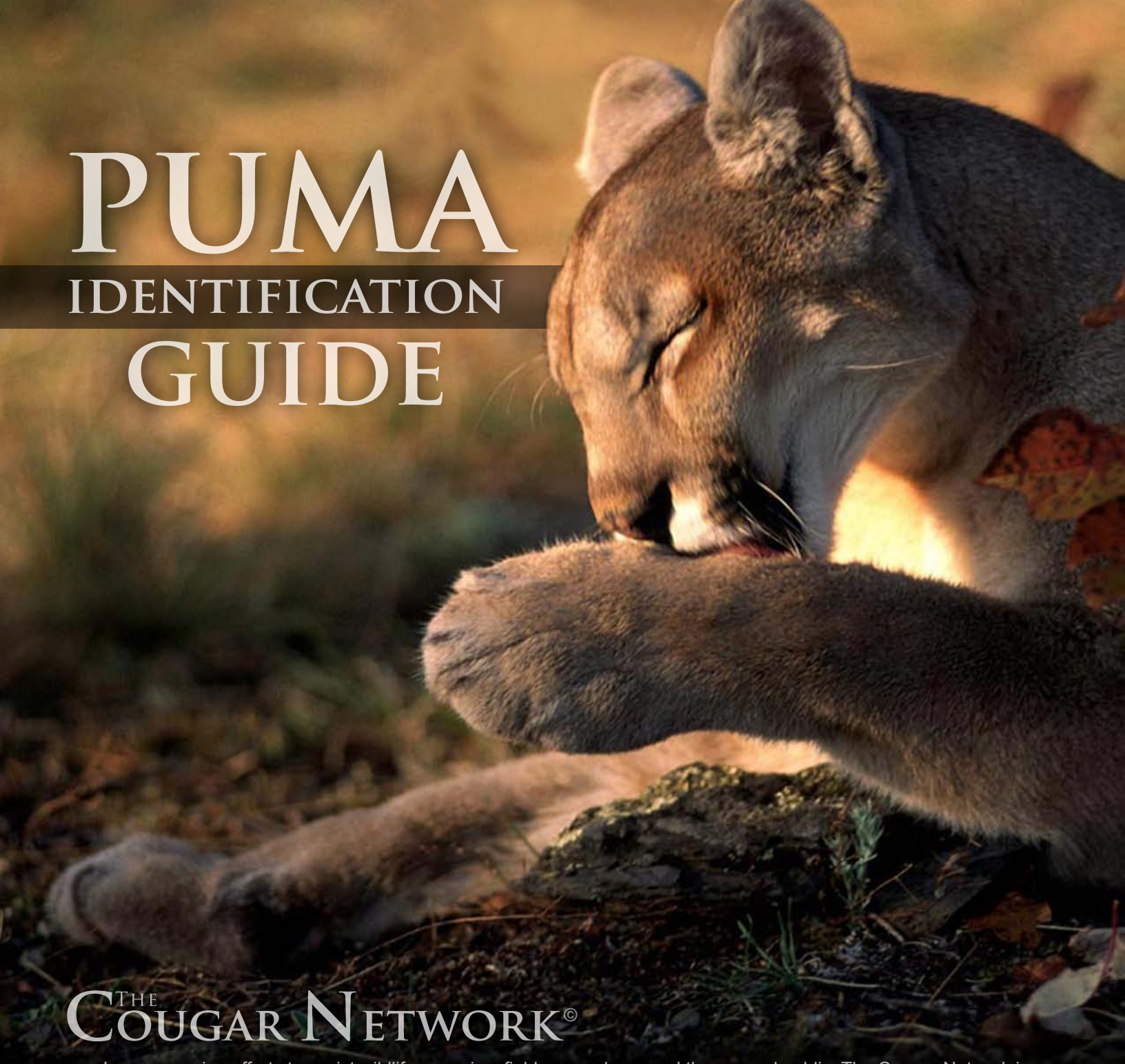


PUMA
IDENTIFICATION GUIDE

The Cougar Network©

In our on-going efforts to assist wildlife agencies, field researchers, and the general public, The Cougar Network is proud to present the Puma Identification Guide, developed with the help of leading wildlife biologists Harley Shaw, Paul Beier, Melanie Culver, and Melissa Grigione, and edited with the help of Chuck Anderson, Mark Dowling, Dave Hamilton, and Bob Wilson.

This document is an abbreviated summary of guidelines used to identify *Puma concolor*. It discusses how the appearance, tracks, and kill sites of the puma differ from other species, which is not to say that other differentiators do not exist; scat size and segmentation might assist in determining a species in certain circumstances, but these differences are much more subtle and often require laboratory testing to confirm. The intent of this guide is to assist with the more concrete means of identifying the puma in the field. It is not intended to be used as a comprehensive guide to identifying the puma. This guide is not to be construed as a statement of policy; the document is provided only as a tool. This document does not discuss documenting identification.

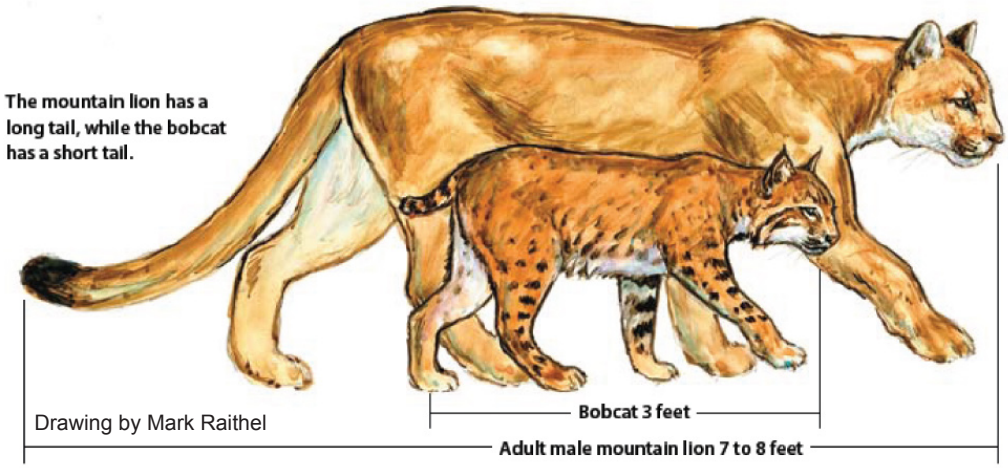
For more information on puma identification – along with information on biological considerations, life history, assessment, and management – see the full-length **Puma Field Guide**, available at **www.cougarnet.org**.

1 Appearance

Puma concolor has many names, including cougar, mountain lion, puma, catamount, panther and painter. A puma is a large, slender cat with a relatively small head, small, rounded ears that are not tufted, powerful shoulders and hindquarters, and a cylindrical tail that is long and heavy. The tail has a black tip at the end (2 to 4 inches) and usually hangs down next to the hind legs. The body fur is short and soft. Kittens are usually spotted, while adults exhibit more uniform coloration of tawny yellow to light gray.

The adult puma's distinguishing traits include its:

- Large size, with a total length of 60 to 102 inches
- Uniform coloration of tawny yellow to light gray, although some patches of darker or lighter fur may exist
- Black markings at the tail tip, back of the ears, and muzzle; white underbelly, throat, and lower jaw
- Tail length of 21 to 35 inches, up to half its body length
- On average, mature females weigh 80 to 110 lbs., and mature males weigh 130 to 160 lbs.
- Small head proportional to body size
- Rounded, not tufted, ears



Above: The adult puma has a characteristically uniform color, a lengthy tail, a proportionally small head, and rounded ears. Right and Below: Puma kittens are born completely spotted and loose their spots as they mature. Spots become faint by age 1.

Puma

Roughly seven to eight feet in length, the puma's common features are a long cylindar tail, a small head when compared to its body, and a coat that is more uniform in color than the other wild cats in North America. The puma has a comparatively longer snout and shorter hair around the jaw that of the bobcat or the lynx.

The puma's ears provide an identifiable shape that distiguishes it from the bobcat and the lynx. The puma's ears are rounded with no white spot in the center. The bobcat and the lynx both have pointed, tufted ears with a white spot in the center near the base.

Bobcat

Standing about 12-18 in. tall, the bobcat is about twice the size of the average house cat. The bobcat has characteristic spots across its mid-section and strips across its faces and legs. Much like the lynx, it has a short tail and a "beard" extending from either side of its jaw.

As described above, the bobcat has pointed, tufted ears with white spots in the center near the base. The lynx also has this characteristic marking, while the puma does not.

Lynx

Slightly larger than a bobcat, the lynx has sparce stripes and a grayish to tannish coat. Similar to the bobcat, it has a short tail and a "beard" extending from either side of its jaw.

As described above, the lynx has pointed, tufted ears with white spots in the center near the base. The bobcat also has this characteristic marking, while the puma does not.

2 Tracks

Within the United States, except where wolves and lynx occur, the domestic dog is the only animal that occurs commonly in puma habitat and leaves tracks of the size and approximate shape of those of adult puma. Distinguishing puma tracks from other species requires the inspection of several different details, including size, shape, depth, and stride of the prints. Below are some specific distinguishing characteristics between puma and dog tracks.

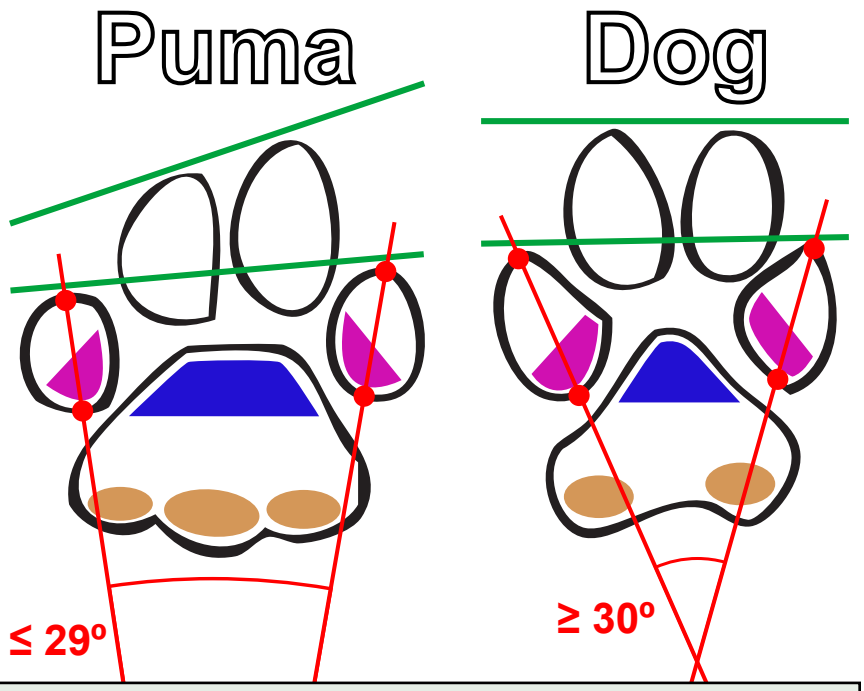
1. Toe symmetry

2. Lateral toe shape

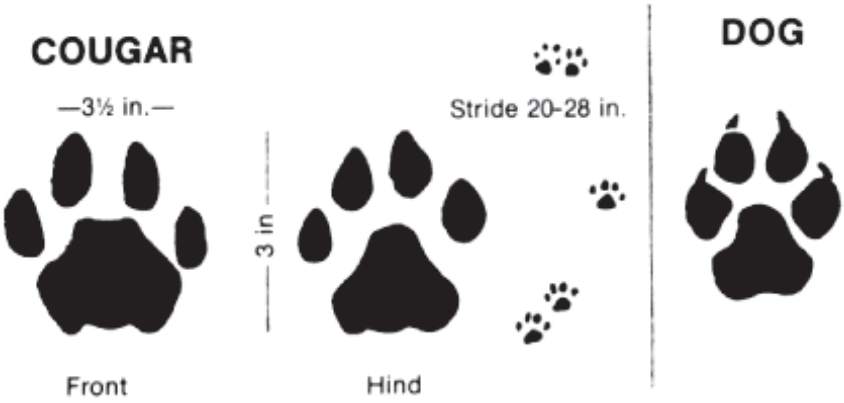
3. Fore-edge heel shape

4. Hind-edge heel shape

5. Angle of fore-aft axis



	Puma	Dog
1. Toe symmetry	Inner lead extends outer lead Inner lateral extends outer lateral	Even inner toes Even lateral toes
2. Lateral toe shape	Rounded inner edge	Angular inner edge
3. Fore-edge heel shape	Bi-lobed (usually) or squared off	Single-lobed
4. Hind-edge heel shape	Three even lobes	Two outer lobes extend beyond center lobe (if center lobe exists)
5. Angle of fore-aft axis	≤ 29 degrees	95%: ≥ 30 degrees 5%: 25-29 degrees
6. Heel Width	Adults: 1.7 - 2.7 in (43-70 mm) Kittens: ≥ 1.4 in (33 mm)	Similar in large dogs only
7. Heel print depth	Flattened in track	More rounded in depth
8. Toenails visible in tracks	Normally absent	Normally present
9. Kick up debris	Rarely	Often
10. Leave drag marks	Rarely	Often

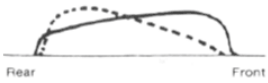


Front track of cougar: Note how heel pad differs in shape from rear track. Front foot is also larger and will be ahead of or partially overlapped by rear.

Rear track of cougar: Note small, tear-drop shaped, widely spaced toes. Note little toe and non-symmetrical shape of foot. Note squared-off front of heel pad and three lobes at rear.

Typical dog track: Note large toes, rounded front of heel, smooth (not lobed) rear of heel, and near-perfect symmetry. Front and rear tracks are of the same size and shape.

Cross section (A) of heel pads of dog (-----) and cougar (____): Note that dog is higher in center while center lobe of cougar is same or lower than side lobes.



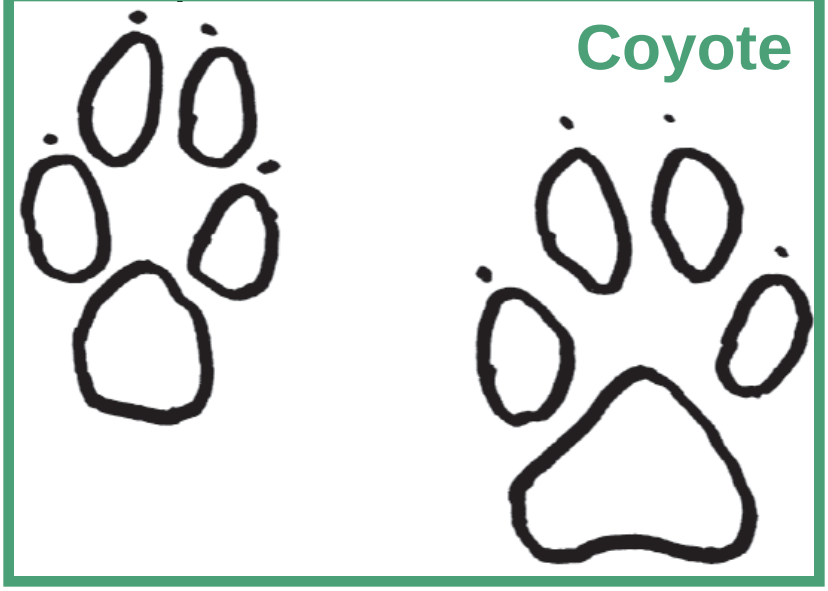
Longitudinal section (B) of heel pads of dog and cougar: Note that dog is highest in rear while cougar is same height or slightly higher in front. Dog slopes gradually in front; cougar is squared off.

Beyond the domestic dog, two tracks of species that are often confused with puma tracks are those of the coyote and the bobcat. Understanding the proportional difference and size of these tracks can help to distinguish them from the puma's. Below, coyote, bobcat, and puma track outlines show that the puma tracks are much larger than the other two. Note how the coyote tracks show claw marks and have a distinct slenderness. Compared to a puma's, bobcat tracks are much smaller and show a rounded heel pad.

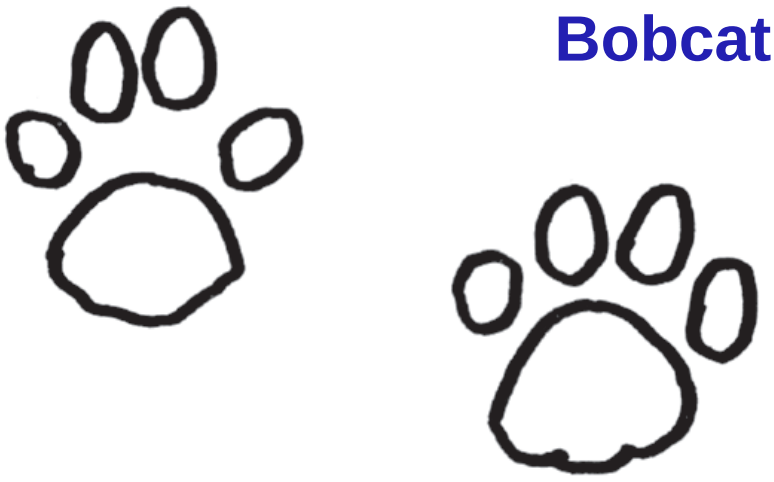
For to-scale outlines, see the full-length **Puma Field Guide**, available at **www.cougarnet.org/guides**.

Puma

Coyote



Bobcat



3 Kill Sites

In instances where a kill site has been found, the state of the prey can often be used for predator identification. The sooner a kill can be viewed, the easier it is to determine the cause of death. Two to three days after death will allow an expert to identify puma involvement with fair accuracy. The task becomes increasingly difficult after this length of time.

Bloodstains on the ground at the kill site and/or subcutaneous hemorrhaging beneath the skin may provide evidence that the animal was actually killed by a predator. Once it is clear that the animal was killed, the species of predator may be evaluated. The chart below provides some key differences between puma kills and dog/coyote kills.

	Puma	Dog / Coyote
1. Canine spacing	Top: 1.8 - 2.0 in. (46 - 51 mm) Bottom: 1.2 - 1.6 in. (30 - 40 mm)	Usually much narrower spacing (except in large dogs)
2. Prey moved	Often will drag to cover if prey was killed in open area	Rarely moved; eaten on site (with more than one canid, “shuffling” may occur)
3. Cover prey	Often, not always (bears and other felids do the same)	Never cover prey
4. Kill efficiency	Efficient - typically localized damage to neck/throat with little disturbance near the attack site	Damage more extensive typically ranging from flank, hind quarters, throat, and/or face; evidence of a struggle
5. Feeding entry point	Shear / pluck hair off before entry	No hair removal
6. Jagged or clean cuts	Clean cuts from scissor-like biting	Jagged cuts from ripping, tearing flesh
7. Carcass entrance	Eviscerate carcass, entering from behind the rib cage	Generally enter through the rump
8. Order of consumption	Feed on liver, lungs, heart first Feed on larger leg muscles next (usually from inside of the leg)	Generally feed on rump first
9. Paunch, Intestines	Seldom feed on paunch, intestines; usually remove them from carcass	Will feed upon paunch, intestines

1. If the carcass can be inspected before it is fully consumed, a neck area dissection can lend valuable information. Tooth marks are typically found around the throat in prey killed by puma. Note the spacing between the tooth marks in the windpipe on the throat area of this dissected lion-killed elk (**right**) and on throat of this deer killed by a mature female puma (**below**).

Drag marks (far left)

These drag marks are left from a puma moving the carcass of a mule deer doe. Unlike dogs and coyotes, when a puma kills its prey in an open area, the puma will often move the prey to cover.

Puma-cached deer (near left)

This kill shows the characteristic covering of prey that is common of felids such as the puma. Bears are known to do the same, but dogs and coyote do not.

Photo courtesy Darrell Land.

Puma-killed desert bighorn ewe

This picture identifies several common signs of a puma kill. Note the entry beneath the rib cage and the evisceration and removal of the stomach and intestines, which have gone uneaten. The hair has been plucked. All of these features are uncommon in dog and coyote kills.

Photo by Thorry Smith; photo courtesy Ted McKinney.

Puma-killed deer

This kill site illustrates the entry beneath to the rib cage and plucking of hair near the abdominal entrance typical of the puma.

Photo courtesy Chuck Anderson.

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