Best Management Practices

for Trapping Swift and Kit Foxes in the United States

ASSOCIATION *of* FISH & WILDLIFE AGENCIES

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 of this manual. The methods used to develop BMPs have been standardized, enabling BMPs 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 that allow 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 must be applied in all cases. BMPs are the product of on-going research and may be updated as additional traps are evaluated through future scientific testing.

Swift and Kit Foxes at a Glance

Characteristics

The swift fox *(Vulpes velox)* (Figure SKF1) and kit fox *(Vulpes macrotis)* are the smallest members of the Canidae (Dog) family in North America. Though the two species are distinct, individuals interbreed and produce hybrids in zones where their ranges contact. The two species can be distinguished visually as the swift fox has shorter, more widely spaced ears, a shorter tail and a more rounded head than the kit fox. While both species have a black tipped tail, the swift fox also has a black spot on either side of the muzzle. The pelage of the two species is similar with the back being grayish, and the sides, legs and tail appearing buffy tan. The posterior region of the back appears grizzled due to the presence of white and black guard hairs. The ventral fur of the throat, chest and belly is pale yellow to white. Adult males are typically larger than females. Kit foxes weigh from 3.0 to 6.6 pounds, while swift foxes weigh from 4.0 to 6.5 pounds. Both species stand approximately 12 inches at the shoulder. Body length ranges from 15 to 20 inches and tail length ranges from 9 to 13 inches for both species.

Figure SKF1. Swift fox (*Vulpes velox*)

Range

The Rocky Mountains represent a geographical demarcation between the ranges of swift and kit foxes with distinct assemblages of populations of swift foxes occurring to the east and kit foxes to the west. In the U.S., swift foxes range from Montana down through South Dakota, Wyoming, Colorado, Nebraska, Kansas, Oklahoma, eastern New Mexico and into the Texas panhandle. Kit foxes range from south western Idaho and southern Oregon into Nevada and western Utah, southern California, Arizona, New Mexico and into southwestern Texas.

Habitat

Swift foxes inhabit prairies of short-, mid- or mixed grasses where the topography is flat or gently rolling. Kit foxes are found in semiarid or arid desert and shrub-steppe areas. Den sites are generally located in areas of loose soil where underground dens can be easily dug. Both species use underground dens throughout the year.

Food Habits

Like most other canid species, swift and kit foxes are primarily carnivorous. They are opportunistic predators and feed on small mammals, reptiles, birds and insects. They also consume small amounts of vegetation and will feed on carrion.

Reproduction

Both species typically breed in late December to early January, however, in the northern parts of their respective ranges, they may breed as late as early February. Young are typically born in late February to early March after a gestation period of ~50 days. Females produce one litter per year and may give birth to their first litter at one year of age. Litter size averages 3 to 5 pups but may range from 1 to 8. Young remain in the underground den until about one month of age. Both parents provide food and care for the pups during the first 4-6 months following birth, but after this time pups begin to forage for themselves and disperse.

Populations

Both swift and kit fox populations are protected from harvest in some parts of their ranges. Converting habitat to agricultural uses and the use of poison in damage control programs negatively impacted fox populations in the past. With poison baits no longer in use and more habitat conscious land use practices, populations are recovering in some parts of their historical range. In other areas, populations are still viable and harvest by trapping and hunting is allowed.

General Overview of Traps Meeting BMP Criteria for Swift and Kit Foxes in the United States

Cage and bodygrip traps were tested for swift and kit foxes (Table SKF1). Examples, brief descriptions, and the mechanical details of the devices are given in the next section.

Table SKF1. Overview of traps meeting BMP criteria for swift and kit foxes in the United States.

Trap Category	**Total Dimensions Length x Width x Height (in)**	**Door Size Width x Height (in)**	**Mesh Size (in)/ Gauge**	
Cage	32 x 10 x 12.75	10 x 12	1 x 2 12 gauge galvanized	
	Height of Trap Window (in)	**Width of Trap Window (in)**	**Frame Wire (in)**	**Spring Wire (in)**
Bodygrip	6 15/16	7	1/4	1/4

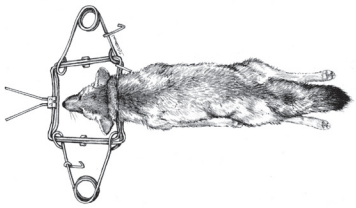

Figure SKF2. Proper strike location

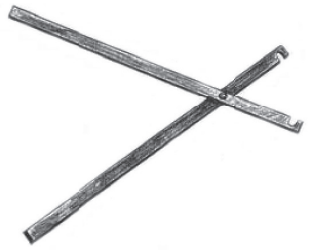

Figure SKF3. Setting tool

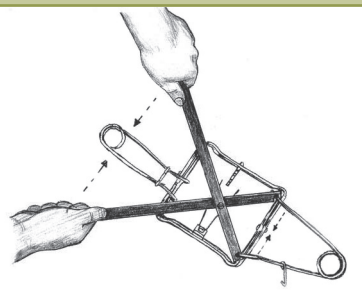

Figure SKF3a. Using setting tool

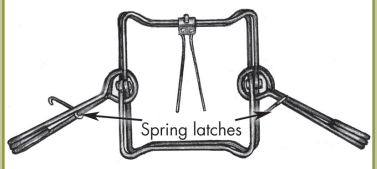

Figure SKF3b. Spring latches

General Considerations When Trapping Swift and Kit Foxes

Cage Traps

- Are bulky
- Require bait (single door traps)
- Can be used to capture several furbearer species
- Capture and hold animals alive, allowing for release

Bodygrip Traps

- Should be placed so that the rotating jaws close on the top and bottom of the captured animals neck (Figure SKF2)
- Allows for use in locations and in weather conditions where other traps are less effective
- May not be appropriate in some areas because captured animals are killed by the trap

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, which is best learned in trapper education.

A setting tool (Figure SKF3) 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 SKF3a). Most bodygrip traps are equipped with spring latches (Figure SKF3b) that hold each spring compressed, and the trapper should use these latches on both trap springs. A safety gripper (Figure SKF4) should also be attached to the jaws when the jaws are moved to the set position (Figure SKF4a). This will prevent the trap from accidentally closing. The safety devices protect the trapper and make it easier to set, position and anchor the trap safely. Safety devices should be disengaged only after the set is completed.

Figure SKF4. Safety gripper

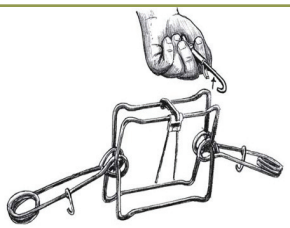

Figure SKF4a. Using safety gripper

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 a setting tool in reach when setting and placing bodygrip traps. In the event you are not able to reach this tool or use it with one arm, you should always carry a four-foot piece of rope with a loop tied on one end (a belt or boot lace could be used instead of a rope) 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 SKF5a).
2) Bring the rope around and thread it back through the eyes a second time (Figure SKF5b).
3) Place your foot in the looped end of the rope and pull the other end with your free hand or teeth until you can set the safety latch for that spring. (Figure SKF5c). You may need to do this to both springs to completely free yourself.

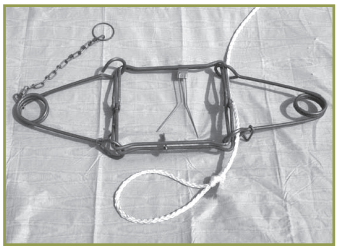

Figure SKF5a. Step 1

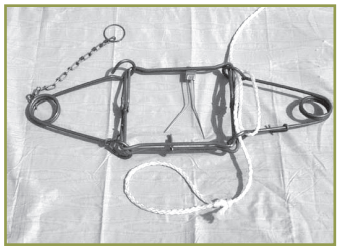

Figure SKF5b. Step 2

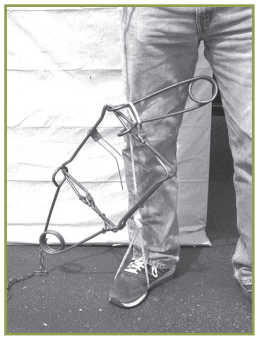

Figure SKF5c. Step 3

Specifications of Traps Meeting BMP Criteria for Swift and Kit Foxes 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. Also, other commercially available traps, modified traps, or other capture devices not yet tested may perform similar to 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 among manufacturers. 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 size designations. The mechanical features of these traps are listed so that similar traps may be identified. The performance of anchoring systems was not specifically evaluated.

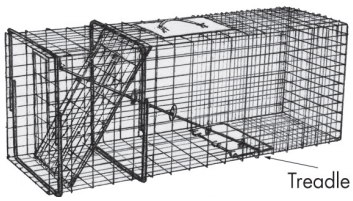

Figure SKF6. Cage trap

Cage Trap (Figure SKF6)

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; single door (width x height): 10 x 12 inches
Weight: 14 pounds
Door closure: Spring operated

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: Multiple 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 fisher, opossum, striped skunk, raccoon and gray fox.

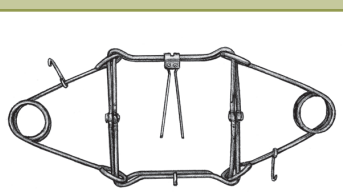

Figure SKF7. Conibear™ bodygrip trap

Bodygrip Trap (Figure SKF7)

Average Mechanical Description and Attributes

Height of trap window: 6 15/16 inches
Width of trap window: 7 inches
Diameter of frame wire: 1/4 inch
Diameter of spring wire: 1/4 inch
Additional clamping bar: None
Safety features: Safety latches on springs

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 Oneida Victor 220 Conibear™ bodygrip trap.

Additional Information

- Selectivity features: Can be recessed in a cubby to increase selectivity. Proper setting techniques are best learned from trapper education materials or from experienced trappers.
- Safety considerations: Use of setting tongs, safety latches, and safety gripper is recommended.
- Special Considerations for Practicality: This trap also meets BMP criteria for fisher, raccoon, nutria, striped skunk, muskrat (submersion), mink (submersion) and river otter (submersion).