Fascinating World of Wildlife Communication

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Due to advancements in science and technology, we can effectively communicate with each other in spite of distance. This is possible with the help of well developed telecommunication facilities. However we have to still depend on several factors like electrical supply, proper functioning of the network, availability of coverage etc. for successful communication.

Wildlife communicates with each other without the modern technology. Further, there is no failure in their communication system as this is nature's gift acquired over many years of evolution. They can feel each others presence without even seeing as they have their own full proof communication system. They communicate with one another through environment air/ wind, sound/vocal signals, and movement around them and by looking at each other. They create their own territory not surrounded by compound walls and indeed they are owner of their own territory.

Wildlife has developed own methods for demarcation of territory and can identify territory of other animals with the help of smell, markings on tree trunks/branches. They seldom encroach or invade other's areas honouring privacy of individual, unlike so called developed human being. Selection of territory depends on species as well as on other factors. Preference is usually given to basic daily needs e.g. shelter or a safe cover, perennial water supply, availability of food/prey, privacy for mating/breeding etc. Each territory is divided in a shelter zone, mating/breeding zone and outermost neutral zone. Outer zone is often guarded for safety, however they tolerate each other in this neutral zone. Wild carnivores occupy more territory than wild herbivores.

Wonderful methods of communications have been developed by wild animals. These can be broadly classified as: Acoustic (sound) signals, Optical (visual) signals, Olfactory (smell) signals.

Acoustic signals: This is one of the common method of communication adapted by wildlife and involves sound. They give alarm or warning signal and also possess repertoire of mating/breeding calls whenever required. They have also developed live and let's live philosophy. For example, monkeys and spotted deer usually live together in forests. Monkeys perform patrolling duty by sitting on the trees and also provide leaves, fruits etc to deer. In case of danger or presence of a predator, monkeys will give danger calls by peculiar sounds and alert deer before hand. They also give all clear or no danger calls.

Monkeys and deer are social animals and live in a group. Every group has a male leader (dominant or alpha male). This male will give a call and all other animals join him in this ritual. The calls of dominant male are strong while calls of younger members of the group are weaker and high pitch. In case of danger, the dominant male will also swing his tail to warn the group. This is indeed one good example of acoustic and visual system of communication of wild animals.

Tigers and lions roar in their own territory and these can be heard from a distance of 7-8 kms. In mating signals, these roars are more frequent and louder to attract receptive female. Animals living near water source produce a loud sound by licking water surface thus helping other animals to locate this source. Water drinking habits of wildlife also differ from each other, depending on species.

Visual (Optical) Signals Wild animal make their presence felt by marking the surrounding vegetation and thus visually announce their territory. This is usually done with the help of claws, horns, antlers and teeth. Wild herbivore stripes the bark or branch of a tree. This stripped area becomes white after some days which indicate their presence in that area. Bear also make such type of visible marks on the tree. Bear and bison wallow in the urine and rub their back on the marks. Deer and wild pigs apply mud over marking surface and then scent mark these by urination. Black buck stand on the elevated part of the pasture land like a statue to claim the area. Tiger and leopard leave claw marks on trees, on ground and also on rocks along their path. These serve has a warning visual signals. Male monkeys exhibit their genital organ to others, swings tails and show aggressive behaviour.

Olfactory (Smell) Signals Another common method of communication in wildlife is scent marking. This is done by urination and by body odour. Though dog is domesticated for thousands of years, the method of urination and marking is a remnant of a wild behaviour. Jackals and wolves urinate in a group on a particular space regularly. In this way they leave behind the urine scent and give signals to other animals about their presence in that particular area and mark their territory. Monkeys urinate on foot of fore leg and then smear it on other foot. This is followed by walking and jumping on the branches of trees spreading the smell of urine thus marking the territory to others. Scent of urine is usually mixed with the odour of dermal glands. Scent also serves as a identification mark, among various wild animals. Faecal materials are also used for olfactory signals. The scent is exaggerated by musky secretion of the anal glands. Dog and cat family members possess very well developed anal scent glands. Many types of dermal glands are present on different parts of body like flag of tail, bellies, head, at antlers base and on velvet etc.

Spotted deer and sambar peels the velvet from the antler by rubbing these against a smooth solid branch of a tree or against a small tree and leave behind their scent. Scent glands are also present under eyes (preorbital glands). Antelopes have such types of glands in front of their eyes. For demarcation of a territory, thorn, grass or twig are inserted in these glands. The secretion attached to the material indicates the territory of the animal. Scent glands are also present behind the horns and thus by rubbing the horns against a branch of a tree, territory is marked. Scent (Olfactory signals) plays a very important role in breeding season and attracts male/female towards each other by sending messages. The chemical natures of these sex pheromones have been decoded. One of them is copulin, an attractant perfume, in females. This perfume attracts and further stimulates male for mating. Optical, Olfactory and acoustic signals are all used for mating purpose.

This is how wild animals show their presence and mark their territory by various signals in forest in order to avoid conflicts and to maintain peace and harmony in jungle raj.

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