

An innovative and selective live-trap for raccoons (*Procyon lotor*)

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The Raccoon (*Procyon lotor*) is a well-known procyonid found in North America where it is indigenous (Kaufmann, 1982), and in Europe and Russia where it has been introduced (Redford, 1962; Beaufort, 1968; Roeben, 1975). It is an adaptable and successful species that inhabits forests near water, and areas of high human density where it finds abundant food and shelter (Kaufmann, 1982).

Raccoons often are subject to biological investigations aiming at developing proper conservation programs. Although ample information has been gathered on the raccoon's life history, there is need for further research on the species' social structure, and the animals' behavior and reproductive biology (Kaufmann, 1982). The cumbersome and relatively expensive box traps (25 x 31 x 81 cm and larger) are commonly used to capture, mark, and transport raccoons (Meyer, 1991; Endres & Smith, 1993; Taulman & Williamson, 1993). The animals may damage their feet and teeth on traps made out of wire mesh but these injuries can be minimized by constructing traps out of wood or plastic. However, a visible and odorant bait is often used to entice raccoons to enter box traps (Meyer, 1991) and this commonly results in the capture of "unwanted" animals such as cats (*Felis catus*), small dogs (*Canis familiaris*), rodents and birds. These "unwanted" animals often get hurt during their escape attempts and this is a source of concern for the general public (Defenders of Wildlife, 1984).

This paper reviews the characteristics of an innovative and harmless live-trap that selectively captures raccoons.

The EGG Trap

The EGG trap (EGG trap Co., Dr R. Thompson, Wagner, South Dakota, USA) consists of a 9 cm wide x 11 cm long plastic housing (Fig. 1). Through a 4 cm diameter opening, animals can reach with their paw the trigger situated mid-way within the housing. However, in order to fire the trap, animals must be able to grasp the trigger and pull on it. Therefore, digitigrade animals usually are unable to fire the trap. When the trigger is pulled, it releases a 5.7 cm long bar moving laterally within the housing that blocks the animal's paw. The EGG trap is not comparable to the highly controversial leghold trap where an animal's paw is

clamped by two jaws closing on each other. Because the trap's plastic housing completely covers the blocked limb, the animals cannot damage their toes by scratching the ground, a common happening with box traps. The trap also protects the blocked limb from wrist torsion injuries.

Assessment studies

Proulx *et al.* (1993a) tested the EGG trap in simulated natural environments by setting it at an angle (to avoid the capture of small rodents) on a tree trunk and baiting it with marshmallow at its opening and on the trigger (Fig. 1). Their tests were first carried out with nine raccoons for a 12h capture period. In a second series of tests, nine raccoons were held captive for 24 consecutive hours. In all cases, the animals did not suffer any serious injuries. EGG-captured raccoons can easily be darted with an anesthetic or immobilized with a snare pole.

In Canada, Proulx (1990) found that the EGG trap baited with marshmallow and set on a tree was as efficient as the box trap to capture raccoons. Contrary to the box trap, it did not capture any "unwanted" species. In the United States, Proulx *et al.* (1993b) found that when the trap was baited with meat, it was also remarkably efficient in capturing raccoons. However, the bait attracted several carnivores and a few dexterous Virginia opossums (*Didelphis virginiana*) were captured. A cat also succeeded in firing the trap by pawing the trigger. A sweet non-meat bait such as marshmallow is therefore more appropriate in maintaining the high selectivity of the EGG trap for raccoon.

Conclusion

The box trap undoubtedly is a valuable means to capture raccoons. However, whenever there is a risk of capturing "unwanted" wild animals or peoples' pets, consideration should be given to the use of the EGG trap. The EGG trap is relatively inexpensive (approximately 10 US\$) and, because of its small size, it can be set wherever a raccoon may live. Since it can efficiently capture raccoons without causing serious injuries, and reduce the number of "unwanted" species, the EGG trap is a valuable tool to use in any raccoon conservation program.

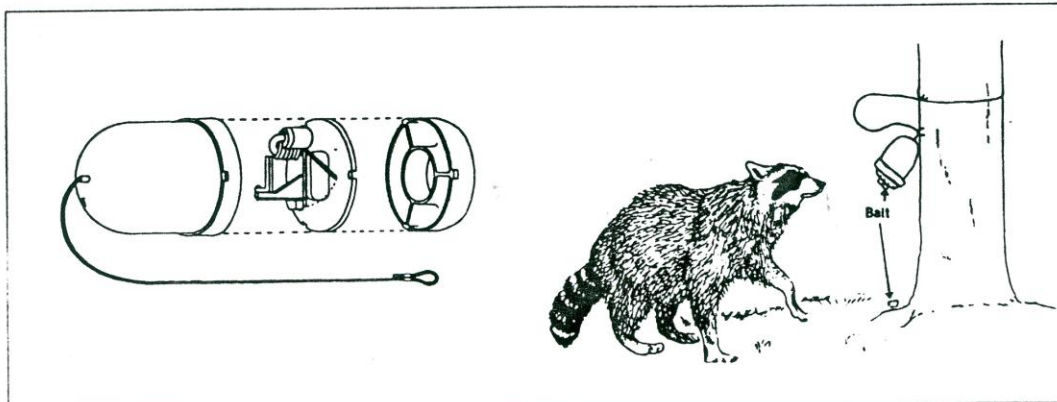


Fig. 1. Diagram of the EGG trap and its tree set.

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