Best Management Practices

for Trapping Opossums in the United States

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ASSOCIATION *of* FISH & WILDLIFE AGENCIES

Figure OP1. Opossum *(Didelphis virginiana)*

Best Management Practices (BMPs) are carefully researched recommendations 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 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. Best Management Practices 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 on-going work that may be updated as additional traps are identified through future scientific testing.

The Opossum at a Glance

Characteristics

The opossum is a marsupial (pouched mammal), and is the only member of the family Didelphidae found in North America (Figure OP1). Adults weigh from 4-15 pounds and are typically 24-40 inches in length. Opossum weight varies seasonally, and they are typically heavier during fall. Adult males are generally larger than adult females and, at the same age, may be twice as large. The fur is coarse, grizzled and generally grayish white, with darker front and hind quarters; however, there is a wide range of color variations. The round, scaly tail of the opossum is prehensile (grasping) and used to assist in climbing. Opossum feet are similar in shape to human hands; with an opposable thumb on each hind foot. Opossums may hiss, growl or play dead when threatened. The scientific name is *Didelphis virginiana* or in older texts *Didelphis marsupialis.*

Range

The opossum is commonly found throughout the United States from east of the Rocky Mountains to the Atlantic Coast. Exceptions to the range of the opossum include Maine, North Dakota, and the northern portions of Minnesota and Wisconsin. Introduced populations exist west of the Rockies along the Pacific Coast. The opossum is also found in Mexico, but is not common in Canada.

Habitat

Opossums are fairly nomadic and use many different habitat types, although they prefer habitat where deciduous woodlands are associated with agricultural fields and streams. They can be found in urban and suburban environments.

Food Habits

The opossum is an opportunistic feeder. Invertebrates, small mammals and seasonally available vegetation including hard and soft mast and the leaves of grasses, forbs, and woody plants compose the majority of the diet. The opossum is also a scavenger, and when available, carrion is readily consumed. Other food sources include reptiles, amphibians, birds, eggs and roots.

Reproduction

The opossum rears its young in a pouch (marsupium), which makes it unique among the mammals of North America. Opossums begin the breeding season in late winter and typically produce two litters of 12-13 young per year. Gestation takes 12-13 days, and at birth, young crawl to the pouch on the female's belly where they attach to one of the 12-13 nipples located there. The young detach from the nipple after two months, but remain in the pouch until they are 70-80 days old. After leaving the pouch, young ride on the female's back until they are 100 days old, at which time they become independent. Both sexes are able to breed in their first year following birth.

Populations

Opossum populations are stable throughout their range. Densities are variable depending on habitat quality. In favorable habitat, there may be one individual per two or three acres.

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

Three basic types of traps were tested for opossums: foothold restraining traps, enclosed foothold traps and a cage trap (Table OP1). Examples, brief descriptions and mechanical details of the various devices are given in the next section.

Table OP1. Overview of traps meeting BMP criteria for opossuns 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 9/16
	Double	4 5/16 - 4 1/2	4 1/2 - 4 13/16
	Offset, laminated and/or wide	5	4 13/16
Enclosed Foothold	**Round Bar (diameter)***	**Opening Diameter***	**Depth of Trigger***
	0.125	1 1/2	2 7/8
Cage	**Total Dimensions* Length x Width x Height**	**Door Size* Width x Height**	**Mesh Size*/Guage**
	32 x 10 x 12.75	10 x 12	1 x 2 12 guage galvanized

* Inches

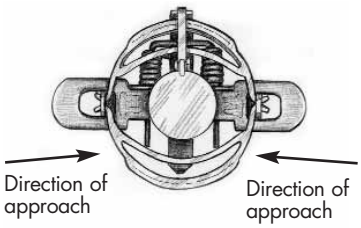

Figure OP2. Double jaw traps

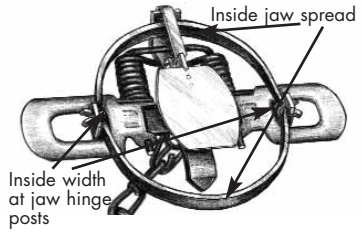

Figure OP3. Coil-spring trap

General Considerations When Trapping Opposums

Foothold Traps

- Many currently-used trap models meet specifications
- Pan-tension set at two pounds may improve selectivity and foot placement in the trap
- Can be used to capture several furbearer species
- Captures and holds animals alive, allowing for release
- Double jaw traps should be oriented when set so that an approaching animal will step between the jaws rather than over them (Figure OP2); may improve efficiency

Enclosed Foothold Traps

- Requires use of baits
- Highly selective for raccoons and opossum
- Design reduces potential to capture dogs or cats
- Captures and holds animals alive, allowing for release

Cage Traps

- Bulky
- Often requires bait
- Can be used to capture several furbearer species
- Captures and holds animals alive, allowing for release

Specifications of Traps Meeting BMP Criteria for Opossums 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 (Figure OP3). 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 $^{1}/_{8}$ inch variation in specifications (Figure OP3) 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.

Padded Jaws (Figure OP4, OP5a and OP5b)

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
Main trap springs: Two 0.080 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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 Softcatch™ coil-spring.

Additional information

- Chain attachment used in trap testing: 6 inch, center mounted with two swivels, one shock spring and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, 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. Special care should be taken to prevent odor contamination of the rubber jaws. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for gray fox and nutria.

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: 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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 1/2 Softcatch™ coil-spring.

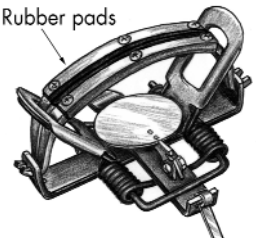

Figure OP4. Padded jaws

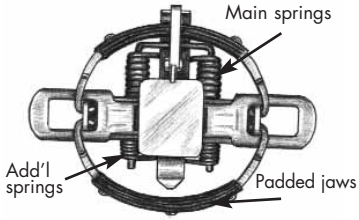

Figure OP5a. Padded jaw coil-spring trap (open)

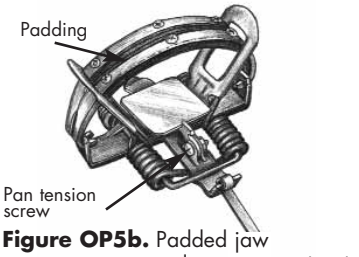

Figure OP5b. Padded jaw coil-spring trap (closed)

Additional information

- Chain attachment used in trap testing: 6 inch, center mounted with two swivels, one shock spring and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, 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. Special care should be taken to prevent odor contamination of the rubber jaws. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for Arctic fox, raccoon, red fox and nutria.

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 9/16 inches
Jaw width: 9/16 inch padded jaw
Jaw thickness: 3/8 inch
Main trap springs: Two 0.131 inch diameter wire coil-springs
Additional springs: Two 0.100 inch diameter wire coil-springs
Base plate: Reinforced wih D-ring
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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 1/2 Softcatch™ modified coil-spring, four-coiled.

Additional information

- Chain attachment used in trap testing: 18 inch, center mounted with three swivels, two shock springs, and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, 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. Special care should be taken to prevent odor contamination of the rubber jaws. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for bobcat, fisher, red fox, gray fox, and Eastern coyote.

Double Jaws (Figure OP6a and OP6b)

Average Mechanical Description and Attributes

Inside jaw spread (at dog): 4 1/2 inches
Inner width: 4 15/16 inches
Inside width at jaw hinge posts: 4 1/2 inches
Jaw width: 9/16 inch
Jaw thickness: 5/16 inch
Main trap springs: Two 0.125 inch diameter wire coil-springs
Base plate: Not reinforced
Padding: Manufacturer supplied rubber pads
Distance from trap pan with pan stop to bottom of auxiliary jaw when closed: 1 inch
Pan stop: Yes

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 pages 4-6) needs to be considered as well. The trap tested was the Woodstream™ Victor No. 1 1/2 Softcatch™ coil-spring, modified with double jaws.

Additional Information

- Chain attachment used in trap testing: 6 inch center-mounted with two swivels, one shock spring, and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, 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. Special care should be taken to prevent odor contamination of the rubber jaws. Avoid using petroleum-based dye directly on the rubber pads. This device also meets BMP criteria for gray foxes.

Average Mechanical Description and Attributes

Inside jaw spread (at dog): 4 5/16 inches
Inner width: 4 7/16 inches
Inside width at jaw hinge posts: 4 13/16 inches
Jaw width: 1/2 inch
Jaw thickness: 1/8 inch
Main trap springs: Two 0.131 inch diameter wire coil-springs
Base plate: Not reinforced
Distance from trap pan with pan stop to bottom of auxiliary jaw when closed: 1 inch
Pan stop: Yes

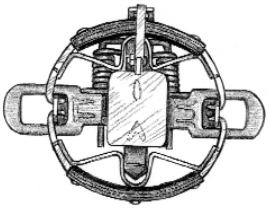

Figure OP6a. Double jaw padded trap (open)

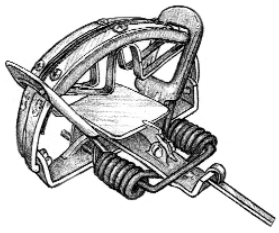

Figure OP6b. Double jaw padded trap (closed)

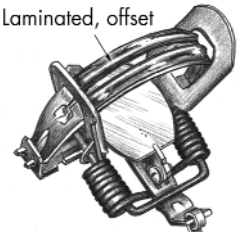

Figure OP7. Laminated offset trap

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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the Sleepy Creek™ No. 1 1/2 coil-spring, modified with double jaws.

Additional Information

- Chain attachment used in trap testing: 20 inch center-mounted with two swivels and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, and was checked and readjusted as needed after every capture.
- Special considerations for practicality: This device also meets BMP criteria for raccoons.

Offset, Laminated and/or Wide Jaws (Figure OP7)

Average Mechanical Description and Attributes

Inside jaw spread (at dog): 5 inches
Inner width: 4 7/16 inches
Inside width at jaw hinge posts: 4 13/16 inches
Jaw width: 3/8 inch wide, smooth round jaw
Jaw thickness: 3/16 inch
Jaw thickness with lamination: 3/8 inch
Lamination: 3/16 inch above-jaw lamination
Jaw offset: 3/16 inch
Main trap springs: Two 0.130 inch diameter wire coil-springs
Base plate: Reinforced

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 pages 4-6) needs to be considered as well. The trap tested was the Bridger™ No. 1.65 coil-spring trap modified with offset, laminated jaws (lamination on top).

Additional Information

- Chain attachment used in trap testing: 18 inch chain, center-mounted with three swivels, one shock spring, and anchored with a stake.
- Selectivity features: Brass pan tension machine screw; pan tension was set so two pounds of pressure triggered the trap, and was checked and readjusted as needed after every capture.

Enclosed Foothold Traps (Figure OP8)

Average Mechanical Description and Attributes

Casing material: Plastic
Opening diameter: 1 1/2 inches
Round-bar diameter: 0.125 inch
Depth of trigger: 2 7/8 inches
Main trap spring: One 0.125 inch diameter wire coil-spring

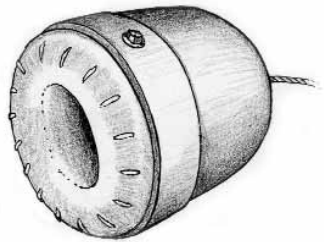

Figure OP8. EGG Trap™

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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the EGG™ Trap.

Additional information

- Chain attachment used in trap testing: 15 inch cable center-mounted with two swivels, and anchored with a stake.
- Selectivity features: Opening to trigger restricted to 1 1/2 inches; enclosed trigger, recessed 2 7/8 inches from opening; trigger is pull-activated but can be modified for two-way action; bait enclosed in casing of trap (hidden from view and access).
- Special considerations for practicality: Requires use of setting tools; disassembly required to set trap and to remove animal from trap; species-selective, best used for raccoons and opossums; requires use of bait or lure; some type of lubricant should be used on trigger mechanism during storage; trap continues to function in freezing weather conditions; can be set above ground to prevent trap from freezing solid into the ground during extreme cold. This device also meets BMP criteria for raccoons.

Cage Traps (Figure OP9)

Average Mechanical Description and Attributes

- Cage material, and mesh size: 12 gauge galvanized steel wire mesh, 1 x 2 inches
- Cage size (length x width x height): 32 x 10 x 12.75 inches
- Door size (width x height): 10 x 12 inches
- Weight: 14 pounds
- Door closure: Spring operated

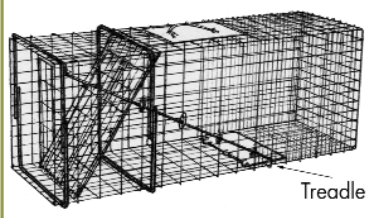

Figure OP9. Cage trap

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 "Criteria for Evaluation of Trapping Devices": Introduction pages 4-6) needs to be considered as well. The trap tested was the Tomahawk™ Cage Trap, No. 108.

Additional Information

- Selectivity features: Limited opening size and length restricts large animals.
- Special considerations for practicality: Versatile set options (baited sets; blind sets only with double doors); can be used for multiple furbearer species in same sets; large and easily seen (difficult to conceal completely); bulky – requires space for transport and storage; easy to operate – requires little training; can be used to transport captured animals; captured animals are easily released; continues to operate in freezing weather conditions. This device also meets BMP criteria for raccoons and gray foxes.