

WILDLIFE WARRIORS

BY SAM CURTIS



FANGS A LOT A badger bares its teeth in a defensive display meant to ward off an attacker. Many predators are even more ferocious when threatened than when hunting.

"Peaceable Kingdom"? Not in the real, often violent world of nature



GEORGE ROBBINS

RACK ATTACK Though bucks will also use hooves and teeth during mating season battles, they primarily lock antlers and attempt to throw each other off balance in a battle of physical strength.

Some of my most vivid memories of wild creatures come from having seen their most aggressive behaviors. Two red squirrels, locked together tooth and claw, tumbling through dried leaves in a fight over territory. The flash of hummingbirds dueling over who gets the nectar from the first flowers of spring. Rival bull elk twisting and smashing their antlers into each other in a contest over mates. The bellow and stomp of a cow moose defending her calf (and sending me scrambling up a tree one afternoon).

ERWIN AND PEGGY BAUER

There is no lack of warriors among the ranks of wild animals. There is also no lack of purpose behind their aggressive natures, whether they're on the offensive or the defensive. I'm not talking about the kind of aggression shown by a predator toward its prey. As Konrad Lorenz points out in *On Aggression*, "the fight between predator and prey is not a fight in the real

sense of the word: the stroke of the paw with which a lion kills his prey may resemble the movements that he makes when he strikes his rival...but the inner motives of the hunter are basically different from those of the fighter. The opposite process, the 'counter offensive' of the prey against the predator, is more nearly related to genuine aggression."



BACK OFF, JACK! Wildlife aggression comes in all manner and shape. Sometimes animals fight over food, such as the wolf attacking an intruder attempting to steal part of an elk calf kill. Bull elk will avoid an energy-draining fight if possible by showing off their antlers in an attempt to psych each other out. A rattlesnake is equipped with deadly fangs used both for hunting and to protect itself from harm. Male sage grouse, peaceable for most of the year, turn into warriors during early spring. They beat each other with wings, chest, and feet, trying to drive away rivals and establish the largest mating area.

will defend a territory that provides them with enough prey, or food, to survive. This territorial aggression serves to space out members of a species across their range in a way that maintains sufficient food within each territory. But it also may limit population size. For example, if a pack of wolves cannot find, defend, or take over a suitable territory, the members may starve to death.

Aggression has a social function, too. By fighting, members of a pack, flock, or herd learn their place in the group's social order. This is called the "pecking order," named after chickens, which aggressively use their beaks on each other. In the strictly enforced poultry social hierarchy, a few birds never get pecked, a few always get pecked, and those in between know who they can and can't peck. This knowledge leads to a fairly harmonious flock, with minimal pecking, until a chicken decides to contest its ranking. That's when the feathers fly.

Prey becomes aggressive toward a predator usually to preserve its life—like a woodchuck biting ferociously when cornered by a coyote. Males and females of most species will fight viciously in self-defense. And females, such as the cow moose that chased me up a tree, can be even more aggressive than males when defending their young.

WHY FIGHT?

Though some fights occur between two different species, most battles are fought

between members of the same species. Though the wildlife warriors in these battles usually are not trying to kill each other, the fighting can result in death.

Why would members of the same species fight with such ferocity? Food is one reason. Animals that store and horde food for survival will aggressively protect their pantries. A squirrel jealously guards its middens of nuts and seeds, attacking any squirrels that try to steal from its stores. And a mountain lion resting near a fresh deer kill will fearlessly attack another lion that approaches.

Animals are also willing to fight to protect their food indirectly. For example, predators

Sam Curtis, a freelance writer in Bozeman, is a frequent contributor to Montana Outdoors.

Researchers have learned that fighting can also determine overall group size. For example, when bobwhite quail bunch together during cold weather, they need a certain number of birds in the covey to stay warm. So, “quail coveys keep down their own size by aggressive behavior within the usual limits of 10 to 30 birds, which appears to be the number that can roost comfortably in the characteristic circle with heads facing out,” writes Nicholas E. Collais in *Animal Aggression: Selected Reading*.

Nothing seems to inspire aggression more than the prospect of sex. Male bighorn sheep bash their heads together; wolves lunge at each other’s throat; bison bulls gore their rivals’ flanks—all for the opportunity to mate with a fertile female. The more evenly matched the amorous rivals are in size and fighting ability, the more aggressive and determined the battle. Bighorn rams, for example, have been known to fight for more than 24 hours over a ewe in estrus.

Though food, territory, social status, and mates may be won and kept by fighting, aggression takes its toll. Animal combatants face exhaustion, injuries, time away from resting and eating, and the ultimate cost of battle: death. Thus, it’s in an animal’s interest to win a war before it ever begins or to avoid a confrontation altogether.

WAR GAMES

“Many fights involve threat displays that emphasize or advertise an animal’s size or weaponry and therefore intimidate other animals into giving up before the fight escalates,” writes Dr. Felicity A. Huntingford in *Animal Behavior*, edited by Tim Halliday. A wolf raises its hackles to appear bigger to an opponent. A mule deer buck circles a rival, trying to display himself from an angle that makes his profile appear largest. A bull elk flaunts its antlers by offering a side view to opponents and by raising and lowering its head so the sweeping arc of the rack makes him appear larger than he actually is.

The purpose of all this posturing—the equivalent of guys wearing muscle shirts—is to allow a visibly inferior opponent the chance to walk away from a fight before it ever begins.

“A male of the territorial species has a better chance to produce offspring by moving

to unoccupied territory than by wasting time and energy in hopeless battles with a superior rival,” writes Niko Tinbergen in *Animal Behavior*. “Success goes to the animal that knows when to flee as well as when to attack. Thus it is a finely balanced system of attack and fleeing behavior rather than uninhibited aggressiveness that has value.”

This balancing act between fight and flight, or between anger and fear, is called “agonism.” It leads to some intriguing responses in animals that experience both urges at the same time. When the flight response is stronger, there is usually little indecision. For example, a forkhorn whitetail confronted by a large-beamed four-point buck either runs off or shows submission by averting his head from the superior rival and looking away while pressing his tail between his legs.

But when the fight and flight urges are equally intense, an animal may display what’s known as “conflict behavior.” For instance, certain fish, when faced with an aggressive rival, wildly swish their tails to propel themselves forward at the same time they are wildly back-paddling with their pectoral fins to move themselves in reverse. The end result of this conflict behavior is that the fish don’t move at all.

Anger and fear felt simultaneously may also give rise to what is termed a “redirected response.” Sometimes, writes Tinbergen, “a provoked animal will attack, but instead of attacking the source of its anger, perhaps a large and fearsome-looking opponent, it will attack a smaller or weaker bystander or even a stick or leaf on the ground—as you or I might, in frustrated anger, bang the table with a fist. Under extreme provocation, an animal may even make movements that have no direct relationship to threats and fighting at all. Male starlings will deal with the tense situation of facing each other near a nest hole by preening their plumage assiduously between bouts of actual fighting.”

WEAPONS AND ARMOR

Actual fighting, of course, requires the use of weapons and defenses. Birds use their beaks and talons to peck, bite, and puncture opponents. Deer and elk fight with antlers, hooves, and teeth. Horned and tusked creatures employ their weapons as battering rams and swords. Insects have

WILDLIFE WEAPONS



ERWIN AND PEGGY BAUER

TALONS

For killing and gripping prey, also used in fights.



BARBARA THOMAS

QUILLS

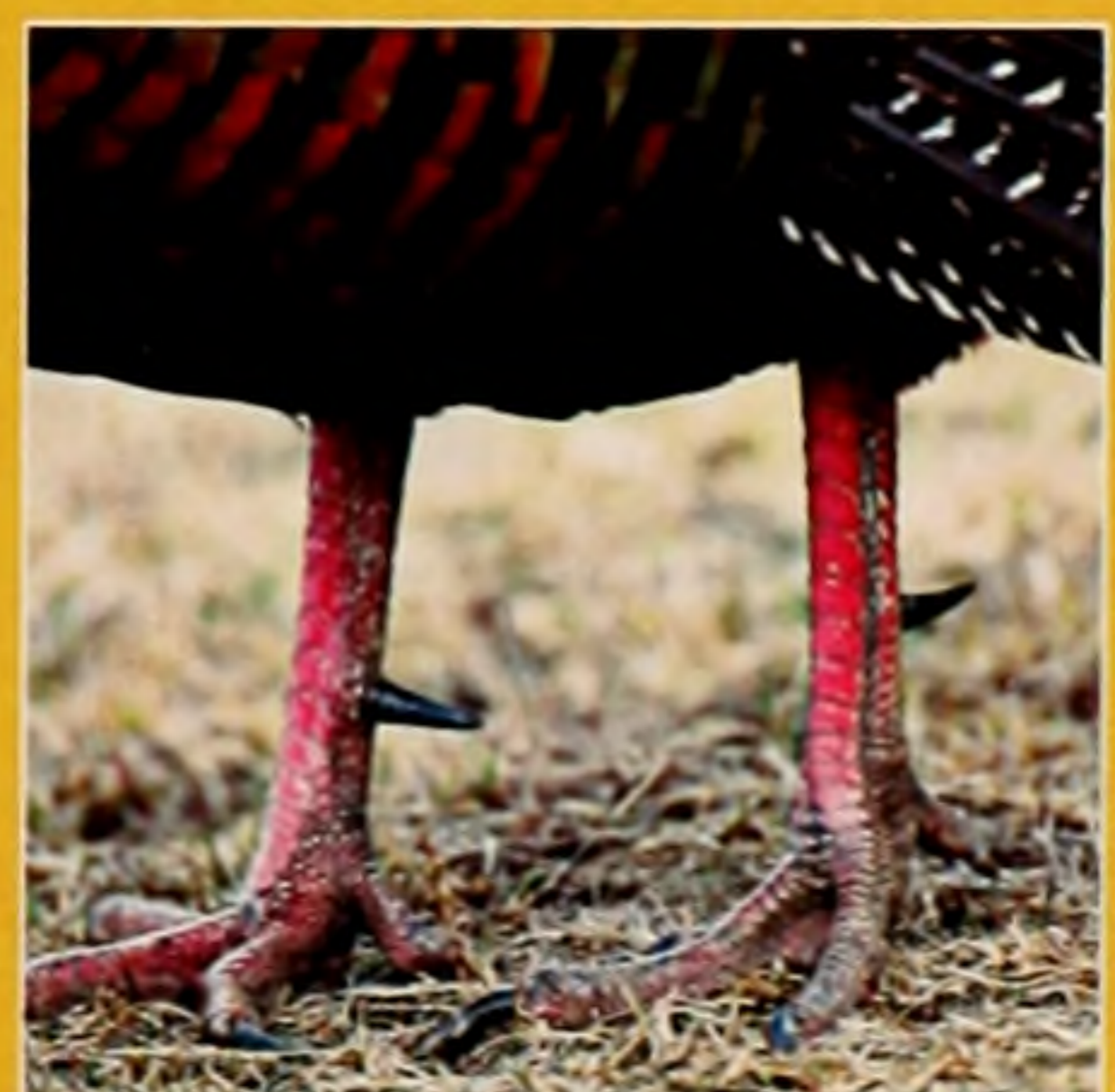
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PHIL FARNES

stingers, pincers, and nippers. Snakes attack with fangs and teeth.

In addition to these conventional tools of war, some animals deploy “chemical weapons.” The foul-smelling liquid a skunk sprays from glands at the base of its tail can hit an intended target 10 feet away, blinding and choking the adversary.

Skunks aren’t the only animals with a chemical arsenal. Some termites squirt a toxic glue-like substance that poisons their enemies and makes them stick to the ground and to each other. And the petrel, a long-winged seabird, will spit the slimy, rank contents of its stomach—the partially digested food it regurgitates to feed its chicks—into the face of aggressors.

In addition to possessing weapons, many animals and insects wear defensive body armor and shields. The cylindrical exoskeleton of an insect is made of *chitin*—a tough, light, flexible substance that resists chemicals and makes an ideal suit of armor. Turtles and armadillos also wear protective body gear, while hedgehogs and porcupines have quills that discourage aggressors. Porcupines have the added advantage of being able to use their protective covering offensively, whacking their quilled tail into an attacker’s snout (something anyone who lives with dogs in the country knows only too well).

STRATEGIES OF WAR

When attacking others or defending themselves, animals employ special fighting tactics. When a cat or fox steals eggs or chicks from nests at night, the adult birds will “mob” the predator if they catch it out in the open during the day. Recently, I watched a dozen magpies swooping and diving on a coyote as it crossed a field near my home. The birds actually struck the predator with their feet on several passes, forcing it to duck and cover its way into a nearby hedgerow.

Male musk oxen use a “circle-the-wagons” tactic when attacked. They stand shoulder to shoulder in a circle with their heads and horns facing out while cows and calves crowd in the center. This defensive maneuver is often enough to discourage even the hungriest wolves from attacking.

When experiencing the simultaneous emotions of anger and fear, and the companion impulses to fight and to flee, some animals just bluff. A friend told me the story of an acquaintance who encountered a grizzly bear that used this tactic in the Taylor-Hilgard Mountains of southwestern Montana. The man didn’t sense trouble until the huge bear was already charging out of the bushes toward him. The sow grizzly stopped abruptly several feet from the terrified hiker, who stood frozen

CLASH OF THE TITANS The social hierarchy among bighorn sheep rams is based on horn size. The bigger and thicker the curl, the more dominant the ram. When two rams of equal horn size meet up during mating season, they engage in battle by charging head on at speeds that may exceed 20 miles per hour. Battles between two well-matched males can sometimes rage all day. Thick, double-layered skulls and powerful neck muscles cushion the brutal blows.

with fear. The bear let out a deafening wuff that blew foul breath into his face, then slowly turned and herded her cub into the brush.

The man was not carrying a weapon or bear pepper spray and was no match for the grizzly. Of course, the grizzly could not have known that. She had been startled into charging to protect herself and her offspring, but she also must have felt the urge to flee. The hair-raising bluff was the end result.

Call this process of conflicting urges the psychology of animal warfare. Animals will use bluffing, posturing, retreating, or any other tactic at their disposal before engaging in conflict that risks their life or that of their young. Wildlife are well equipped to do battle, but it appears that most will take whatever measures are necessary to keep the peace.

That’s a good lesson for any animal to learn. 🐾