

The Indian Chameleon

M. Krishnan

This was the third time I had seen a chameleon cross a broad road in strong sunlight. It moved at a slow wobble, bringing round its legs in a semirotatory sweep to ground them, with the body slung between the limbs and lurching unevenly up and down in its laboured process. In all lizards the body is not firmly supported on top of the limbs but slung between them, but most of them can run, with a whirling motion of the legs, at speed.

I took a stout, leafy bough off a roadside tree and placed it in the chameleon's path, but it refused to take this proffered lift, and tried to circumvent the obstruction with painful effort, I picked it up and released it into a thorn bush across the road, towards which it was heading. When I picked it up, it opened its mouth in a bite-threat, revealing the row of tiny, conical teeth along the rims of its jaws, and I was reminded of an almost identical experience, the first time I had seen a chameleon crossing the road under a blazing sun.

I was in a bus then, proceeding from one rural small town to another, and the driver stopped the vehicle with a sudden jerk, to avoid running over a chameleon crossing the road. And he treated the passengers to a remarkable lecture on the animal; it could change colour instantly at will to any hue it desired, blue, red and even black: and though it was so lethargic and clumsy, its bite was deadly. He picked it up between two long sticks, and keeping the openmouthed creature well clear of himself, deposited it across the road, and when I said it was non-poisonous, he retorted that only showed how little I knew it: yes, no doubt it was not venomous, but he had never said it was: did I know what happened to the men who were unfortunate enough to get bitten by it? Invariably they came to a sad end ultimately.

Well, I ran no risk of consequences, because I picked up this chameleon by the middle of its slab sided body, and while some lizards can turn their heads round on a sinuous neck and bite, chameleons cannot. What struck me was that except for a slight darkening of the green-and-yellow pattern of its skin, it did not change colour at all during its transportation across the road. Textbooks say that chameleons can change colour swiftly, but I doubt if they are capable of any really quick changes. It is said of the Indian chameleon that this change of colour is "apparently limited to shades of green and yellow" and this "may be in response to

light, heat, the emotional state of the animal, and the colour of environment”.

In an experiment with a captive Indian chameleon, taking the animal (on a bough) from bright light to heavy shade, I found that in a few minutes the pattern of dark green on yellow of its strongly grained skin faded to a neutral grey-green, and that when returned to sunlight the pattern reappeared slowly. Watching free-living chameleons, what struck me was not that their colouration was assimilative and cryptic, blending with the background, but that it broke up shape effectively on a leafy twig.

What is much more remarkable about the animal than its ability to change colour are its eyes. Each bulging eye is cone shaped and covered with patterned skin on the sides, with the tiny pupil in a flat disc on top of the cone. These eyes can be moved independently of each other in different directions, and also be moved forward together to secure binocular vision, a real help in estimating distance when shooting out the tongue at prey. A chameleon can look simultaneously on both sides of its body, and also in front and even behind itself, by rotating its cone-like eyes.

Its ability to stalk its prey (mainly arboreal insects, though it has also been known to take other prey) is impressive. The foot has the broad toes in two opposed sets to ensure a strong grip, and the prehensile tail supplements this grip, so that though it is slow, a chameleon can progress very surely along twigs and boughs. As everyone knows, its method of capturing prey is to dart out an incredibly long tongue, club-shaped at the tip and covered with sticky slime, entangle the quarry on this sticky tip, and withdraw the tongue into the mouth, all in a split second, in what the eye sees only as a blurred flash. The tongue is almost a foot long when fully extended, and the chameleon can add two inches to this reach by leaning out towards the prey, but it must get to within a foot or so to capture its prey. Its deliberate, very slow stalk does not vibrate twig or bough to alarm the quarry, but at times a direct approach is not possible, and then it creeps along a devious path to get near enough.

Incidentally, we have only one kind of chameleon in our country, distributed widely over the peninsula in scrub jungles and fairly open tracts. Africa and Madagascar are the true homes of the tribe; there are many kinds of chameleons there, including a dwarf chameleon and one that is fantastically horned, on its nose!

Courtesy : The Sunday Statesman.