

# Animal and Human Senses

by John Perritano



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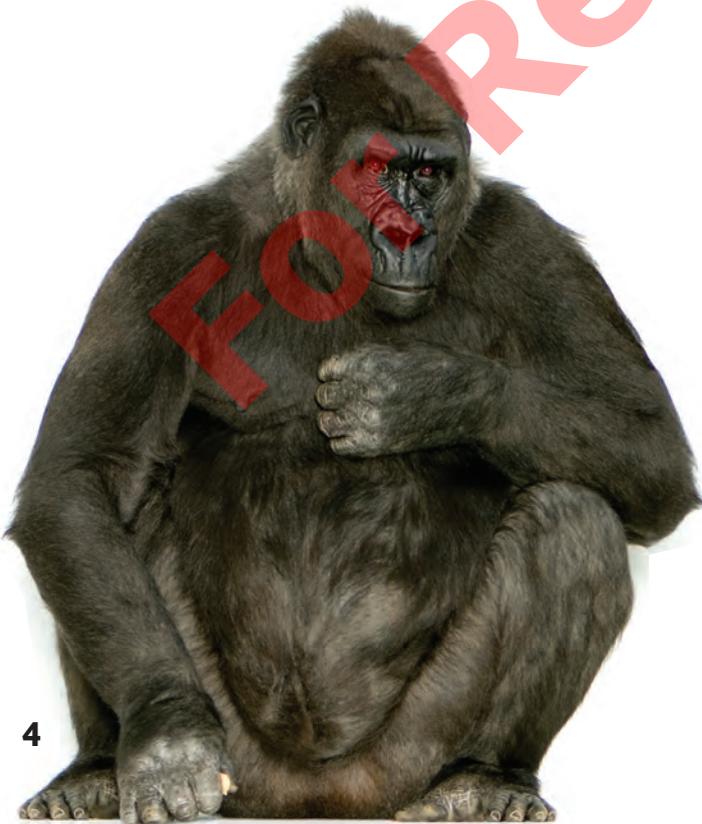


# How Animals Use Their Senses to Communicate

**Makumba** was a silverback gorilla that lived in the Dzanga-Sangha National Park in the Congo Basin of Africa. Researchers began following Makumba through the jungle in the year 2000. When they began, they knew gorillas used a variety of sounds and actions to communicate.

Their lips get tight if they don't like something. They pant if they get angry. They jerk their heads and snap their jaws to scare away other animals.

What researchers didn't know is that gorillas also communicate by giving off a bad scent. If a predator got too close to Makumba or members of his family, his body gave off such an unpleasant odor, it made the other animal run away. Researcher Phyllis Lee said Makumba's bad smell was making a statement: "I'm strong, powerful, and here, protecting my females and babies."

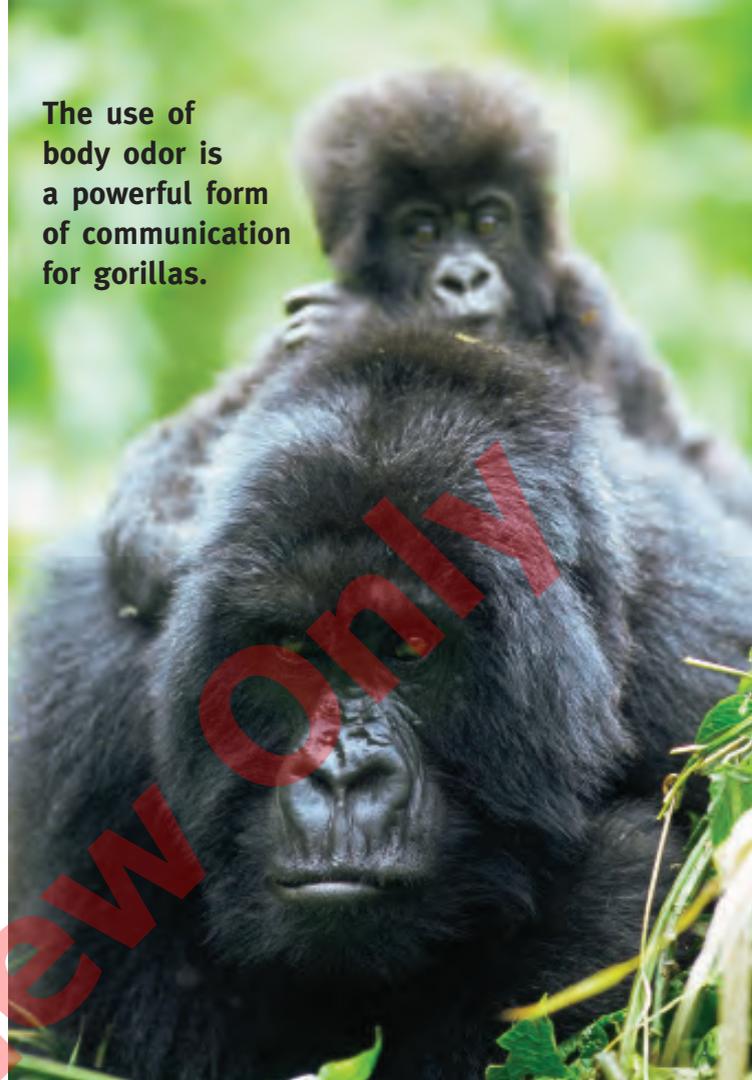


◀ Gorillas like Makumba show emotions through sounds and expressions.

It's not easy living in the wild. Animals need ways to communicate in order to survive. They have to tell one another when they want to mate, eat, and play. They need to be able to intimidate their enemies when they're mad.

Animals can't speak to get their point across the way humans can. However, there are many other ways they can communicate. They can purse their lips or frown. They can shake, smirk, grunt, and groan. They can beat their chest or sing songs. And they can even smell bad, just like Makumba.

The use of body odor is a powerful form of communication for gorillas.



## Ways Animals Use Their Senses to Communicate

Animals communicate using their senses in four main ways: by sight, sound, touch, and through chemical reactions. Here are some examples:

Visual	Auditory	Tactile	Chemical
<b>Fireflies</b> glow to attract mates.	<b>Male whales</b> sing songs to communicate with females.	<b>Baboons</b> groom each other to show how much they like each other.	<b>Cats</b> rub up against objects to mark their territory with scent.
<b>Male Peacocks</b> raise their feathers to make themselves attractive to females.	<b>Wolves</b> howl when calling others to the pack.	<b>Dogs</b> lick their puppies as a form of bonding and to clean them.	<b>Skunks</b> use smell to keep predators away.
<b>Cobras</b> puff up to scare other creatures.	<b>Elephants</b> raise their trunks to talk over vast distances.	<b>Horses</b> kick when they want to exert power.	<b>Ants</b> emit a smell so other ants follow them.

# Dancing, Glowing, and Singing

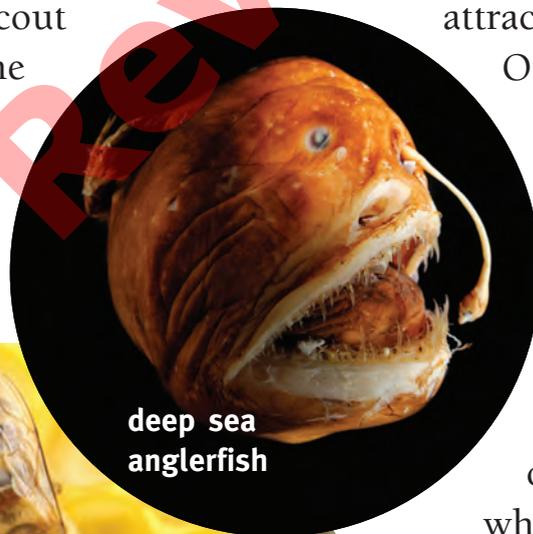
**A**nimals communicate their feelings by sending signals. Those signals might be a sound or a movement. Or they may change their appearance, such as their skin color or how they display their feathers. Some animals have more unusual methods, such as glowing, screaming, hopping around, or banging the ground and flailing their arms and legs. Animals also send signals by using facial expressions.

Honeybees, for example, send signals by dancing. Scout bees are always on the lookout for pollen. When they discover some, they fly back to the hive and “dance” while

the other bees crowd around and watch. The scout bees fly in circles when the pollen is close to the hive. Scientists call this the “round dance.” Bees also do a “waggle dance” that tells the others which direction to fly.

Another visual way animals communicate is bioluminescence, or glowing. Some animals use bioluminescence to attract others. For example, fireflies use bioluminescence when looking for a mate, and many fish, like the deep sea anglerfish, glow to attract their next meal.

Other animals use bioluminescence to protect themselves. Sometimes their light blinds predators and prevents them from attacking. One type of algae lights up when it is threatened in the hope that an even larger predator will go after the organism’s attacker.



deep sea  
anglerfish



honeybees

Birds communicate vocally through song. Different types of birds make different calls. Cardinals sing, while blue jays screech. Songbirds, like wrens and warblers, make up nearly half of all bird species. They use their songs to serve different purposes. They sing to impress a mate, to defend their territory, and when they find food. Male birds sing for longer periods of time than females.

Crows squawk. It's an instinctive trait. It comes to them naturally. Crows have twenty calls. The harshest is a caw. Crows also rattle and click. Some sounds are warnings, and others are calls to fly to a certain place.



Birds sing songs to communicate a variety of messages.

## BIRD CALLS

Birds have a voice box, which is where their sounds begin. Here's how it works: Earth's atmosphere is crammed with tiny particles called molecules. When a bird chirps, cries, or caws, its voice makes those particles vibrate. The shaking particles create a sound wave. The sound wave moves outward. It travels through the air. We hear a bird chirp when those sound waves hit our ears.

# Facial Communication

**P**rimates share many facial expressions. Primates include monkeys, great apes, and humans. They show their teeth when they are happy. Humans smile and chimps grin. Primates snarl when they are mad. They close their eyes when they “give up.” Primates twitch their ears when they are stressed.

**Each of these chimps is conveying a different message using facial expressions.**

Other mammals also make many different faces when they want to pass on a message. They move their lips, lift their eyes, twitch their ears, and wrinkle their noses. A dog might lift its lip when another dog walks by. A cat's ears may move back when it sees a mouse.



Dogs and wolves snarl to communicate different emotions. Their facial expressions help distinguish their snarls. When they are afraid, they will snarl for a long time and move their ears straight back. When they become hostile, their eyes open wide, their ears prick up, and the corners of their mouth come forward.

## SAYING "HI"

A kiss on the cheek. A hug. A handshake. Humans have many ways to say "hello." Other animals have their own way to say "hi." Chimpanzees hug one another, touch palms, and sometimes kiss. Male giraffes rub their long necks together. Dolphins whistle and make clicking sounds at one another. Dogs sniff one another, and cats groom each other. All of these are ways to build trust, show affection, or avoid a fight.

Animals also communicate when they want to play. When a dog wants to play, it lowers the front of its body and puts its paws in front. Horses flick their ears or shake their head.



◀ Animals use body language to communicate.

