The illustrations and data provided in these documents were inspired from the results of the trap testing completed through the work of the Trap Research and Development Committee of the Fur Institute of Canada. They are intended as general guidelines for trap users.

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Graphic design and illustrations
Mélinda Morissette
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March 2012
Update April 2014
### Principles

<table>
<thead>
<tr>
<th>Approach angle</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Centred approach</td>
<td>A Trap dimensions (adapted to the size of the animal);</td>
</tr>
<tr>
<td>facing the trap</td>
<td>B Set (angle of approach by the animal, trap position, trigger position and configuration, trigger adjustment);</td>
</tr>
<tr>
<td>Pole will control the</td>
<td>C Trap Model Mechanical properties (velocity, momentum and clamping forces)</td>
</tr>
<tr>
<td>approach</td>
<td>D Strike locations (targeted vital strike zones).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trap position</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B Dorso-ventral (ideal)</td>
<td></td>
</tr>
<tr>
<td>B Side hit (avoid)</td>
<td></td>
</tr>
<tr>
<td>Bad strike</td>
<td></td>
</tr>
<tr>
<td>D Appropriate strike</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trigger Adjustment</th>
<th>Strike type</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Slow (double strike)</td>
<td>D Double</td>
</tr>
<tr>
<td>Quick (single strike)</td>
<td>J. Goodman ©</td>
</tr>
</tbody>
</table>

Illustrations show rotating jaw traps but can be applied to other killing type traps.

These criteria and principles apply to species-specific killing traps. For a list of certified traps for each species, see:

- [http://www.fur.ca/TRS_certified_traps.php](http://www.fur.ca/TRS_certified_traps.php)
To Get Optimal Lethal Strike Locations

<table>
<thead>
<tr>
<th>Strike Type</th>
<th>Recommended Strike Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>✓  ✓  ✓  ✓</td>
</tr>
</tbody>
</table>

- On land and submerged
  - 120 frame

- Semi-submerged
  - Guiding sticks to reduce the opening thereby allowing rapid contact with the trigger

- Burrow or house entrance
  - 120 frame

- Atlanto occipital (neck base)
- Neck
- Thorax

These specifications only apply to killing traps for this species. For a list of certified traps, see:

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Update: March 13, 2012
To Get Optimal Lethal Strike Locations

**Trail set (on land)**
- Bait or lure set
  - 220 and 330 frame
  - 8.5 to 10.5 cm

**Channel set “submerged”**
- 330 frame
  - Trail set “semi-submerged”
  - 220 frame
  - 220 and 280 frame

---

**Strike Types**

<table>
<thead>
<tr>
<th>Strike Types</th>
<th>Recommended Strike Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>Double*</td>
<td>1, 2, 3, 4</td>
</tr>
</tbody>
</table>

* Any combination of thorax ③ and strike location ① or ② or ⑤.

---

**Head ①**
**Thorax ④**
**Neck ③**
**Atlanto occipital (neck base) ②**

These specifications only apply to killing traps for this species. For a list of certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


Update: March 13, 2012
To Get Optimal Lethal Strike Locations

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<tbody>
<tr>
<td>Single</td>
<td>✓   ✓   ✓   ✓</td>
</tr>
<tr>
<td>Double*</td>
<td>✓   ✓   ✓   ✓</td>
</tr>
</tbody>
</table>

* Any combination of thorax ③ and strike location ① or ② or ③.

These specifications only apply to killing traps for this species. For a list of certified traps, see:

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To Get Optimal Lethal Strike Locations

“Closed” Box trap

Double rotating jaws / baited trigger

Reduced opening for better selectivity and approach by the animal

Modified Rat Trap

Plastic cone to ensure correct approach

<table>
<thead>
<tr>
<th>Strike Type</th>
<th>Recommended Strike Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Head
2. Atlanto occipital (neck base)
3. Neck
4. Thorax

These specifications only apply to killing traps for this species. For a list of certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


Update: march 13, 2012
To Get Optimal Lethal Strike Locations

**Box set**

- **120 frame**
- **2.5 cm**
- **3 cm**
- **8.5 cm**

---

**Strike Types**

<table>
<thead>
<tr>
<th>Recommended Strike Locations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Double*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

* Any combination of thorax ③ and strike location ① or ② or ③.

---

**Head ①**

**Atlanto occipital (neck base) ②**

**Neck ③**

**Thorax ④**

---

These specifications only apply to killing traps for this species. For a certified traps list, see:

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Update: March 13, 2012
To Get Optimal Lethal Strike Locations

**Pole set** or **Box set**

With baited trigger

- **Strike Type**
  - Single

- **Recommended Strike Location**
  - 1
  - 2
  - 3
  - 4

These specifications only apply to killing traps for this species. For a list of certified traps, see:

- [http://www.fur.ca/TRS_certified_traps.php](http://www.fur.ca/TRS_certified_traps.php)

Update: March 13, 2012
To Get Optimal Lethal Strike Locations

**Pole set**
- 8.9 cm
- 7.6 cm
- 6.4 cm
- 3.8 cm
- 220 frame

**Box set**
- 11.7 cm
- 14 cm
- 15 cm
- 280 frame

**Trail set**
- 11 cm max.
- 28 cm
- 28 cm

*Trap size and distance between the bait and the center of the trap is a major factor in obtaining atlanto-occipital strikes.*

1. Single

---

**Strike Type**

<table>
<thead>
<tr>
<th>Recommended Strike Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
</tr>
<tr>
<td>Single</td>
</tr>
</tbody>
</table>

① Head
② Atlanto occipital (neck base)
③ Neck
④ Thorax

---

Sets above the ground (vertical or horizontal) is to avoid captures by a front leg

= Approach by the animal

= Bait

These specifications only apply to killing traps for this species. For a list of certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


Update: March 13, 2012
To Get Optimal Lethal Strike Locations

Set details

280 and 330 frame

Pull trigger

String

Trigger wire

1. Head

2. Atlanto occipital (neck base)

3. Neck

4. Thorax

Technique to encourage lynx to take the bait with its mouth thus avoiding capture by a front paw.

= Bait

= Approach by the animal

Single

Recommended Strike Location

1 2 3 4

1

These specifications only apply to killing traps for this species. For a list of certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


Update: March 13, 2012
Efficient locks (equipped with a compression spring)

Types of cable (galvanized steel)

<table>
<thead>
<tr>
<th>Target species</th>
<th>Diameter (Inches)</th>
<th>Construction</th>
<th>Breaking point (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynx/Bobcat</td>
<td>1/16</td>
<td>1 x 19</td>
<td>500</td>
</tr>
<tr>
<td>Fox/Coyote</td>
<td>1/16</td>
<td>7 x 7</td>
<td>480</td>
</tr>
<tr>
<td>Coyote/Fox</td>
<td>5/64</td>
<td>1 x 19</td>
<td>800</td>
</tr>
<tr>
<td>Wolf</td>
<td>5/64</td>
<td>7 x 7</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>3/32</td>
<td>1 x 19</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>3/32</td>
<td>7 x 7</td>
<td>920</td>
</tr>
</tbody>
</table>

Recommended attachment points

- Always tie off the snare for the largest possible animal you may catch
- To enable the neck snare to close behind the ears and a proper positioning of the lock on the dorsal part of the neck (see ○)

- Use of a neck snare holder (whammy) to provide a sufficient “temporary” resistance

Update: April 28, 2014
Stricking areas (Canidae + Felidae)

Loop diameters and heights

<table>
<thead>
<tr>
<th>Species</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox</td>
<td>18 cm (7&quot;)</td>
<td>18 cm (7&quot;)</td>
</tr>
<tr>
<td>Bobcat</td>
<td>20.5 cm (8&quot;)</td>
<td>20.5 cm (8&quot;)</td>
</tr>
<tr>
<td>Lynx</td>
<td>20.5 cm (8&quot;)</td>
<td>30.5 cm (12&quot;)</td>
</tr>
<tr>
<td>Coyote</td>
<td>25 cm (10&quot;)</td>
<td>25 cm (10&quot;)</td>
</tr>
<tr>
<td>Wolf</td>
<td>35 cm (14&quot;)</td>
<td>35 cm (14&quot;)</td>
</tr>
<tr>
<td>Wolf (Northern)</td>
<td>40.5 cm (16&quot;)</td>
<td>45.5 cm (18&quot;)</td>
</tr>
</tbody>
</table>

N.B. On top of these considerations, in order to ensure a rapid loss of unconsciousness and death, killing neck snares must be properly constructed: efficient locks equipped with compression spring, smallest possible cable wire diameter for the target species. The assembly must produce the best possible mobility (S-Hook) and efficiency of the sliding lock (Sonneker trigger, Power snare).
To avoid capture and retention of cervidae, cattle and sheep, killing neck snares must be constructed and set the proper way.

**S-Hook**

Conventional Cam lock with S-Hook

S-Hook opening point between 320 to 640 lbs

**Accidental catches of moose in neck snares intended for wolves (nose catch)**

In a conventional set

54% of the catches involve the nose

**Diverter; wire no 11 (set details)**

View from above

Double ferrule

Attachment wire no 9

Side view

28”

15”

**Cam lock with breakaway rivet**

Rivet breaking point at ± 270 lbs

**Using a diverter wire**

Flexible neck snare

Heavy sliding parts

46% of catches involved the hooves (rear hoot in 2/3 of cases)

**Leg catch = rupture produced by S-Hook**

Stopper ring 10” from sliding lock (wolf neck snare)

Update: April 28, 2014
**Best Trapping Practices**

**ACCIDENTAL CATCHES**
(eagles + birds of prey)

**KILLING NECK SNARES**

---

**Problems**

- **Trapping period = critical period for migration**
- **Solution:**

  Use of trail sets (no bait)

  **AND / OR**

  Use of snare sets with scent lure and very small size hidden baits (1 lb/0.5 kg) hidden inside a bait container (plastic tube with holes and lid). Ensure that the bait can’t be released from container.

- **Canid enclosure set: High risk trapping technique**
- **Solution:**

  Solution = Use of a adapted bait container (eg. Steel bucket with lid)

  Scent emanations pipe

  Ground level

  Buried bait container

  Construction of open or inverse enclosure set

  N.B.: the open surface must allow the birds of prey to easily land and take off close to the bait (if exposed to their sight)

---

**Legend:**

- * Attractant : (lure) + (small size bait hidden close to the ground in a bait container)
- ■ Position of neck snares
- ■ Buried bait container
- • Hand made trail
- — Existing trail or dense vegetation edge

For more information on proper birds of prey handling and rehabilitation techniques consult: [http://www.uqrop.qc.ca/en/](http://www.uqrop.qc.ca/en/)

Update: April 28, 2014
Elements of trapping to avoid injuries / Limb Holding Traps

Daily check of the trap sets

**Jaw type traps and certain footsnares**

Proper adjustment of the pan trigger...

...Produces an appropriate strike location

**Jaw type traps + Foot encapsulating**

**Jaw Type Traps, Footsnares, Foot Encapsulating Traps**

Use of swivels avoids injuries by twisting

Canids, lynx, raccoon:
- With a stake, use short chain or cable
- Canids jaw trap only:
  - With a drag anchoring system, use a long chain (see Canids sheet)

Shock absorber springs

- Strong (coyote, wolf)
- Regular (fox)

Stake or drag trap anchoring:
- Use an inline shock absorb spring and a sufficient number of swivels

All limb holding traps for raccoon and lynx:
- Use stake anchoring systems

These specifications only apply to the species-specific live capture traps. For a list of certified traps for each species, see:

- [http://www.fur.ca/TRS_certified_traps.php](http://www.fur.ca/TRS_certified_traps.php)

Update: March 13, 2012
**BEST TRAPPING PRACTICES**

| CANIDS (fox, coyote, wolf) | LIVE CAPTURE |

---

**FOOTSNARE / JAW TYPE TRAP**

**Trap Set Details to Avoid Injuries**

- **Jaw type trap**
  - Use of swivels avoids injuries by twisting
  - Movement radius = chain length x 2
  - With a stake, use short chain or cable (see table)

- **Footsnares**
  - (not set)
  - (set)

- **Shock absorber springs**
  - Strong (coyote, wolf)
  - Regular (fox)

- **Recommended anchoring chain maximum length**

<table>
<thead>
<tr>
<th></th>
<th>Mobile (drag)</th>
<th>Stake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox</td>
<td>1.5 m</td>
<td>0.3 m</td>
</tr>
<tr>
<td>Coyote</td>
<td>2.5 m</td>
<td>0.5 m</td>
</tr>
<tr>
<td>Wolf</td>
<td>3 m</td>
<td>1.2 m</td>
</tr>
</tbody>
</table>

- **Use of at least one shock absorber spring and a sufficient number of swivels**
- With a drag anchoring system, use a long chain (see table)

- **Swivel**
- **Shock absorber spring**

**Optimal Strike Locations**

- 1 Toes
- 2 Pad
- 3 Wrist

These specifications only apply to the live capture traps for these species. For a certified trap list for coyote and wolf, see:

- [http://www.fur.ca/TRS_certified_traps.php](http://www.fur.ca/TRS_certified_traps.php)

For more details, check the PIGEC manual (http://www.ftgq.qc.ca/fr/publications/index.htm)

Update: March 13, 2012
### Trap Set Details To Avoid Injuries

**Lil' Grizz Get'r**z

- Bait set under pull trigger
- Positioned this way, the restraining arm (steel rod) strikes on the pad side

**Duffer**

- Short chaining system
- Stake anchoring system

Duffer and Egg trap:

- Partly buried underground (compacted soil)
- Bait set on the trigger

---

**Egg trap**

For all trap models:

- Positioned this way, the restraining arm (steel rod) strikes on the pad side

Ideal raccoon approach angle

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**Obstacle behind the trap**

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Conducted soil

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General:

- Bait set under pull trigger
- Positioned this way, the restraining arm (steel rod) strikes on the pad side

---

### FOOT ENCAPSULATING TRAPS

**Optimal Strike Location**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>🟢</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Toes
2. Pad
3. Wrist

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These specifications only apply to the live capture traps for this species. For a list of certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


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Update: March 13, 2012
**FOOTSNARE / JAW TYPE TRAP**

**Optimal Strike Locations**

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<th>1</th>
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<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>✓</td>
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</table>

1. Toes
2. Pad
3. Wrist

These specifications only apply to the live capture traps for this species. For a list of certified traps, see:

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**Trap Set Details to Avoid Injuries**

- **Trap anchoring**
  - Stake only
  - Short (max. length 24.5 cm)

- Centre mounted swivel

- 2 swivels + shock spring

- Approach by the animal

- Set only for capture by one front foot

- Favour this type of strike...

- ...To obtain this strike, properly position the trap

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Update: March 13, 2012
Installation Details

- Cage set in the shade and if possible protected from bad weather and to prevent exposure to sun and hypothermia.
- Daily check, early morning.
- If set close to water edge, anticipate water level fluctuations to avoid drowning.
- Choose quiet trap sites to avoid stress.

For a list of raccoon certified traps, see:

http://www.fur.ca/TRS_certified_traps.php


Update: March 13, 2012