

Communication among the higher animals

Third instalment of a series

Auditory Communications

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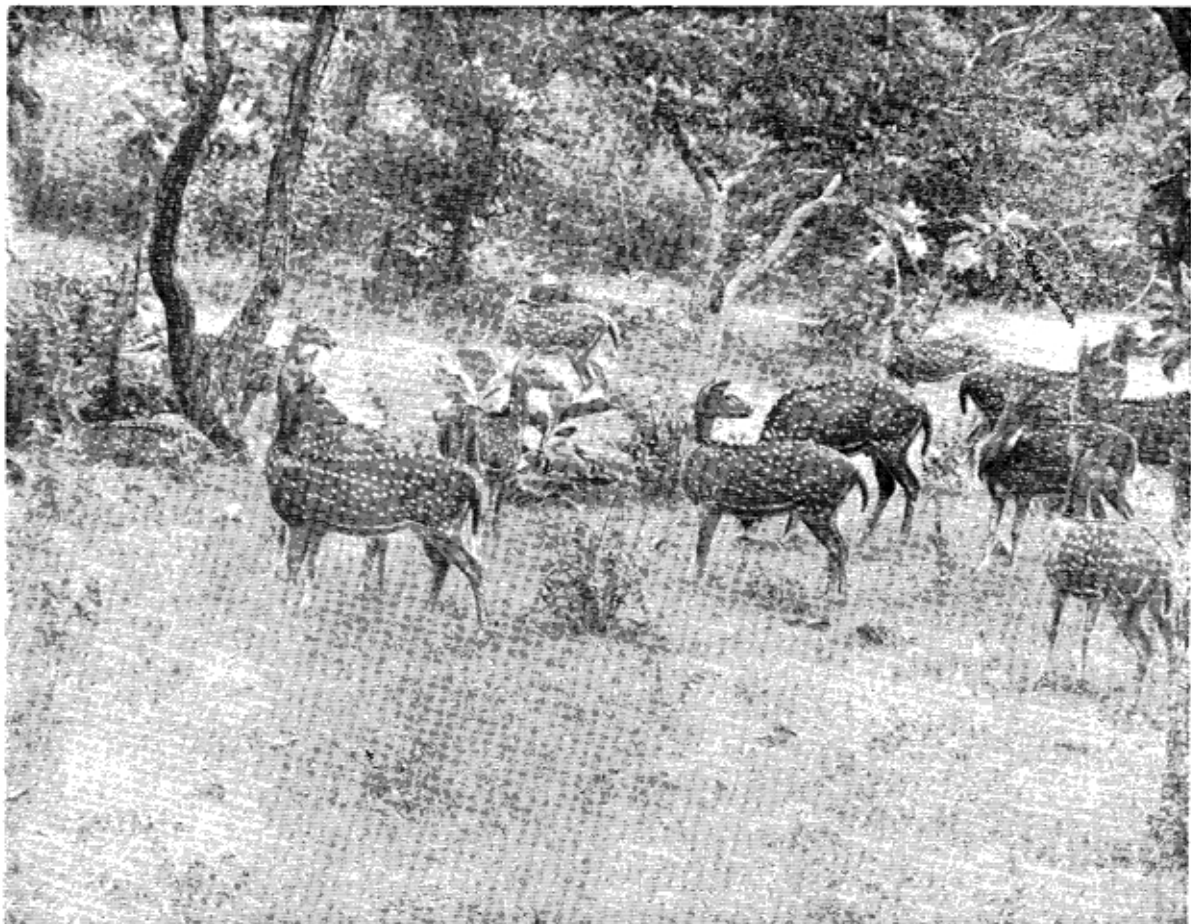
The summer before last, I was in the Periyar Sanctuary, and 50 yards below the rise on which the rest-house was built was a shallow arm of the lake. There was no light to read by, and after dinner I came out and sat on a ledge overlooking the bay. Presently, I heard an extraordinary sound, like a great drum reverberating in a rhythmic throb; it was too dark to see anything, but I knew at once what it was—

there was a wild elephant at the water right below me, indulging in one of the many sounds that elephants make, a sound of contentment.

Very soon it was clear that there was not just one wild elephant below me, but an entire herd, and for three hours I sat there and listened to rumblings and grumbings, squeals and gurglings and faint squeaks, deep sighs and an occasional trumpeting, or a

querulous 'kook, kook, kook' (a call of annoyance), a sharp yapping that proclaimed that an infant was in the herd, dull roarings, and less describable vocal sounds, mingled with the plops of giant feet being withdrawn from the mire, and the sounds of water being splashed and swished about. It was a memorable experience. Rarely was there an interval of silence, and in those three hours I heard more elephant sounds

Chital turning their heads and ears towards the sound of a peacock's alarm call.



than I have in many years of following the great beasts.

I mention this only to make the point that with our experience of wild animals usually limited to brief chance encounters, and longer observations when they were aware of us, or else to captive specimens in cages and paddocks, it is quite likely, that we do not know all the intraspecific sounds made even by the more familiar of these beasts. For instance, the calls to each other of two striped hyenas out on the prowl, a sharp, querulous call midway between a bark and a mew, has not been described so far by anyone (excepting me). However, we need not feel any inhibitions on the grounds that probably we do not know all the social and personal vocalisations of our animals: we know quite enough.

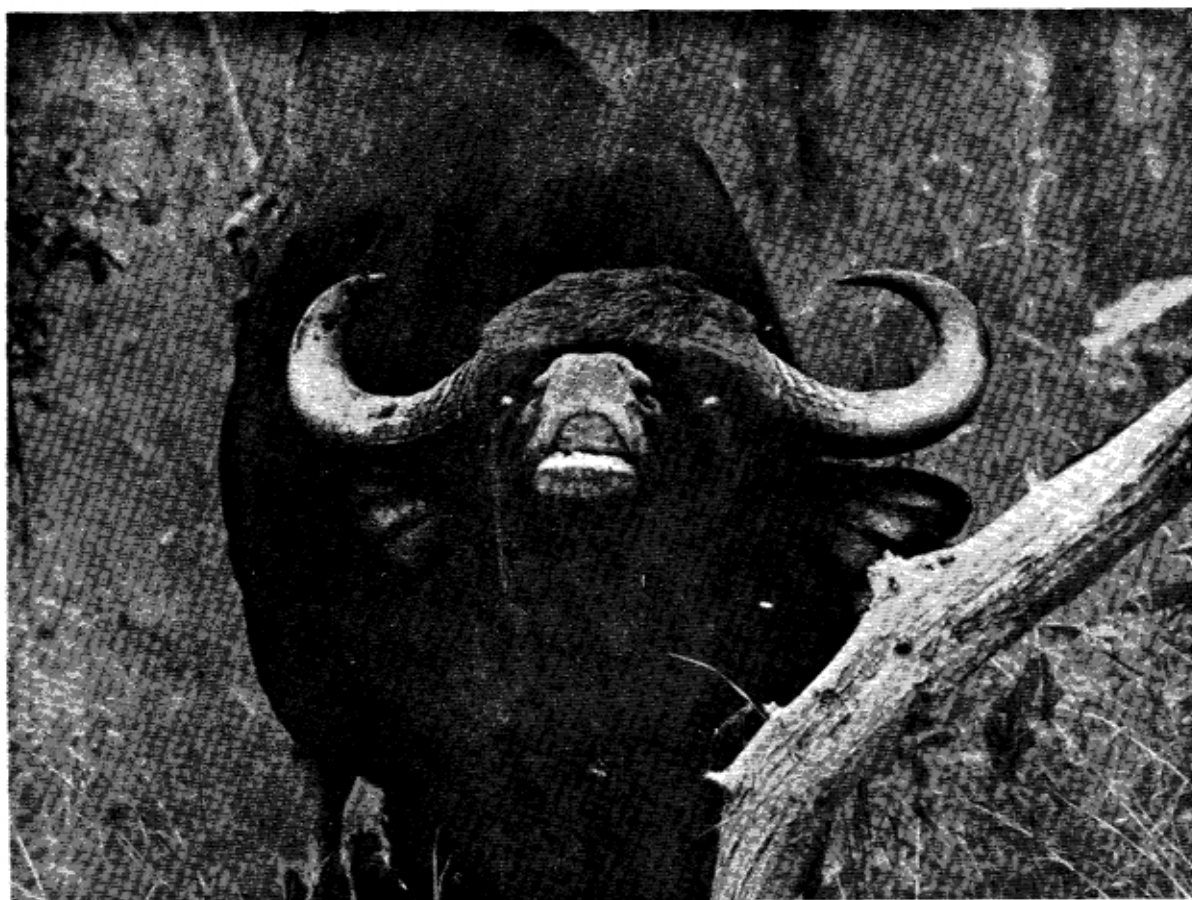
Naturally, it is in social rather than solitary animals that vocal communications are best developed and most freely used. However, on occasion animals not given to gregarious associations may also be quite vocal, like tigers when seeking a mate, giant squirrels, and muntjac when alarmed. While there is nothing like the dawn chorus of birds among mammals, on occasion some animals may indulge in concerts—the sunset howling of jackals and the early morning whoopings of langur are instances.

Gregarious animals use a number of calls when out together, as when foraging. The great variety of vocalisations of elephants, best heard in the silence and darkness of the night when visual communications are ineffective, has already been mentioned. Bonnet monkeys in a troop call

to one another in low grunts when on the ground (especially when in bush cover) and with a musical, whistled 'pio' when in the treetops; dhole chasing quarry through bush country use shrill, short whines to keep in touch with one another; gaur in a herd moo softly or come out with low grunts, and chital and barasingha hinds indulge in a regular conversation of rather plaintive, mewling calls when in cover. All these are fairly low calls, that help the animals in a herd or party to keep together.

Louder calls are used to re-assemble a scattered herd or party. Dhole come out with a weird, loud cackling, reminiscent of the hyena's 'laugh', to re-assemble. Elephants trumpet, the calves separated from their mothers roar. One of the most evocative sounds of our hill forests

Gaur bull lowing to his herd.



is the long-drawn, high-pitched muted lowing of a gaur bull to the herd from which he has been separated, when the herd splits up for some reason, as it does in a sudden downpour. It is somewhat muffled call, not loud when heard from near, but capable of carrying a mile through the forest.

The best known mammalian vocalisations are the alarm calls of various beasts—these are so widely known that they serve not only as intraspecific warnings, but also to warn other animals. In fact, even the alarms sounded by birds are apprehended by many beasts. A peacock's sudden alarm immediately alerted a herd of grazing chital, and every head was at once turned towards the call, as shown in the photograph reproduced on page 14.

Among the best known of mammalian alarm calls are the frenzied swearing of monkeys (especially of the grey langur) at the sight of a leopard or tiger, the chattering of squirrels, the snort of surprise of gaur, the munjac's hoarse, reiterated bark, and the sambar's explosive 'dhank!'. Other deer, too, sound alarms; chital come out with a chorus of high-pitched mewlings, almost of whistles, and barasingha indulge in a sustained, hysterical baying at the sight of a predator.

Chital hinds use a loud, mewling call, with a definite lip-sound to it, to warn another chital of risk apprehended to that other—this is what is known, in telephonic parlance, as a 'particular person call', for the warning is

addressed not to other chital generally but to a particular individual. All alarm calls are not vocal. The chinkara's sneeze of alarm (from which the animal gets its name) is distinctly nasal and not vocal, as also the gaur's snort. The stamping of the forefeet of deer, and the thumping and clattering of the hooves on the ground at the commencement of the getaway of gaur, and the metallic thud produced by elephants by ramming the trunk sharply against the ground, are all expressions of alarm.

These mutually locative, assembly and warning calls all serve social ends. Many other vocalisations are used in individual communications, and in the expression of moods and strong emotions. Monkeys chatter and whimper in fright, cats purr in contentment or to announce friendly intent, tigers whine in a low tremulous declaration of friendly or placatory intent when approaching another tiger, dogs yap in excitement, and the repeated alarm calls of many deer are also interrogative, being as much calls of suspicion as of warning.

A great many sounds are used to express anger and hostility: the anger-call of the macaques varies from a reverberating 'krrrrr' to a guttural screech; the lesser cats spit and hiss (as the leopard also does usually), and the greater cats snarl and growl in anger; otters hiss and bark, and members of the dog family snarl; at times elephants shriek in a rage; gaur grunt and snort when combative. Varied as these sounds are, even to human ears

they convey hostility and anger unmistakably.

Most personal intraspecific calls, as between mother and young, are low and soft, but a young animal separated from its mother may call loudly to it—young elephants roar at such times, leopard cubs come out with a long-drawn, plaintive, hoarse mewling, and as everyone knows, kids bleat lustily when calling to their mothers.

Among birds, we associate song with courtship (and the staking of claim to a territory), and some of the most wonderful music that human ears have listened to have been the songs of birds like the magpie-robin and the shama, the blackbird and the nightingale. Mammals in love are not musical in their vocalisations. In fact, some of the most ridiculous-seeming and harsh sounds they make are love-calls. The caterwauling of domestic cats is well known; tigers seeking their mates roar fearfully; the blackbuck pursues his chosen doe with rough, eruptive grunts. Once, I saw a pair of courting rhinos on the periphery of a bheel in Assam; the bull was running after the cow with puffing, high-pitched grunts, sounds that seemed perfectly ridiculous coming from an animal of his huge size and mass—no doubt they had tender, passionate undertones to that cow rhino. The love-call of the mighty gaur bull is an absurd, muffled piping, produced with enormous effort, and with the head high in the air at the stretch of the neck, much as his call to the scattered herd is



Chital hind turning towards a human whistle and its echo.

produced, except that it is pitched higher and is more of a thin, whistling sound, hardly audible from a hundred yards away.

The ability to locate and identify sounds accurately seems to vary with different animals, but most predators are able to pinpoint sounds faultlessly; animals of the cat and the dog families both have acute hearing, and are far in advance of us in precisely locating what they hear. Most herbivores also are able to locate and gauge the nature of

suspicious sounds heard by them, turning their heads towards the noise and switching their ears forward. Nevertheless, occasionally animals may be deceived by confusing sounds. In the Mudumalai Sanctuary, there is a wide nullah and beyond it an almost vertical wall of rock, and some peculiarity of the formation of the ground here results in a very responsive echo, even to a soft whistle. Coming upon two chital hinds on the farther bank of the nullah, without their being aware of me, I whistled sharply, and at once one of them turned its head

towards me, locating me instantly by the sound, while the other (as can be clearly seen from my picture above) turned towards the rockface which had reflected the whistle.

Naturally, since the auditory powers of animals may differ considerably from ours, it is difficult for us to guess how these various vocalisations sound to the animals that make and hear them. The one thing we can be sure of is that nothing so coordinated, sustained and tireless as human speech is known to the higher animals.

(To be concluded)