Best Management Practices

for Trapping Nutria in the United States

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ASSOCIATION of FISH & WILDLIFE AGENCIES

Figure NT1. Nutria *(Myocastor coypus)*

Best Management Practices (BMPs) are carefully researched educational guides designed to address animal welfare and increase trappers' efficiency and selectivity. The extensive research and field-testing used to develop BMPs are described in the Introduction section of this manual. The evaluation methods used to develop BMPs have been standardized, enabling them to be easily updated and revised as new traps and techniques become available. All traps listed in the BMPs have been tested and meet performance standards for animal welfare, efficiency, selectivity, practicality and safety.

Trapping BMPs provide options, allowing for discretion and decision making in the field. BMPs are meant to be implemented in a voluntary and educational approach and do not present a single choice that can or must be applied in all cases. BMPs are the product of ongoing work that may be updated as additional traps are identified through future scientific testing.

The Nutria at a Glance

Characteristics

The nutria *(Myocastor coypus)* (Figure NT1) is the only member of the Myocastoridae family found in North America. This large rodent is dark brown to yellowish brown with a long, round tail that is slightly haired. The dense underfur is short and grayish in color, while the guard hairs are long, glossy and brown. Like many other rodents, nutrias have large incisors (front teeth) that are orange on the outer surface. This semiaquatic species has a valvular nose and mouth that can be closed while submerged and webbed hind feet to assist in swimming. Nutrias possess cylindrical tails, instead of laterally-flattened tails as in the muskrat. Nutrias are capable of swimming long distances underwater and are also able to travel considerable distances overland. Nutrias are smaller than beavers but larger than muskrats. Adults average from 10 to 20 pounds and 34 to 42 inches in total length. Adult males are slightly larger than adult females. An unusual feature of female nutrias is the relative location of paired mammary glands along the back-bone (i.e., dorsal side), from just below the shoulder blades to the pelvis. This unique feature allows the young to nurse while clinging to the back of the female.

Range

The nutria is found primarily in the coastal regions of the United States, including the Gulf Coast states, the Pacific Northwest and the Mid-Atlantic states. In the southeastern United States, the range has expanded northward in recent years into Arkansas, Oklahoma and Tennessee. Nutria are indigenous to South America, but because of both accidental and intentional introductions, feral populations are now present not only in the United States, but in Europe, Russia, the Middle East, Africa and Japan.

Habitat

Nutrias may inhabit almost any coastal wetland area, saltwater, brackish or freshwater. They thrive in tidal coastal marshes as well as inland freshwater marshes and swamps, drainage canals with spoil banks and freshwater impoundments. Nutrias carve out burrows in levees, embankments and dikes and use these for protection in winter months or other cold periods. During warmer months, nutrias live on floating platforms or nests which they create from emergent vegetation. They spend much daylight time sunning, grooming and resting, and feed primarily at night. They are most active from dusk to dawn, with midnight often being the peak of movement and feeding.

Food Habits

The nutria is almost strictly herbivorous and consumes a wide variety of wetland plant species. The diet of nutrias in the United States varies with geographic location and seasonal availability, but grasses, rushes, lilies, reeds and cattails are the most commonly consumed plant species. Nutrias generally feed on the roots, rhizomes and the basal portions of plants.

Reproduction

Nutria populations in the United States breed year round. Peak breeding activity, and subsequent birthing of young however, may vary annually as a result of weather conditions such as hurricanes, freezes or droughts. The age of sexual maturity is also quite variable (four to nine months) and dependent on habitat quality and population density. The gestation period is 130 to 132 days and though litter sizes may range from one to 13, the average litter size is four to five. Young are precocial (i.e., born fully furred with eyes open) and are capable of swimming and eating green vegetation within 24 hours of birth, though they generally nurse for about two months. Nutria social behavior in the wild is not well studied, though most conclude that nutrias are gregarious and live in social colonies. Within colonies, one alpha male and one alpha female are typically present, with the remainder of the colony consisting of mixed sexes. Adult males, other than alpha males, are often free-ranging and have no group relationship.

Populations

The nutria is an introduced invasive species, and through both accidental and intentional propagation, wild populations now exist in numerous coastal regions. After introduction, populations increased rapidly and began to cause extensive damage in fragile coastal marsh ecosystems. Due to their high densities, the consumption of marsh vegetation leads to the denuding of many acres of marshland, causing marshes to revert to open water and changing tidal marsh ecology. The loss and degradation of marsh habitat, which sustains numerous wildlife and fish species, has caused loss of habitat and biodiversity over wide areas of wetlands. Intensive efforts are underway to dramatically reduce nutria densities; however, populations appear to be continuing range expansion in many areas.

General Overview of Traps Meeting BMP Criteria for Nutria in the United States

Two basic types of traps were tested for nutria: foothold restraining traps and bodygrip traps (Table NT1). Examples, brief descriptions, and mechanical details of the various devices are given in the next section.

Table NT1. Overview of traps meeting BMP criteria** for nutria in the United States.

Trap Category	Jaw/Frame Characteristics	Inside Jaw/Frame Spread at Dog*	Inside Width at Jaw/Frame Hinge Posts*	
Coil-spring	Padded	3 5/16 – 4 1/2	3 7/16 – 4 7/16	
	Height of Trap Window*	**Width of Trap Window***	**Frame Wire***	**Spring Wire***
†Bodygrip	5 7/8 – 6 1/8	5 7/8 – 7 3/4	3/16 – 1/4	3/16 – 1/4

* Inches

** Any size foothold traps or bodygrip traps with the above measurements or larger measurements, which are commonly used for nutria, also meet BMP criteria for use in submersion sets for this species; foothold sizes commonly designated as 1, 11, 1.5, 1.65, 1.75, 2, 3, 4, and bodygrip sizes commonly designated 160, 220, 280, 330.

† All bodygrip traps tested had two springs.

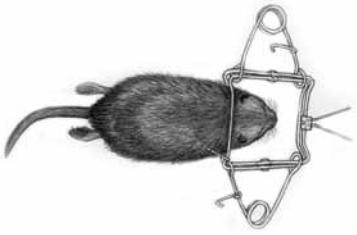

Figure NT2. Bodygrip, proper strike location

Figure NT3a. Setting tool

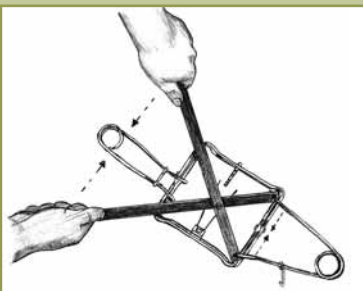

Figure NT3b. Using setting tool

Figure NT4a. Safety gripper

General Considerations When Trapping Nutria

Foothold Traps

- Many currently-used trap models meet specifications
- Loosening pan tension so that the pan moves freely may improve efficiency
- Can be used to capture several furbearing animals
- Can capture and hold animals alive, allowing for release

Bodygrip Traps

- Bodygrip trap should be placed in a vertical position so that the rotating jaws close on the top and bottom of the captured animal's neck (Figure NT2)
- Can be used in locations and in weather conditions where other traps are less effective
- May not be appropriate in some areas (captures and kills animals, no release)
- May need additional protection in some areas to avoid capture of non-target animals through use of restricted entrance cubby sets

Safe Use of Bodygrip Traps

By design, bodygrip traps must close with considerable force to humanely dispatch and efficiently capture wild furbearers. This is particularly true of larger sized and "magnum" type bodygrip traps. As a result, users should take special precautions to avoid potential injury when using these devices. Trappers should be familiar with the safe and efficient use of bodygrip traps and these are best learned in trapper education.

A setting tool (Figure NT3a) should be used to compress trap springs when setting large and magnum bodygrip traps. Use of a setting tool will not only make setting traps easier, it will make setting traps safer by allowing the trapper to keep hands and fingers away from the jaws (Figure NT3b). Most bodygrip traps that have double springs are equipped with spring latches that hold each spring compressed, and the trapper should use these latches on both trap springs. A safety gripper (Figure NT4a) should also be attached to the jaws when the jaws are moved to the set position (Figure NT4b). This will prevent the trap from accidentally closing. The above safety devices protect the trapper and make it easier to set, position and anchor the trap safely. Safety devices should be disengaged only when the set is completed.

If you are accidentally caught in a bodygrip trap you need to know how to free yourself. A setting tool is the most effective means to freeing yourself and should be used to compress the springs or jaws. You should always have one in reach when setting and placing bodygrip traps. In the event you are not able to reach one or use it with one arm, you should always carry a four foot piece of rope. The rope should have a loop tied on one end and should be stored in a pocket that can be easily accessed by either hand. You can use the rope to free yourself as follows:

1) Thread the rope through the eyes of one of the springs (Figure NT5a).
2) Bring the rope around and thread it back through the eyes a second time (Figure NT5b).
3) Place your foot in the looped end of the rope and pull the other end with your free hand until you can set the safety latch for that spring. (Figure NT5c). You may need to do this to both springs to completely free yourself.

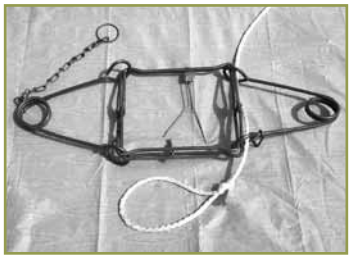

Figure NT5a. Step 1

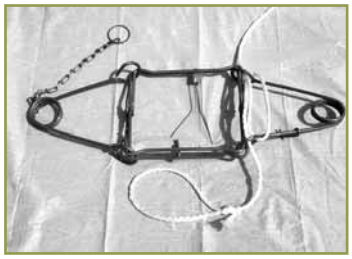

Figure NT5b. Step 2

Figure NT5c. Step 3

Figure NT4b. Using safety gripper

Specifications of Traps Meeting BMP Criteria for Nutria in the United States

As more capture devices are tested and new information becomes available, they will be added to an updated list. Mechanical descriptions of tested traps are given as an aid to trappers or manufacturers who may wish to measure, build or modify traps to meet these specifications (Figures NT6a and NT6b). Also, other commercially available traps, modified traps, or other capture devices not yet tested may perform as well as, or better than the listed BMP traps. References to trap names are provided to identify the specific traps tested. The following list is provided for information purposes only, and does not imply an endorsement of any manufacturer.

Average mechanical measurements are rounded to the nearest $^{1}/_{16}$ inch. There may be up to a $^{1}/_{8}$ inch variation in specifications on the part of the manufacturer. Manufacturers use recognizable names, such as "No. 2" coil-spring, to identify certain traps. However, there is no standardized system linking mechanical design features with trap names. The mechanical features of these traps are listed so that similar traps may be identified. The performance of anchoring systems was not specifically evaluated, however, methods of attachment are described for informational purposes.

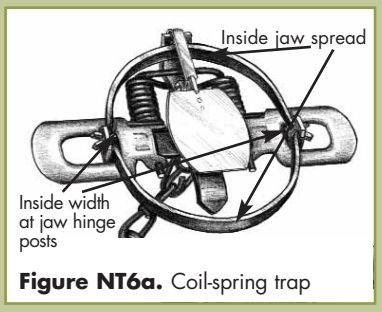

Figure NT6a. Coil-spring trap

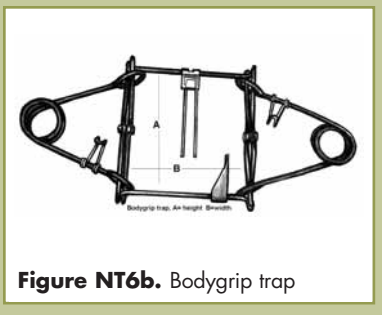

Figure NT6b. Bodygrip trap

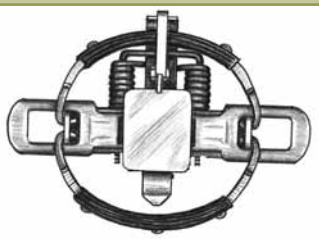

Figure NT7a. Padded jaw coil-spring trap (open)

Figure NT7b. Padded jaw coil-spring trap (closed)

Padded Jaws (Figures NT7a and NT7b)

Average Mechanical Description and Attributes

Inside jaw spread (at dog): 3 5/16 inches
Inner width: 3 3/16 inches
Inside width at jaw hinge posts: 3 7/16 inches
Jaw width: 9/16 inch padded jaw
Jaw thickness: 1/4 inch padded jaw
Main trap springs: Two 0.084 inch diameter wire coil-springs
Base plate: Not reinforced
Padding: Manufacturer supplied rubber pads

Any trap that has similar specifications may be considered a BMP trap regardless of brand or source of modification, although performance information on all other BMP criteria (see Introduction: "Criteria for Evaluation of Trapping Devices" pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 Softcatch™.

Additional information

- Chain attachment used in trap testing: 12 inch, center-mounted with two swivels, one shock spring, and anchored with a stake. When using submersion sets, chain length should be short enough to prevent captured animals from resurfacing.
- Selectivity features: Brass pan tension machine screw; pan tension was loosened so that the pan moved freely, and was checked and readjusted as needed after every capture.
- Special considerations for practicality: Some damage to trap pads should be expected and will require occasional replacement as a normal part of trap maintenance and upkeep. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for use in submersion sets for muskrat and mink.

Average Mechanical Description and Attributes

Inside jaw spread (at dog): 4 1/2 inches
Inner width: 4 7/8 inches
Inside width at jaw hinge posts: 4 7/16 inches
Jaw width: 9/16 inch padded jaw
Jaw thickness: 3/8 inch
Main trap springs: Two 0.130 inch diameter wire coil-springs
Base plate: Reinforced, D-ring chain attachment
Padding: Manufacturer supplied rubber pads

Any trap that has similar specifications may be considered a BMP trap regardless of brand or source of modification, although performance information on all other BMP criteria (see Introduction: "Criteria for Evaluation of Trapping Devices" pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 1/2 Softcatch™.

Additional information

- Chain attachment used in trap testing: 6 inch, center-mounted with two swivels, one shock springs, and anchored with a stake. When using submersion sets, chain length should be short enough to prevent captured animals from resurfacing.
- Selectivity features: Brass pan tension machine screw; pan tension was loosened so that the pan moved freely, and was checked and readjusted as needed after every capture.

- Special considerations for practicality: Some damage to trap pads should be expected and will require occasional replacement as a normal part of trap maintenance and upkeep. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for live restraint of opossum, raccoon, and red fox, and for use in submer-sion sets for beaver, otter, muskrat and mink.

Bodygrip Traps (Figure NT8)

Average Mechanical Description and Attributes

Height of trap window: 5 7/8 inches
Width of trap window: 5 7/8 inches
Diameter of frame wire: 3/16 inch
Diameter of spring wire: 3/16 inch
Additional clamping bar: None
Safety features: Spring latches

Figure NT8. bodygrip trap

Any trap that has similar specifications may be considered a BMP trap regardless of brand or source of modification, although performance information on all other BMP criteria (see Introduction: "Criteria for Evaluation of Trapping Devices" pages 4-6) needs to be considered as well. The trap tested was the Duke™ 160.

Additional Information

- Chain attachment used in trap testing: 18 inch, anchored with a stake.
- Safety considerations: Use of setting tongs, safety latches, and safety gripper is recommended.
- Practicality considerations: This trap also meets BMP criteria for raccoon on land and muskrat in submersion sets.

Average Mechanical Description and Attributes

Height of trap window: 6 1/8 inches
Width of trap window: 7 3/4 inches
Diameter of frame wire: 3/16 inch
Diameter of spring wire: 3/16 inch
Additional clamping bar: None
Safety features: Spring latches

Any trap that has similar specifications may be considered a BMP trap regardless of brand or source of modification, although performance information on all other BMP criteria (see "Criteria for Evaluation of Trapping Devices": Introduction pp. 4-6) needs to be considered as well. The trap tested was the Duke™ 220.

Additional Information

- Chain attachment used in trap testing: 18 inch, anchored with a stake.
- Safety considerations: Use of setting tongs, safety latches, and safety gripper is recommended.
- Practicality considerations: This trap also meets BMP criteria for raccoon on land and muskrat in submersion sets.