were rewarded the following year.

In the winter of 1930-'31, traps were set up at Hulbert, Blaney Park, the Hanson Refuge, and the Fletcher swamp in Alpena County. At two of these locations, Hulbert and the Fletcher swamp, considerable effort was put forth, and the operations were highly successful. "The trap at Hulbert was operated sixty-two days during which eighty-seven catches were made involving twenty-nine different deer. From one to eight box traps were operated in the Fletcher swamp over a period of seventy-four days. During the two hundred fifty-five 'trap days', one hundred twenty-nine catches were made, averaging approximately one deer per trap every two days."<sup>1</sup> A total of ninety-six deer were tagged and released. Some deer became accustomed to the traps and would return to be caught time after time.

Although the Grand Island type trap was catching deer, it had certain imperfections which, if eliminated, might improve the trapping method and results. J. H. Stephenson, of the Game Division, recognized these imperfections and assumed the task of designing a new trap. As a result, the standard live-trap for deer now used in Michigan is the Stephenson trap; a tight, box-like affair, four feet high, four feet wide, and twelve feet long. It has a top but no floor. The two drop doors, one at each end, slide in grooves, are held open by means of a rope attached to a trigger. The trigger is tripped by pressure on a light-gauge wire stretched across the middle of the trap about a foot off the ground. The

<sup>1</sup> Live-trapping Michigan Deer - I. H. Bartlett.



trap is not heavy. Two men inside the trap can carry it on their shoulders for short distances. When the doors fall, the inside of the trap is relatively dark, which has a quieting effect on the deer. When the small slide door leading to the slatted tagging crate is opened, the trapped deer seldom hesitates long to get through the opening. This trap was used first at Fletcher swamp in 1931 and has proven satisfactory in Michigan.

With a new and better trap and three winters' experience in locating trapping sites, running bait lines, and handling deer, the "trial and error" period had been survived successfully. Although deer trapping continued annually, lack of man-power limited such activities. By 1935, C.C.C. camps were well established in Michigan, and deer trapping was undertaken on a large scale. Trapping sites, other than those already mentioned, were established at the Cusino Refuge, Schoolcraft County, in 1934; the Iosco Refuge, Iosco County, and Wilderness State Park, Emmet County, in 1935; the Escanaba River Tract, Dickinson County, and Baldwin Creek swamp, Lake County, in 1936. The United States Forest Service trapped and tagged deer in the Stiles swamp, Newaygo County, in 1938. The Biological Survey trapped and tagged deer at the Seney Migratory Waterfowl Refuge in 1939, and the Michigan Department of Conservation operated traps the same year at the Lunden Refuge in Montmorency County and Flynn Valley in Oscoda County. Traps were operated by the Michigan Department of Conservation personnel on Drummond Island during February and March of 1941.

The man-power provided by C.C.C. camps made possible extensive trapping and tagging operations, but now (1941) many camps have been discontinued, thereby terminating some trapping activities. Other trapping sites were temporary for one or two winters, and other sites were abandoned because of small numbers of deer caught and tagged. Fortunately, there have

been C.C.C. camps near the Hanson Refuge and at Cusino so that the trapping in these locations has continued since it was initiated. When those two camps are closed, the deer trapping and tagging will probably return to its former level of relatively few deer caught and tagged. During the ten years of trapping at the Hanson Refuge and the six years at Cusino, many interesting things have occurred.

#### Trapping at the Hanson Refuge

Late in the day of January 14, 1930, Game Area Manager Otto Failing made the final adjustments on the first deer trap to be used at the Hanson Refuge. The big, Grand Island type trap stood on the edge of a deeryard from which most of the browse had been eaten. Cold, gray, storm clouds were rolling, and the temperature was low, the kind of weather that makes animals hungry. As Failing scattered his bait of clover and alfalfa hay in front of the trap, he wondered if any deer would be foolish enough to go in to that barn-like affair and get caught.

On his way to the trap, the next morning, the anticipation Failing felt was as keen as that of a deer hunter on the first dark, snowy morning of season. Sure enough, the trap door was down. He thumped the side of the trap; something moved. A peek through a knot-hole revealed a mature buck inside. The satisfaction was a warm feeling, but it soon gave way to cold consternation. The deer would not go into the tagging crate. The deer was not at fault; he could at least see the sky in the top-less trap, but the tagging crate door was a small, dark hole. Otto rapped the side of the trap, he poked with a stick, but the deer faced him and fought. He next climbed the trap and waved his coat and threw sticks, but the deer was more interested in Otto than anything else. After nearly a day of trying one new



scheme after another, he got the deer into the tagging crate. Another objective reached, but to tag this first deer was another job. It cost Otto a bruised arm and several skinned fingers besides a lot of manly self-control. The tag fell out of the pincers, the pincers fell in the snow, the deer got out of his grip, and Otto became more angry, but finally clamped tag number 76 in the buck's right ear. Both parties were very much relieved when the scuffling was over. When the door of the crate finally swung open the deer made several jumps out into the snow, looked around for bearings, and raced for the shelter of the swamp. Five more deer were trapped that winter, and each was nearly as much a problem as the first. Otto held two of the deer two days trying to get them into the tagging crate and finally after exhausting all of his newly learned tricks, had to let them go without tags.

No more was seen or heard of this first buck tagged for nearly two years. One day, after the 1931 deer hunting season, a letter was received in the Lansing office of the Conservation Department saying that Mr. E. J. Kennedy of Elk Rapids, Michigan, had shot a deer near the Hanson Refuge with an aluminum tag in its ear bearing the number <sup>76</sup>seventy-six. There was Failing's first trapped deer, a fine hunting trophy, weighing one hundred-forty-eight pounds dressed, and carrying six-point antlers.

For two winters, Failing operated the deer trap alone. It proved to be a strenuous daily job, and made much more difficult when five new Stephenson traps were set up. On Saturdays and on vacations from school, Otto's boys helped him with the work. There were traps to set, bait lines to run, and deer to be tagged, all performed at a place four miles from home in the dead of winter, when movements are restricted by cold, snow, and heavy clothing. It was not with regret that trapping activities were discontinued

during the winter of 1933 and 1934. These two seasons were mild and the deer did not yard but remained scattered over part of the summer range where they found sufficient food.

The news was out that there was to be a C.C.C. camp located nearby. This was just the chance that Game Division men had hoped for -- it would mean an opportunity to trap deer at "Hanson" on a larger scale. At about the same time as the arrival of the camp, winter deer losses from starvation were becoming more acute. This fact favored the work inasmuch as there was some public opposition to the idea of trapping. For three winters, 1936, '38, and '40, deer were trapped and released in other areas with the help of the new C.C.C. camp. One hundred and one deer were trapped and tagged in 1936. Eighty of them were released in other localities; twenty-six in the Butterfield swamp in Roscommon County, and fifty-four in the North Manistee swamp in Kalkaska County. The remainder of the deer were released at the trapping site on the west side of Lake Margrethe near Grayling. The first place of release was about sixteen miles distant; the North Manistee swamp was about ten miles away. Many of those released at the traps were pregnant does caught late in the winter and it was considered unwise to subject them to extra handling. In 1938, forty-nine deer were again released in Roscommon County, forty-two in Kalkaska County, and four at the trapping site. All other deer tagged, one hundred fifty-nine, were transferred to Kalkaska County. The total planting of two hundred fifty-five deer to date in the North Manistee yard has been sufficiently large so that reports of many tagged deer have been turned in by hunters. Returns from other releases have also been received, but have been too few and scattered to reveal any significant information.



The deer tagging and trapping activities in Michigan had, by this time, become known in many other states. The Virginia Commission of Game and Inland Fisheries, in 1938, expressed a desire to purchase a small number of deer from Michigan. Fifty-four deer were trapped in 1939 at the Hanson Refuge where starvation because of winter food shortages was prevalent and sent by truck and express to a state where food was more plentiful and winters less severe. In 1941, the states of Virginia, West Virginia, and Tennessee sent in requests for Michigan deer. Agreements were reached with the local people in the vicinity of the Hanson Refuge and fifty-two deer were sent to West Virginia, twenty-seven to Tennessee, and fifty to Virginia. All expenses incurred were paid by the states receiving the deer. The deer caught and trapped, other than those shipped, were released at the trapping site.

Since the beginning of trapping activities at the Hanson Refuge, there have been six hundred and seven deer caught and tagged. In addition to this number, one hundred ninety-four re-catches (re-catches of deer previously tagged) were made. The re-catch records ran particularly high in 1936 when one hundred and seven were made in a total of two hundred and eight deer trapped. In other words, nearly one of every two deer caught was a deer caught more than once. One very commendable record was the small number of casualties. Fifteen deer, or one out of every forty, figured as a casualty from trapping and handling.

#### Cusino Trapping Activities

When trapping and tagging activities were initiated at Cusino, the winter of 1934-35, the traps and trapping technique had been measurably

improved. Also, there was a C.C.C. camp at Cusino from which came the help to set up and operate traps. This situation, as compared to the early trapping days at the Hanson Refuge, brought about more positive results in numbers of deer trapped and tagged. The first winter, which was mild, ended with a total of fifty individual deer tagged. Winter weather in 1936 was particularly severe and the deer yarded "tight." With the deer in rather a compact herd in the Cusino swamp, trapping success rose sharply and a total of ninety-nine deer were tagged. The number of re-catches was also high, one hundred-sixty as compared to ninety-two the previous year. The re-catches, although non-profitable from the standpoint of deer tagged, were comparative indications of deer movements during open and severe winters. Deer tend to remain scattered during mild winters as they are able to travel easier in their search for food. The winters of heavy snow restrict the movements of the deer to the swamps where snow seldom drifts or crusts and there they remain until conditions are right for dispersal movements.

Blaine Brannon became the resident Game Area Superintendent at Cusino in 1936, and he assumed direction of the trapping job for the Game Division. Brannon is one of those individuals endowed with a "seventh sense" when he is working with animals, and he is especially adept when deer are concerned. He is a keen observer in the field, and his knowledge and experience were readily adapted to this new job. One important technique in trapping that Blaine devised was the long bait line. It was often necessary to attract more deer to the trapping site from other parts of the swamp, and it was by means of the long bait line that they were brought in. A bale of hay was loaded on a toboggan and hauled by two men on snowshoes into other parts of the swamp where deer were staying. The bale was broken open and



the hay was scattered along the back-track by handfuls about every eight or ten feet. In this way, the bait line was <sup>laid</sup>~~laid~~ half the distance back to the trapping site. The next day the men started at the near end of the bait line and again, half the distance back to the trapping site was baited. Usually, by the third day, the bait line was run to the trap site. Although the deer around the traps sometimes fed out, or away from the traps, on the bait line, there usually was little hay left, and they did not go far. The new deer were then close enough to the trapping site to remain in the vicinity with only a handful of hay at each end of the traps and some wrapped around the trigger wire to hold them. Bait lines were run for distances of a mile or more in this way with good results. This technique proved of value several times.

In 1937, additional demands were made of the trappers for a supply of deer needed at the newly initiated deer feeding experiments at Cusino. Sixty bucks, does, and fawns were needed and many of them were taken during the live-trapping operations. These deer were put into corrals 50 x 100 ft. and one-acre browse plots for food consumption and nutritional studies. Again, those irksome re-catches in the tagging operations proved worthwhile. The well-fed deer in the corrals, which were weighed regularly, showed progressive weight losses during the winter. Some anxiety was felt about this change until it was discovered from the re-catch records that well-fed wild deer also showed a winter weight loss. The trapped deer were weighed each time they were handled, and the records showed that the loss of weight in winter was a natural occurrence.

Deer trapping and tagging went on smoothly for two years, then came orders to trap and ship deer to Virginia. The residents near Cusino

and in Munising did not approve of sending deer out of the area. They finally agreed that fifty-five does and fawns removed from the Cusino swamp would not harm the hunting, nor decrease the herd too much. There was considerable detailed work in arranging for trucks, shipping schedules, and caring for the deer held over from one shipment to the next. The shipping schedules and routes were finally decided upon but ice floes jammed the Straits of Mackinac, thus necessitating detours through Wisconsin and Illinois. It was hard, worrisome work that winter, but the deer were delivered in the South without loss.

Brannon became involved with other work, and supervision of the deer trapping was turned over to Ford Kellum, who has since been in charge. This was not particularly new work to Kellum, as he had been managing the deer feeding experiments nearby, and he was quite familiar with the trapping methods. Brannon and Kellum, working together, devised a method of shipping deer loose on the trucks rather than one to a crate, which took up so much room. A large tarpaulin was placed over the truck body, hay put on the floor for bedding, and the deer put in loose through a narrow door in the tail-gate. This system worked very well. The deer would lie down after the truck was in motion, and it was probably more comfortable than in a narrow crate. On the trip, the deer soon adjusted themselves to traveling by truck and readily drank from a pail of water offered to them by the drivers.

Early in the trapping season, before some of the mature bucks had lost their antlers, they very effectively used them in breaking out of the traps. Light showing through small cracks at the edges of the sliding door was the cue for a break for freedom, and they sometimes smashed through the doors and got away. The snow depths in the swamp ranged from two to six feet, and many times the C.C.C. boys on snowshoes would be able to run deer



down and catch them by hand. The deer caught by hand were usually fawns that had lost weight and were unable to maneuver in the deep snow. The weak ones were brought in to the "deer hospital" where the boys nursed them back to health. The dead deer that were found were brought in for autopsies for information. While working in the swamp, the boys usually noted predator tracks, which were mostly coyote and bobcat, and reported them to Brannon who often staged predator hunts.

There have been many hunters' reports received on deer trapped and tagged at Cusino. When the kill reports were "spotted" on a map of the general area, many significant things were revealed. The extent of a summer range began to show certain limits; yearly occupation of the same winter range is apparently habitual with deer, and there are other interesting and valuable results of the trapping which can now be summarized.

Some results from trapping and tagging deer.

The story of deer trapping and tagging at the Hanson Refuge and at Cusino has been told so that those who are interested in Conservation Department activities will know something of this particular job. Very likely, you are not only interested in the job but also its outcome. One of the results of ear-tagging has been the great amount of interest exhibited by hunters who have shot a deer wearing an ear tag. There are scores of letters in the Lansing office reporting tagged deer, most of them from Michigan hunters. There is a letter from a man in Detroit who got his tagged buck in Schoolcraft County. Another report came from a Port Huron hunter. A woman from Grayling reported her buck was ear-tagged. One man, from Chicago, Illinois, shot a buck in Chippewa County and did not notice the tag

until he had reached Traverse City on his way home. The cooperation of the deer hunters who have found ear tags has been just as important as trapping the deer for tagging.

Every tagged deer is represented by a card in a permanent file in Lansing. All such pertinent information as sex, age, size, tag number, and death record are placed on the card. By tabulation and analysis of the information on these cards, some revealing data are found.

It has been the contention of some people that the sex ratio of the annual fawn crop has been out of balance. Others have maintained that nature keeps the scales from tipping seriously either way. Others shrugged their shoulders, and the argument went on. There have been four hundred-thirty fawns trapped at the Hanson Refuge and four hundred-eighty fawns at Cusino. At the Hanson Refuge, there were two hundred-four male fawns handled as compared to two hundred twenty-six female fawns. At Cusino, the number of buck and doe fawns handled was equal, two hundred forty each. Those are the figures; they do not claim to settle a good argument. The sex ratio figures on mature deer show that more does than bucks were handled at each trapping site. At the Hanson Refuge, the does outnumbered the bucks four to one, while at Cusino, it was one buck to slightly more than two does. The inequalities of the buck-doe ratio are probably partly explained by 20 years of buck hunting. At the Hanson Refuge, where there were two more does per buck trapped than at Cusino, the deer kill per square mile in hunting season since 1935 has been about twice as great as at Cusino. All this information has led to a better knowledge of deer herd composition. Another significant figure is the ratio between adult



deer and fawns. At both trapping sites there was a fraction better than two fawns trapped for every adult deer handled. This seems to indicate that hunting and other losses do not impair the reproductive capacity of the herds. The food conditions and starvation losses in the swamps where these deer were caught show that not enough of the deer are being removed.

The knowledge of range requirements of deer has been added to from the trapping and tagging activities. In the first place, and within certain limits, the records show that deer apparently have a "homing" sense. That is, they tend to use the same general summer range and will return to the same winter range regularly. A deer with tag 1094 was trapped at the Hanson Refuge and released in Kalkaska County ten miles away. The same deer was caught two years later back at the original trapping site. Deer 2219 had a chronic case of homesickness. This deer was trapped in 1938 at the Hanson Refuge and released 16 miles south in Roscommon County. It was caught again in 1939 back at the Hanson Refuge and trucked back to the same swamp in Roscommon County. Eight days later it was recaptured back in the same trap. For the third time it was sent back to Roscommon County. When this deer showed up in the Hanson traps in 1940, it was sent to Kalkaska County and has not been heard of since. This deer had made three sixteen-mile return trips from where it was released back to the place where it was caught. At Cusino there have been many re-catches, but the most notable was the deer that was trapped fifty different times in three months.

Another indication of deer showing a tendency to return "home" is pictured in the hunters' reports. Twenty-two deer released in Kalkaska County from the Hanson Refuge have been recovered by hunters. By spotting

those reports on a map of the area, a definite drift from the point of release to the original trapping site is apparent. The fawns apparently found no difficulty in returning ten miles to "home," but there are no reports of their returning for distances greater than that. Deer trapped at the Fletcher swamp in Alpena County were transferred and released at distances of eight, twenty-two, forty-five, and sixty-five miles from the trapping site. "Deer transferred and released more than twenty miles from where they were caught seem to be in strange country and show no tendency to drift in the direction of 'home,' but will apparently scatter in any direction."<sup>1</sup>

With the advent of the spring break-up and easier travel, the deer start moving away from the yarding area into the summer range. The extent of the summer range has been a subject open to argument which the tagging returns do not settle conclusively. Nevertheless, the summer range limits which the tagging returns indicate are worthwhile mentioning because they are the best and only ones obtainable. It was found that eighty-two per cent, or thirty-two deer of the thirty-nine shot in the Cusino District, were within an area about sixteen miles from the trapping site. Considering that tagged deer have shown they return rather consistently to the same winter range each year, then it seems safe to assume that, in this case, the area sixteen miles out from the trapping site constitutes the principal summer range. As more returns are received, the more conclusive will be the evidence.

Thus was the deer trapping and tagging idea conceived, put to use, and produced some valuable information. Deer herd composition, extent of range, "homing" instinct, are all basic factors on which a thorough management program depend.

<sup>1</sup> - Live Trapping Whitetail Deer - I. H. Bartlett.