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# UNDERSTANDING WORKING RANGELANDS

## Sharing Open Space: What to Expect from Grazing Livestock

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**Hikers, horseback riders, and other recreationists** enjoy access to more than 130,000 acres of grazing land that is owned and managed by various park and open space entities in the San Francisco area and North Bay Area. Ranchers ran livestock on most of these lands well before the public was welcomed to share the lands with cattle, sheep, or goats. Though grazing and recreation are two distinct uses for rangeland, they generally coexist easily and with very few conflicts. When ranchers graze livestock on lands that have public access, they take great care to select and keep only animals with a gentle temperament there. Any animal that displays aggressive behavior is removed from the herd and from areas shared by the public. We should remember, however, that when an animal acts aggressively, the behavior is simply its natural response to what it views as a threat.

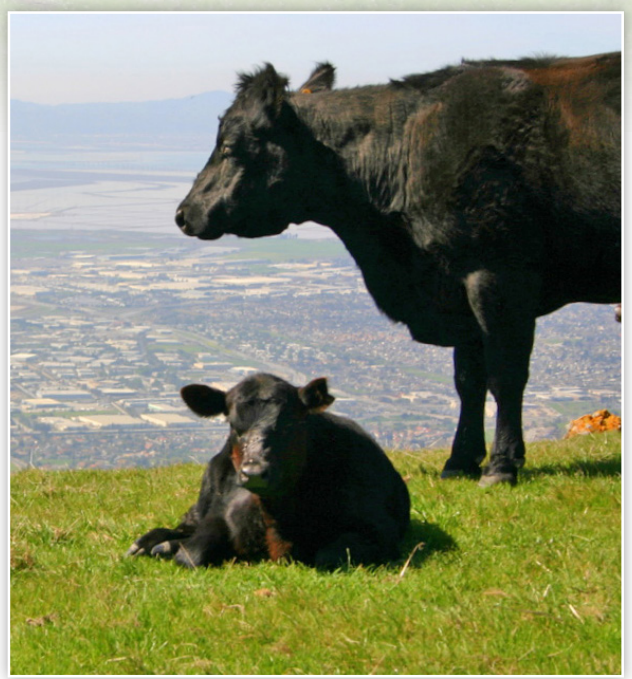

*Photo*: Josh Mazgelis/Fickr

Working rangelands are open space lands that are managed with livestock grazing and rancher stewardship. Their management contributes to a variety of ecosystem services including food production, clean water, weed control, wildlife habitat maintenance and creation, fire fuel reduction, carbon sequestration, pollination services, and open space conservation.

Cattle perceive a dog as a predator. Don't allow you dog to chase or harass cattle. *Photo*: Mary Mactavish/Fickr.

Due to their size, cattle seem more intimidating than sheep and goats to most people. Cattle are the most prevalent livestock animals on park and open space lands in the Bay Area and in California overall. A mature dairy cow can weigh as much as 1,500 pounds, and a mature beef animal generally weighs 1,200 to 1,400 pounds. Sheep and goats are closer in weight to humans, at about 100 to 150 pounds for an adult animal.

Livestock—horses, cattle, goats, and sheep—are classified as prey animals, which means they are potential targets for large predators such as wolves, coyotes, dogs, lions, and humans. Because of this, they naturally experience and express fear and protective behavior, especially when unfamiliar people and animals are near and to protect their young. Large livestock, particularly cattle, can react to such situations in ways that may cause injury to humans. By understanding basic livestock behavior, you can give yourself a better chance to predict how large domestic grazing animals are likely to act in your presence and in response to your actions, and that can help make your recreational outings safer and more enjoyable.

## Dogs Can Threaten Cattle

Dogs and livestock have a complex relationship. On the one hand, working dog breeds have been used to herd and protect livestock for many centuries. On the other, wild dogs and coyotes prey on small and young livestock and sometimes harass adult animals, so they are perceived as a threat.

Cattle can feel threatened by your dog, which they will perceive as a predator. This is especially true for mother cows, who naturally become aggressive when trying to protect their young. Cattle that have had previous negative experiences with dogs may have a predisposition toward fear when they see, hear, or smell them. In addition, cattle are fenced in, and based on how close they are to the fencing and on the topography of the site, "flight" (running away) may not be possible for them in a "fight-or-flight" situation.

A loose, barking dog can harass, injure, and sometimes even kill livestock. When in the presence of livestock, keep your dog close to you and under complete control at all times. Taking a dog near cattle should be avoided if possible; if unavoidable, do it only with extreme caution. Moreover, never allow a dog to get between a mother cow and her calf. If your dog is chased by or otherwise interacts with a mother cow, do not intervene as you can be badly injured. The cow in such a situation usually is not attacking the dog, but rather trying to push or frighten the dog out of its own flight zone (figure 1) in an attempt to protect its calf. Once the dog is out of the flight zone, the cow will most often run away, either to the

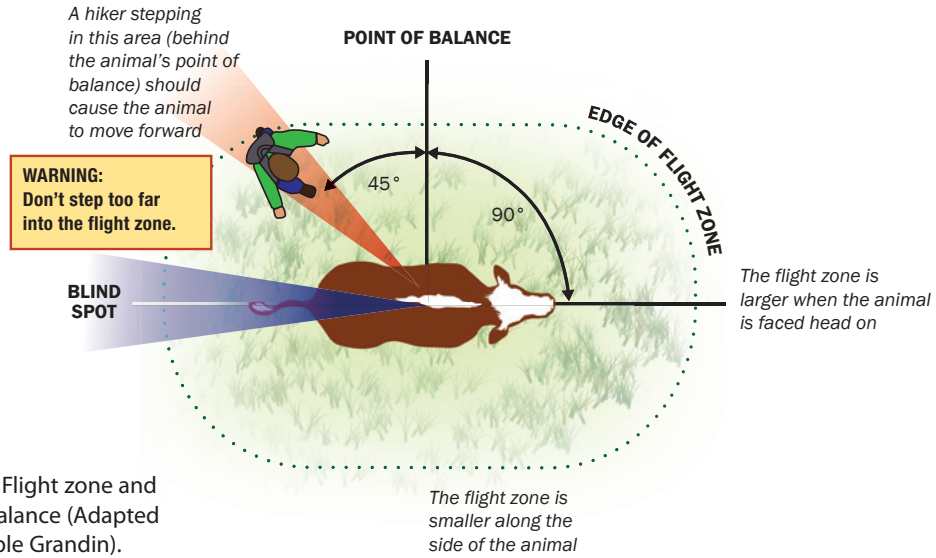


**Figure 1.** Flight zone and point of balance (Adapted from Temple Grandin).

calf or with the calf and away from the people. Cattle often gather in herds for protection, and a dog can be chased by more than one cow in the herd.

## Interpreting Cattle Body Language – Signs of Comfort versus Fear

When cattle are relaxed, they are usually eating, chewing their cud, or lying down. Relaxed cattle that are standing generally have their head and neck either low to the ground or level, extended straight from their body.

Being prey animals, livestock and horses are always alert to danger. When cattle get nervous, they usually lift their head, a posture called "high headed." This posture allows them to see, hear and smell things so they can decide on their next action. If cattle feel threatened, they may follow this head raising with aggressive behavior or by running off. Cattle often raise their head up high before they become aggressive (B. Barboni, personal communication), and horses are known to have the same behavior pattern. If you encounter an animal that appears to be nervous, step back and give it space.

## Cattle Flight Zone

A flight zone or "safety zone" is the space around an animal that allows it to feel safe, and a guideline to how close a person can get before the animal becomes anxious and in most cases runs away. Depending on how accustomed cattle are to people, the size of their flight zone can range from about 2 meters (about 6 feet) to many times that. The complete oval in figure 1 represents the edge of the cow's flight zone (Grandin 2011). You can determine the edge of an individual cow's flight zone by walking slowly toward the animal and observing how it reacts to you.

Unless you need to move cattle out of your way, though, such as to move them off a narrow trail, it's best to give them plenty of space and avoid their flight zone altogether. If you do need them to move out of your way, step slowly into their flight zone. That is all it should take to get them to turn away. Once they do turn away, stop moving. Patiently repeat this process until you have room to move down the trail without entering their flight zone. Animals don't want to feel trapped and they always want to have a way to escape uncomfortable situations. Never back cattle up to a fence or into a corner, as this can cause them to become agitated or panicked.

## Cattle Reactions to Loud Noises

Cattle are more sensitive to noises than humans are, especially high-pitched sounds that are used in the wild as predator alarm calls. Loud noises such as yelling or shouting near a cow can scare her, making her run, kick, panic, or charge (Grandin 1980). Often the cattle will hear you approaching and either become alert or begin to move away from your direction. Quieter sounds are less frightening, and can sometimes be calming.

## Behavior by Class

While cattle generally are not aggressive animals, their behavior can differ according to *class*. This is a term that references their age, sex, and reproductive status.

**Cows with calves.** Mother cows, especially those with young calves, are understandably protective. They may view humans as predators and may view unexpected human encounters with fear, prompting them to protect their young with aggressive behavior or flight.

**Heifers and steers.** Heifers are female cattle that have not given birth. Steers are young male cattle that have been neutered. Like most teenagers, cattle in this age class tend to be very curious, so they will often approach humans, sometimes running up in a group. Heifers and steers are rarely aggressive or dangerous, but their behavior can be unpredictable. Steers and heifers that are being raised for beef production may be present in herds as stocker cattle from fall or winter through spring.

**Bulls.** Male cattle that have not been neutered (bulls) are often solitary, keeping away from the cow herd. Bulls are less predictable than other classes of cattle; you should exercise caution in any encounter. If a bull lowers or shakes his head, arches his back, or paws the ground, you should step back, stay clear, and possibly move away. In general, beef cattle ranchers do not keep bulls that they consider to be dangerous, and ranchers will be particularly attentive to the temperament of any bull kept on land with public access.

## How to Act around Cattle

**Do:**

- Keep dogs close and under complete control at all times; dogs can frighten livestock, and dog owners can be injured during interactions with livestock.
- When encountering cattle, continue to move past them rather than staying in their presence. Step slowly into their flight zone only if it is necessary for you to move them.
- Move slowly around cattle and use a normal speaking voice.
- If an animal appears to be uncomfortable or agitated, step back.
- Approach cattle from the front or side, avoiding the blind spot behind them (see figure 1).
- If you see cows that are *clearly* injured, notify park personnel so they can contact the livestock owner. Do not approach the injured animal, as it is already uncomfortable and may become more agitated by your approach.

**Don't:**

- Don't physically intervene if a dog is chased by or otherwise interacting with cattle.
- Don't approach cattle from behind—you could emerge from the animal's blind spot and startle it, causing fear.
- Don't get between a mother cow and her calf—stay well away from mother cows with young.
- Don't make quick movements, flap your arms, or do other things that could surprise or agitate cattle.
- Don't yell, shout, or make other loud noises.
- Don't "rescue" or touch calves that seem to be separated from their mother—the mother may be off drinking or eating, and will return to the baby. She may even be watching you!

## References

Barboni, Bill. 2013. Personal communication with Lisa Bush on March 5, 2013. Dr. Barboni is a Marin County cattle rancher and small animal veterinarian.

Grandin, T. 1980. Observations of cattle behavior applied to the design of cattle handling facilities. Applied Animal Ethology 6:19–31.

Grandin, T. 2011. Understanding flight zone and point of balance for low-stress livestock handling of cattle, sheep, and pigs. Dr. Temple Grandin's website, http://www.grandin.com/behaviour/principles/flight.zone.html

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