# TRAPPING AND TAGGING MOOSE ON WINTER RANGE

R.W. Ritcey and R.Y. Edwards

August 22, 1955

reprinted from The Journal of Wildlife Management Vol. 20, No. 3, July 1956

For two years this Division has trapped and tagged moose on winter range in Wells Gray Park. This preliminary note describes the techniques used. Trapping moose has not been found difficult, and others engaged in moose studies which would be aided by tagged animals may be encouraged by our success.

The herd involved is migratory along much of the Clearwater Valley in fall, winter, and spring. Population densities are high on the winter range (Edwards, 1952, 1954). This seasonal concentration is an important factor in our trapping success. Migration is an additional aid, for while some captures have resulted from drives to the traps, they usually captured migrating animals which entered of their own accord.

The traps are located on a low ridge which parallels the long axis of the valley. Their precise location was governed by winter observations on locally favoured migration routes, with the result that the traps and their leads are thrown across a route of concentrated movement. When the traps are set, gates at either end are open. Their entrances are camouflaged with evergreen boughs and appear to be passages though the barrier to migration formed by the leads.

The first trap was made in the fall of 1953 at a total cost of about $200 which was mainly for labour. This trap is octagonal in shape and might be more appropriately called a corral. The enclosed space is about 20 yards across. Two gates, 10 feet wide, can be raised 8 feet from the ground.

Construction is of horizontal aspen poles between split cedar posts. Posts are double, both at the eight corners and midway between these. The trap was constructed in an aspen stand, providing abundant material for poles.

The gates are raised and one is held in place by a wooden lever. The trap is set so that moose walk into a length of nylon monofilament at the centre of the enclosure. This moves a notched iron lever, which in turn releases the lever supporting one gate. As this gate falls, a rope attached to it releases a clevis pin supporting the other gate.

A chute, V-shaped with a wide mouth in plan, is used to hold the animals for tagging.

Experience with this trap shows that it is unnecessarily large for tagging operations. There is so much space within it, that it is difficult to drive some animals into the squeeze chute. The large size is necessary, however, so the trap can double as a holding corral for anticipated experiments with captive moose.

Long lead fences of aspen poles wired to A-frames, also of aspen poles, act as funnels to each gate. A total of 3,870 feet of leads has been constructed.

In the fall of 1954, two smaller traps were placed in the leads to the large trap. These are about 23 feet long by 5 feet wide, with sides and gates constructed much as for the larger trap. These traps cost about $100 each. Animals are held in one end of the trap for tagging by a swinging gate, and squeezed by a movable panel. This panel is made of 2” planking and swings on a heavy cedar log resting on the floor of the trap. It can be moved to the side of the trap when not in use.

The tags and plastic markers used have been described by Leopold *et al.* (1951). The plastic is cellulose acetate, 0.025 inch thick. Of five colours used, visibility under field conditions is best for red and pink, intermediate for blue and green, poorest for white. Simple tests have shown that both red and pink fade badly in direct sunlight. While this plastic is tough, one of three returns had lost the plastic marker. This material becomes brittle in cold and the markers may be lost in sub-zero winter weather. Tagging is done from outside or above the squeeze, which reading through the side or top. The operation is completed most successfully from a position above and behind the animal's head. When approached from the side or front, frightened animals struggle violently.

Trapped moose try to go over the fence only three or four times on the average, then run about the big trap. Fear and exertion combine to tire the animals rapidly. Many soon exhibit defiant behaviour and charge at people on or near the trap walls. Some even return to attack after being released from the trap.

One moose has escaped from this trap by breaking a top rail and jumping out. Packed snow in the corral provided good footing, and the animal scrambled over the height of 6'8". No moose has yet gone over eight foot sides. In their jumping attempts, they rarely get their hind feet off the ground. By contrast, mule deer that have been trapped come within inches of clearing the sides and make many more attempts to escape.

In 1954, twenty moose and three deer were trapped in four months (January to early May) during a period of increased trap efficiency from accumulating trapping experience. In 1955, the large trap took 25 moose and 2 deer, the small traps 15 moose. Poorer success from the small traps was expected. The lead fences converge on the large trap while the small ones are set in these leads.

A total of four calf moose and two adults have not survived. This is 10 percent of the total capture. Two calves were trampled by cows, one strangled when roped, and one was struck by a dropping gate. One adult apparently died of fright, and one broke a leg while leaving the corral.

In addition to trapped animals, 17 recently born moose calves have been tagged in the past five years. This activity has been found too dangerous for field men working alone. We now search favoured calving grounds in teams or two or three. Cows are frightened from their calves with shouts and rifle shots into the air. A dog aids in pursuing active calves. Since beginning this method we have had no serious trouble from females protecting their young.

There are no returns or observations on moose tagged as calves, except for recaptures of calves recently tagged. Considerable evidence shows that cows and tagged calves are soon reunited so that separation of calf from cow does not seem to have a serious effect upon calf survival. Of trapped moose, none has repeated in the traps, one has been shot by a hunter, and two have been identified by field observers. In a number of cases, moose seen in the field have been suspected of carrying tags, but conditions for observation were not favourable enough for observers to be certain.

Enthusiastic assistance in all aspects of this project was given by L. E. Cook and C. Gaglardi, BC Forest Service; and by T. Helset and R. Helset who have given time freely on many occasions.

*Literature cited:*

Edwards, R. Y. 1952. An aerial moose census. Res. Note 23. BC Forest Service

Edward, R. Y. 1954. Comparison or an aerial and ground census of moose. Jour. Wildl. Mgt. 18: 403-404

Leopold, A. S., T. Riney, R. McCain, and L. Tevis, Jr. 1951. The Jawbone deer herd. Game Bull. 4, Calif. Dept. Nat. Res.