

BIRDSONG AT DAWN

*Arise! The vital breath again
has reached us:*

*Darkness has gone away and
light is coming.*

*She leaves a pathway for the
sun to travel:*

*We have arrived where men
prolong existence.—From
the hymns to Usas, the
Rigveda.*

I AM afraid I am habitually late in arriving at this juncture. Along with a fondness for dark hours, I have developed a certain punctilio in closing all eastern portals before going to bed, so that neither the fresh dawn nor the life-giving sun touches my slumber. There is much to be said for deep sleep at daybreak; I am convinced it has tonic properties. Moreover, look at the early worm! It gets the bird.

So do all early others. Bird-life everywhere is assertive at the crack of dawn. On the occasions when I have been compelled by circumstances to the experience, I have always noticed how suddenly the silence of the hour before sunrise yields to the voices of birds. Long before the formal appearance of day, the earlier birds are up and vocal; when the sun's red rim breaks the horizon, a swelling chorus greets him. There are many voices in this medley, some sweet and strong, others strong but not sweet, much cheeping and chirping. To quote from MacDonnell's excellent rendering of Rigveda hymns again:

*Bright leader of glad sounds
she shines effulgent*

*Dawn has awakened every
living creature.*

Another Orientalist, Edwin Arnold, has a more specifically avian passage about dawn:

*The koil's fluted song, the
bulbul's hymn,*

*The "morning, morning" of
the painted thrush,*

*The twitter of the sun-birds
starting forth*

*To find the honey ere the bees
be out,*

*The grey crow's caw, the par-
rot's scream . . .*

Somehow, no poet mentions that most exhilarating of all proclamations of daybreak, the brave, clear call of the cock partridge.

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I know many more poetic references to birdsong at dawn, but shall not cite them. My attempts at discovering scientific literature on the subject have been painstaking, but not very successful. Surely there must be some cogent literature on dawn-song, with so many naturalists, here and elsewhere, given to early rising? But I cannot find it. I did succeed in locating some precise Indian records of the order of awakening among the birds of particular places, with exact timings. One of these records provides details of the entire output of song of the species studied over a number of days, with the course of their singing plotted on graphs and even information on the make of the chronometer used. These records are valuable as evidence tending to determine the order of awakening among certain birds in certain places, and their diurnal singing peaks, but I was surprised to find that inferences drawn from them wholly ignored several vital factors. I realize that it is ironic that I should formulate theories on dawn-song, and further realize that I have nothing startling to disclose, but since I can find nothing better, I give you my own views.

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Season affects all birdsong, and so morning songs, too. In November, for example, one is likely to miss the Koel that dominates the hour before dawn in June. Many of our songbirds are silent for a few months in the year. Season, again, determines migrations and courtships, and so affects the bird voice of any place.

Apart from birds of the cuckoo tribe, I cannot think of visitors, off-hand, that are likely to dominate any locality with their voices. But many migratory birds roost in close numbers, and though they are more vocal when going to bed than when getting out of it, even

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by M. Krishnan  
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their weak voices gain volume in chorus. The morning voices of swallows, heard from near, have a peculiarly pleasing sound, like that of running water.

Theregarious roosting of resident birds, again, is largely seasonal. Recently, I read of the plight of city dwellers who must awake to the raw, proximate caw-



ing of crows, but they are lucky folk, if you ask me. In certain cities and towns the Common Mynah is apt to roost in hundreds, and compared to its morning voice (its evening voice, of course, is much worse) the cawing of crows has a remarkably pleasant and soothing quality. The main bazaar in Mysore and many markets in the heart of Bombay are favoured by this mynah, and I

believe that in certain parts of Calcutta the Pied Mynah takes its place quite efficiently, especially in winter. Parakeets sometimes patronize city dwellings of the old style, with parapets and domes; the Collectorate at Bellary is an example. Their dawn chorus can be quite penetrating.

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Since the birds of any place depends so much upon its terrain and location, these factors must influence its dawn-song powerfully. Just think of morning voices in the open countryside and in the wooded jungles, for effective contrast. I can never forget three successive dawns in the Supa block of the Karwar jungles, where both the Shama and the Racket-tailed Drongo greet the sun. The Shamas, which sang more consistently at dusk, made nightfall even more rapturous.

Even apart from terrain determining the species of birds that live about the place, I believe it influences birdsong. I have noticed that in the wooded countryside the common king crow (I am not confusing it with the White-bellied Drongo) is more given to dawn concerts than in urban localities. Apparently it wants space and plenty of perches in the open for its harsh, heartening chorus.

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have unlovely voices, even when they do find them—the birds of prey, kingfishers and woodpeckers are examples—but some of them can sing sweetly and like to sing in the afternoons. The Pied Bush-Chat and the Pied Wagtail are birds that provide buoyant, delightful music to the late riser, even if he lives in a town. Another glorious songster that will enter towns is the Magpie-Robin though it sings only in summer and is partial to the false dawn. However, its song is one of the very few things in life for the sake of which it is worth getting up at 5 a.m.

Birds of the cuckoo family (especially the Koel and the Hawk-Cuckoo) and a few others will call at night when there is light enough; sometimes they usher in each watch of the night as if it could not progress without their announcements.

All these are factors to be considered in studying dawn-song, but what I like most about it is the fact that very often the vocal zest of birds then cannot be ascribed to the two main motives that are said to induce birdsong, territorial feeling and love. I like to think that birds sing at times just because they are happy, from joie de vivre and nothing else, and their morning songs cheer me for this reason, however harsh their voices.



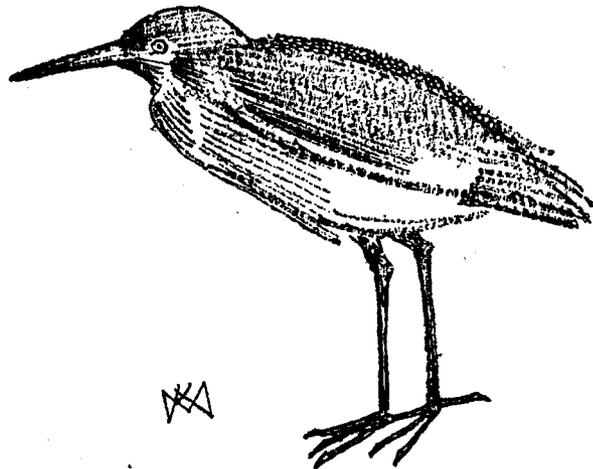
First, it should be realized that this entire question of matins is a complicated study, like other aspects of bird behaviour and life. There is no space for comprehensive detail, but I may mention the main factors that one must remember, when studying birdsong in the cold, grey morning. The season (in the climatic rather than calendar sense of the term), the locality and terrain, the resident birds of the place and the arrivals and departures of migrants, gregarious roosting habits and nesting, and atmospheric conditions (particularly lighting) all influence birdsong profoundly, not only at dawn but at all times.

Less obvious, but equally important, are the vocal tendencies of each species. All these factors are interrelated, to complicate things further.

Lastly, there is the question of individual preferences. I know a very intelligent young lady who is quiescent and quite safe to talk to till breakfast. Gradually, as the day develops, she finds her voice and by evening it is sheer foolhardiness to indulge in argument with her. It is the same with some birds; they are not vocal in the morning. Most of these birds

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Lone Sentinel Of The Puddles



LIFE has grown wet and plastic during the past week. Visitors bring in footloads of mud, which they scrape against the stone steps or distribute over the verandah—being given to petty joys, I note with satisfaction that when they go away the sodden gravel leading to my gate shakes off at each step from their shoes, and that I have gained soil. The ditches flanking the road are turned into brown rivulets, and the dip in the field beyond, hardly perceptible in September, is now a miniature pond.

All this wetness is different from the somewhat formalized depictions of wetness that we are so used to. There would be white glints and dimpled blue patches in an artist's picture of these October puddles and flooded drains, and turbulent streaks of red, perhaps, to denote the freshets. Actually, the lowering skies yield no

highlights; everywhere the water is a torpid, deep umber, thick with mud and squirming with infant life. Almost as if by magic, innumerable mosquito larvae and tadpoles have appeared in the pond in the field, even little fish. Life began in the slush, according to biologists, and the slush is very fecund still. As I bend over its squelching rim to peer into the pond's teeming depths, I am conscious that I am not alone.

Another huddled watcher is on the other side, acutely aware of me. My cautious advent has driven it several yards away, and now it seems on the point of

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by M. KRISHNAN

flight. I retreat to the roadside and squat immobile, and the pond heron returns to the water, step by deliberate step, its apprehensive head stretched out in front on its long neck. It stops at the water's edge, and is immediately harder to see. The extended neck is doubled up and drawn in between the shoulders, so far in that the bird is neckless; the streaked brown of its humped back and the yellowish greys of its legs and beak blend with the muddy background. It walks carefully into the water, lifting each foot clear of the surface and carrying it forward through the air before im-

mersing it quietly again, and now its neck is again outstretched—it is withdrawn once more as the bird halts, and takes its stance in the shallows.

For two long minutes it stays utterly still, only the hard, yellow glint in its eye betraying the avid life in the dull, slumped body.

While fish that pass pass by, till the destined fish comes in, Great is the heron's dejection, says a cynical couplet, in Tamil. Presently, and without the least warning stir, the dagger-billed head shoots down on the extensible neck, a tadpole is lifted deftly out of the thick water, and swallowed in the same movement. At once the neck is drawn in, and the morose, huddled pose is resumed, so quickly and completely that I could have sworn that its waiting had been unbroken, had I not watched the movement.

The pond heron or "paddy bird" is probably the most familiar of our waterside birds. Wherever there is not too rapid water, a puddle or a pond or any shallow stretch, you will find it there, an unmistakable little heron with dingy plumage, a humped back, and sulky habits. When alarmed it emits a harsh "kra-ak" and is instantly transformed into a dazzling creature on broad, white wings—its pinions and underparts are white, but hidden

except in flight by its earthy mantle, and in flight it seems an all-white bird. Americans in India used to call this heron the "surprise bird," from the sudden contrast between its drab, unobtrusive repose and the flashing whiteness of its flight; I believe the name is no longer in fashion.

Though roosting and nesting in company, pond herons are unsociable by day. They are lone hunters; occasionally you may see three or four near one another, but they never seek prey in common, and even when going home to roost do not join together in large flocks. They are strong flyers, and though they look rather like cattle egrets in size and whiteness when on the wing, it is easy to tell their firm, quick wing beats from the lubberly action of the egrets.

Incidentally, all herons fly with their necks tucked in. Wordsworth's

And heron, as resounds the trodden shore,

Shoots upward, darting his long neck before.

might be quite true of a heron shooting up into the air in alarm, but once it settles down to flight the neck is not darted before, but is doubled up and drawn in—that, in fact, is the token by which one may know members of the heron tribe from other waterside birds on the wing.

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by M. KRISHNAN

MR Hem Chandra Datta's letter, in the Calcutta edition of the Sunday Statesman of Oct 12-13 and Northern India edition of Oct 16-17, suggests a new cause for birdsong, that it may be due to "anger, fear or worry". He begins by saying that the *joie de vivre* motive for song, mentioned in my Country Notebook article of Oct 5, is not new and was put forward by Julian Huxley long ago; then he goes on to say it is more likely birds sing from mental disturbances far from joyful.

May I point out that all I said was that birds occasionally sing from sheer exhilaration, and that the dawn chorus might well be due to this, since the two main motives for birdsong, love and territory, had often no application then? Of course this theory is not new, nor did I claim it as mine—the only bit of theorizing I did was over the factors governing the bird voice of any place, where I am on very solid ground. For the rest, neither Julian Huxley nor I can claim originality for the view that birdsong is occasionally inspired by joy. It was there generations ago: "Eha", for instance, advocated the view.

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Biologist-naturalists like Tinbergen and Lorenz, whose scientific approach Mr Datta hopes will provide a "consistent explanation of birdsong", will be the first to point out that, though moved by powerful instincts, birds are highly emotional and complex beings, and that to impute automatic, unvarying reactions and fixed motives to their vivid lives is as unsound as the sentimental attribution of human values. Love and territory are undoubtedly powerful motives with birds, and cause marked reactions, including song, but no one will say that these are the only things that induce vocal efforts in birds. Lorenz himself has worked out another motive; he says that songbirds in good health are given to singing from lack of other occupation—from loneliness and boredom. It is significant that he adds that birds so singing do not appear to be depressed, and that we need not pity them. To provide another motive, it is well known that gregarious birds like certain babblers and the Pulney Laughing Thrush keep calling, to keep in touch.

Let me provide examples to the contrary to Mr Datta's statement of the vocal behaviour of typical songbirds, to illustrate how complex the question is. He says "the nuptial chase is not accompanied by any song." Among pigeons, the climax of vibrant vocal effort is reached *only* during the nuptial chase, and the strongly-patterned courtship display is continued very briefly in pantomime, after the act of mating. Again, the statement that it is in response to a rival, to call the straying mate, or out of loneliness when the hen is brooding that a male bird sings (once territory is established), has many exceptions. One of our most charming songsters, the Pied Bush-Chat, will sing freely in the absence of all these conditions.

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I quite see that Mr Datta's theory is fascinating, in a way, and is scientifically legitimate, if we do not insist on a literal interpretation of "anger, fear or worry"—of course what he intends is not only those very emotions as we know them, but like uneasy promptings. But if birds sing from unemployment, boredom and loneliness (we may take these as proved causes), that does not preclude their singing from sheer joy—on the contrary, I should think those promptings establish a complex mind, capable of apprehending joy. Even if they sing from exasperation and frustration (not yet proved) they may well sing also from exhilaration. I am keen on saying, again, that this question is complex and involves highly emotional creatures that are sensitive to many influences. There may be a dozen different motives for birdsong, some of them contrasting. This is not a sentimental view, but a very objective one. I am keen on reiterating it so that I can say, ten years later when we know more about the motives of birdsong, "I said so"! Of course I claim no originality in this, but only addiction to a biological viewpoint.

Lastly, Mr Datta's tentative suggestion that birdsong in the morning is induced by a quick response of the "fight-or-flight

glands" to dawn light, the light starting the chain of increased adrenalin in the blood, restive resentment and consequent burst of song, is interesting but cannot, I fear, account for the behaviour of a number of songbirds. Some of them sing long before the sun's first light illumines and warms this dull earth; others reach their singing peaks in the afternoon; still others exhibit no definite periodicity. Moreover, a rise in the adrenalin level of the blood cannot incite fear or worry—perhaps anger is a nearer emotion to the confident assertiveness that this rise promotes, but of course *joie de vivre* is nearest to it.

I should make it quite clear that those who think *joie de vivre* is a motive for birdsong do not think so sentimentally, but are led to the conclusion by factual considerations. No books are available to me at the moment, so that I cannot cite authority for this statement now, but this is unnecessary. From my own observation I can speak to certain factual considerations. It requires no

great understanding of birds to know when they are unwell, physically or mentally. Their attitudes suggest dejection then, and they are usually silent. I have never seen a bird that might be experiencing emotions similar to fear or worry indulge in song. Even the vendors of caged birds know that isolation and a cloth cover to exclude the outside world are not enough to make a bird sing; it must be in exuberant health—and spirits.

The truth is that it is not hard to speculate on diverse and opposed motives for birdsong. But I cannot understand why some people must exclude the motive of joy. One could quote Hardy's "Darkling Thrush" tellingly in this context:



Mr Datta says that the typical song-behaviour sketched above by him, and the fact that a male bird preoccupied with finding food for the young does not sing and resumes singing only when the fledglings are grown, "points to song being associated with anger, fear or worry". I am unable to see how this must be so. I should have thought that if worry inspires birdsong, the harassed father of a clamorous brood would be bubbling over with song.

As for the song of the lark revealed by a hawk, this type of behaviour must have been noticed occasionally by any serious student of bird life. The immediate resumption of normal activities by birds that have escaped death by the skin of their non-existent teeth has been explained, by ornithologists like Griscom, as showing remarkable lack of fear due to poor intelligence and poor apprehension of danger—I do not know if anyone else has suggested the explanation, but I think it may be due to an urge to feel reassured at once by the performance of familiar acts. Anyway, there seems to be no reason for presuming that a bird that has just escaped death feels any strong resentment, worry or fear.



*So little cause for carollings of
such ecstatic sound*

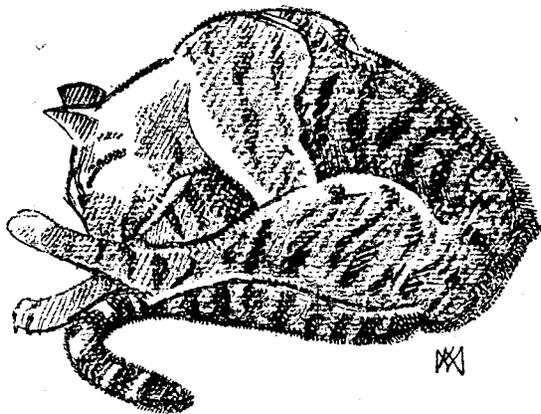
*Was written on terrestrial
things afar or nigh around,
That I could think there trem-
bled through his happy good-
night air*

*Some blessed Hope, whereof he
knew and I was unaware.*

Even if some man of science, whose scientific fetish is the exclusion of all emotions from all things, were to come forward with the theory that what made that aged thrush burst into song was merely a more sensitive perception of infra-red rays in the sunset, no matter—that sort of restive perception might well be joy. But of course one can always quote Shelley in favour of the non-joy view, that it was not any access of glad feeling that moved the bird, but only "that unrest which men miscall delight"!

SCRUB CATS

HERE is a faithful copy of a quick pencil sketch I made years ago, of a cat licking its hind feet. Cats at this occupation make indifferent models—they stretch and twist into queer postures and are very mobile. However, I thought the likeness reasonably good, which is why I have copied it for you. Now, what sort of a cat would you call this one? A nondescript tabby, obviously, and a pretty hefty one, less obviously.



Perhaps it was preening itself on the drawing-room sofa, or on the kitchen roof, but clearly it belongs to the common or garden variety of Indian cats. No one would guess that this smug creature was a tomcat, for all its tabby markings, that it was completely wild and that it was sketched in my pigeon-loft soon after the massacre of my racing homers.

Hearing a flutter in the dovecot I went to it, and found that this was no metaphorical flutter. Crouched beside the strong wooden box that held my mated pairs in safety was this cat: four

and these are easily the commonest cats of the countryside. They never enter human dwellings, except to raid poultry, and have reverted to a purely feral life. In colour and build they are indistinguishable from the mongrel pussy-cats of our households and roofs, with which they interbreed freely in places where the scrub adjoins human settlements. Only in temperament and in a certain hard-bitten, tough look do they differ from their domesticated progenitors.

This difference is one that is hard to define in words, but which is apparent even to casual observation. Generations spent with men have evolved a love of snug corners, an audacious familiarity, and a certain gracious tolerance of

human favours in the household cat, without loss of dignity and aloof reserve in matters personal to itself. There are even friendly pussies—my wife used to be owned by one, named Palti, which would turn somersaults across the carpet when my wife requested it to, and which was unusually indulgent towards clumsy humanity. The scrub cat, on the contrary, distrusts mankind and has forsaken the comforts of the sheltering roof for the hard independence of the open air.

Times without number I have seen these cats in the jungle clearings, and sometimes I have watched them at their hunting. Anything small enough to be overpowered is legitimate prey—rep-

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Scrub Cats

by

M. Krishnan

of my seven unmated cocks (relegated to perches in the loft) were on the floor in a bloody, fluffy mess, and the air inside was thick with down. The cat had entered through a forced gap in the split-bamboo partition of the loft, some six feet from floor-level—it could not get out that way because the inwardly-bent slivers blocked the gap.

My first thought was for swift revenge, easily possible in that limited, trapped setting. But what possessed me was not so much a thirst for vengeance as self-reproach at having left that split in the bamboo work unrepaired. A predatory beast cannot be blamed for taking advantage of weaknesses in the partition that separates it from its meal, nor for killing again and again when it is impounded with the prey. I slipped into the loft and stood against the door: the cat crouched in a corner, every muscle tensed, ready for action. After a while the unhurt, panicking pigeons settled on their pegs, and the cat relaxed its attitude. It took no notice of the corpses at its feet, but began to lick itself all over carefully, as if to remove the evidence of blood on its coat, watching me out of the corner of its eye. When I had made my hurried sketches of the killer, I stood aside and pulled the door ajar, a gesture to which the watching cat responded by disappearing into the scrub outside in a grey streak. I took good care to mend the gap in the bamboo partition and had no further losses.

That cat was not a true wild cat, but only the semi-domesticated variety run wild. There are a number of true wild cats in the scrub and jungle outside villages, varying in size and colour with locality—the most familiar of them is the Jungle Cat (*Felis chaus*), as big as a show-type fox-terrier. But there are any number of "domestic" cats living in the scrub,

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tiles, birds, beasts. I have known one kill and partly eat a snake, and once I saw one carrying a leveret in its mouth. Field mice and rats form a substantial portion of their diet, and to this extent they are beneficial to agriculture. After it is dark these cats go the rounds of the cultivated fields, and will sit up near mouse-holes and the runs of rats with unrelaxing patience. They hunt mainly in the dark, but I have seen one stalk and kill a squirrel under a blazing sun. These cats are versatile and expert hunters, and must account for a number of ground birds, like partridges.

And who are their enemies, in turn? Jackals are big enough and strong enough to kill them, but a cat can always escape from such enemies by climbing the nearest tree. Frankly, I do not know if any animal, in particular, is fond of cat flesh or hunts these wild pussies regularly. However, they are never remarkably numerous in any locality. We know little about their breeding habits in the scrub, but I presume that they are not very fecund, that infant mortality claims quite a few kittens in the uncongenial, uncompromising scrub and that diseases account for a number of adults—I have seen some scrub cats in wretched condition.

Cats are not fast breeders, in comparison to many other animals, but even so it is only on the above presumption that I can explain why they never overflow any place: they seem to have no particular, limiting enemies.

COUNTRY NOTEBOOK

Quail In The Grass



IN November the grasses come up with a rush. Right from September onwards they grow, rejuvenated by the rains into fresh, green, spreading vigour, covering slopes and clearings with their lush carpets. Some of them continue their vegetative spread longer, but many are already in seed by the end of November. That is true not only of the wild grasses, but of the cultivated varieties in these parts, like jawar and bajra. In fields fitting together along their bunds to a geometrical jigsaw puzzle, along the banks of paths and in jungle clearings beyond, the grasses stand high or less high, offering cover for squat little things. Now is the time to look for quail in this cover

Of course those that look for them with a gun will look later, when the crops are harvested and

by **M. KRISHNAN**

the birds gleaning grain in the stubble are easier to flush. Moreover there are too many young about now. Practically every bevy of quail that I see now consists of a parent pair accompanied by young, miniatures of the old birds no bigger than a breakfast egg on red legs, marvellously assured in deportment and finished in plumage

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Even a full-grown quail is wonderfully dainty and richly marked, to those to whom its plump body has not only edible virtues. But perhaps these little ones represent the most perfect miniatures in barred and speckled beauty that can be found among birds. I have always been fascinated by the sight of a family party of quails.

They have many enemies, these baby quails, and so have their parents. I am writing mainly of Rain-Quails and Bush-Quails but I suppose it is true to say that the entire quail family means juicy meat to all hunters in the scrub, besides men. It is by wariness, the ability to run swiftly in the cover of grass and low shrubs or squat tight in a thorn bush, and the sure instinct of obedience in the young, that the tribe survives. A baby quail is strong on its leg within a sur-

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Country Notebook

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prisingly short time of its genesis, and very soon it is able to whirl low on its tiny wings, but it is the watchfulness and craft of the old birds that saves it most often.

Recently I watched the escape of a quail family from a purposeful hunter. I was sitting immobile behind the screen of a Lantana, watching a pair of Bush-Quails and their three tiny progeny. They were pecking at an ant-hill some 20 yards away, in the middle of a grassy field (incidentally I think young quail, like many other young birds, depend quite a lot on termites and other soft-bodied insect prey). A prowling cat saw them and walked away, very casually, and disappeared in a dip beyond. Presently I saw that cat come creeping in from an altogether different direction, taking advantage of a hedge to approach the quarry. The predator was barely visible from where I was, but well hidden from the quail by the mound of the ant-hill. However, one of the parent birds saw him when he was just three yards away, and bolted with a hurried whistling call, running fast to the cover of the hedge on the other side of the field. Had the rest of the family scattered the cat might have had a chance, but they too made off in the same direction, running smoothly and instantly away from the threat, the young ones invisible in the cover of grass. As everyone who has been present at a beat for quail knows, Bush-Quail when flushed are apt to disperse suddenly in different directions. I was surprised at the orderly method of this escape.

And I noticed that that cat accepted defeat with philosophical calm. It made no attempt to get at the quails again, with another flanking movement, but just walked steadily away, to "fresh fields and pastures new."

A buffalo, a tiger, and a trick worth knowing

WHEN first I set eyes on Bommakka she was in a newly-cut field of millet, tethered to a stake. Along with the country schoolmaster who owned her, I had walked two miles to see her: and I could see little in the massive, slate-grey beast to justify my friend's pride in ownership. On the way to that field he had extolled the courage, the great strength and the noble disposition of his pet—and there was this old buffalo cow, disappointingly commonplace in her looks.

Yes, she was bigger than most village buffaloes, bigger and darker, and no doubt she was in splendid condition. But I had expected something more mettlesome than this placid, elderly cud-chewing creature that allowed me to stroke her Roman nose, and nuzzled closer when I stopped stroking. It was then that I noticed that the poor thing was quite blind in one eye.

However, I summoned a tone of surprise and envy and spoke admiringly of the beast; I know how strong, how strangely uncritical and sensitive, the bond between a man and his buffalo can be. My friend insisted on our crossing and recrossing four spiky fields of stubble to fetter Bommakka an armful of green bean plants, pods and all. And all the way home he regaled me with rambling stories of her prowess.

No doubt I had noticed that she was in an interesting condition—

she was getting on in years and this time, at least, he hoped she would bear a cow-calf—unfortunately, on both the previous occasions, in his five years of ownership, she had presented him with bull-calves. Well, to come back to what he was saying, very soon he would have to send her up to the hill-top, nine miles away, where there was lush grass to be had for nothing, and the herdsmen there would welcome Bommakka with joy. For once she was with the herd, the heifers and dry milch-cows were safe from raiding leopards. A full-grown buffalo, of course, is too much for any leopard to tackle, but I should realize that most buffaloes, grazing in the jungles with milch cattle, would be content with making off by themselves when the killer seized a calf. Bommakka was not like that; she understood her responsibilities by the weak. The minute she scented the enemy she would charge him fiercely, and no leopard dared face her onslaught. My friend went on to tell me of the rescues she had effected, and I listened politely, pondering over the amount of imagination that went to make any heroic figure.

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Next week I was in the hill-top jungles, along with a shikar party. What took us there was news of tiger—of a tiger that had crossed over into our territory from an adjoining range. We found his pug-marks in the sand of a pool's edge, enormous in their splayed-out spread, but footprints on hard earth told us that he was full-grown, though not perhaps of record proportions—two months later, when that tiger was shot, our estimate was proved right, for though he taped only 9 9" between pegs, he was in his prime and very heavily built. A deputation from the hill-top cattle pen met the guns with an urgent request to save them from this new menace. The tiger had already accounted for a cow from their herd as also for a big, red Sindhi bullock belonging to the tobacco company at the foot of the hill. As we turned home after assuring the herdsmen of our keenness, I remember thinking idly that Bommakka was probably in that cattle pen, and that even her credulous master could not expect her to deal with a tiger!

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A few evenings later, in answer to a frantic message from the schoolmaster, the local medico and I rushed off to a field, where a group of gesticulating men stood well away from an excited buffalo. The herdsmen who had brought a very lame Bommakka down from the hill gave us a vivid account of the incident. That morning, as the herd was being driven into the jungle, the tiger had leaped out from ambush.

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with loud roars, and the cattle and men had dispersed in terror. But as they ran for dear life to the shelter of a nearby shrine, the men had seen Bommakka turn and charge the great cat. Naturally, they could not see what followed. But for a few minutes they had heard the sounds of battle, the snorts of the gallant buffalo and the roars of the tiger, and then the tiger had gone away, the fainter and fainter tone of his occasional voice telling of his retreat. When they had gathered courage at last to go back to the spot, they found the old buffalo in a trampled clearing, raging with pain and anger and covered with blood. Beside a bush was the victim, a young heifer that the tiger had killed instantly, with hardly a mark on its white coat.

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Some sort of cleaning of the wounds had been attempted, but the men were afraid to go too near the excited buffalo, and blood was still flowing from the deep gashes. The wounds told their own tale. There were four deep, long, parallel gashes down the left hip and thigh, and the right hock was severely bitten and swollen to twice its normal size. Apparently the tiger had tried to hamstring his huge adversary from behind, leaping in from her blind right side and getting a purchase over her left hip with his grappling-hook claws.

Veterinary aid was non-existent where we were, and Bommakka's restive mood complicated matters. She was in obvious pain, but there was no hint of shock or fear: she cropped the fresh, short grass at her feet with fierce relish and glared out of her single eye at us; her nostrils were distended and when we tried to approach her, she tossed her head and snorted low in warning; the four long ropes that had been used to lead her home trailed the earth besides her—I was sure those ropes would have been useless had she not wanted to come home.

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Finally, the schoolmaster sent us away, and after a while the great beast suffered him to lead her, limping painfully, to the ramshackle shed behind his cottage. Once she was there, it was possible to syringe out the wounds gently with an antiseptic lotion, and apply the liquid, white paste that the medical practitioner provided. No doubt the gashes re-

quired stitches, but this was out of the question.

In a couple of days the gashes over her hip and thigh had begun to heal marvellously, but the hock was as bad as ever, and the animal had lost weight alarmingly. The big ribs stood out clearly beneath the hide, and there were deep hollows between and behind them. The trouble was that the great beast could get no sleep or rest for the pain and stiffness of her swollen hock—a buffalo that cannot lie down will waste away, however carefully it may be fed. Some half-a-dozen of us thought furiously of some plan by which the heavy weight of Bommakka's body could be eased off her stiff, injured hock—one of us even went to the extent of devising a sling for the body from gunny bags—but all our thought was futile. The schoolmaster feared that the fact that Bommakka was far gone in calf would complicate things further—however, the immediate problem was to provide her with rest.

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This is a true story. I can vouch for every word of it. I state this here because on the third day a miracle happened—the buffalo found the solution that had escaped all of us. She snapped her tether with a casual flick of her head and limped, painfully but with determination, to the watercourse nearby. She waded into the murky, green depths of a pool there, deeper and deeper in till only the nostrils, the eyes and the bump of her forehead showed above water. And at last, with buoyancy doing the trick that all our cunning had failed to achieve and her weight off her legs, she closed her one eye and went to sleep. It was a job to get her out of the pool and lead her home as darkness fell, and early next day she was back in the water for sleep.

★

Being apprehensive humans we continued to fear for her for a while. We thought that the dirty water coming into such prolonged contact with the wounds might result in sepsis, but in a week's time Bommakka's wounds had healed completely and in a fortnight she was her old self, with only the raised scars to bear witness to her adventure. Nor did the experience affect her condition as her master had feared. In due season she presented him with a robust, beautifully pink calf. Need I add that it was a bull-calf?

COUNTRY NOTEBOOK
by M. Krishnan

Bats In The Rain

FOR a week now it has been raining continuously or threatening to rain. Lowering clouds obscure the sky, there is a sustained gloom that only lamplight at night relieves, and when it does not pour there is a damp wind blowing. Slugs crawl slimily up the outer walls, enormous insects enter the house, the ditches are loud with frogs—the lesser life, and the things that prey on it, flourish in spite of this depressing weather. But, when the wind is high or the downpour becomes a deluge, it is of flying foxes that I think, hanging upside down in their roosting trees.

*

In November I used to see them in hundreds each evening, flying out to feed. I see them no longer, though I know that with fine weather they will be back in the darkening sky again—perhaps even now they beat their way through the pelting air and it is only the rain that hides them. but I am sure their evening flights are less gregarious and regular now.

What intrigues me is whether the colonies that have settled in the more exposed trees hang thickly on to the slippery twigs in this weather, or have left for less open resorts. Yesterday my curiosity got the better of a desire for dryness, and I went miles out into the rain to an old silk cotton tree in a plot of wasteland that used to be a favourite roost of flying foxes.

*

It was six years since I had passed that way and noticed the dark, living load of fruit among the pendent green fruits of that tree, but that made no difference. Unless shot repeatedly or otherwise made unwelcome rather pointedly, a flying fox colony does not desert its roosting tree in a hurry. I know of another colony in a clump of tamarinds outside a village that have hung on to their home for over seventy years, if the oldest inhabitant of that village is to be believed—and I saw no reason to disbelieve that forthright patriarch.

However, my quest was unsuccessful, though I did succeed in getting drenched to the bone in spite of my mackintosh. When I got to that place there was no silk cotton tree, not even the plot of waste. A tidy little house

stood where these things had been, and I turned home, looking and feeling very sheepish—and wet.

*

The lie of the hair in a flying fox is towards its head, and this reversal of the usual arrangement serves it well, hanging upside down in the rain. Frequently these bats choose a banyan or an aged tamarind for their roosting tree, and I suppose that such a well-sheltered colony could gain nothing by seeking protection elsewhere during heavy rain. But what do the inhabitants of



tall, upright trees with not too heavy a crown, like the silk cotton, do in foul weather? I do not know, but I am quite prepared to believe that they just hang grimly on, wrangling occasionally with a neighbour, while the wind rocks them bodily and the water runs off their foxy heads.

*

Much of a flying fox's time is taken up with fighting its immediate neighbour, whether it is feeding or having its siesta, the two main occupations of its life. I do not know why it should have such a quarrelsome nature, for its diet has the approval of the sages, and consists of things specially recommended by them as tending to promote a mild, benevolent disposition. Flying foxes live entirely on nectar and fruit juices. The nectar they get by chewing up flowers, and when eating fruit they take in

only the liquid part, rejecting the rest. What one sees under the roosting tree of these bats is not their droppings, but such rejected matter, but the litter represents only a small part of their nocturnal orgies. When they come in to roost after raiding an orchard, they bring home something to munch in bed, and it is the pulp, mashed rind, and seed of this that litters the ground beneath their tree.

Of course they can and do eat solid food. Dealing with soft homogeneous fruit, like plantains, they cannot separate the juice from the mesocarp by mastication, and so they eat it whole. It is amazing how deftly a flying fox uses its umbrella hand for holding a plantain, when it is given one. I saw a captive in a pet market consume two plantains in excellent time in this manner—it was ready for a third at the end of the performance, but no one had a plantain to spare.

*

These bats are caught and sold to those who manufacture indigenous specifics, for the supposed medicinal worth of their blood. I mean the blood of the bats, of course, though I don't suppose it makes much difference even if the sentence is construed the other way round. A hair-oil, infused with the potency of flying fox blood is said to be a sure cure for baldness, weakness of the brain, insomnia and similar disorders. I have no doubt that those who make this oil do use the bat's blood in its manufacture, but I, for one, am quite certain that it can cure none of the afflictions listed above. I should know—I speak from personal experience!

The Poor Man's Cow



COUNTRY NOTEBOOK

by M. KRISHNAN

THE SUNDAY STATESMAN, JANUARY 4, 1953

EVERYONE knows the common goat, and very few love it. Too often it is the common or garden goat, a vandal worse than the blight or caterpillars, swifter than them in destruction and harder to keep away. It trespasses lightly into the compound and makes for your choicest plants, pulling creepers clean off their frames in its tearing hurry, biting off the growth of months for the sake of a few young leaves. Those who have a modest kitchen-garden, and those who own large plantations, detest it equally; and in three different provinces I have heard officials of the forest department, from the conservator down to the ranger, speak of the goat as they would of some Satanic power—so often does it nip their afforestation efforts in the bud.

I admire the goat. No other domestic animal has its richness of character, its vivacity, caprice and independence. It is a lovable and wholly useful creature, cheap and productive when alive, the source of fine leather and the bulk of Indian "mutton" when dead. Even its droppings are valuable, as manure.

However, I shall do the goat no good by defending it against such overwhelming opposition, espe-



cially when there is so much truth in that opposition. There can never be any defence of the goat against those who plant and garden. But there is a remedy, not hard to provide. Plenty of pounds for errant goats and a stiff penalty for redemption can do wonders to bring home their responsibilities to goat-keepers. It is a mistake to think that these raiders are ownerless vagrants. All goats are vagabonds at heart, but with the money value of adult animals what it is now, there is always somebody to whom the raider belongs. This somebody is singularly shy in coming forward to face his responsibilities, but it is unnecessary to go seeking him. Pounds can do the trick.

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I should make it unmistakably clear that I approve of all measures to discourage goats in places where young forests grow. We need forests vitally, and even a rule sanctioning the snooting down of goats in areas where plantations are coming up can be justified. But it is ridiculous to

is lost in wood is gained, partly at least, in goat flesh—no forester will accept this as, the gain is not departmental!

It should be realized that there are thousands of miles of jungle and scrub jungle in India where no valuable timber grows, where goats can be grazed without much loss or damage. In the scrub around villages they find a living in the spiky shrub growth, and at this time of the year seek out luxuriant creepers—especially do they relish the *Cephalandra indica* and a species of *Daemia*. Unfortunately, they do not eat the *Lantana*—if they did, the forest department would become their firm friend overnight.

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In rural areas where goats are not allowed into the jungles, the forest department can help considerably by selling pruned green fodder to goat-keepers at the cheapest possible rates. In fact, if this is done in all forest areas, owners may not resort to the surreptitious grazing of herds in prohibited places. Most rural goat-keepers are uninformed and unenterprising, and need education in several ways that would benefit their stock. It is easy, for example, to raise large plantations of quick-growing trees like the *Sesbania grandiflora* and *Pongamia glabra*, which stand pollarding well and provide foliage crops—I have never seen such plantations raised by co-operative effort. Again, these people do not understand the value of quality in the stud bucks that are run with their herds. Nor is Government provision of aids to rural goat-keeping considerable.

Those who blame goats wholesale for soil erosion would do well to study their actual contribution to the damage, and the methods of prevention possible. In sandy Hagari, near Bellary, where seeping water from higher areas around causes erosion, effective binding has been obtained by planting the area with *Acacia arabica* and *Prosopis*. There are any number of goats loose here, but they cause no harm to the plantation. They nibble at the *Acacia* but do not eat *Prosopis* foliage—they pick the fleshy pods of the *Prosopis* off the ground and also eat the thinner but equally nutritious pods of the *Babool*.

The quantity of green fodder that goats require can be reduced by feeding them dried leguminous plants (after the pods have been harvested) such as the horse-gram and the Bengal-gram, and the pods of the *Babool*. They care little for grass, but can be induced to eat it.

So much for the common goat. But it is the milch-goat (of which we have several established breeds here, like the Surti and the Jumna Pari) that is a national asset and that can make an invaluable contribution to the country. Since milch-goats are stall-fed as a rule, even the forester can have no quarrel with them.

★

say, as some of the highest authorities in the land have said, that goats eat down grown forests and are the chief agents of soil erosion, and that they bring pestilence in their wake. When I hear such things I wonder if in our country the goat is not, to some extent, a scapegoat.

Forest trees have crowns well beyond the scrambling reach of goats and even in scrub jungle a herd never settles down to consume a tree (though it may be such a favourite with them as the *Gmelina arborea*) but walks restlessly on, browsing at a shrub here and a creeper there. It is the goatherds that do the damage, lopping down entire branches to carry home for fuel after their pets have stripped them of leaf and green bark. Experts crede, I have herded my own goats in the jungles and watched other herds there closely.

In a stretch of foothill jungle that I knew intimately for eight years, goats were allowed to graze but the cutting of wood, however dead, was prohibited except on permit. That jungle grew no thinner till the prohibition in regard to cutting wood was relaxed. It is now almost open scrub!

Of course goats do inhibit natural regeneration and underwood in forests, and bark greenwood to some extent, though I think that much ringing caused by forest dwellers like deer is ascribed to goats. Granted that they cause a measure of loss in forest revenue, it is still true that what



All experts on nutrition agree that the crying need of our infants and children is milk, which they get in wretchedly insufficient quantities, especially in the poorer classes. It is not often that the solution to a national problem is lost in a trite truism, but it seems to have happened in this instance. Everyone knows the goat is the poor man's cow, everyone bar the poor man.

True that Governments today are more alive to the value of milch-goats, and that goat farms have been established in a few places, but it is the poorer classes that need to realize the value of the milch-goat as the provider of the family milk requirements. With the exception of the Muslims (who have done much for our goats) our people need quite a lot of education in goat-keeping and stall-feeding, and the nutritive value of goat milk, before they will take to the idea. Practical demonstrations, inducements (chiefly by the provision of good stock at nominal prices and of aids) and propaganda are all necessary—involving much expense and effort. But I am convinced that any cost or effort will be well worth incurring because it is a fact that the family milch-goat is the cheapest, the quickest, the safest and the most practicable solution to the problem of malnutrition in our country, taking into consideration the conditions that obtain here rather than those that prevail elsewhere.

COUNTRY NOTEBOOK: by M. Krishnan

HOOPOE



I USED to know a Mahratta head-mali, with decided ideas on seemliness. He would come to work in a crisply-starched khaki coat and a magnificent turban of tiger-striped mull, and was superior to messy digging or work on rough shrubs—such things he left to underlings. Each day he would spend hours on the lawn, quartering it systematically to locate weeds, inspecting each blade of grass with a dignified, critical decline of his beturbaned head. I have never seen a man look and behave more like a hoopoe.

You will not find hoopoes away from open spaces. They seem to suffer from a mild form of claustrophobia, for though given to perching in trees and the occasional reconnaissance of shrubs, they will not enter thick cover, and are happiest pottering about some stretch of unconfined turf. What they like is short grass, and just now, with plenty of it in garden and scrubland, hoopoes are common birds.



Most of the time they are on their feet, looking for grubs, worms and insects in the grass. The zebra-patterned wedge of the horizontal body and tail hides the trotting feet, so that a curious, clockwork effect marks their movements. Other low-to-ground creatures, whose short legs are hidden by the bulk of the body, also convey this impression, but perhaps it is most noticeable in the hoopoe. The jerky mannerisms of the bird, and its habit of scuttling over the ground in brief dashes, accentuate this illusion of mechanical propulsion.

The very full crest is spread out into a flamboyant fan, then suddenly shut tight into a spike counterbalancing the curved line of the beak, this gesture being repeated again and again, as if to relieve the tedium of the long, pedestrian search for food. There are many birds with highly emotional tails, but here it is the head that wears the crown that is uneasy. The folding and unfolding of the volatile crest express the entire emotional range of the bird, and each passing mood. I have seen a hoopoe indulge in this play with its crest six times within a minute, for no reason that I could discern, but there are rules regulating its conduct on certain occasions. When the bird probes the earth in search of prey, or when it takes off from the ground, the crest is shut close, and just before alight-

ing from flight it is fanned out as fully as it can be.

Some of the most fantastic frills and fancy touches in nature are to be found among birds—great casques, racket-tails, grotesque wattles and spurs, streaming pennants, bright bibs and redundant tail-coverts—as a rule these barbaric ornaments are associated with love, and are on display during courtship. But the hoopoe on the lawn is as strikingly decorative as any bird of strange plumage, though it is fulfilling a daily need and being useful to us—how rarely does beauty go with routine need and utility! As the bird moves forward on invisible feet, the slanting sun touches it, turning the fulvous sienna of its breast and crest to liquid gold, revealing fully the emphatic contrasts of black and white in the back. Then suddenly the crest is shut and the bird shoots up on slow, fluttering, broad wings, patterned even more rhythmically than its body.

Yes, the hoopoe has claims to remarkable looks, and like others with such claims, it is at its best in public. For its domestic life is a shocking contrast to what one might expect from a bird so richly plumaged and with such a patrician love of lawns. It nests in some recess, maybe in a crevice in the roof of an outhouse; the less said about the foul mess that is its nursery the better. The phrase is often used in a prefatory way, to hold forth at length on an unsavoury topic, but I shall be literal—I shall say nothing at all about that nest.

Thuggery In The Treetops



FOR the past month I have been hearing the thin, high, petulant "Ki-kiyu" of the shikra, and occasionally I have seen the bird in the dazzling midday sky—whirring along on quick, blurred pinions, then sailing in an ascending circle on still, round wings, the long tail spread like a half-shut, banded fan. There are two of these hawks about, that call and answer in the same querulous tone, though they seem to keep a certain distance apart. By these tokens I know they are a courting pair that will later nest somewhere near, probably in the clump of mangoes a quarter-mile away.

Ordinarily the shikra is not given to high jinks and public appearances, for it lives by thuggery and thugs do not proclaim themselves. It lurks in obscuring foliage, waiting for the unsuspecting victim to approach before pouncing down on it, and when it goes from tree to tree, its passage announced by the shrill twitters of little birds and the alarm cheeps of squirrels, it keeps low and flies direct and fast. Even when it goes coasting the fields, as it does at times, it hugs the contour of each dip and hollow and takes good care to keep below any line of trees, so that it may arrive unexpectedly at the next field. It is capable of determined pursuit and speed over a short distance, but furtive means and attacks from ambush are what it favours.

But just before it pairs and breeds, it takes freely to the air and goes soaring on high. Its harsh, grating voice then changes to a high, frequent "ki-kiyu", a call that is exchanged all day from the wing and even from perches between the courting pair. To human ears few bird calls are more expressive of tantalised impatience at the slow, tedious progress of love imposed by nature! However, the call is also used at other times. I have heard an angry shikra, attacking crows, repeatedly indulge in this call—it seemed louder and less plaintive then, with a challenging ring in it, but this was probably because I heard it from so near.

WHEN the sun sinks behind the trees and night is imminent, sparrows and other small birds flock to their roosts, and the shikra is well aware of this opportunity. It lies in wait, huddled, in some thick-leaved tree, and if a little bird alights near by it makes its plunge, flinging itself bodily through twig and leaf. Often enough the quarry escapes, and then the hawk may fly swift and low to another tree, or lurk on in the same ambush. There is no rule governing its behaviour on such occasions, except that it fails quite frequently in its dusk hunting. One February evening I followed a shikra from 6.25 p.m. till close on 7 o'clock—it made three attempts to snatch its dinner in that time, and having failed, flew away over the horizon when it was almost dark.

The shikra is capable of a fine courage, too, when there is need for courage. It can tackle mynahs and birds almost as big as itself, as the old-time falconers knew well, and it will fight even larger birds on occasion. Once I was watching a shikra eating a bloodsucker on the branch of a neem, when first one jungle-crow and then another came up and settled on a branch close by. The hawk resented their covetous glances and their sidling closer, and abandoning its prey it flung itself at the intruders with a torrent of "ki-kiyus"—I was amazed at this onslaught, for the crows were larger birds and by no means incapable of fighting, moreover there were two of them.

So impetuous was the attack that all three birds came tumbling down in a frantic ball of black and barred feathers, that rolled about on the ground below for a moment before resolving itself into two crows that fled for dear life and an angry, open-beaked hawk. Both crows must have been grabbed simultaneously, one in each taloned foot, for this to have happened, but incredible as it may seem, it did happen. I would much like to tell you how the victor returned to the hard-won meal and consumed it in triumph, but in fact this incident ended even more like a story. For while the hawk was routing its enemies, a third crow made an unobtrusive appearance on the scene, by a rear entrance, and flew away with the dead lizard even more unobtrusively!

M. KRISHNAN

COUNTRY NOTEBOOK

White Wings

EVERY evening, at half-past-six, the cattle egrets fly southward over my roof to their roosting trees by the water. They go past in a broken string, five or six first in compressed Indian file, flying low, then a long break, then five or six again following the same diagonal course over the roof and trees, picking up the threads of the flight that went before. Their flight is round-winged and leisurely, heads drawn in, yellow beaks pointing forward and black legs trailing behind; the full, curved wings never stroked in vigorous flaps but moved in an unhurried rotatory action, like boats rowed slowly with broad, bent oars.

There is grace enough in their slow white flight against the slaty sky, and a steady aim, but no hint of power or speed. Twelve hours later, soon after sunrise, they are back in the sky again, flying no longer in a set direction but circling in small parties, for they are now seeking feeding grounds. Their flight seems even weaker now, as they row around indecisively on hollowed, dazling wings, gliding occasionally before settling in some field. They look even more like the curve-winged white birds of Japanese screens in the sun than they did at dusk.

Bird flight can be very deceptive. Butterfly-winged hoopoes are capable of steep speed when pursued and long-distance migrants, like wagtails, often have a weak-seeming dipping flight. But the lassitude of wing of the cattle egrets is not illusory—they have not even fugitive speed. I have known this for years, from the time I was a young savage with a catapult. Among the savages with whom I consorted furtively in those days was an Anglo-Indian boy, bigger than the rest of us and an acknowledged master with the catapult. I have seen him bring down cattle egrets on many occasions. His method was to stalk a flock in a field and flush it from near; the birds would fly away, then turn in a sharp bend and come back, and as they came over some twenty-five yards above, he would let fly. It was useless winging a bird, it had to be hit in the head to stun or kill it, for any prospect of recovery. Perhaps an empirical skill guided the marksman's aim a shade ahead of the fleeing quarry, but I have never seen any other flying bird, even a considerably smaller one, fall to a catapult. There were many blank stalks, but I have also known my

friend turn home with three egrets from a morning's hunting. According to him the birds were insipid even in a curry, but not so bad as paddy-birds, because they did not eat quite so many frogs.

It is true that the cattle egret is far less dependent on frogs and fishes than its cousins. It belongs to the tribe of egrets and herons, professional anglers, and has the wading legs and dagger bill on extensile neck of the fraternity, but it lives mainly on the insects of green fields. It is a pastoral bird, much given to following in the wake of grazing cattle; it is an adept at seizing the grasshoppers and other insects that their hooves scatter, and everyone has seen it picking ticks and flies off cattle. Still, it has not wholly lost its tribal love of water, as its nesting and roosting trees will show, and occasionally it reverts to angling for tadpoles and small fry at puddles.

One would think that the birds that seek their meat in the air, like the peregrine, would find these slow-winged egrets easy prey, but I believe it is not often that a cattle egret dies this way. The pond heron, which flies faster and higher, sometimes meets this fate—the ancient Tamil curse, "May you fall headlong like the pond heron struck by the shahin", is based on fact. For one thing the cattle egret never flies far except when going out to feed and when returning to the roost, and even at such times it flies low—the hunters of the air prefer prey that will seek escape in flight, providing a depth of air below to make giddy swooping safe. Moreover, it is when the air is cold and slow, early in the morning and late in the evening, that cattle egrets undertake their flights—birds of prey are rarely on the wing then, for they like plenty of light, and warm air currents for soaring.

I must make it clear that I make no suggestion of intelligent apprehension, or dominant motive, in saying this, but I have been watching peregrines lately, and it seems to me that cattle egrets do choose their journey hours safely. There is no need at all to presuppose reasoning in a bird for the development of a habit that is beneficial to it, but, of course, it is quite possible that the flight habits of cattle egrets have nothing to do with the habits of birds of prey.

M. Krishnan

THIRST

*

by M. KRISHNAN

IT was insufferably close in the machan. After sunset we had to strain our eyes to see the white form of the goatling, tethered in a clearing some thirty yards away. The bait lay down to repose, nothing moved and no panther came—which was, perhaps, not surprising, for our machan, though well screened by foliage, was a ponderous affair and accommodated two guns and a non-shooting naturalist. At half past seven a sudden breeze arrived over the harvested fields, stirring the tall, white jowar-stalks and crisp leaves, bringing the warm, stony scent of the sun-baked hills and just the hint of wild jasmine—a breeze that was even less restful than the stillness had been. At 8 o'clock we decided to call it a day, climbed carefully down, walked across the dusty fields to the jeep, and went home. None of us could summon any zest for dinner, but it was good to be able to unfold one's knees again, and the thought of a cold wash before the meal was refreshing.

The panther must have come on the heels of our departure. We had instructed the shikari to untie the goatling and take it home, but he had stopped for a smoke and when he went to the clearing there was no little white goat in it—only a bit of broken string, tied to a peg. He reported to us at once, and with no plan or idea in our heads we jumped into the jeep again and drove straight to the lone tamarind that held our machan.

Eyes in the Dark

Almost an hour had passed since we left it, and as we arrived at the tree the headlights cut a thick, blurred yellow lane through the spiky jowar fields. At the end of this lane, a hundred yards away, we could see a pair of eyes that glowed dull red in the feeble light; paired, glowing orbs that seemed to play hide and seek among the jowar stalks, now moving a little to the right, now reappearing to the left, till it was clear that there were, in fact, two pairs of them. A panther and her cub, obviously: that accounted for the systematic slaughter of the goats of the village that had made us set up the machan here.

There was no point in attempting a shot, or in trying to push the jeep closer. We were still debating the next move when the panthers provided it themselves. They got up and started towards us, following a line of bushes that divided one set of fields from another. Their path lay a little ahead of us, and the beasts, behind the cover of the bushes, were soon out of sight. Throwing caution aside the driver started the engine, and turned the jeep sharply around, so that the headlights were focussed on a thin patch in the hedge, about 20 yards in front of us.

I thought that no beast on earth, not even a very domestic cow, could have failed to take fright at the sudden roar of the engine, and so did my companions. But immediately on our agreement the panther and cub walked past right in front of us, right across the beams of the lights, taking us so much by surprise that it occurred to no one to shoot. We had a clear view of the beasts at the gap in the hedge in the yellow glare. The cub was three-quarters grown, but looked much smaller as it slunk past belly to ground, obscured by the grass. The mother did not bother to hide herself—she walked past arrogant and upright beside her cub, keeping herself between us and the youngster, as if screening it from an anticipated bullet by her bulk. She did not even turn to look at us.

After-dinner Drink

The shikari was sure that the beasts were making for the water, a small, shallow pond a furlong away. He said that they were so thirsty after their meal that they would go straight to the pond with a reckless disregard of all things, and though none of us really believed that they would ignore the thunder and blaze of an oncoming jeep, laden with excited men, now talking loudly, we decided to intercept them. The line of bushes they followed zigzagged to an earth mound, then dipped steeply to the pond—by following a cart-track we hoped to get to the mound before they could.

We reached the mound in a cloud of red dust and petrol fumes, and stopped to the accompaniment of a series of detonations—the headlights were right on that balding mound, but we could see no sign of the panthers there or as far around as the light spread out. We had taken a short cut, but apparently the speed of thirsty panthers was greater than what we had reckoned it at, or else their recklessness was less. We backed the jeep, preparatory to getting round the mound to see what lay behind it, and the panthers walked across its top and disappeared into the hedge, towards the pond.

Well, finally that panther was shot at the pond—an achievement of which no one need feel proud. The cub got away, frightened at

(Continued on Page II)

THIRST

(Continued from Page I)

last by the sound of guns, but I suppose my friends could have shot it, too, had they cared to. I have never seen, nor heard of, such an instance of utter disregard for men and cars by wild animals. It is true that the circumstances were somewhat exceptional—there was no other piece of water anywhere around to which those panthers could have gone for a drink; it was a dusty, thirst-provoking evening, and I am even prepared to concede that that goatling was a remarkably dry meal. All the same it does seem astonishing that those panthers, which were cautious when hungry, should have been rendered so blind and heedless by thirst.

THE SUNDAY STATESMAN MARCH 29 1953



SPRING IN THE JUNGLE

SUMMER has taken us by surprise in these parts. Usually its advent is both gradual and sudden; it creeps up through February and March with occasional halts during showers, and then, in April, leaps in with a formal little pounce. This year, however, the pounce was early and savage. In the last week of March we were still congratulating ourselves on a slow summer, in spite of dry weather, when one day the temperature shot up by almost 10 degrees, overwhelming us with a gasping lassitude. The optimistic, their senses enervated and lax, talked of a heat-wave—but with the coming of April and little abatement in the heat it is clear that this is no passing wave, but summer in all its glory.

And, quite possibly, it is also spring, the loveliest and least defined of seasons in our hill-dotted plains. We know when it is the rainy season—it is when the monsoons arrive, and their tardiness or prematurity only changes its timing. There is a brief winter in December; even autumn, if one goes by a certain mellow serenity in the air, is a definite season in many places, about October. But when is it spring?

The Vernal Season

Mere botanical knowledge cannot answer this question, and knowledge of the flowering peaks of garden plants is even less helpful since we are not concerned with a horticultural season. Spring has symptoms celebrated in the classics, and it is futile considering it apart from its classical background. The setting in of a gentle, fragrant southern breeze, a restive, amatory urge, the blossoming of certain trees and the voice of the koel are the accredited tokens of the vernal season. The gentle-southern breeze is a reality more refreshing than poetic fancy can ever be, as those who have been out on a sweltering day in April will know, but it is local in its balmy range. Other trees like the Asoka, and even shrubs like the jasmine, are listed in descriptions of spring, but undoubtedly the mango is the most symptomatic of them. And this year, in places far apart, I found the wild mango in lavish bloom, in the middle of February, when the numerous koels of those tracts were resting their voices for a while! Nor are Hindu festivals more specific in fixing the season—right from Holi (end of February) to the Tamil New Year day (in the second week of April) each of them has some vernal connotation.

here, a magnificent and saddening sight.

The Asoka (*Saraca indica*) is the most delicate of all red proclamations of spring, and is intimately associated with the season, traditionally, but the tree is not to be found in this jungle. From early in February the Indian Coral tree (*Erythrina indica*) was in bloom—an ugly tree, to my eyes, too florid and thick-branched, but the pure scarlet of its flowers is probably unmatched for brilliance. The Coral's bloody crown is enhanced by lack of leaf—but then, most trees flowering in the heat are leafless. The true "Flame of the Forest," *Butea frondosa*, is unforgettable when seen in the jungle. It was later in bloom than the *Erythrina*, but by mid-March it was in full flower, and, of course, without leaf. The rounded crown of orange-red flowers, with dark calyces, looks Chinese vermilion against the sun-browned hillsides, seen from afar—somehow, in an avenue, the tree never has scope for its vivid charm. The Gul Mohur (*Poinciana regia* or *Delonix regia*) was still in leaf when I left. In May it will be in extravagant bloom, its flat, flaming crown spread on outflung branches, blazing fiercely in the forest. This, too, required a wild setting for its flame—I have always thought it a pity that people should plant it along the roadside. Incidentally, the *Poinciana* has no association with spring in poetry or tradition—but the flamboyant *Butea* has.

I will mention only one other tree that I saw here. Late in February we were going up a hill-road laboriously. A recent fire had scorched the earth, there were heavy, black rocks on either side, and the sparse jungle was brown and seemed withered beyond redemption. Round a bend in the road we came suddenly upon a group of Yellow Silk-cotton trees—three crooked little trees, with burnt, gnarled trunks and tortured branches, the very tips of which



alone were purple and turgid with life, and bore great, opulent yellow flowers of the purest aureolin, with hearts of red-gold stamens. I cannot describe the contrast of the gracious, unstinted beauty of those flowers against that ground of charred and twisted desolation—we stopped wordlessly in our tracks to stare, unmindful of all else. To one blessed with greater faith than I, the experience could have been a revelation; surprised by such loveliness, a poet could have found lasting joy in the sight, in a recollective, Wordsworthian manner. But, after the first glad stare, what came to me was no sense of rapture or thankfulness, but only a sharp memory from a painful past, when I had been at the foot of the systematic botany class. I turned to my comrades in triumph: "*Cochlospermum gossypium*" I announced to them, with finality. However, they did not hear me, or if they did, they were wholly insensible to the bathos of my remark—they just stood there, staring. There are times when the impercipience of others is merciful.

Peak In Flowering

Perhaps that gives us a clue. Spring is an extensive season, marked by a florescent urge in nature. The herbaceous vegetation is in bloom for many months, but probably December-January marks a peak in their flowering. By March most herbs are drying up, and from February to June a number of forest trees burst into flower with dramatic extravagance. The voice of the koel, also representative of the season, varies with locality almost as much as the flora, but I have never heard the cock in full voice before mid-April. Spring proper seems to begin before summer, and to coexist with its earlier months.

Not all trees that flower in summer are conspicuous, and some, like the neem, commence to bloom in February and go on till April. The chaste, white blossoms of the neem are used in vernal festivals, but it is the red flowering of certain forest trees that seems most expressive of sultry, provocative spring. Some of these red-flowered trees are traditionally associated with the season, and quite three of them are known, vaguely and descriptively, as "flame of the forest."

Recently I was in a block of jungle which has its own character, no doubt, but which is so wholly uninfluenced by climatic extremes or any attempt at forestry that one can take its naturalness for granted. The jungle was dry and brown, most of the trees leafless, and there were vivid declarations of spring here and there. All the three trees called and miscalled "flame of the forest" are found here—and hotter flames as well. Forest fires, unchecked except by the conformation of hills, water courses and prevailing winds, take toll of the under-shrub every year. There was an extensive fire on the night of my arrival

M. Krishnan's Country Notebook

Midnight Visitor

SINCE the first warm breath of March, I have had my cot removed to the lean-to shed in the backyard. Here, with no walls to keep out the shy, occasional current of air, sleep is possible, but not before midnight. Till then, too mindful of the stillness and the regurgitated warmth from brick and earth, I turn the pages of a book listlessly, or pace the yard, or just sit sullenly on, indifferent to the beauty of the stars. Then a heaviness takes hold of my limbs the tepid stillness is oppressive no longer, I am aware of scents and sounds unnoticed before, and retire to bed.

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It is then that I hear the intruder; slow, shuffling footsteps, a halt, advancing steps again, then, from quite near, low, menacing grunts. I do not look to see what it is. In that drowsy bliss petty reason has no sway over thought—perception is sharp but in uncritical repose, and an overwhelming desire for the continuance of repose prevails, till sleep blots out everything. The senses do not jolt one awake needlessly, but sometimes they mock at wakeful logic. Some animal, a large animal, probably, but nothing familiar. Perhaps this is a desperate leopard,

a lame leopard dragging a maimed foot, driven into the heart of a residential area by hunger. I hear muffled grunting again, fling an arm over my head to keep out the man-eater's growls, and am instantly asleep.

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One night, when sleep was less insistent, I heard the approaching shuffle and sat up in bed. Before I could reach out and switch on the light, the brute was past the shed in a scurry, but though I could not see it I knew at once that it was a bandicoot—there was no mistaking its voice and gait, when one was awake. I sat up for it next night, and many times, since, I have watched it.

It arrives invariably after midnight, hugging the compound wall that runs by my shed and enters my neighbour's territory through a hole at the end. It is willing to brave electric lighting, but retreats in haste at the least hint of movement. Lying still in bed, with the light on, I can watch its ponderous passage through my yard. It comes and sits in the dim edge of the lamplight, a vague, hulking figure with close-set eyes that gleam balefully as it faces the illumination. It sits on its haunches like a kangaroo, or walks around,

reconnoitring. Satisfied at last, it comes on at a lurching trot, the massive body raised clear on the short legs the tail held rigid, an inch off the ground, not trailing easily behind like a rat's. Sometimes it moves in silence, but most often it grumbles and mutters villainously to itself, as it walks. If I click my fingers together it rushes back to the penumbra, then halts, crouches and peers ahead anxiously. After a while it advances step by apprehensive step, then gains heart and pace to its lop-sided run, grunting as it accelerates.

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All bandicoots are huge in the dark, but this is an exceptionally large specimen. It is a dark, greyish brown with the pink skin showing through in places, the mantle of coarse black hair on its hump back adding to the impression of bulk. Its timidity is due, no doubt, to its being by itself and on strange ground in my backyard, a certain lack of moral support and territorial feeling. I have the most unpleasantly clear recollections of a colony of bandicoots with which I was once forced to share a cottage for a month. They sneered openly at men, secure in their numbers, their sure knowledge of bolt-holes and disregard of filth. They had made the most elaborate arrangements for their nefarious life, beneath the flooring of that cot-



tage, and had acquired a depraved passion for soap of all kinds—belatedly I realize that with a slight variation in the title of a popular book, with strychnine in the soap, I could have got even with that infamous band. However, while the experience has left me with strong views on the low cunning, the insufferable hardness and the tunnelling abilities of bandicoots, I realize that all of them may not be such bold, bold creatures. Some may be less vandalistic about the house. My nocturnal visitor, for instance, has a decided preference for gardens.

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What does it do, night after night, in my neighbour's garden? Such constancy is often due to discovery of a store of food. I can understand, with melancholy resignation, even a bandicoot ignoring the flora of my compound, but what does it dig up and consume next door? Particularly am I interested in the horticultural preferences of bandicoots, for not much

is known about them. I have tried to find out what I can with the aid of a powerful flashlight and a little trespass, but on realizing that it is being observed or followed, the bandicoot disappears effectively into the confusion of bunds water-drains and vegetation that is my neighbour's garden.

Finally, I decided to ask the gardener. The man was most casual, but then that is his nature. I explained to him that a large able-bodied bandicoot was visiting his province each night, and spending several hours there, to judge by occasional grunts. He was not interested. I asked if he had noticed any heaps of new-dug earth, or damage to tubers and bulbs in the vegetable garden and elsewhere. The violent demise of seedlings and the plunder of fruit. A look of comprehension spread slowly across his face, he grinned a foolish grin and walked away, in obvious thought. I am afraid that, seeking an explanation, I have furnished a complete one.

Country Notebook

Mangoes In Season

by **M. KRISHNAN**

THERE are mangoes with high-born names, Benishan, Jehangir, Mulgova; there are mangoes with soft, seductive names such as Rumani or Dil Pasand: mangoes red as a sunset and yellow as a sunflower; big and small, early and late, rank as a jack and delicately flavoured as a rose-apple, so many sorts and conditions—and all of them fruit in summer.

Some, it is true, do well on the lower hills, but they belong essentially to the plains. In March one may hope for the first fruits, gummy and turpentine; but mangoes still, and with July the season is over. I have always thought of this peerless drupe as nature's compensation for summer in the plains.

All mangoes go back, ultimately, to the wild *Mangifera indica*; it is from this magnificent progenitor, with its robust spread of limbs and reckless profusion of sour, fibrous fruit that the cultivated mangoes come. No culture in this ancient land has received such close and worthwhile effort, such sustained cunning, as the evolution of our numerous mangoes. Having eaten most of them some time, somewhere, I know that it is idle to speak of the mango as if it were just one fruit—today it is quite 20 different kinds of fruit, each with its own character and culture.

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Science tells us that ripe mangoes abound in vitamin C so good for the system, especially in the tropics. I knew this long before science did, though I could put no name to the goodness.

There are still certain joys in this drab world of ours, among them the mango, but refinement can only nullify them. That is why I view with such stern disfavour all attempts to reduce the mango to a table dainty, and, worse still, to can it.

The mango is not a fruit that lends itself to social occasions or nice manners. It must be consumed in privacy and without inhibitions, by oneself or with trusted friends. There is only one way to eat it, to bite the mango in its prime, to suck its potent juices, and devour its flesh with eager relish. No count must be kept of numbers, no thought for appearances must spoil the orgy.

That is the way to eat mangoes—but what good is it telling this to those who will eat their mango iced, in neat, ready-cut cubes, daintily with a spoon? To such people I have another suggestion—try a dusting of fine-ground sugar, just a spot of vanilla essence and a generous sprinkling of some peptonising powder next time.





Ignoring the many things that we get from the ripeness and immaturity of mangoes—the brown, laminated, sun-dried slabs of sweet juice, sherbets and fools, jams, chutneys hot and sweet, and pickles, ranging from the Andhra avakkai, with pungency matured over months in subterranean jars, to the bud-fruit pickle of the far South, nearest in flavour, not to other mangoes, but to olives in brine—ignoring all these delectable and poignant derivatives that depend so much on choice of the right sort of mango, the fruits themselves are so unlike that one can think of them as different kinds, and find in their versatile differences scope for the extremes of one's tastes.

The fruit I like most is a mango, the one that goes by the name Alphonso along the West coast, Badami in Mysore and Khader in the South—though in Banaras I have wondered, in my fickle mind, if the Langra is not, after all, the most delightful. And the fruit I care the least for is also a mango, a long, insipid, smooth-fleshed kind that is also given to aliases, but which is most repulsive to me by the name Bangalora.

People, especially in the cities, are apt to think of mangoes as desert fruits, indigestible unless prudently rationed—how much these good folk have missed in life! The mango, in season, is not a dessert but a staple diet. I firmly believe that a fortnight's devotion to mangoes, in May, rejuvenates the system for the rest of the year.

Much depends on how one conditions oneself for the course (a highly individual business) during the early part of the season and the time-honoured practice of washing down the meal with a glass of milk—the milk, I believe, counters the irritative of the turpentinic astringency of the pulp next the skin.

Some unfortunates are allergic to mangoes: to these, I offer my sympathies. Some, again, do not care for any kind of mango—be on your guard with such men. Others, again, give up in regret and pain after a zestful go with a basket of Mulgova or Alphonso or some other variety equally unsuited to bulk consumption—to these I recommend a fresh trial with a milder sort, say, the Rasपुरi.



M. Krishnan's "COUNTRY NOTEBOOK"



THE BABY-SNATCHERS

HOW right it is that almost the first bird to be specifically mentioned in Press despatches by our National Committee for Bird Preservation should be the common Indian crow; and how too right (as the Australians say) that this mention should be dishonourable!

The Committee has urged urban and suburban municipalities to encourage charming and inoffensive birds like orioles and flycatchers, by decimating the too thick crow population. Crows, it points out, raid the nests of these innocents and devour their young.

Commenting editorially on this, a Madras paper offers its sympathies to the municipalities appealed to by the National Committee. The utility of crows as scavengers in municipal areas is stressed, and their claims to citizenship in our democracy boosted—moreover it is pointed out, with much truth, that it will be no easy job giving these hardened birds the push.

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Now, the National Committee is on very firm ground in accusing crows of having an inhibiting effect on the less common and more attractive bird life of any place. All the world lives on nature's provision for unborn generations, on the store of good food set by in eggs and grain, but crows are inveterate nest-wreckers and baby-snatchers, ruthless and untiring in their methods. They go nest-hunting late into the evening and, when there is a moon, even at night.

No doubt the National Committee means all crows found in urban areas and not the grey-neck exclusively, though its Press note refers only to the "house-crow". Actually the jungle-crow is almost as much at ease in town and city as the grey-neck, and is even more given to the massacre of infants. Moreover, it is more at home in groves and tree-studded gardens—a point that has bearing on this issue as will be seen later.

However, whether only one or both crows were meant, the fact remains that it is hard to discourage these birds. It is not as if they belong only to municipal tracts—they are the most widely distributed of all our birds. Furthermore they are long-lived, sapient, audacious and capable of learning much from actual experience, a thing that only the most intelligent of birds can do. They

are strong on the wing and fly long distances each day. Shooting them, snaring them, even the hanging up of a crow's skin as a warning and a moral are all only temporary measures. The birds are back the minute they realize the danger is unreal.

Apart from all this, even if a municipality could get rid of its crows, that is not enough to encourage birds like orioles and flycatchers to take up residence in the place. Such birds need fairly close tree-growth and plenty of leafy cover—they are very fond of mango groves. The kind of parks that municipalities raise offer little scope for their lives, for these are usually planted with deciduous flowering trees spaced far apart.

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Where there is close tree-growth and plenty of foliage it is noticeable that crows are much scarcer than in more open places. That, perhaps, is the secret to success in the encouragement of the kind of birds that the National Committee wants the municipalities to foster.

I cannot help feeling that though sound in its ornithological advice on this issue, the National Committee has addressed it to the wrong parties. The owners of large private bungalows are far likelier than municipalities to take pride in the presence of beautiful and melodious birds in their compounds—there is no law prohibiting private parties from discouraging crows as much as they like, and living on the spot they can wage this unequal war with less strain and futility.

What the municipalities can and should do is to provide spacious parks with plenty of trees like the mango and the *Ficus religiosa* besides the invariable *Poinciana regia* and cassias—in this way they can provide the woodland type of cover beloved of orioles and many other charming birds. In built-up areas where there are no large, rambling compounds with low-to-ground evergreen trees, it is the roadside avenues that sustain arboreal birds, somewhat inadequately. If the National Committee can persuade urban authorities to raise and maintain parks of the type described it will have done a very real service to the struggling bird life of built up areas, besides adding a welcome touch of green to these grey localities.



IN a story that I read recently the climax is reached when the narrator, in his boyhood, has to cross a haunted pathway in the dark. The suspense mounts as he nears the place, then, unable to face it, he turns away from the horror and walks backwards, his senses taut with apprehension: "My ears were pricked up, ready to listen to the slightest rustle. A leaf dropping, the night heron darting into the still night with its shrill call 'tweet, tweet, tweet' would have seen me drop dead on the ground."

Having done most things the hard way all my life, I fear I will have no easy death, but even I would get a pretty considerable jar were I to hear a night heron rise into the obscure silence with a shrill "tweet, tweet, tweet!" But were its cry far more eerie, a sudden, raucous, floating "w-a-a-k!" from above, I wouldn't turn a hair, for that is the bird's call.

In many Indian languages, the night heron's name is onomatopoeic—in Tamil, for example, it is called "Vakka." Perhaps it is the most identifiable of the lesser herons and egrets, a dumpy heron, grey above and white below, with a black crown, nape and back. There is a silky crest of long black feathers drooping over the humped shoulders, but neither this nor the colour of nape or back is visible as one views the roosting bird from below or at eye-level, though the black crown is prominent. In fact, it is after sunset, when the sky turns a neutral tint, that one usually sees night herons, and in that light it is a wholly dusky bird with even the characteristic white of the under parts a lighter shade of grey.

However, it is not by observing details of plumage that one knows this bird—the heavy, dark contours of head and beak, the blunt, hollowed wings rowing a steady path through the dusk, and the hoarse, airborne "w-a-a-k!" are unmistakable.

Being nocturnal and crepuscular, night herons spend the day in heavy repose in their chosen roosts. But when they breed, they are day herons as well, for the ceaseless yickering of the young drives the parents to seek food for their insatiable brood throughout the night and day. Breeding is a wearing pastime with most birds—with night herons it is positively exhausting for all concerned, including neighbours.

Usually the breeding sites and roosting trees are well away from human habitation, and often near water, but the birds do not hesitate to locate their nesting colony in a built-up area if other conditions suit them. In June 1946 a colony of some 150 night herons nested in mango trees in the back yard of a house in the heart of congested Madras—there was a tidal creek not far away and a sluggish canal right at the back, ample inducement to the hard-worked birds to pitch on this spot.

The sustained clamour of the young and the continuous arrivals and departures of the adults rendered sleep almost impossible for the occupants of neighbouring houses. After futile private attempts to move the birds, the residents lodged a complaint at the local police station. Our unsung police force, which is capable of dark feats of public duty, rose nobly to the occasion. A constable with a

shotgun visited the scene of the offence and fired a few rounds into the loud, thick trees, bringing down a number of birds, and the rest of the colony took wing in a hurry, never to return to this homestead.

In contrast to this feverish whole-time activity of the breeding night heron, I must add that occasionally the bird sleeps soundly through the night, in spite of its name—when the hunting has been good in the evening and early hours of darkness. One of the most vivid recollections of my youth is the capture of a slumbering night heron on the parapet wall of my house, around midnight.

It stood on one leg, its head lost in its huddled shoulders and fluffed plumage. It was so fast asleep that when I switched on the powerful terrace lamp, right above it, the sudden glare failed to get through to its drowsing senses. Only when I took it in my hands did it awaken with a loud croak of protest. I held it as one holds a pigeon, with its flights and feet pinioned between my fingers so that it could not use them, but it got away by an undignified and smelly manoeuvre, by being abruptly and fishily sick. Best to let sleeping night herons sleep.

M. Krishnan's Country Notebook

EGRETS

WHERE the water is shallow and not too still, in estuaries and by sand-spits and the margins of lakes, the Large Egret seeks its patient living. It is a solitary bird, and likes a fair stretch of knee-deep water—but so do other waders, more sociably inclined. Even when it finds a quiet creek, away from ibises and spoonbills and storks, it is rarely altogether free from the companionship of its cousins.

From these cousins it is distinguished by its size and carriage. Our egrets differ from herons in being all-white—one of them, the Cattle Egret, has turned pastoral, and moreover it does not belong to the genus *Egretta*. But the Large Egret, the Smaller Egret and the Little Egret are all waders and all white, with exquisitely dissected plumes adorning them during the breeding season.



It is not easy to tell the two lesser egrets apart at a glance, highly sociable birds both and often found in the same places; especially is the difference between them slight when they are not breeding, and the Little Egret lacks its distinctive, drooping, nuptial crest. The yellow feet of this bird contrast sharply with its black legs and are conspicuous in flight, but this may not serve to distinguish it always. However, there is no mistaking the lone Large Egret.

If you see a gleaming white bird, the size and shape of a grey heron but more daintily made stepping warily over the shallows by the shore line, you may safely put it down as a Large Egret. Its long, slim neck is thrust well forward, and even in repose it stands less upright than a grey heron—when it walks, this horizontal leaning is even more pronounced and at times the bird seems almost on the point of toppling over!

Not that it is ever in danger of losing its balance. It is a canny bird and knows that fish and tadpoles, and such under-



water things that it hunts, are suspicious of sudden splashing. So it lifts its black feet clear of the surface, and moves it carefully forward through the air before setting it down gently through the water again; it cranes forward and prospects the shallows ahead, and when the prey is near enough a lightning plunge with the poniard bill secures it.

After summer, this deft bill turns from black to yellow, and with the plumes of love fallen, the humped back and abruptly tapering end of the tail are plainly visible. A Tamil poet who lived some 2,000 years ago, has likened the shape of an egret standing huddled in the water during the rainy season to the bud of the white water-lily—from afar and from June to November the simile seems strikingly true to life.



Incidentally, the aigrettes that were once so much in demand among fashionable ladies in Europe, are the nuptial plumes of egrets—the Smaller Egret being the most abundant provider. The plumes were collected humanely, without injury to the valuable birds, at egret-farms near villages. With aigrettes going out of fashion in the West, probably on account of a false sentimentality, egret-farming has ceased to be a thriving industry. The birds, however, continue to thrive and are rarely disturbed at their breeding sites by villagers, who consider the water fouled by a nesting colony excellent for the fields.



ASSES IN AUGUST

It is in August that I sometimes wish, cravenly, that I lived in a smart, snug, ferro-concrete house. Till then my ramshackle cottage is good enough for me—I often view, with pride, the uneven, time-stained brown of its assorted tile. But the first downpours of August discover each leak in the old roof and create fresh ones, and non-plussed by the manifold cascades, the sudden pools on the floor, I think this unworthy thought. Then I locate the leaks and distribute catchment-vessels beneath them, and as the rainstorm continues unabated, console myself with the likely plight of others, more exposed.

In this moralistic consolation, strangely enough I do not think of the thousands of humans leading less sheltered lives than I, so much as of domestic stock. In particular, the picture of asses drenched by torrential rains comes to my mind, a picture that goes back to past Augusts.

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Other domestic stock suffer less in such weather. Cows and bullocks are provided with sheds as a rule, even the water-loving buffaloes have their sheds; sheep and goats are worse off, but they huddle together, gaining a measure of co-operative comfort and protection. It is the asses, for whom nobody cares, that are truly to be pitied. Turned loose on the village common, they know by bitter experience that no one will tolerate their entering a garden or any sort of shelter. When it rains, they retire to some ruined wall and stand patiently besides it, waiting for the elements to exhaust themselves.

For years I lived near just such a wall, at one end of an open field. Many times I have seen asses hugging that wall in the rain, miserable, wet through and cold, waiting with endless fortitude for the downpour to cease. If I tried to drive them into my goat-shed, they would run shudderingly away, as if they apprehended that I disputed their right to that wretched wall.

My friends found my solicitude for the beasts vastly amusing, and hinted at hidden deep-rooted affinities; their gibes were sly and often really witty as I, the object of their humour, must confess, but I have felt shocked at their utter callousness towards those poor, unhappy animals. It is strange how the best of men can never feel beyond a stupid, traditional prejudice against asses.

They used to argue that the

donkeys were tougher than I sentimentally imagined, and could do with a thorough wash once in a while. There is much truth in what they said. Our asses are hardy; they have to be, to survive at all. But only wishful ignorance can believe that they can take no harm from exposure to wind and weather. I have known donkeys develop a horrible, racking cough in the wetter months, and I have known them die from sheer lack of attention and shelter.

You should realise that everyone of these beasts is owned and worked, and earns, more than its keep. Also, that even after they have outgrown their shaggy, whimsical foalhood, asses are intelligent, patient, sensitive and very responsive to kind treatment. Their sureness of foot is well known and over hilly paths they are unbeatable as pack animals. True, their great potentialities as beasts of burden, handy size, and versatile capacity for being trained have remained largely unexploited in our country, but they are worked all right.

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They are driven hard and made to carry enormous loads, and treated brutally rough. Often they are severely branded, or have their ears and nostrils mutilated, as marks of ownership. Only, they are not worked all the year round and every day of the week, and when they have no burden to carry they are turned loose on the waste outside the village to get themselves some sustenance, after hobbling their forefeet. It never occurs to their owners that a handful of grain or even kitchen waste, to supplement what they can get out of the mean scrub, would be deeply appreciated or that they like shelter when it rains, especially at night. And unless an ass is acutely and obviously ill and its master thinks he can save a valuable beast by some cheap measure, it never gets any attention.

That, of course, is the compensation that the Indian ass gets for its life of suffering and neglect. In between bouts of too heavy work it has its freedom, after a hobbled fashion. I say this with no bitterness. Freedom is as dear to a beast as it is to us, and it will face odds even more stubbornly than we do to enjoy its liberty. Only, in August I wonder if a little food and shelter would really circumscribe a donkey's freedom, and if we cannot, even in a free country, insist on its being less shamefully neglected by humanity.



"JUNGLI PHAL"

by M. KRISHNAN

ABOUT this time of the year, for many years, my elderly cook used to warn me of the dangers of eating all sorts of "jungli phal." by which term she meant the custard-apple, the jamoon (*Eugenia jambolana*) and the wild, sharp *Carissa*, fruits now in season in many places. Particularly was the good woman against the first two.

The custard-apple, I was told, promoted phlegm and the rheumatics; it was a fruit one should guard against at all times, but especially in seepy September. The jamoon was worse. It caused, besides sore throats and bronchitis, sudden, debilitating fevers; a dis-

COUNTRY NOTEBOOK

tant cousin of hers, who was fond of the fruit, had died young. Moreover it was infra dig. for a man of my years and status, an officer of the Government, to indulge such immature, boorish tastes. Latterly these sermons became so insistent that I had to use much furtiveness in my fruit eating.

I am no longer under Sita Bai's motherly surveillance, for I have left that place and she this world—and I am an officer no more. I eat my fill of custard-apples and jamoon, with abandoned openness. But somehow they have not quite the old relish.

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There was much truth, though, in the elderly advice. A surfeit of custard-apple is not calculated to improve one's health. However, it is not often that one takes it in any quantity, for it is a fruit of which one tires quickly. If you like its somewhat musty flavour and have not eaten it that way before, you should try it in an ice-cream. Much of the prejudice against the fruit is due, I think, to the fact that people often eat it overripe and are not choosy over their custard-apple. The polygonal "cells" on the rind (denoting each carpel) should be few and large and the fruit of good size. It should be taken off the plant while still firm and stored in dry grain till just ripe—much of the charm of this artless fruit lies in its being properly ripe. The way to get good custard-apples is to collect them in person from carefully selected shrubs or, if one is an officer, to employ a confidential agent for the purpose. People rarely sell the best custard-apples they can find. They eat them.

Of the jamoon I can speak with greater enthusiasm. This, too, varies considerably from tree to tree, even more than the custard-apple, and is often eaten overripe. What is sold is fallen fruit with bruised skin, collected from under the tree. The jamoon must ripen on the tree and is at its best when just about to fall, pendent and a glistening purple-black. An ideal arrangement would be to wait beneath a tree of known quality and catch the fruit in one's mouth as it falls, but ideals are hard to achieve in this cursed world. Therefore, pick your tree and get someone to climb it and bring down the ripe fruit.

The jamoon differs as much in size as in quality. On the hillslopes it is possible to get a long, thick variety twice as big as the fruit of the plains, dark-fleshed and exquisitely flavoured. To my plebeian palate no lichi or mangosteen has the sweetness of this fruit. On the plains the trees yield smaller and more astringent fruit, and some of these are hardly worth the eating. However, one need not despise the jamoon of the plains provided it is of fair size and good flavour. Sprinkle salt and powdered red chilli over the fruit and wait for an hour, and its astringency will be cured—this treatment is not to be thought of for choice hill-grown fruit.

The world consists of those who like the jamoon and those who do not. Among the addicts are the aborigines, the shaggy Sloth Bear and other denizens of the jungle. The people who cannot abide the

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Country Notebook

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fruit are often highly refined and intellectual—they find no joy in life.

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Another delicious and wholesome fruit, now in season, is the guava. Being marketable, it is frequently cultivated in orchards and there are "improved" varieties, mild, white-fleshed, yellow-skinned and big—excellent for conversion into jam or jelly, I think. Give me the small, green-skinned, red-hearted country guava. I believe I am correct in saying that the country guava is far richer in vitamins than the cultivated varieties. Anyway, it is better eating. There is a pear-shaped kind, very small and red and often grown in the backyards of villagers. The tree is little better than a shrub and its yield very scanty, but make friends with the man who owns it.

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There are many other trees and shrubs in the jungles that are in fruit just now, but I shall mention only the spiky *Carissa carandas*. It is very sour when green, less sour when ripe, and too acid for consumption as it is—there are other *Carissas* that bear sweeter fruit. However, the green fruit of this bush can be converted into a piquant and stimulating pickle with powdered chilli and other spices and just a little oil. According to South Indian traditions this fruit (even in a pickle) is superlatively good for the liver. I think there is sound sense in many of our traditions regarding things to eat and I am sure that even my old cook would have agreed that it is very important to keep the liver in good order!

MUSK-RATS

AT 10 o'clock at night I hear a faint, quick whine, like the sound of hydrogen ignited in a glass jar, and I know that the musk-rats have arrived. There are three of them, graded in size like Goldilocks' bears, big middling and little; and I think they live well away from my sleeping shed, for otherwise I should see and hear them much earlier. Musk-rats are out as soon as it's dark.

I cannot tell which of the three will come in, but know which way it will enter—not by the inviting, doorless doorway, but through the drain-hole in the side wall, below the table. I adjust my highly adjustable table-lamp to cast a strong, even, shadowless light on the floor beneath, the better to see my visitor. A sharp, pink muzzle appears at the drain-hole, describes a quivering circle, then disappears with a sudden, thin squeak. I wait and watch, for I know it will return, questioning the air with its sniffing, circling nose before it enters the room.

After a while I resume the laborious writing work that I have undertaken in a rash, academic moment, and the musk-rat comes in unnoticed. Deliberately, in slow-motion, I can reach out and take a soft pencil and the sketching-pad from the table without scaring it, but by that time the restless creature might move on. So I try to get rapid sketches down on the foolscap with my fountain-pen. Dozens of such hurried, untidy sketches interrupt the pedantic lines of the writing, and it is from them that the illustration is taken.



For a month now, off and on, I have been watching these creatures and experimenting with their tastes. Of course they are not musk-rats. They are insectivore and shrews and no sort of a rat. Somewhere in North America there is a true rodent musk-rat, valued for its pelt, but no rat ever had the grey velvet coat and pink feet and tapered, sensitive nose of this shrew.

Moreover, in spite of what the text-books say, even the musk of its name is bogus. The occasional powerful odour, discharged from lateral glands when it is excited, has no musky smell—it has a heavy, clinging staleness, like the essence of the air of a damp, long closed cottage. Formerly it was believed that this mustiness could permeate glass and taint wines and beer by musk-rats running over the bottles. Now, of course,

the termites swarmed early, a musk-rat came out to feast on them in spite of the sunlight. McMaster saw one feeding upon a scorpion and Sterndale (who cultivated the acquaintance of these shrews) tells of another that "attacked a large frog". It seems to hunt more by smell and an exquisite tactile perception conveyed through its whiskers than by sight, for it is short-sighted as one might guess from the size of its black, pin-head eyes. However, it is difficult to be positive on this point, and I think Sterndale overrates its myopia. It dislikes bright light and is probably dazed by it, but even in such lighting it can see objects from near, even immobile objects. I am convinced that it can see farther and better in dim light and darkness.



And what else does it eat, besides insects and meat? McMaster says, cautiously, that he has known it eat bread, and Anderson that it will not touch grain. I can add to this. Experimenting with my visitors I found that all uncooked grain and pulses held no attraction for them. They were equally indifferent to sliced plantains, guavas and other fruits, but I would like to watch their reaction to apples—a wish that can be gratified easily. Boiled presentations and then, too, in rice they inspected with interest, sniffing and mouthing it, but would take it only after repeated small quantities, just a few grains.

I have known for years that they like coconut, for sometimes they are caught in rat-traps baited with toasted coconut. They ate pieces of coconut with avid relish, carrying a piece to the drain-hole and devouring it there before returning for another. They had little enthusiasm for bread per se (it seems very likely, to me, that bread was a less insipid thing in McMaster's days), but it was comic to watch their reaction to bread smeared with honey. They went for it as if it was some live prey, attacking it with quick, sideway bites and worrying it, pouncing in again and again to the attack. That of course, only showed their insectivorous habit and unfamiliarity with immobile food—worrying shakes and fierce bites kill insects (some of which can bite back nastily) most efficiently. They treated a cheap sort of sweet biscuits in the same manner, but were completely indifferent to imported gingernut biscuits.



we know better. We know that no smell can get through hermetically sealed glass (as proved by the more insistent perfumes, which remain providentially inside the stopper) and people will no longer throw away a dozen bottles of beer on this account as in the wicked, wasteful old days. I know several men who wouldn't mind a suspicion of musk-rat in their beer if only they could get it—the beer, I mean, not the smell.

Probably, this odour gives the musk-rat a measure of protection besides serving social and personal ends I notice that the savage young tomcat that deigns to live with me is not interested in musk-rats, though he hunts most small animals that he sees—rats, squirrels, birds, geckoes, skunks, and even bloodsuckers that he rarely eats. However, this useful shrew has other enemies. "Eha" found the ground beneath the nest of screech owls littered with musk-rat bones.

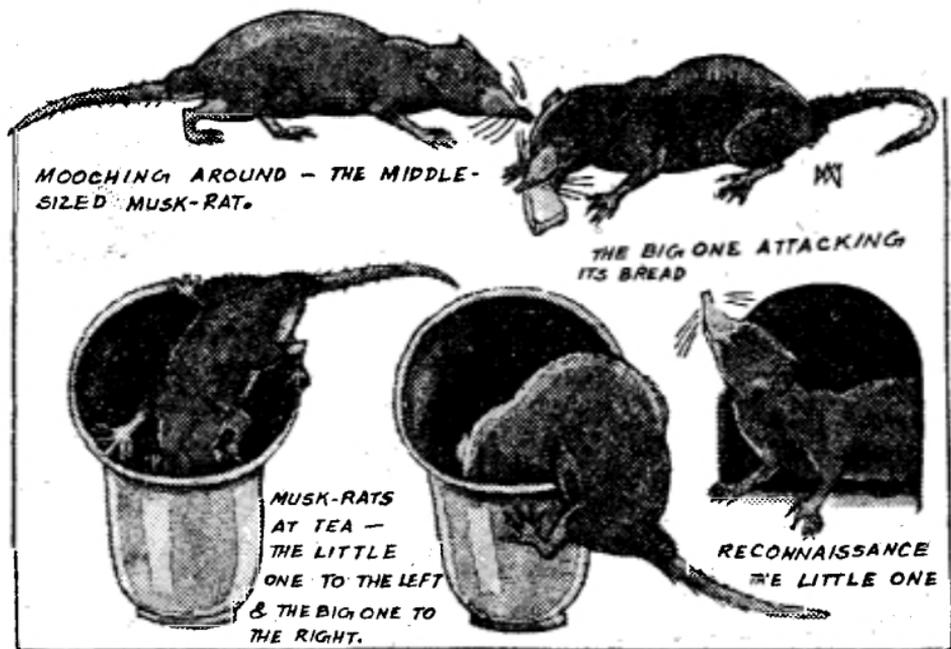
Being an insectivore, the musk-rat hunts all manner of insects, crunching them up gleefully. I remember that one evening, when

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The one discovery I made was that they have a decided sweet tooth. In fact, it was this that first brought them to my shed. Here I must digress from the curious eating habits of musk-rats to my own curious habits. I like hot, strong tea the last thing at night and drink it, not decently out of a cup, but from a tall, polished bell-metal tumbler. This tumbler is then deposited on the floor beneath the table, and it was the sweet dregs of the tea that attracted the musk-rats. It was most amusing watching them get at it. The little one had no trouble—it climbed on to the mouth of the tumbler, then let itself in, hanging on to the rim with its hind feet, and drank slowly, not lapping up the tea but wetting its lips and then licking them.

The other two were too big to adopt this method. There is hardly any difference in size between them except that the big one is thicker in body and has a

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MUSK-RATS

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thicker, more muscular snout. They tried to reach down to the bottom of the tumbler while clinging with their hind feet to its outside, balanced in a scrambling posture on the rim, but sometimes they would fall off or plop right in, to climb hastily out with a "chik" of surprised irritation. When I substituted the tea in the tumbler with a few spoons of sweetened malted milk, the muskrats displayed a quite frantic liking for the change. Especially was I amused by the antics of the big shrew—he had to balance his bulk on the rim to reach down, and in his eagerness for the drink he frequently lost his precarious hold. The "middle-sized" one, being less heavy, was less awkward.

I found that when these shrews were preoccupied with their malted milk, I could apply my finger to their tails and slowly hoist them up by a steady movement, without their noticing it. Nor did a tap on the tumbler with my pen affect them in any way. But sometimes, when I had to take my hand over the tumbler, they grew aware of it and were so frenzied and shrill in their exits, and afterwards so mistrustful and shy, that I did not persist with this experiment.

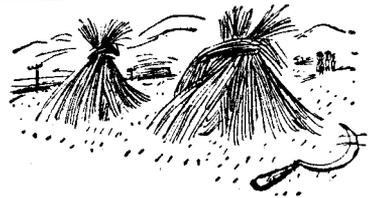
The illustration, being drawn from odd sketches, does not show the three shrews in proportion. Actually, the big one is twice the bulk of the little one, as the sketch of them at their drinking will show (these two sketches are to the same scale). I presume the little one, which is light grey in colour and seems grown, is an immature female and that the other two are males, though I am not sure of the "middle-sized" one. Muskrats vary much in size and breed while still immature. These discreet creatures bear no obvious external tokens of their sex,

so that it is always difficult to say how far grown a musk-rat is or guess its sex. However, I am sure of the big one. His chunky build and Roman nose have a very masculine look, and his size proclaims his sex. Female shrews never reach his proportions.

Apart from their occasional odour (which is nauseating, but it passes) the one snag to giving muskrats the run of the house is their shrill volubility. Normally, while questing, they indulge in occasional low squeaks, but when a family party is foraging (my muskrats seem unrelated, they do not come in together) the conversation becomes quite high-flown and general. And when they are alarmed they let out a series of electrified squeaks that is nerve-racking, and jabber in shrill voices for a long time afterwards. Muskrats are highly excitable, but if they are not molested they tame easily, which means that they are less prone to smells and squealing.

These shrews are domestic animals and would be quite lost without our homes and gardens and drains. To thousands of Hindus (especially now, with the Ganapati Utsav just past) the fact that the musk-rat (and not any other animal) is the authentic "vahana" of Ganesha must have significance and promote friendly feelings towards it. The Plague Commission pointed out, long, long ago, that muskrats were most beneficial in the house because they are intolerant of rats and drive them away. Even otherwise a creature that gives us such splendid service by reducing the cockroach population of our homes and other undesirable insect invaders deserves every encouragement. I should add that the musk-rat is completely inoffensive towards man, and never bites those who prefer to sleep on the floor.

COUNTRY NOTEBOOK



A raised platform of bamboos is built on poles driven into the middle of the field. This is five to six feet high and usually has an arched sheltering roof of bamboo mat, like the top of a bullock-cart—in fact, the old tops of bullock-carts are often used for this purpose. As soon as it is dark, the ryot retires to this shelter with his elementary bedding, a lamp, something to eat, and his dog, if he has one. The dog is tied to a post, and he climbs into the shelter and makes himself comfortable, but tries to keep half-awake. When he suspects that the pig are near (his dog gives him sure warning) he sets up a sustained shouting and flashes his electric torch (if he has one) in the suspected direction—this shouting and flashing of lanterns and torches is taken up by watchers in neighbouring fields and the entire area is alerted.

Destruction

I have known pig feed unconcernedly in a groundnut field where there were men and dogs, keeping in the dark, beyond the reach of the lanterns. Moreover, though the cart-top shelter is good enough for a drizzle, it is no protection in heavy rain, as I know from experience. When heavy rains threaten, the ryot makes hasty tracks homewards, or towards the nearest hut, and abandons his vigil. The rain does not stop the pig—the more slushy the field, the easier it is for them to rootle for groundnut.

Unless you have seen it, you cannot believe the damage a few pig can do to a promising three-acre plot of groundnut overnight. They literally plough up the field with their snouts, and are most wasteful in their feeding. They cause less destruction to jwar, but are fond of the tender cobs.

Last month I followed the tracks of a large pig for nearly two miles, through cultivation and wasteland. The thorn fences had been no barrier, and it had eaten its fill of young jwar, pulling down and trampling the crop to get at the cobs. I was surprised that the spoor led straight through a small plot of unguarded groundnut, till my companion (a lad belonging very much to that soil) pulled out a plant to show me how hard and solidly insipid the groundnut was. Pig love the groundnut when it is sweet, tender and creamy, and tender, milky jwar cobs. I can understand this preference. I, too, like them that way.

The best check against crop raiders, of course, is their natural enemies, the tiger and the panther. In the area I speak of, the sudden, shy reluctance of pig to go raiding abroad at night is taken as the sign of the advent of a tiger to the hill-jungles, and I have never known this sign false. Panther, too, are very fond of pork and know very well what pig to tackle—as an old Boya pig-hunter pointed out when I chaffed him over the size of the infant boar that he and his friends brought home in triumph, it is the little ones that grow up into master boars and prolific sows. In places where pig are a serious threat to cultivation, the simplest and best remedy would be to prohibit the shooting of the greater cats. But this is never done.



by
M. KRISHNAN

WONDER if you can tell what this is. If you have seen it before, in the rough, you will now it at once; but many may not have seen it at all or else only when mounted in silver to frame a photograph or put to some such ornamental use, when it loses its strong identity. This is a photographic reduction of a tracing from the right lower tusk of a wild boar shot in the last hours of September 1945. The tracing was made three days later, and the tusk measured exactly 10 inches along its outer curve—a remarkable tusk by any standard. It is the canines of the lower

jaw that grow outward into formidable, gashing tusks in boars. They grind against the much smaller out-curving tusks of the upper jaw and so are kept razor-sharp, for ripping. Sometimes a boar may lose its upper canine accidentally and then, with nothing to wear and limit it, the corresponding lower canine grows in a malformed circle. Such tusks are never taken into account in reckoning the size of a trophy. According to Rowland Ward the record for India is a tusk from Josrama measuring 12 5/8 inches along the outer curve, and the best that Delhi, Ceylon, Burma, the Central Provinces, Meerut and

Telam have produced is a malformed 10-inch tusk from Delhi—the others are between 9 inches and 9 7/8 inches. The tusk shown here is quite exceptional, especially when its thickness is taken into account; its fellow, from the left side of the jaw, matches it perfectly but is shorter, being only 9 1/2 inches long.

I remember this pig. In the area where it was shot, the groundnut is harvested in September-October and, rains being punctual, war heads begin to set about this time. Pig become a menace to the crops then and invade the villages at night, retiring to their impregnable cover in the hills before daylight.

It had rained all day on Sept 30, 1945, and we were returning home through the night's drizzle in a car. Nearing a section of the byroad that had turned into a bog the car was slowed to a crawl, and suddenly a solid mass of mire stood up in front of us and halted, directly in the glare of the head-lights. There was a bloodthirsty boy with a loaded rifle in the car, but even he was so taken by surprise that he could do nothing immediately. Slowly it dawned on us that this red, quelling, massive figure before us was a pig that had been wallowing in the ditch beside the road; with this comprehension a shot rang out and the pig sank into the bog again. I had to carry the exulting boy on my shoulders to view the trophy, for he had clean clothes on (I had not) and the mire was ankle-deep. I can remember standing there, in the drizzle, with the mound-like carcass in the slush at my feet and the boy on my shoulders, flashing a torch to inspect the late pig. It was then that we saw its tusks and remarked their great size.

Old And Gaunt

That boar was old and gaunt, very long in the body and with a huge head. There were two healing gunshot wounds on its quarters, inflicted by some vigilant ryot a week or so previously—that accounted for the animal's leanness in times of plenty, and also, probably, for its reluctance to leave its wallow, though pig are fond of the mire even when uninjured. I could not measure or weigh the boar, but estimated it was not much under 250 lb., in spite of its emaciated condition. Pig come pretty big in that area.

Visiting the same hill-jungles late last month, I was again in time for the local pig season. The jwar was high above my head and the cobs were just formed and tender, but the groundnut had been harvested in most fields and what was left was hard and fully mature, not creamy as young groundnut is. The ryots in the hillside cultivation were sitting up each night to scare the raiding pig—this is quite a ritual in these parts and not always an effective one.

M. KRISHNAN'S "COUNTRY NOTEBOOK"

The Leopard And His Spots

*Lord, suffer me to catch a
fish
So big that even I,
In telling of it afterwards,
Shall have no need to lie.*

SO runs the Fisherman's Prayer. With two words substituted for "catch" and "fish" this could also be the prayer of all big game hunters. Many of them, of course, may be unaware of the wish in their hearts—till they have bagged something near record size.

I am no big game hunter; only a naturalist. The difference does not lie merely in my comprehensive lack of skill with gun and rifle. I am apt to find a smallish tiger quite as exciting as one that would be (when dead) a clear 10 feet between pegs and, worse still, a jackal equally interesting on occasion. The compensation for my lowly estate is that I am unlikely to magnify the proportions of an animal that I watch or of one, shot by someone else, that I measure or weigh. This personal and defensive preface is necessary because I am writing of the most versatile and varied of big game beasts, the leopard or panther (the terms are synonymous now, and the Indian and African leopard identical, specifically).



Which is the record specimen of the panther? This is a question that is simultaneously easy and almost impossible to answer, with certainty. If newspaper reports can be trusted, the Hyderabad monster puts all others of its kind, and almost all tigers, to shame. According to a news agency report widely circulated in South India, Mr M. K. Vellodi, then Chief Minister of Hyderabad, bagged a man-eating panther at Narsapur on May 13, 1951, that was 10½ feet long.

However, if we are to limit ourselves to prosy facts, the question is hard to answer. In assessing size certain difficulties arise with panthers that are less difficult with most other creatures, including the tiger. For even where length between pegs and weight are both available (which is unusual), the length of the tail varies so much in panthers that unless it is also specified one can get no idea of the bulk of the specimen. Dunbar Brander, a most trustworthy authority, says the tail may vary in length from 28 to 38 inches, and since this is independent of body size, one can never say that even a 7½-foot panther is a large specimen without knowing the length of its tail.

Again, weight is affected by the condition and whether or not the panther has killed and fed recently. A really big panther weighs about 150 lbs., and some 25 lbs. of this weight may depend on whether it is gorged or unfed—in a tiger there would not be the same proportionate difference on this account.



Chilkanahatti measured 7 ft. 1½ in. (tail 32 in.) and 7 ft. 5 in. (tail 36 in.) and weighed 132 lbs. and 121 lbs. after 24 hours—neither was gorged. The first of these was a very powerfully built old beast, with a big domed head, a close dark coat and no white at all on the face or throat, even the chin and jaws and inside of the ears being yellow ochre. He crossed the road in the light of the setting sun right in front of two experienced shikaris, a few minutes



before he was shot, and both identified him as a tiger!

I should mention two remarkable animals from the Sandur hill jungles. Both were chance-met males, shot from the road very near human settlements. The first, shot about sunset on June 13, 1948, was 7 ft. 7 in. between pegs and was a low, longish panther, obviously old and with the right lower canine broken. It had the most remarkable coat I have ever seen on a panther, with the hair soft and somewhat fuzzy—the ground colour was no shade of yellow or brown, as in most panthers, but a light warm grey, and there was no line of solid spots down the spine, the markings consisting mainly of large rosettes, some of them double rosettes with an inner cluster of fine spots within the outer circle. The illustration is from a rough sketch of this beast.

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After stressing the variations in size and coat that can obtain in panthers, Dunbar Brander says "Purely jungle leopards, those living entirely inside the forest and never resorting to open country and villages, are often of large size and adopt the habits and ways, and to some extent the colouration, of tigers. They have yellow tawny coats, relatively fewer spots and rosettes, and are distinguished by the jungle tribes as 'gol baghs' or 'spot-tigers.'" "A fair average specimen" of this type "measured 7 ft. 5 in. and weighed 152 lb."

This distinction between the larger and heavier forest-loving game killer and the panther haunting the purlieus of villages has been reiterated by most subsequent writers. A recent note in a scientific journal refers to this difference and mentions a panther "8ft. 5½ in. in length" (between pegs?). Rowland Ward, I think, records longer animals and one that weighed 160 lbs. I remember reading somewhere of a 9-foot panther—but probably this measurement was very much round the curves.

I have measured the length, between pegs, of certain large panthers shot in the Deccan during the past ten years, and where there were facilities for accurate weighing I have weighed them. Here are the details, from my notes.

Two males shot within 15 minutes of each other on the evening of September 14, 1947, from the main bus road near

The second panther is probably a record, for South India at any rate. It was shot on the night of July 25, 1951, by the Yuvaraja of Sandur, and had a tucked in, empty stomach. Length—7 ft 8 in. between pegs (lowest of three measurements); tail (root to tip) 35 in.; shoulder to toes of forelegs, 33 in.; girth behind forelegs, 36 in.; weight—158 lbs. The colouration was normal.

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The interesting thing about these four panthers (and other large animals from the same areas) is that none of them was a pure game killer, a forest-loving "gol bagh." All four were shot very near villages, from the main road, and three were definitely known to prey, occasionally, on village cattle and dogs. In Karwar, where there is real forest (there is only bush jungle in Chilkanahatti) the few panthers I have seen were small and long-tailed—two males I measured were around 6½ feet, and very light, with beautiful, dark coats.

Whatever may be the general rule in the Central Provinces, the "gol bagh" distinction does not appear to hold in the Deccan, and it is unsafe to specify any colouring as being typical of the panthers of any region. Heredity seems to play a much larger part than environment in determining the size and colour of the panthers of any area. Sufficient food during the period of growth (and even afterwards) is a vital factor, of course.

THE GREEN BEE-EATER

M. Krishnan's

"Country Notebook"

AN oblong of lawn, some 30 yards across, lay between the barbed-wire on which the bee-eater sat and the foot of the parapet I sat on. Every blade of grass, each leaflet and blushing flower of the tiny wild indigo that grew amidst the grass, stood out in sharp relief viewed through my binoculars, for the sunlight was cloud-filtered and there were no highlights and shadows to confuse the eye.

The bee-eater sat hump-shouldered on the wire, sideways to the lawn. A needless, secondary line of barbed-wire, two inches below its perch, lay across the pin feathers of its tail, further suggesting fixation of its inertia. The plumage of its back was slightly ruffled and it seemed lost in unseeing introspection, as if chasing far memories.

Suddenly it launched itself into the air and came sailing over the lawn on acutely triangular wings, chased an insect on quick-beating pinions, caught it and returned to the barbed-wire again, to resume its slumped vigil. In the half-hour I watched it through the glasses, it sallied out 21 times from its perch to catch prey, mostly over the lawn, right under my nose—and not once did I, with that hunting ground so clearly in magnified view, spot its prey before the bird.

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It was only by following the bee-eater's line of flight that I could spot the insect each time, though I was watching the lawn from above all the time, rather than the bird. The prey consisted mainly of some minor sort of bee, but it took two small white butterflies (patently clear against the grass to me—after my attention had been drawn to them by the bird!) and once a dainty, green dragon-fly.

After each successful sally (there were a few misses) it returned to its perch to take up the same, contemplative, sideways attitude. No doubt it watched the roadway with the other eye, with the eye away from me, for sometimes it took its prey

across the fence, over the road. What surprised me, even more than the quickness and certainty of its sight, was the fact that each eye covered territory so unerringly, independently of the other.

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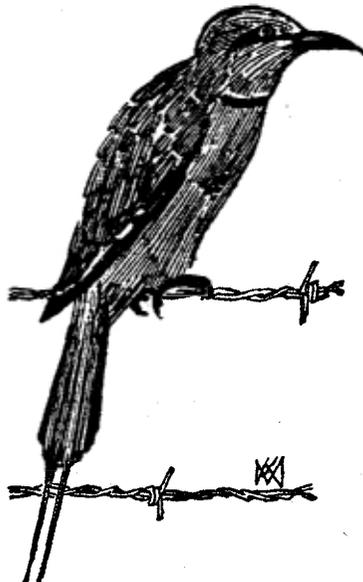
I have seen this bird take large, red dragon-flies, darting about at dizzy speed near electric supply wires. These were the fierce-looking, orange-vermillion dragon-flies, some $3\frac{1}{2}$ inches long, clear against the sky in spite of their erratic speed—I have not seen any other bird hunt them, though I have seen them when rollers and king-crows were near. The bee-eater had no difficulty at all in catching its speeding quarry. It sailed out to meet the ill-fated dragon-fly at a particular point in its headlong flight, as if by punctillious appointment, plucked it casually from the air and returned to its perch.

The bird had some difficulty, though, in killing and devouring its considerable meal. It held the insect by the base of one pair of wings and dashed it against the wire with quick, lateral jerks of the head to kill it, swallowing it when quite still with obvious effort. I noticed that after it had eaten three dragon-flies in this manner, it showed no further interest in the circling insects.

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During the cold weather (right now, in fact) bee-eaters roost in close company. I used to know such a roosting place on top of a hillock, where two large, spiky, much-branched bushes, with little leaf on them and sheltered from the wind by green cover beyond, provided all that the birds wanted. Each evening some hundred bee-eaters would assemble here, and roost thickly on the bushes, ending them suddenly with lanceolate, living leaves.

It was pleasant to climb that little hill at sunset and to rest for a while in that sheltered clearing on top, listening to the trilling voices of the bee-eaters.



THE CART OF THE COUNTRY

PERHAPS, if I live on and on and on, the day will come when people will ask me (as a survivor from the "B. C. era") to tell them about that curious old contraption, the bullock cart. And how I shall treat them to stories of perilous long rides and benighted jungle roads, of blooded bullocks with sabre horns that could hold the tiger at bay, and swift-striding teams conveying smuggled cargoes through the dark!—for with age the mind develops an aesthetic fullness and vigour and is delivered from cramped, immature limitation to actual experience.

But thinking it over I am glad the day will never come, not if I live to be a hundred. The bullock cart will still be there.

I cannot imagine an India without bullocks and carts. Our ancient culture and history are sustained by them, for through centuries of conquest, opulence, famine and strife it was the unobtrusive bullock that made agriculture, transport and life possible. Even today no countryside landscape would be complete without the bullock cart, and it is still what moves our rural economy.

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Few people know how many thousand miles of cartway are listed in official statistics, but it is safe to double this mileage without exaggeration, for like the jeep the bullock cart is independent of roads. Many of the paths it takes are just a pair of parallel, hardly visible wheel tracks in the scrub, and often it leaves the earth-blazed trail altogether and goes cross-country, especially in sandy places.

When I was a boy I travelled distances in a bullock cart across sandy country. The rides of later days were somehow much less comfortable, and I put this down to an unmanly habituation to luxury in travel and, possibly, the fact that the carts of my boyhood were specially made and sprung to carry people, unlike the rough, timber-laden ones of later occasions. It was only recently, while traversing a few furlongs of hard-metalled highway in a bullock cart after many miles along a river-bed, that I discovered the true cause.

The bullock cart works on the principle that instead of pneumatic tyres and springs on the cart taking the jolt out of a hard road surface, loose earth can cushion bumps when iron-bound wheels are used. On unyielding, metalled roads the cart is rattled continuously and bone-shakingly, but when going cross-country over pathless fields or along what Kai Lung would term "the long earth-road" the bumping is quite bearable. Most country roads nowadays are metalled, and the wise cartman leaves the road whenever he can.

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Even I will not say that travel by the country cart is a soft experience, but one gets used to it, as one gets used to strap-hanging in buses and trams and the discomforts of air travel. Nobody accustomed to the bullock cart complains about jolts; occasionally, of course, one swears at the road or whatever surface supports the wheels—that is good for one's diction and keeps one's language in practice, and the jolting is good for the liver.

The chief charm of bullock

cart travel is the leisurely comprehension of the countryside that it permits. You have the right stance, bodily and in mind, to notice many things about the slow-moving landscape that you will miss otherwise.

Even from an utilitarian point of view it is important to have cart bullocks evenly matched and of mettlesome temperament. Otherwise the larger beast of the pair is apt to get the skin of its hind quarters rubbed off by friction against the cart, and nothing can move a philosophic bullock once it gets into a reflective mood.

But quite apart from their utility, there are few possessions in which the rustic takes greater pride than his bullocks, for they are his constant companions. The savings of years, often supplemented by hard-borrowed money, go to the purchase of a pair of

(Continued on Page III.)

Country Notebook

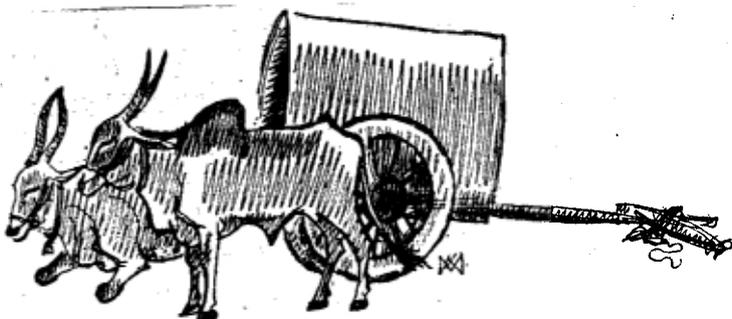
(Continued from Page I.)

cart bullocks, but he will pay an extra fifty rupees for the sake of a flecking of iron-grey on the sides that he fancies, or symmetry of horn. You should hear him talking to his beasts on a long and lonely road. All his cares in life are discussed in detail with them, and who can say that he is not the better for this circumstantial clearing of the heart?

People may think me antediluvian or biased in my claims for the homely bullock cart—city-bred people afflicted with physical and mental dyspepsia, given to periods of insufferable ennui between bouts of frantic work and pleasures and rushing about. I have been told, with a sarcastic intonation, that we are now in the age of air travel. Strangely enough, my first taste of air travel compelled me to think of the lowly country cart, by contrast.

I had promised apprehensive relatives immediate news of safe passage, and since an educated man need not rely overmuch on his memory I carried a tersely worded telegram in my pocket, announcing arrival at the destination. But I had not yet learned the wisdom of equipping myself with a half-read detective novel on a long air trip. We experienced bumps and dips in plenty, but it was not my stomach that felt uneasy—it was my mind that felt low, for all the way from Bangalore to Delhi I looked out of the window at the remote, dreary, meaningless map of the earth below, and was depressed. When I reached Delhi I tore up the ready-drafted wire and wrote out a more expensive one to relieve my feelings, somewhat to the embarrassment of the courteous airport official who undertook its despatch: REACHED HERE AT LAST SOUND IN EVERY LIMB GIVE ME THE COLOURFUL BULLOCK CART.

THE SUNDAY STATESMAN DECEMBER 13 1953



Fond Recollections

BLACK birds, as a rule, are glossy. Look at the king-crow, the Racket-tailed Drongo, the cock koel and robin—even the homely crows have a shine to their darkness, like a glace-kid shoe. Some black birds are even more fancy, the sheen on their plumage having an ridscence the hill-mynah's black is shot with flashes of purple and green, the little sunbirds have a gem-like purple glow, and many other birds have a watch-spring-blue gloss to their blackness.

But the cock Pied Bush-Chat is not like that. Its black is shineless and gentlemanly, and sets off the patch of white in each wing and above the tail so neatly, brings out its stubby little figure so trimly. Its mate is even more sober in attire, the colour of sun-baked, brown clay.

It is scrubby country, given to spiky, stony vistas framed by thorn-bush, that the bush-chat likes best; and here it will often take up residence, with its mate, around one's home. So will many other birds, but I think that none of them can impart to a modest cottage set in a plot of waste land the same sense of cheer. I should know, having lived for years in just such a dwelling.

For seven years a pair of Pied Bush-Chats lived close beside me, till I left. Each year they built their nest in the vicinity, in a cleft in the kitchen wall, in the roof of my goat-shed, and once in the axle-hole of an enormous, handleless, stone road-roller that lay permanently unrolling on my wiry "lawn"—that brood, I remember, came to grief soon.

Robins, many wagtails, sparrows, bulbuls, sunbirds—all sorts of birds would come to the curious, low, circular wall that enclosed my house or to the aloes and the few hardy bushes that I succeeded in cultivating.

But it was the bush-chats that were the permanent residents and I was glad this was so; they were such quiet, self-assured and confiding tenants, unlike the giddy, fidgety visitors.

During summer and even during the cold weather (especially in December) the cock bush-chat would take his stance atop the terrace, or on a mast-like strip of plank from a packing case that somehow came to adorn the roof of the goat-shed, and sing his glad, brief song—a loud, clear rising whistle ending on a note of untamed sweetness.

Listening to it on a sultry afternoon, I have often felt convinced that there is more to bird-song than scientists know yet, and that there are times when a bird sings merely because it can and feels like it.

I know that scientifically-minded people will shake their heads sadly over this little tribute to a lost friend; they will tell me that it is a projection of my own emotions, a sickly and unworthy sentimentality, that is responsible for this note.

No matter. I knew these chats for years and they did not—and if science is the elimination of all feeling and perception and an unwillingness to believe what is not printed in a book, then I have no use for it.



THE SUNDAY STATESMAN DECEMBER 20

M. Krishnan's Country Notebook



AMATEUR ASSASSIN

IN a world where life depends so frequently on lesser life, the killers usually know their job. Their methods are swift and efficient, not out of self-conscious mercy but because by quick killing they avoid many risks to themselves. Sometimes there is hardly any killing—with a lizard or bird feeding on small insects it is just stalking, seizing and swallowing. And even where a killer takes on sizable prey, too large and strong for instant despatch, there is no intentional cruelty, and possibly, in the excitement of the fight for dear life, less pain than we imagine.

Many cynical naturalists have pointed out that it is only man that inflicts pain with the will

to hurt. I will not repeat that; we are also sensitive to the suffering of others in a way that few animals are, often with a superimposition of sentimentality over deeply-felt sympathy. I only wish to say that there is not much scope for sentiment in any study of the murder technique of animals.

Most killers are efficient but a few are not; these latter are usually creatures that have taken to a predatory life for which they are not fully equipped by nature. Among these is the Jungle Crow, which was named long ago when it was less common in urban areas than it is now.

It is a bird equipped for a life of scavenging, plunder, theft and insect hunting; intelligent, long-lived and capable of much individuality. It is not such a dexterous flier at low elevations as its grey-necked cousin, though Whistler comments on its aerobic skill. It is big and black and has a wicked bill, but lacks the talons of the true killer; in fact, it never uses its feet for seizing anything in the air.



It is given to carrion feeding in the countryside, and is an inveterate egg thief everywhere. It has long been known to attack maimed birds and fledglings, but I do not know whether it has always been an amateur assassin as well, a rôle in which I have known it many times.

When I was a boy I was a tumbler fancier. I learned, then, that it was necessary not only to protect eggs and unfledged squabs from these crows, but also to shut in young and inexperienced birds before dusk. Such youngsters were chased by the crows into the gathering darkness and as night approached the pigeons could no longer see their way about, while the crows could; they were apt to panic and get lost. I do not know whether the crows actually got them in the end, but they never came back.

Jungle Crows kill bloodsuckers in a particularly revolting manner, by slow torture and paralysis of the hind quarters. The bird looks sufficiently big and powerful for a forthright attack, but always uses the utmost circumspection. It comes in from behind and tugs at the lizard's tail, avoids the open-mouthed rushes of its victim by hopping aside, and tugs and pecks at the base of the tail repeatedly—unfortunately for itself the bloodsucker has not the fragile tail of the geckoes. Slowly the lizard loses the ability to pivot around on its hind legs, and is then pecked from nearer till it sinks, then carried away.



Sometimes two crows take part in the killing, so that when the lizard turns on one adversary, it exposes its hindquarters and tail to the other—it is the grey-necked House Crow, rather than the Jungle Crow, that hunts in pairs like this.

People do not realize, quite often, what is taking place when they see crows hopping around a bloodsucker and tugging playfully at its tail. Such a close observer as "Eha" was misled into thinking the birds were having a game with the lizard—it is no game, but cold-blooded murder. When cover is handy the bloodsucker may escape, but usually the birds wait till it is well in the open before attacking.

A pair of Jungle Crows that live near me are much given to baby-snatching. I have seen them hunting baby squirrels among the tiles and eaves of roofs, and recently I saw one of them abduct and devour a fully-fledged White-headed Babbler. This was at sunset, as the light was just about to fade. It held the youngster by the nape in its beak and flew off to a parapet, its victim squeaking loudly all the while. There was a full contingent of grown White-headed Babbler close by but none of them went to the rescue of their abducted child—an amazing reversal of their normal behaviour. The crow sat on the parapet, right in the open, and killed its prey by repeated blows of its heavy beak. When I went near it carried the little corpse away, plucked almost clean of feathers.



Recently our National Committee for Bird Preservation appealed to bird lovers to help the avian population of their locality by thinning out House Crows. Commenting on this I pointed out (in the issue for June 7, 1953) that the Jungle Crow, more at home in tree covered areas, was the more potent inhibitor of bird life. There is, of course, no question of sentiment involved, but if we want the bird life of any place to flourish, I think this clumsy, amateur assassin should be sternly discouraged.

Country Notebookby M. Krishnan

GOGGLE-EYES

THROUGHOUT India and even far beyond, where the country is sufficiently dry, stony and scrub-jungly, you will find a brownish, much-streaked bird with enormous eyes, trotting over pebbly riverbeds on long yellow legs, scuttling through the scrub, crouching low and merging instantly with the earth. It is a bird of many aliases, all of them descriptive and none flattering.

It is the Stone-Curlew, the Thick-knee or the Goggle-eyed Plover, it is the "bastard-florican" of Anglo-Indian sportsmen—I have even heard it called the "bastard-florican." However, it is ornithologists that have been least kind to it. Formerly it was termed *Oedicnemus scolopax*, but apparently it was felt that the second, specific part of the name was too easy; so, now they call it *Burhinus oedicnemus*!

Thick-kneed-goggle-eye d-bustard-plover-stone-curlew would be completely descriptive. The bird has the three-toed, yellow running legs of the bustards, and carries its body horizontally: when it runs, with quick, mincing steps, it holds its head low, in a line with its body. By day it is inactive, especially when the sun is bright and cover scanty, but as the light fails it emerges singly and in pairs, moving on quick, silent feet through the scrub looking for insects.

Its obliterative plumage is almost invisible in the dusk, but you may hear it for with nightfall it grows vocal and often keeps calling till quite late, especially when the moon is bright. And listening to its wild, high, repeated "curlew . . . curlew," a call suggestive of desolate, wide wasteland, you know at once why it is called the Stone-Curlew.

In places it is only less common on the night road than the nightjar. When caught in the beams of the oncoming car, it scuttles to the shelter of the nearest bush and stays

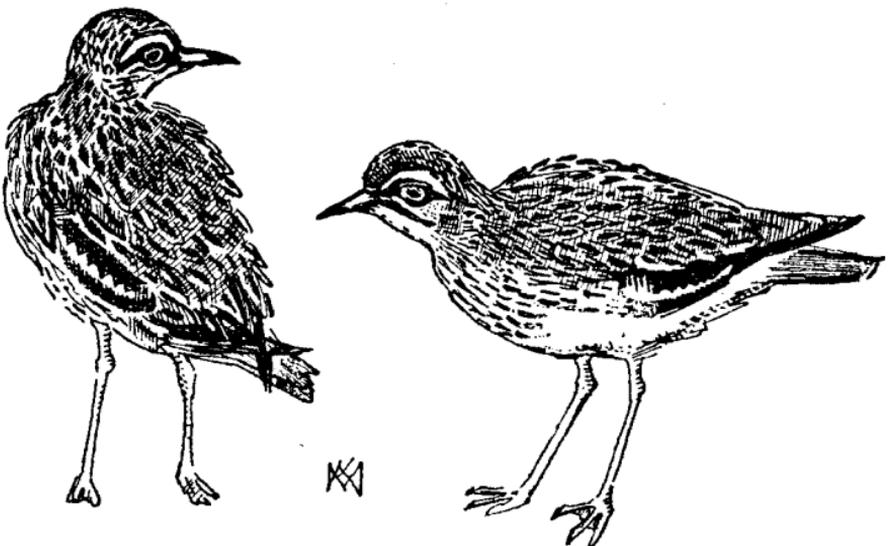
put beneath it, only its big, black-and-yellow eyes betraying it—or else it flies swift and low for a short distance, the white bar in each wing clearly displayed, before touching ground again and scuttling away. It never flies high or far when disturbed, for it is a ground bird that trusts its thick-kneed legs, but I have heard a pair flying fairly high and calling to each other in the cold, clear moonlight.

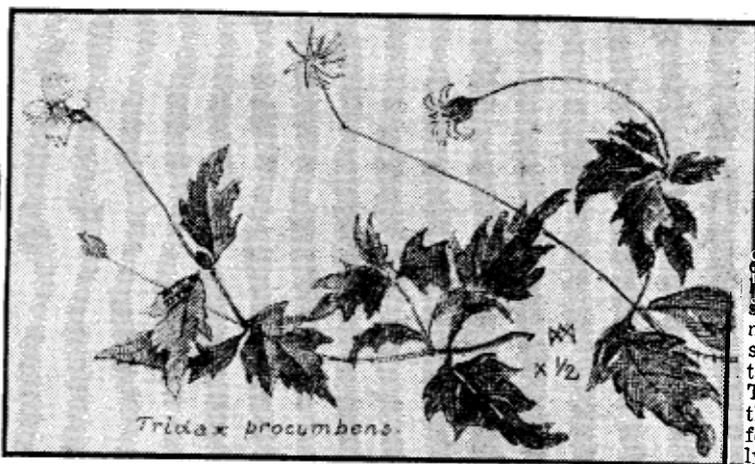
Often a bird disturbed at night on the road will fly alongside the car or right over it, before turning away, somewhat in the manner of nightjars. Once I caught one from an open lorry, putting up my hand as it came skimming over, and what impressed me was the way it went limp and yielding in the hand, and its surprising lightness. Most birds lack weight remarkably in the hand, but I think the Stone-Curlew (it is definitely larger than a partridge) is exceptionally light even for a bird.

I would like to know more about the courtship of this earth-loving bird, whether that too is terrestrial. Does love inspire its wings at any time or was it just the moonlight that exhilarated the birds I heard, more than once, flying high?

Growing curious on this point I questioned a number of people who lived where these birds were common. They could tell me nothing, but directed me to a gang-foreman whose knowledge of the fowl was said to be considerable. After missing a few opportunities, I met this expert at last, and this was what he told me:

"Yes, they can fly, but that's not the point. Sometimes they fly a little and sometimes a little further, but mostly they like to run. The point, however, is this: Try them cold, in a sandwich." Unfortunately, I am a vegetarian and can add no personal recommendation, but that was the expert advice.





LAZY DAISY

M. Krishnan's Country Notebook

None of these books mentions a characteristic of the plant that I have noticed, that cattle do not seem to relish it though it is common on pasture land. I will not say cattle never graze it—perhaps they do, occasionally—but in a Tridax studded grazing ground that I passed almost every day for years I found the plants slowly gaining strength. My goats would not touch it when I offered it to them but knowing goats I draw no certain conclusion from this; it could be that the proud creatures did not care for the manner of offer.

GOOD FOR WOUNDS

EVERYONE knows *Tridax procumbens*, a lazy daisy, though its name may be unfamiliar, a low herb stretched at ease on the ground (as its name suggests), common in wasteland in the plains, especially common in open, grassy places and at roadsides. The dark green, beautifully unsymmetrical leaves have a fine, stiff down softening their contours, and the flower-heads, yellow-centred and with a few white petal-like outer florets, are borne on long, up-curving, down-covered stalks—an obvious "daisy", though larger and ranker than the true daisy, less gregarious and far more tolerant of the heat and dust. I will not describe the plant further, for I have drawn it from life for you, but I should make it clear my sketch is a half-sized one.

Tridax procumbens is one of the most familiar plants of our plains today, but it was unknown to our old-time herbalists; its original home was in tropical South America and it came here only some 120 years ago. Like many exotic plants (many of which also come from tropical South America) it soon became quite a feature of our hospitable scrub, and no longer exotic. However, there is evidence to show that till late in the 19th century its conquest of our countryside was unnoticed.

EARLY LITERATURE

Roxburgh's "Flora Indica" of 1832 does not mention the plant, not even in the "Reprint" issued by C. B. Clarke in 1874. Nor can I find it in Indian floras belonging to the evening of the last century, including Hooker's "Flora of British India" of 1875 and Heber Drury's voluminous "Handbook" of 1866. Theodore Cooke says, in his monograph on the flora of the Bombay Presidency published in 1908, that "it has long been completely naturalized in the Bombay Presidency, especially in the Deccan, where it is very abundant." It is mentioned in all subsequent accounts of the plants of the plains, and by about 1920 it was so common that Indian botanical textbooks began to use it as the type specimen for Compositae of the daisy type.

However, it is hardly fair to this adventurous cosmopolitan to look

in Indian books for an account of its early history and achievements. Ridley in "The Dispersal of Plants Throughout the World," gives a brief but adequate recital of its conquests till 1930 (no doubt it has spread farther afield since), which I quote below.

"It was introduced into India before 1830, and spread to the Malay Peninsula, Java, Papua, Queensland, Fiji, Nigeria, South Africa, Mauritius (where a note in Herb. Kew, dated 1864, states that it escaped from gardens 20 to 25 years before), Bourbon, Rodriguez, and other islands. It is abundant in America, from Florida to the West Indies, Mexico and Colombia, where it is said to be wild in the woods. Since its introduction, probably (though not showy) as an ornamental plant, it has spread by its plumed achenes." Earlier he says: "It has established itself, not only in waste ground, but on sandy seashore, so that it often looks as if it was a native."

"COLONIZATION"

All the books I have consulted for this note (over a dozen!) pay tribute to its powers of colonization by means of what Ridley terms "its plumed achenes". This technical description need not alarm non-botanical readers, it only denotes the numerous, dry, light, one-seeded fruits with a parachute arrangement of radiating white hairs on top that each head of the plant produces. Because of the parachute each fruit can float far on the breeze, seeking "fresh fields and pastures new". One authority estimates that each plant produces 500—1,500 such fruits yearly—the potentialities of this weed to acquire fresh territory are obvious.

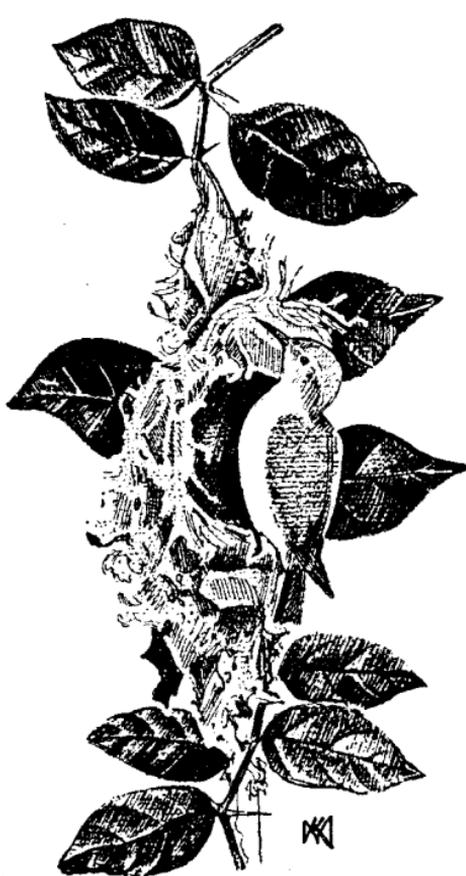
But it is not only the airborne seed of the *Tridax* that gives it such wide lebensraum; the seedling is extremely hardy and thrives in most soils, particularly in fresh dug soils. I understand that in South Africa this plant is known as the "P.W.D. weed", because of its "frequent appearance on building sites after building work has been completed." Every book on gardening that mentions this plant (as a wily weed) suggests strong and persistent measures for its eradication.

The leaves have no bitter or acrid taste to the human tongue, but are unpalatable because of their stiff down. What is remarkable about them is not their taste but their therapeutic virtue. The leaves are thick, succulent and crisp. Their greenish juice is easily expressed between the fingers, and is excellent for flesh wounds.

Some thick leaves, when crushed in the fingers, yield little juice, some exude a slimy sap, some others a sticky milky latex, but the greenish juice of *Tridax procumbens* leaves runs freely out of them, in large drops, under manual pressure. In places far from medical aid and standard antiseptics, it is easy to treat flesh wounds with this quickly-got juice. Of course I have tried it personally, though I did not have to, and have found it effective, very effective, for flesh wounds. But what impressed me, more deeply than personal experience, was the number of clean, quick healings obtained in a rustic school in 1945, when almost everyday some rough countryside lad would get himself cut or badly scratched by a hedge. Incidentally, when the juice is squeezed into a cut, it smarts every bit as pungently as iodine.

In Jim Corbett's "Jungle Lore" (published last year) he mentions a plant locally named "Brahm Buti" (he does not provide the botanical identity) the leaves of which, crushed in the hand, yield a juice that he recommends for flesh wounds. His description of the plant tallies with *Tridax procumbens*.

Perhaps some biochemist who reads this note will investigate and discover just what it is that gives the juice of *Tridax* leaves its healing virtue. To anyone who might take up this investigation, I have a suggestion to offer. No doubt it is some other substance in the juice that gives it antiseptic power, but clearly the juice contains plenty of chlorophyll, as its yellowish green colour shows. Western science now recognizes the value of chlorophyll in the treatment of wounds and sores, but I believe there is still much scope for experimenting with the manner of its use, and the direct use of a leaf-juice, easily obtained, might not have been widely tried.



THE SUNDAY STATESMAN FEBRUARY 28 1954

M. KRISHNAN'S "COUNTRY NOTEBOOK"

The Nest In The Bougainvillea

THE bird, I was told, was tiny, dark above and yellowish beneath, and the nest it was building hung close to the dining-room window from a bougainvillea trained against the outer wall. I said it was a sunbird; probably a Purple-rumped Sunbird, for it frequently nests early in February.

My informant was sure it was not. She knew sunbirds and this bird did not have the thin curved beak of sunbirds; its beak was shorter and straighter. I asked if it was accompanied by its mate, in dark metallic purple and green all over, or that colour above and lemon yellow below. Yes, once its mate had come with it, but it was no sunbird either; it was bigger and brighter but otherwise like the hen. I decided to investigate.

One look at the nest, in an advanced stage of construction, showed that it was a sunbird after all—the typical pendant purse of floss, fibre, dried leaves and flowers, bits of string and jute, all deftly held together with cobweb and with a round opening on one side with a little porch on top. However, I adjusted the window-curtains and made myself comfortable so that I could watch the nest from close quarters.

The specific identity of the nest-builder had to be established. The cock bird would provide it, I explained in patient tones, for it was difficult even for an ah, expert to tell the hens of sunbirds apart at a glance.

The little hen came to the nest, perched momentarily on the threshold, pecked at the inside wall and flew away. It reappeared at frequently intervals, dipping under the creeper and shooting up to the nest with a thin "tsee-tseep" to add a bit of building material and peck it in place, before flying away. Its beak was rather short and straight, and moreover it was pale in colour, but clearly it was a sunbird.

Then another bird came up to the nest with it, larger plumper, more greenish above and a much brighter yellow below, but otherwise like the hen. It

perched on a twig close to the nest, then flew away. I felt puzzled, and foolish. I did not know this newcomer—and I do not still, after searching through books.

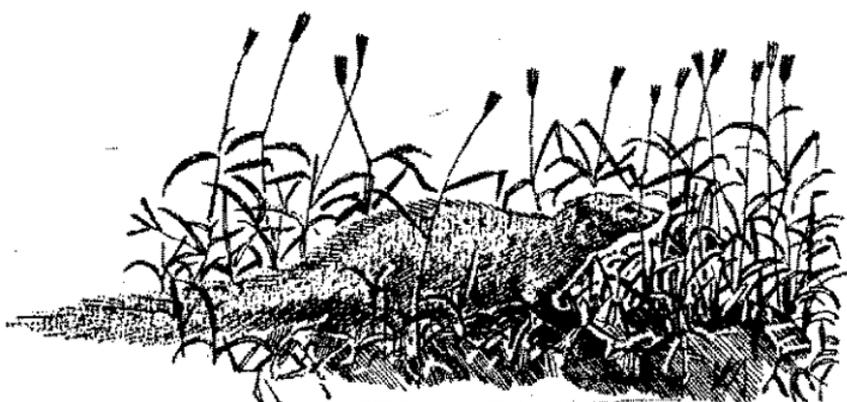
I explained, with a stubborn faith in my recollection of nesting sunbirds, that one should not be hasty in coming to conclusions in one's bird watching. Yes, it did look as if my original identification was, ah, somewhat inexact (how pompous we are in our less secure moments!) but it was better to wait and make sure that this was, in fact, the mate. It was just possible, I added, that a dark purple and yellow cock might still show up. No one believed me.

And then the cock returned with the hen, not once but half-a-dozen times, unmistakably a Purple-rumped Sunbird in its trim yellow waistcoat and glistening dark coat, and my reputation was saved. But it was a near go!

The other bird did not return, though I waited patiently. It could have been the hen of some other sort of sunbird, perhaps a Loten's Sunbird (though its beak was not long) but I am not sure. Watching the nesting hen from a yard's distance the straight, short beak was noticeable—the cock had the typical, dark, curved beak.

Twice, while I watched, the cock came straight to the entrance hole, perched on the rim, and pecked at the inner walls before flying away. Even though I was so near, and watching so closely, I cannot say if it had anything in its beak on these occasions. According to the books the cock sunbird never helps in nest building.

As I write, the hen is in the nest, sitting on the eggs. Someone told me once that he knew of a pair of sunbirds that had rigged up their nest in one day—I have never known such quick work. This nest (which I have sketched with great attention to details that are unimportant) seems to have taken all of five days to complete, from the start to the first egg, and that seems to be a fair average period for the construction.



THE SUNDAY STATESMAN MARCH 7 1954

M. Krishnan's Country Notebook

NON-RECLAMATION

IF I had a five acre plot of out-lying cultivation as so many ryots have, a stony field at the foot of a hill or the edge of the scrub that would gradually repay the effort of reclamation, I would not make the effort. I would abandon my field to weeds and shrubs, even help it actively to run wild, and count myself as much a patriot as the man who, by sustained toil, adds it on to the struggling agriculture of our grain-hungry country.

And if I lived in a mansion set in an immaculate garden, with lawns and smooth paths and every little annual in place, or if I were in charge of a spotless city park, laid out in a geometrical pattern and with ornamental trees in rows—why, then too I would let my garden or park run wild, in part at least, and encourage thick bushes festooned with greedy creepers and the rank under-shrub.

I would do these things from no sense of cussedness or ennuï, but because in a small way I would be contributing towards a less sterile life. We can grow more food by less wastefully extensive agriculture—an incredible extent of countryside is cut up and wasted by our loose agriculture and communications. And in towns and cities one can no longer find a bit of wasteland, leave alone woodland. Even the bird life of these places has been banished by an ugly craze for ferro-concrete architecture and tidy, well-tamed gardens.



In the old days urban gentlemen lived in bungalows with large, tree-filled compounds, and it was part of their gentlemanliness not to bother overmuch about the further reaches of their domain. Today the urban rich, when they do have a bit of garden space, have flowering trees near the road and rectangular lawns in front of the house in herbaceous borders; cannas flank the drive and crotons in pots decorate the portico, and if there is a plot in the back yard they grow anæmic tomatoes in it.

Our public parks display a hideous and patent symmetry; wide, hard paths intersect one another at right angles, rows of flaming Cassias and Poincianas stand stiffly at attention, there are sandpits and short-mown lawns for the children and concrete benches for older visitors. There is not enough undershrub and

bushes anywhere to tempt a mongoose to stay or a warbler to nest. There is no lebensraum for the lesser fauna even.

Off and on, during the past thirty years, I have watched the bird life and lesser beasts of a city area dwindle and vanish, and I know at first hand how our extensive agriculture can drive out wild life in rural areas.



Even now it is not too late, if we follow a sensible plan of non-reclamation in the countryside and encourage gentlemanly neglect in city gardens and parks, to bring back the charm of wild life to these places. What many people (including enthusiasts for our fauna) do not realize is the power of nature to recoup, left to itself. The following extract from an editorial in *The Times* (London) of Dec 18, 1953, is significant:—

"Many cities in Britain have their acres of bomb-devastated land, once covered with houses but now overgrown with vegetation. These are places of great interest to naturalists; they can see what plants most readily and most permanently colonize ground on which no plants have grown, perhaps, for centuries past. Not only plants but also insects and birds and even mammals have been demonstrating how nature pours into any vacuum that is offered, and then stages a battle there for survival. . . In all, 269 kinds of wild flowers have now been recorded in the City of London, their seeds brought there within these last few years by air, in the fodder of horses, and by other agencies including birds. For birds, too, have been quick to colonize the ruined cities."

No need, of course, for our cities to face a blitz for the welcome return of nature—though it is true that ruined buildings offer splendid scope for wild things. Plant a section of every park and garden with native jungle trees (not forgetting a few fig trees) and thick bushes, allow creepers and the undershrub to grow, and the birds and smaller beasts will come back.



In the countryside all that is needed is to tighten up agriculture so that intervening wasteland can run wild, and be available to wild life in sufficiently large blocks. Unfortunately our wild life preservation effort is directed mainly towards the denizens of forests; the fauna of the open scrub receives little attention from anyone—excepting professional trappers.

When I was a boy I had ample opportunities for watching minor wild life in a city and in the countryside. Those opportunities are now gone, or are going. It is such a pity, and so wrong, that urban children today should grow up in ignorance of the common wild life of the soil.

The idea that our fauna should be penned up in national parks and preserves, and that our children should visit these pens or some remote countryside for a glimpse of the great heritage of nature that is theirs, revolts me. There is room enough for man and birds and beast in this hospitable land, if only men would be less covetous of space and curb their urge to claim and tame every plot of land in the neighbourhood for the sake of grain too hard won, or may be the sight of a row of Poincianas.



M. KRISHNAN'S COUNTRY NOTEBOOK

WOLF BOY

PERIODICALLY a Wolf Boy appears in the news, there is much excitement and a spate of speculative medical opinion that is inconclusive and generally uninformed by any knowledge of lupine life, then the case is relegated to the archives of things "not proven" and forgotten—till the next Wolf Boy comes along. The only person who has benefited by it all is Rudyard Kipling. The Mowgli story is revived and people read "The Jungle Book" again—a splendidly written story, always worth rereading.

I will not go into the cases of past "wolf-children." There is an admirable summing-up of cases up to 1928 in Brig.-Gen. R. G. Burton's "Sport and Wild Life in the Deccan", an entire chapter devoted to them which readers may look up, if they are interested. But I may say that in this book the fact that most "wolf-children" come from the province of Oudh and its neighbourhood is mentioned, and it is said that "an eminent and well-known surgeon, who formerly resided in Oudh" said, when asked what he thought of these stories, "I do not believe one of them."

What interests me about the latest Wolf Boy, in the Balrampur Hospital, is the amazing circumstance that eminent medical men, like Sir Philip Manson-Bahr, should have observed the boy and given opinion without bothering to consider the probabilities of the case. But perhaps this is not so amazing, after all.

A medical expert, presented with an alleged Wolf Boy, is apt to confine his observation to the accord of the physical and physiological condition of the child to the circumstances which he thinks must have conditioned life, had the child been really brought up by wolves. I don't suppose that vexatious but reliable document, the Indian Evidence Act, is ever part of the course of studies of specialists in tropical medicine, but they could certainly have consulted it before presuming that the Lucknow boy came from a wolf's den.

There is not a scrap of evidence to show that this boy was really recovered from the custody of wolves. Naturally not. The very idea of wolf-children is biologically unlikely. I say this not triumphantly, but sadly, for I have always felt moved by the wonderful, spontaneous sympathy of animals for hopeless and helpless humanity.

I know from observation and experience that it is a fact, not yet "explained" by cold science, that dogs and even cattle are sometimes capable of a deep commiseration towards humanity—they nuzzle up to the man that is wretchedly sick

or sorry, offering him their tacit, patient, unquestioning sympathy.

Watch-dogs, given to biting first and then considering the bonafides of intruders, have been known to escort trespassing children through their domain with fond care; it is well known that the most savage carnivores are often gentle in the extreme with infant life, and that the maternal instinct is strong in them.

Cats have suckled plump little bunnies, bitches have reared leopard cubs; though these things have not happened in natural circumstances, there is nothing prima facie impossible in a she-wolf trying to rear a human infant, that has miraculously survived the incidental transport to the den.

The survival of the transport would be a major miracle, though, for all canines depend on the loose, tough skins of their progeny for lack of injury in transport over any distance, and human infants have tight and tender skins; moreover, in snatching a baby and running away with it, urged by the frantic shouts of the legitimate parent, no wolf can exercise the full gentleness of jaw that it is capable of. But granted that somehow a she-wolf has arrived at the den with an uninjured human infant, which it is prepared to suckle and rear, how will the child survive lupine upbringing?

Here are some facts that will bear thinking over. The wolf suckles its young for about six weeks, then feeds the husky, thriving youngsters, equipped already with stomachs and intestines for the digestion of raw meat, on regurgitated and torn up meat.

We need not at once consider how the human child will react to this sudden change of fare, for it seems unlikely in the highest degree that the infant will survive several weeks of wolf milk, in the first place.

Wolf milk is much thicker and richer than human milk (dog's milk is three times as rich in proteins and fats as cow's milk and less watery, and there are good grounds for assuming that Wolf's milk is similarly rich); incidentally, it is unflattering but true that of all animals it is the ass that yields milk nearest to the natural food of infant humanity.

If you take a week-old puppy or wolf cub and feed it human milk, diligently, it will die of starvation, because its intestines are too short for it to ingest a sufficient quantity of the weaker fluid—what is lost in concentration cannot be made up in bulk. Considering the

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WOLF BOY

(Continued from Page I.)

relative length of human and canine lactation, that is a very fair comparison. Things are not true by contra, but it seems just as unlikely that an infant will survive several weeks of wolf milk.

Consider the probabilities, for it is scientifically sound to do so. During the period of lactation and even after the stage of solid food is reached, the intervals between feeds are longer, sometimes much longer, with wolves than with humans—this will surely tell on the wolf-child. Again, after the stage of solid food is quickly reached, is the human infant likely to survive several weeks of sustenance that consists of lumps of meat and hide, not finely chewed meat but solid lumps? Again, a she-wolf does not go on caring for the cubs of an earlier litter when the next litter arrives. Even assuming, hypothetically, that the wolf-child has survived till then, how will a two-year-old human find his own food in the jungles? For about six weeks the she-wolf will not be bringing back anything solid to the den, and even afterwards will actively resent the human trying to get a share of the regurgitated food of the next generation. The fact is the Wolf Boy just does not seem possible, biologically, even considering only dietetic hazards. That does not, of course, bar superstitious beliefs and tales. The Wolf Boy is as old as Romulus and Remus, probably the story is older in India. There are similar stories about other animals caring for human company—in places there is the story of Sloth Bears carrying off the village belle, a story with far greater literary possibilities. The only thing we can now say about the Wolf Boy story is that in another fifty years or so it is liable to lose currency, for it seems likely that by then wolves will have become extinct in peninsular India. But perhaps that will be no real bar to the story.

Acts Of God

I was far from the recent earthquake that rocked Eastern India, but a correspondent has asked me for opinion on a point. "Several people to whom I have spoken mentioned that just before the earthquake the other day birds in their respective localities were unusually active and restless," he says, and asks if there is anything in this or if I think the observation of his informants is suspect. He adds, "After all, birds are usually active here by 5 o'clock at this time of the year. Dawn is about to break. The earthquake took place at 5.13."

★

A truly interesting point, but I must confess that I have no experience of earthquakes. However, I think I know the answer to this query. No, I do not think there is any point in suspecting the observation of a number of independent witnesses. And why should these people ascribe the excitement of the birds that they noticed to an apprehension of the oncoming shock rather than to the everyday dawn? That is the question, really, and it provides its own answer.

I have no data on the personal habits of these witnesses, but it would certainly take a major earthquake to get me out of bed at a quarter past five in the morning, when sleep is sweetest. On the inconvenient occasions when I have to be up before the lark, a large round-faced clock of antique make works the miracle. The reverberations of its three-legged dance on the teapoy near my pillow, and the eruptive preliminary rumble and confused clamour of its alarm are not, I fancy, wholly unlike an earthquake in the distance.

Tumbled out of bed at a too early hour, a number of people



noticed an avian activity that they usually miss, or else half hear without seeing, through drowsy curtains—naturally, in the confusion of their rude awakening and the shock following it, they subconsciously exchanged the priority of the avian excitement and the earthquake which they presumed was its cause. This seems a reasonable explanation to me, because my faith in humanity does not permit me to believe that a number of people in different localities (unrelated even by membership of some faddist cult) were all up and about at 5 a.m. on March 22, solely out of deplorable habit.

However, it could be that the birds really did apprehend the earthquake. In spite of the vast experimental work and the voluminous theories on the instinctive behaviour of animals (especially birds) that feature recent science, we are not very sure of the scope and directions of their perceptions.

In his detailed and authoritative note (in the Journal of the Bombay Natural History Society, Vol. 50, No. 3) on the Great Assam Earthquake of 1950, E. P. Gee has only this brief observation to make on bird life: "It is difficult to estimate the destruction caused among birds. Occurring as it did after nightfall, when birds would be roosting, the earthquake must have paralysed some of them with fear and swept them with the forest to their doom." The possibility of birds having advance intimation of seismic disturbances does not arise in this case. Mr. Gee estimates the loss of terrestrial wild life must have been staggeringly heavy.

★

We know that birds are sensitive to atmospheric conditions like heat and humidity, and to light. They are usually reliable harbingers of seasonal changes. In many parts of India the arrival of the Pied Crested Cuckoo foretells rainy weather, and each year I date the official commencement of summer by the stern ring of purpose in the noontide voice of the coppersmith. Cannot birds also foretell, by a few minutes at least, a heavily brooding earthquake?

That brings us back to the starting point, and I am again acutely conscious of my ignorance. It seems to me that here there is an unforced occasion for the technique that was my standby through

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M. KRISHNAN'S COUNTRY NOTEBOOK

(Continued from Page I)

so many university examinations, when no inkling of the answer to the question inspired me. I know nothing about earthquakes, but so what? I know about forest fires. Let me tell you about forest fires.

Many of the forest fires I studied were major conflagrations. That swept across entire hillsides devastating thousands of tons of desiccated fodder grass and even valuable timber. There were no firelines in those hill-jungles.

Following painfully in the wake of some of these fires, looking for animal victims, I found only one dead snake. It was very dead and it seemed likely that it had died of burns and nothing else, for it was in a patch of scorched grass. Heat is one of the few things that can kill a snake at once and all along its length.

The other animals seemed to have escaped, in spite of the pace of the wind-spiced fires. The literature I have read on forest fires (largely fictional) suggests that in the face of the blazing common danger mutual animosities are forgotten (a thing that is not at all unlikely, for in the confusion of a large beat predator and prey sometimes emerge side by side) and that if there is water nearby, the animals make for it. It was during a comparatively minor scrub fire, far from water, that I had the good fortune to witness the way animals reacted to the sudden and swift danger.

I was with a party of guns having the bush-dotted cover beaten for pig. The scrub was level and clad only in ankle-high grass in the more open places, but clumps of bushes and rock dotted the flatness, and along the dry, sandy stream beds there was heavy cover (mostly belts of wild date palm). There were pig in the beats, but somehow they sensed where the guns lay in wait and avoided them, a few affording shots that were ingloriously missed. As we drove to the scene of the last beat it was long past lunchtime, everyone was tired and hungry, and tempers were frayed.

One of the beaters noticed the fire first. It was advancing towards us on a wide front, coming very fast and low. There was a patch of fairly open cover between us and the fire, and this ran past the road on which our cars were halted, some half-a-mile downwards—by retreating rapidly the guns could get to the end of the patch and be ready for the fire-beaten animals.

To me (who do not shoot) that seemed a mean thing to do, and

I told my companions so. I also referred to the truce between wild beasts that is said to prevail during fires and floods, and drew obvious inferences. They left me behind in a lorry, with only its massive driver for company (a man whose rugged bulk lent the 3-ton chassis a certain slimness), and departed in haste to their evil assignation.

Our lorry was safe, in an open plot of sand, but I have an old-fashioned dislike of being blown to pieces, and so laboriously climbed a tree some 30 yards away. The driver, whose mass and philosophy discouraged simulation, sat on in his seat, with stoic resignation.

The fire was approaching at a great pace and was now quite near. It was a hasty, light-footed fire, that hurried low over the crackling grass, leaving bushes in its path unscathed, but the smoke rendered visibility confused. I watched narrowly for escaping wild life, but saw nothing. Then the fire passed us, jumped across the road and was soon racing away from us. It was then that I noticed something scudding through the unburnt grass towards the line of fire and smoke. A hare leaped effortlessly over

the flaming grass and bounded away through the burnt stubble towards a green bush—a minute later I saw another hare repeat the move.

Then a small leopard (it was known that the beat might hold a leopard) came streaking through the line of fire, and crossed the burnt grass into the green cover in a grey flash—one of the guns told me later that he had also seen it, and both the driver and I had a clear view.

Nothing else came our way, but what we had seen was remarkable enough. The beasts seeking escape from the flames actually ran into it and past the line of fire, and so gained the safety of the burnt grass and green bush cover. It was much the most sensible thing to do in the circumstances—perhaps animals react differently when the fire is slower and deadlier, as in forest fires. I cannot say whether intelligence or instinct guided their escape, but doubt if I would have had the sense to do what they did had I been caught up in that fire. I may have realized the safety of the rapidly burnt grass only after the fire had pursued and overtaken me.

M. Krishnan's Country Notebook

MUNNA

ONE gusty night eighteen months ago, when we were sitting down to dinner, a miserable little kitten crept in and crouched in a corner, regarding us from hostile but expectant eyes. It was very small and very ragged; it could not have been over a few weeks old, and clearly it had wandered far and was tired out. We had no intention of adopting a cat, but we gave it a lap of milk and allowed it to sleep in the kitchen.

Next morning it was there for breakfast, looking somewhat less lost, and though it was away all day it was back home for dinner. Now Munna is a husky, semi-wild tom, extremely self-assured. He lives largely on my roof and the roofs of neighbours, but during the rains he comes indoors. And, of course, he continues to visit us at meal-times.

This is not the story of my cat, for Munna is not my cat; he belongs only to himself. Nor is this a biographical sketch—only a record of stray observations.

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Cats are among the most predaceous of carnivores, wonderfully equipped with instinctive and bodily skills for hunting. However, it is a feature of feline life that the young are schooled in the art of stalking and slaughter by their mother, experience guiding inborn talent. Having no maternal guidance, Munna learned his murder craft the hard way, and watching his adolescent efforts I learned a thing or two about the hunting of cats.

The first prey I saw him kill was a skink, when he was quite a small kitten. He ate that skink, tail and all, and when he was older he would pounce on imprudent geckoes that had ventured too far down and devour them. This revolting hunting was all he lived for during the first few months. My garden had a thriving skink population before Munna's arrival, but now I see very few. He also killed young bloodsuckers though he rarely ate them, and the size of his bloodsucker, victims increased with his age. Today, he cares no longer for such easy game.

Squirrels and rats are his proper quarry now. There is a thick hibiscus bush in my garden, overgrown with creepers, and young Munna used to hide in this cover and wait, hopefully. When the squirrels climbed down the compound wall, some twenty yards away, he could no longer contain himself. He would streak out of the bush at them, trying to surprise them by sheer speed—naturally, he never caught one.

★

When he spied a squirrel on the roof, he would again try surprise and speed, rushing to the *Gliricidia* tree that overhangs the roof, scrambling up the trunk in frantic haste, and charging across the tiles. It took many months for him to learn that a cat must bring inexorable patience to the stalk and cannot afford a single false step, that it is necessary to get close to the quarry before pouncing.

Now, when he is stretched at ease on the roof in the shade of the *Gliricidia* and hears squirrels just across the gable, he pricks his ears slowly in a bored gesture,

without bothering even to gather his limbs together. Sight plays a very important part in his hunting, but his exquisite ears often help to locate the quarry before sight takes over.

When Munna wants to get on to a wall or a window sill that is too high to be reached in a jump, he does not climb laboriously but resorts to a trick that is more impressive even than the ability to clear the height in one leap. He leaps straight up towards his objective, touching the wall a little over half way up; then, at the exact moment of contact, he kicks down with his hind legs, and this take-off against the wall has sufficient propulsive force to carry him up to the landing he wishes to reach.

★

The entire movement is so quick and casually made that close watching is needed to spot the exact technique, but I have forced Munna to repeat this double high jump again and again, by placing something that he specially fancies inside a room and closing all approaches except a ventilator six feet from floor level. He takes off from a standing start, close to the foot of the wall, establishes contact about 3½ feet up the wall, and reaches the sill on the rebound off this contact.

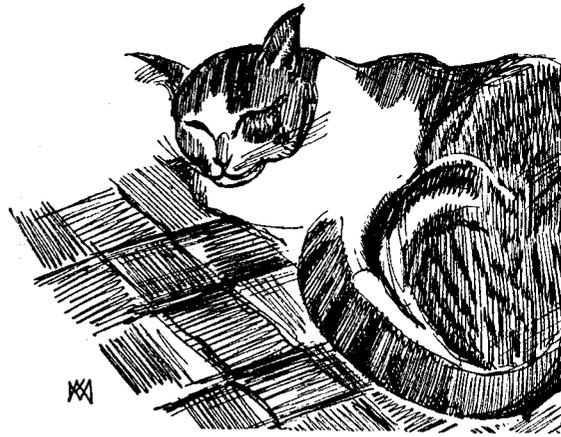
The astonishing thing about the feat is that the rebound off the wall is vertically upwards. If we tried to do such a thing, we would get violently thrown off the wall, away from it, but that is because our legs (especially the feet) are so differently made from a cat's.

This trick is not peculiar to Munna. I have seen other cats using it, and I believe other quick-footed quadrupeds are also capable of it. I must repeat that the kick against the wall is so deft and rapid that unless one is looking for it, and watching the animal sideways, one might easily miss it.

I labour this point because naturalists have wondered how the African Klipspringer (a little antelope with agile feet) can be at the base of a sheer-sided rock one moment and on top the next, unless it can clear a vertical height of some 25 feet from a standing start. It could well be that it uses the double jump trick, its elastic hooves and skill in jumping being well suited to the technique.

The fact that leopards can jump out of enclosures with steep walls that are safe for holding tigers is very likely due to the same cause; the heavier and less expert-footed tiger cannot perform the trick but, apparently, the leopard can.

Recently, we were forced to think quite seriously of banishing Munna altogether from the premises—if we could. During the early days, when just-dead bloodsuckers used to appear in realistic postures in the most unexpected places, we had endured the vagaries of a bloodthirsty adolescent, learning to kill, even summoning strength for our endurance from philosophical tales. But now dinner had become an ordeal, because he was always there, ahead of us, demanding satisfaction first and mewling incessantly till fed.



This preprandial mewling grew more urgent and plaintive each night, and gradually it began to tell on our nerves so much that we found ourselves with little appetite for the meal. I lectured my family on the obvious fact that it was we who had built up the situation, by yielding to his demands with increasing speed each night, and pointed out that the right thing to do was to somehow make him understand that well-behaved silence would be adequately rewarded.

We tried everything, ignoring him with set faces while we hurried through a tasteless meal, stern words, sorrowful words, even corporal punishment. When he was scolded, or tapped on the nose with a folded newspaper (an admonition that dogs understand) he shut his eyes, laid his ears back, and turned away in shuddering distaste, continuing to mew with increased plaintiveness in a subdued, resigned minor key. He was just puzzled and stupid and submissive, and half way through the string of Latin plant names that I invariably use for scolding animals I would stop, surprised at the rough boorishness in my own tones.

Then it occurred to me that he might comprehend a spiteful hissing, for cats hiss at each other in disapproval. My first attempt was somewhat half-hearted, for just as I drew in air for the effort I remembered what Lamb had said—that only a snake, a goose and a fool hiss. However, there was a noticeable response. Munna turned away with eyes shut and ears laid back, shuddering delicately as usual, but he was silent. He waits in expectant silence for his dinner nowadays.

GECKOES



FOR some time past a young gecko has taken up residence in my writing-table, picking its way through the jungle of pencils, brushes, inks, paints and papers with familiar assurance, running up and down the teak-wood legs with airy grace. This table is a Health Robinsonian contraption, with sectional ground glass tops that can be tilted and set at different angles.

All day the gecko hides in the crevices in the framework, sometimes even in the thick, assorted cover on top. It is very young and very small, and quite sure of itself. I know exactly how long it is from its snout to the tip of its restless tail, for once I saw it stretched obligingly along my footrule—it is just a shade over 2½ inches in length.



By daylight it is light brown in colour, with only its tail marked with alternate rings of dark brown and buff; it looks more like a painted miniature of an alligator than a baby gecko, for its head is long in proportion to its tiny body, its jaws are lean and its limbs prominent. Its tail is thin and cylindrical, not at all like an alligator's tail in shape, but shape is not everything in resemblance—the annulations give the tail a rugged, toothed look in spite of the smoothness. Incidentally, this slim tail is highly expressive, besides serving as a balancing organ. It is often carried in a gay, upward curve, and it twitches wickedly from side to side while the rest of the gecko is utterly still, watching an insect creep nearer.

At night, with the strong electric light directly on the infant lizard, it is even less like the squat, pallid, thick-bodied, fat-tailed creature that it will ultimately grow into. Its body is a warm, glowing orange then, like human fingers closed over the glass of a flashlight. Even a gecko can have a fragile, quaint charm in its infancy, and it can jump across intervening spaces with volatile ease. Of course it can jump across a gap even when it is adult and heavy, but the effort is deliberate and cautious then.

At times, when a mosquito or some other insect has settled on the lamplit whiteness of my jubba, the little hunter jumps on to my back and commences a stalk across its expanse. Twice it ran down my arm, along the bared forearm (where it seemed to find the hair in the way) right down to my fingers, before taking off for the nearby table. I could hardly feel it on my skin.



Although it can clear gaps that it will never attempt when grown, its judgment of space is immature and occasionally its impetuous leaps fail to get it across. But it is so insubstantial that it falls without the characteristic smack of grown geckoes, and takes no harm from its falls.

Not that adult geckoes are often injured by their falls. I have seen a gecko fall on to stone flooring from a height of 12 feet, with a loud plop, remain immobile for a minute stunned by the force of its fall, then scurry along the floor and up the wall to the roof again. Sometimes, however, it comes to grief, when its toes are injured.

A big gecko that used to inhabit my front verandah fell from

COUNTRY NOTEBOOK

by

M. KRISHNAN

the lintel of the doorway to the cement floor, a drop of 7 feet only, but it landed slightly edgeways and injured the toes of both limbs on its right side. It tried to climb the wall repeatedly, but could no longer achieve the necessary grip. Only a few moments before its fall it had raced across the wall and jumped a six-inch gap to get to the lintel. After a while it gave up trying to climb the wall and retired to a dark nook, behind the door. Next day it was on the wall again, but moving with obvious difficulty, and the day after it was no longer to be seen. Perhaps it fell a prey to some lizard-eater, after another fall.

The remarkable thing about fallen geckoes is that they retain their tails. When one of these lizards is seized by its tail, that organ grows suddenly brittle and breaks off at its base—the tail then writhes about with a brief, violent life of its own, and while the enemy is chasing the frantic appendix the main body of the lizard scuttles away to safer regions. Later the lizard grows another tail, a most useful appendage to an animal that lives so often against the pull of gravity. But even when a gecko falls from a considerable height its tail rarely gets broken off, which shows that it is not physical shock but some voluntary or fright-induced muscular contortion that renders its tail fragile when seized by an enemy.



Geckoes recognise their prey by the movement of the prey, and though I think their vision is not as good as ours they can spot an ant or a fly from quite 15 feet away. When in doubt over the edibility of an insect, geckoes have an amusing habit of sidling quietly up to the suspected quarry and licking it with their blunt tongues, almost as if sampling it. They seem to have no instinctive knowledge of what prey is edible and what is not, and learn by experience, sometimes sad. I have seen a gecko swallow a baby scorpion without fuss or effort, and with no regrets, and I have seen another, which made a pass at a blister-beetle, retire in obvious pain and discomfort; for almost an hour afterwards it kept opening and closing its mouth in a gasping manner, protruding its tongue, and wiping its mouth against its fore-feet as if to brush away the irritation.

The little one that lives in my table seems to go largely by size in determining whether to attack an insect or not. It lives mainly on small, flying insects attracted by the lamplight, and I have not seen it tackling anything large than a minor moth. Its reaction to a cockroach was interesting. It was unwilling to attack the monstrous prey, but was fascinated by it all the same; perhaps it sensed, in some dim, inborn manner, that cockroaches are part of the fare of its tribe. It followed the crawling insect right across the floor of the room, keeping just a few inches behind, halting or turning as the quarry halted or turned. If I had waited and watched, I might have seen some development of this vague, slow interest of the gecko, but my reaction to a cockroach is both definite and swift and so there were no developments.

BAUHINIAS

M. KRISHNAN'S
Country Notebook

COUNTRY NOTEBOOK

(Continued from Page I)

Decorating The House

SUPPOSING a typical citizen of India, with vague notions about our fauna, were to take an evening walk along a lonely country road, and supposing (this is more wildly worthy of supposition) a South American jaguar were to step out of the bushes right in front of him, his reactions would be unpredictable but one thing is certain—he would identify the beast unhesitatingly and, allowing for everything, more or less correctly.

Mind you, there are no jaguars in India, not even in our zoos, I think, and our citizen may not have seen one in a book. But in calling it a leopard or a tiger (I have known experienced shikaris mistake a massive leopard for a tiger in the yellow evening light and the jaguar is heavier built than any leopard) he would not be too far out, for his instant placing of the apparition as one of the greater cats would be sound.

In spite of our lack of natural history, most of us can place many strange animals fairly near. There were two pumas in a cage in the Mysore Zoo and a rustic identified them, not as lions, but as a minor race of lions! Confronted with a dingo we would call it a wolf or a jackal, and we would have no trouble in recognizing a grizzly as a bear. Most beasts and many birds have pronounced family features that we know; we can tell, by their looks, where they belong. It is not so with plants.

The classification of plants is based on floral structure and only by dissecting the flower can a botanist determine the systematic position of an unfamiliar plant.

Once, when I was in college, I was severely ragged by senior students for my refusal to pronounce opinion on some malformed neem leaves—till the Professor justified my attitude and confounded them by producing strikingly similar leaves from another plant (though he pointed out to me, privately, that neem leaves have an unmistakable smell). His students will always remember the late Prof. Fyson (even if they are not sufficiently familiar with his pioneer work to realize its value) for his quick sympathy for the under-dog and his patience with the mentally slow.

Even now, when I am called upon to identify some quite common plant that I do not know, I

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often escape by pointing out that it is not in flower and that it is risky and most unscientific to go by leaf and habit. However, there are a few plants whose leaves have generic identity, and the Bauhinia is one of them.

Bauhinias belong to the tribe of the tamarind and the Cassias, the Gul Mohur and the Gliricidia. They have large and lovely flowers, flushed with purples and reds, or yellow, or white, and their leaves are always cleft into two lobes, like the footprint of a goat.

It is this leaf that gives the genus its name. "The name Bauhinia was given in honour of John and Caspar Bauhin, sixteenth century herbalists, the twin leaflets suggesting two brothers," say Blatter and Millard.

Bauhinias differ considerably in size and habit. Some are quite small shrubs, some are large shrubs that are almost small trees, and some quite handsome trees that are used to decorate gardens and avenues—*B.variegata* is such a tree. And then there is *B.vahlii*, the giant liana sprawled a hundred feet across some lofty tree, its stem thick and woody in its lower reaches and pliant and green on top, its great cleft leaves well over a foot across. But big or small, all of them have the typical two-lobed leaf of the genus; and all of them have the flat pods of the tribe, though these vary in size as much as the leaves—the pods of *V.vahlii* are like broadswords.

Bauhinias are familiar garden plants and I think they deserve even wider culture, especially in public parks. No Bauhinia lacks beauty of flower and foliage and even when it is leafless and naked (as some species are during the cold weather) it has beauty of build.

Not that Bauhinias have no utility, besides looks. Their bark yields useful fibre, the roots and bark have medicinal value, and the leaves are used for covering bidis or stitched together into leaf-plates. The young leaves and flowers are used in curries and the buds are pickled. Yes, they have many uses besides serving to decorate the garden, but I know of one that others may not know. The larger Bauhinias can be used to decorate the house.

In May and June most Bauhinias are through with their flowering and the dark, pendant pods replace the flowers. If you pick three or four small branches with well-formed leaves and pods (the pods should not be fully matured) and cut them with plenty of stem to spare, you have material for an original vase. Store the twigs in a dry place and in due course the leaves will turn olive and then brown without shrivelling. Now coat the leaves and the pods very carefully and thinly with a wax polish (bees-wax melted and mixed with turpentine is best) and then wipe away the wax with equal care, and you will have perennial sprays for a large vase that will lend distinction and dignity to any room, especially to a room with simple furnishings.

The hanging pods give the arrangement emphasis and strength and the shape and set of the leaves retain their charm in spite of being dried. If the leaves (or pods) fall off, it is a simple matter to refix them with a little glue or cellulose cement—perhaps it would

be just as well to provide them with this reinforcement before applying the wax polish, so that they will not come off.

My drawing, made from a live branch (on the tree) does not convey a fair idea of the decorative qualities of such a vase, for with the cut twigs you may arrange angles to the best effect and eliminate leaves if necessary. Two trees commonly grown in gardens—*B.variegata* and *B.purpurea*—provide excellent sprays for such use, and if you live in a grand mansion and have a really magnificent mind you may try an arrangement of *B.vahlii* sprays. I think, I am almost sure, that the species illustrated here is *B.purpurea* (the Purple Bauhinia), but I will not commit myself. You see, it is not now in flower.

Bauhinia sp. - 8-5/54
PODS NOT FULLY DEVELOPED.



M. Krishnan's

Country Notebook

CAVE CANEM!

ON one side of the street there are six houses and on the other eight, trim villas each in its own compound, each with a creeper on a trellis lending height and privacy to the wall separating it from its neighbour, a gravelled path leading to the porch and securely-latched gates. No two are quite the same in size or shape, their tidy gardens are differently laid out, and though most of them are yellowish outside they vary in colour from cream to ochre—there is even one which is startlingly sea-green in its distemper. But in one thing these suburban homes have uniformity, on every gate there is a board that carries the legend, "Beware of the Dog."

True that each warning is in a different lettering and that No. 8, with a narrow regard for grammar, sports a slight variation, "Beware of Dogs," for it houses half-a-dozen pedigreed Alsatians. But even No. 6, which has no dog and no occupant, carries the board. In this semi-detached colony live people of many complexions and profession, most of them well-to-do. They are good neighbours and good citizens, but all have to be on guard against the petty thief who comes in so plausibly with a basket of something to sell and walks out with the more portable assets of the verandah-cum-sitting-room, and the not so petty thief who climbs walls in the dark. A dog, especially when its ferocity is boosted by a prominent board asking all comers to beware of it, discourages unostentatious visitors.



The watchdogs of this street differ in size and colour even more than their homes and owners do. I don't think anyone can take the dog at No. 9 really seriously—a shy, small bundle of silky hair, of indefinable origin, whose reaction to any visitor is to retreat in silence and hide in the bathroom. No. 10 has a frisky young pie-dog, handsome, agile and alert. He is early with his bark when someone approaches his gate, but it is a frequent warning and no one heeds it much.

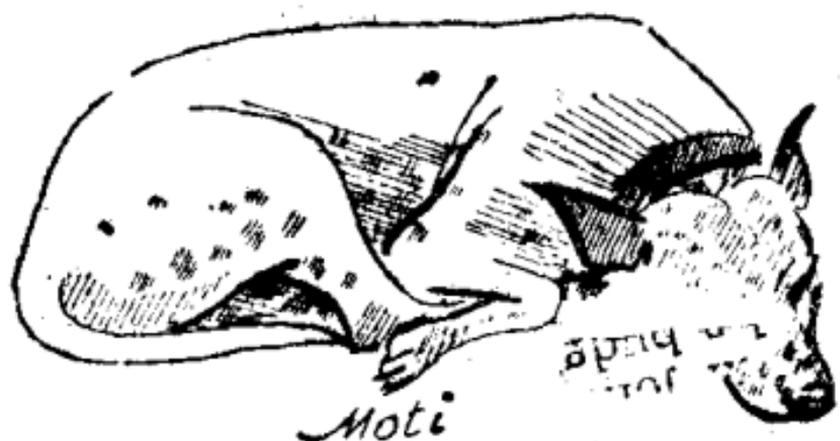
The guardian of 9A, where I am staying, is partly Bull Terrier. The cobby, powerful build, the ears and jaws, and the grey Dalmatian-like spots that break out so often in B.T. crosses, speak for themselves, but I cannot guess where the rest of

To some extent territorial feeling is responsible for this outbreak of ill-will, but I do not think that is the real motive. Naturally, each dog resents any trespass or attempted trespass into his territory, and is surest of himself on his own ground. Even a long, vigilant waiting for opportunity to attack and dominate a neighbouring canine is understandable—I was given, on inquiry, a graphic account of how one of the Alsatians broke bounds and nearly murdered poor little Rosie in her own garden. But this ravenging mass hostility towards the newcomer on the street is due, I think, to a different motive.

I noticed that when the most down-at-heel human tramp walks the street, even the aggressive Alsatians are silent unless he approaches their gate. But when a stray dog, or goat, or donkey, ventures down the street, every canine voice is raised against it at once. This is not a mere "demonstration," a loud intimidation—there is a note of impatient yearning in the voices that is unmistakable to one who knows dogs, a yearning for blood and slaughter. Strangely enough, these watchdogs have not tried, so far, to jump the wall or gate, a thing that most of them could do easily if trained. I have not the slightest doubt that if these dogs were let loose they would fall on their unfortunate street

cousin and tear the victim limb from limb—before turning on one another to settle long-standing disputes.

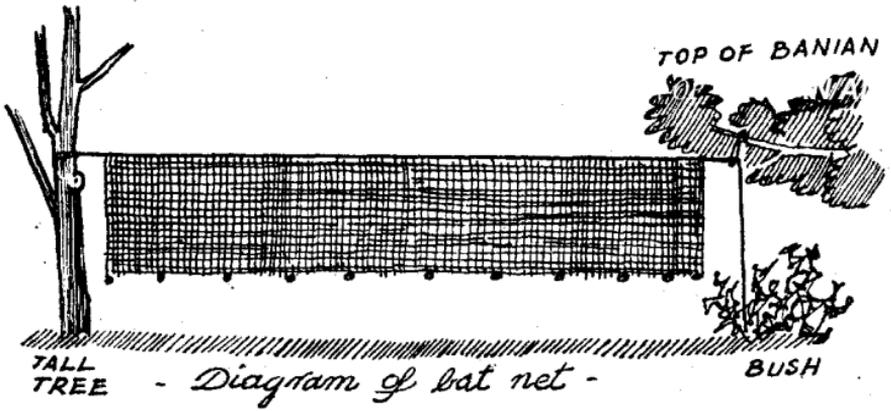
It has been explained to me, by a resident, that it is lack of occupation and exercise that is responsible for the lurking murderous trait in these dogs. It is well known that dogs kept continually chained grow savage and treacherous and snap at people within their reach. It was argued, analogically, that when dogs are kept confined to their compounds without sufficient hard exercise (it is a fact that these dogs do not get the exercise they should) they develop certain antipathies. I do not think that explains their behaviour. I am second to none in my admiration for dogs, but we can understand them best only by an unsentimental appreciation of their values, and I think this unanimous blood lust is really due to a pack feeling of strength and hostility, a desire to hunt the slouching fugitive on the street.



Moti came from. His lubberly, pacifist temperament suggests that one of his parents was a benevolent vegetarian creature. He greets visitors with a lick of his broad, wet tongue, and his thick, horizontal tail beats a tattoo of welcome on the front verandah chairs. Unlike the typical suburban watchdog, Moti is innocent of snobbery—he sees beyond the beggar's rags and the resplendent attire of the nob to their essential humanity.

The dogs of other gates are no less contented and good-natured. But suddenly this placid, whimsical canine society is smitten with a snarling, yickering mass hysteria. A stray dog has entered the street, and war is instantly declared. The Alsatians rear and paw their compound wall and crane their necks to see over it. Their hoarse, frenzied chorus is taken up by every dog in every compound. Moti rushes to the gate with an eager, bloodthirsty whimper and hurls his bulk against the bars; the pie-dog snarls with a guttural savagery so different in tone from his formal warning bark; I am shocked to find even the shy, small silky one at No. 9 yapping viciously.





A NET ACROSS THE DUSK

ONLY once have I seen fishermen netting flying-foxes and the operation was incomplete in a detail then. I daresay others also net them, fruit-bat flesh being prized by eaters of strange meat, but the two men who came that evening asking permission to use private grounds were fishermen.

They had made their own rectangular net, 25 yards long and 5 yards high, of Vandyke-brown four-stranded twine (the kind of twine used for fishing nets) with a four-inch square mesh: the net was surprisingly light for its spread.

They chose a banyan in fruit, with a number of bushes and small trees encircling it except on one side, where a 30-yard stretch of open ground separated it from a tall tree. A long cord was run through the upper hem of the net and one end of this cord fastened to the tall, outlying tree some 25 feet up the bole—the other end was drawn through a loop of string tied to the top-most branch of the banyan and then down to earth. By hauling this free end the cord was stretched taut between the two trees and the spread net hoisted high, its lower edge fluttering in the air some six feet above ground-level. Stones were then tied to the lower hem to keep the net flat and immobile.

★

By 6.15 p.m. the net was in place, a thin, reticulate, vertical screen across the open space leading to the banyan, visible against the glowing sky but probably not to be seen from the air

against the darkening green of foliage and grass.

The arrangement was quite simple. The man who had control of the free end of the cord sat in a bush at the foot of the banyan. As the giant fruit-bats swooped down to the figs they would get entangled in the net, instantly the man would release his cord and the weight of bats and stones would bring the net down to the earth; the bats would then be killed and disentangled from the mesh at once and the net hoisted up in the air for a fresh batch of flying-foxes. It was explained to me that the bats had useful teeth and would bite through the mesh unless immediately despatched.

★

The flying-foxes were due at 6.45 p.m. The litter of chewed fig pulp beneath the tree showed that some of them patronised this banyan—these bats chew their fruit, suck in the juice, and spit out the rest. By half-past-six the net was invisible against the warm grey of the sky, and both men well hidden in bushes, but I had to go away although I had secured permission for the netting on the express understanding that I would be allowed to watch. The men said that however much I tried to be part of a bush, my white clothing would betray me to the bats and scare them away. I too, thought that likely and so I retreated a hundred yards to a porch and contented myself with watching for flights of fruit bats.

They came at the appointed hour, in small batches and slow-

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Country Notebook

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winged parties, flying steadily south and fairly high. Some of them circled lower, almost right over the banyan, then passed it and dipped steeply to a stream beyond, swooping down to kiss the water lightly for a sip before resuming their plodding journey—that is the way these bats drink and the manoeuvre has been mistaken for an attempt at fishing!

At 8 o'clock the men left, satisfied that their luck was out that evening, and I left with them. Didn't I begin by telling you that the experience was incomplete in a detail? No flying-fox was netted. A kit of four insectivorous bats was flitting about the place throughout, erratic, insubstantial shadows that ducked under the net or shot suddenly upwards to clear it. The men had no interest in them, for even in their ignorance of the radar equipment of these creatures they knew empirically that they were not to be caught. Moreover, it was explained to me, that they were no good to eat.

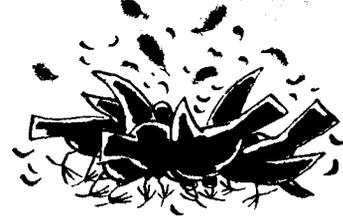


However, I learned quite a few things about flying-fox meat from these men. Considering how common they are, the market value of these bats is surprising—a freshly killed (or live) specimen in good condition can fetch well over a rupee. Apart from the reputed medicinal potency of the blood, the flesh is said to be of special value to consumptives and people suffering from debility. I was assured that it was only the skin that smelled so horribly and that a properly skinned and roasted fruit-bat had no smell and tasted rather like chicken, only more so.

A hair-oil boiled with flying-fox blood is useless for baldness, *experto crede*, but I wish some nutrition research enthusiast would work out the food value of the flesh—it is quite likely to be high if the exclusive diet on which it has grown is an indication. I know this wish sounds somewhat gruesome, but then I have an economical mind. Flying-foxes are regarded everywhere as unmitigated pests and scientific naturalists in India have recently recommended the use of explosives at the roosting trees as a sound eradication measure, blowing up the bats en masse. To many that may seem even more gruesome, and anyway it is a waste of good meat if fruit-bats are as nourishing as they are said to be. After all, we eat the oddest things and so much depends on how a thing is dished up and what it is called on the menu card—and on the small fortune you pay for a bite of it at some plastic-varnished air-conditioned, "superior" eating-house.

AVIAN COURTS MARTIAL

by M. KRISHNAN



THE "lynching" of one of their kind by Common Mynahs and Jungle Babblers, and the execution of a crow by crows, have been reported in the correspondence columns of "The Statesman" recently, and an explanation invited. The resigned passiveness of the victims has been remarked, and a comparison to courts of justice suggested.

I have read similar reports of avian tribunals, but shall not refer to them as the "court of justice" explanation is bad both in fact and in law. I do not object to the comparison because there is no considered justice in these assaults by birds on one of their feather. No serious student of jurisprudence will pretend that rabid injustice has not been dispensed at human judicial tribunals. There have been many bloodthirsty courts in our history where the procedure was a farce and everyone knew the verdict before trial opened, but they were content to pronounce the sentence—its execution was left to others.

"I'll be judge, I'll be jury," said cunning old Fury:
"I'll try the whole cause and condemn you to death." Lewis Carroll tactfully refrains from adding what Fury did to that mouse. It is as one interested in law, not as a naturalist, that I object to the comparison!

An Explanation Goes

Having made this helpful contribution, I make another, as a naturalist this time. No explanation can cover all intraspecific attacks of individuals by groups, in gregarious birds. Such attacks are known among gregarious mammals also, but are most often noticed in birds. In the old days a moralistic explanation was sometimes advanced, that it was the punishment of a culprit by plebiscite, intended to secure social welfare. We know now that birds are quite incapable of moralistic thought or self-conscious appreciation of communal good. That explanation must go.

My point is not that there can be no explanation; there can be many. But first we must consider what we know of avian so-

cial life, for in trying to explain these attacks we are trying to understand bird behaviour better than the birds themselves.

Clearly no question of sexual motive or extraspecific hostility is involved in these attacks. Crows and mynahs are intelligent as birds go, but we may safely rule out the motive of conscious punishment of a crime. Birds have no critical intelligence. In fact their social life is totally independent of an intellectual comprehension of rights and duties. Is it because of their freedom from the imposition of the carping, petty, analytical intelligence that rules our lives so inexorably that we find birds fascinating?

Emotional Language

In a bird clan social function and communications depend largely on patterned urges and responses which may be visual, vocal, tactile or based on some other sense perception. But do not imagine for a moment that because communication is not based on intelligence but on instinctive and emotional gestures birds are automatons. On the contrary, so many circumstances condition this "emotional language" (as Dr N. Tinbergen puts it), so personal and intimate can these expressions and reactions be, that no scientific observer can deny the existence of a bird mind, capable of much varied and sensitive apprehension. Thanks to the recent work of scientific naturalists, the idea that birds (and even lesser animals) are automatons whose lives are merely a chain of rigid, mechanical actions and reactions has been fully exploded.

Certain of these responses are released by specific "gestures" (I use the term loosely, to indicate both visual and acoustic signals), called "releasers." Releasers are of special value in the social behaviour of animals, particularly in their intraspecific fighting where they may serve to promote or inhibit hostile effort. In

gregarious birds these gestures often become highly personalized and are used only between birds knowing one another. Let me quote Tinbergen on this point: "Not all communication, however, is based on releasers; there are certain complications. As we have seen, many social animals respond to the species' social releasers only when provided by certain individuals, which they know personally. In such cases personal connexions, established through learning processes, confine the reactor's responses to signals from one or a few individuals only; they still respond to the releasers of the species, but only after they have narrowed their attention to particular members of the species."

That is the barest possible background against which we can try to understand these intraspecific attacks. In none of the instances reported by correspondents to "The Statesman" is there any detailed account of the circumstances anterior to the attack. We do not even know that the individual that was attacked by the group belonged to that group—though of the same feather, it might have belonged to another group. Among birds that go about habitually in company, such as the babblers (or mynahs during certain periods, while feeding), the company is strictly limited. No outsider is tolerated, usually. Here we may note that birds are well able to recognise members of their own party, exceedingly well.

Clannish

Territorial feelings may also account for hostility towards intruders. In July 1951, I was staying at a forest bungalow and the gate of its compound seemed to limit one side of the domain of a party of Large Grey Babblers—another party of these highly clannish birds inhabited the scrub beyond the gate. One morning a babbler from the scrub crossed over into the compound and was promptly mobbed by the bungalow party. The assault was technical: a voluble, excited attempt at encircling the gate-crasher, which retreated to the scrub in haste and was not pursued—there was sufficient threat in the attempt to constitute an assault in law. It could be that if that intruder had come far enough in, if it had not been so near the gate that escape was easy, there would have been more action.

Flight from what hurts or threatens is such a natural and widespread reaction among animals that the victim's lack of attempt at escape does seem surprising, at first sight. However, it could be that it does not respond to the threat gestures of its antagonists (this preliminary display by the attackers has probably been mistaken for deliberation before attack, by the older naturalists) because those gestures have no compelling force or "meaning" to it, because they do not release either

flight or appeasement responses in it. Of course encirclement, confusion, and bodily injuries caused by actual attack may all be reasons for the victim's apathy—illness or injury prior to the attack may also be causes. There is no intelligent appraisal of chances of escape or acceptance of the inevitable—if that bird were capable of intelligence, it could escape.

A Safeguard

A group attack can, of course, be directed against a member of the group. There is usually some safeguard to prevent actual fighting in gregarious animals and threat gestures are often sufficient to assert rights. Fighting out of sexual rivalry or over rights of precedence is confined to the rivals and the rest of the clan takes no sides but where a basic "right" is violated the protesting bird summons clan aid and usually gets it. Lorenz describes the amusing behaviour of jackdaws when a stronger bird tries to usurp the nest hole of a weaker member of the colony. The aggressor assaults the rightful holder and appropriates the site by sheer force; the dispossessed bird indulges in a proprietorial "zicking" call which soon changes to an outraged "yip-ping;" this brings all the jackdaws within earshot to the nest, jostling one another and yipping furiously, and this sudden babel usually breaks up the fight, "particularly since the original aggressor participates in the yipping!" Lorenz explains how this is not a cunning move by the miscreant to divert suspicion from itself by crying "stop thief!" with the rest, but an uncontrollable reaction—he adds, "I have often seen cases, however, where the aggressor was very definitely recognized by the advancing members of the colony and was thoroughly thrashed if he persisted in the attack."

Conceded "Rights"

It is likely that some such communal disturbances, initiated by the outraged calls of a bird defending some usually conceded "right" against an aggressor, brought about the "lynchings" reported. But the culprit need not have indulged in violent aggression—its culpability may be accidental or beyond its control.

That brings us to the crows. I have heard the theory that an injured or sick bird is sometimes executed by its clan and that this is a communal safeguard, for obviously an incapacitated bird must be a drag on the clan and cannot perform its duties by the next generation efficiently. There is, of course, no suggestion of conscious action in all this—the birds act instinctively in this manner. This is not a variation of the "court of justice" idea and is scientific-

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AVIAN COURTS MARTIAL

(Continued from Page 1.)

ally sound, but still it is a speculative theory.

I have seen crows pecking a crow to death—I am sure many others have also witnessed this happening. I cannot attempt any explanation of the murder because I did not observe the incidents that led up to it, and had not studied those crows closely enough to know their identities or their relationship to the victim, i.e., it is my ignorance of "the facts of the case" that obscures my understanding. However, I am happy to provide an example to the contrary from my own observation. I have seen a party of crows trying to rouse a member that had fallen to the earth with man-inflicted injuries. They flew low over it, repeatedly flying just over its prostrate, struggling body, evidently trying to induce it to follow them; later they alighted and settled around it, cawing agitatedly; they approached close and then hopped away. That wounded crow took nearly 15 minutes to die and only when it was quite still did its companions fly away.

I trust I have at least explained why there cannot be any one explanation of intraspecific mobbing and how it is useless to theorize unless all the facts are

known, especially those anterior to the attack. No little bird can tell us the truth about these things because, as pointed out already, we are attempting to understand motives far beyond avian understanding. However, our knowledge of bird behaviour is much sounder and more comprehensive than what it was, and an expert observer can often account for an avian mobbing—perhaps much more certainly than we can explain why human mobs sometimes react as people did during the recent Kumbha Mela.

M. KRISHNAN'S "COUNTRY NOTEBOOK"

Arachis Hypogaea

IN most parts of peninsular India the groundnut farmer heaves a long sigh of relief when the rains arrive in July, and sleeps soundly at night. I circumscribe the terrain of his satisfaction because it is unwise to commit oneself to statements on the versatile groundnut; it is sometimes sown much later in the year, especially in the South where it is commonest. But in most light, monsoon-fed soils where it is a main crop, and not a rotation crop with cotton, the seed is put down in May or June and by mid-July, if the rains are punctual, the seedlings are up and spreading across the brown earth in little clumps of green.

*

That is when the farmer heaves his sigh, for now he need only guard the crop by day, against cattle—more against errant hooves than greedy mouths, for though dry groundnut foliage is valued as cattle fodder, the beasts care little for the young, bitter leaf and a thorn fence will keep them out. But till the monsoon comes and the crop is up the farmer must watch his field every night to keep away wild pig, which know just when he sows and where the buried treasure lies. Of course it is not only the pig that bothers his nights; the prospect of delayed rains worries him no less. I don't suppose his sown seed will take any harm from the monsoon being late by a few days, but the sooner they start sprouting the sooner the crop will mature and if this is held up till the downpours of late November he may lose much. Heavy showers can ruin the ripe crop.

This is no dissertation on the varieties of groundnut and the history of its cultivation, but it is a curious fact that the plant, a native of South America, came here by a devious route only some 120 years ago. And for

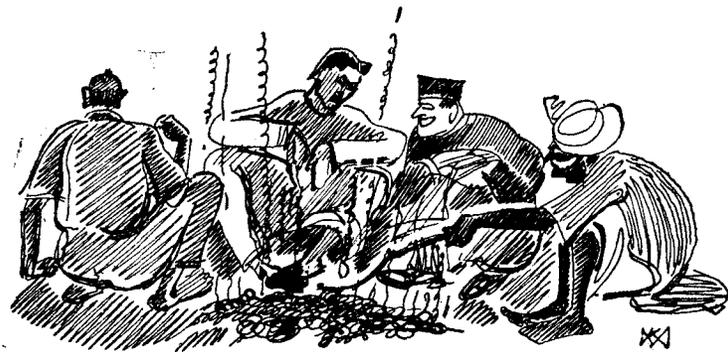
nearly half a century India has been the chief groundnut growing country in the world. To no other exotic food crop have the people of the country taken so wholeheartedly. Throughout peninsular India, wherever it is not wet enough to grow rice, groundnut is not only a prime commercial crop but also an important part of the people's diet.

*

Four standard books on Indian agriculture that I consulted list the groundnut as an oilseed and comment on the uses of the oil in cookery, in soap manufacture, in lubrication and as a possible fuel—even the high protein value of the residual cake and its merit as cattle feed and manure is mentioned, but there is not a word in any of these books about groundnut being so often, in city and in village, the poor man's snack and the snack of the not so poor, or how excellent and nutritive it is.

Groundnut thrives on poor soils and with hardly any manuring, the bacterial nodules on its roots helping to provide its own supply of nitrogenous substances—it is like other leguminous plants in this and its merit as a rotation crop lies in this. In light soils the harvesting is a ridiculously simple process; the plants are pulled up and the pods come out with the shallow roots. For this reason it is sometimes said that groundnut is an easy crop and a lazy man's crop. A ten-year sojourn in a groundnut area has left me with very different impressions.

When the plants are fully grown, dark yellow flowers with showy, papilionate corollas appear on the lateral branches. The groundnut flowers like any other plant, but as soon as they open the flowers start pushing themselves down into the earth—this subterranean bias of the fertilized flower is a marked peculiarity of the plant and the pods will not develop unless so buried. By



the end of September, the crop sown in June will have flowered and fruited, and in October or early in November the pods will be fully matured. The maturing process is quick. The inside of the pods is white and pulpy, like wet pith, and the seeds are small and thin—a fortnight later the pod has a thin, dry coat and the seeds are fully formed and oily. However, not all the pods mature together and so a certain quantity of immature pods cannot be avoided at the harvest.

*

Pig love the young groundnut, and so do I. For almost a month before the harvest the farmer has to sit up every night in a machan built in the middle of his field to guard against nocturnal pig—though he is safe from me and men with like tastes, for we are diurnal visitors to his crop. He shouts and waves his hurricane lantern about when he suspects that pig are near, and he shouts and waves the lantern at intervals even when he suspects nothing, in a prophylactic manner. The nights are loud with the howls of groundnut watchers in such places, and the crop is the prize of continuous, unrelaxed vigilance, sore throats and the expenditure of much kerosene. But though this great effort can and

does ward off serious damage by the pig, it is unavailing against the rain. Downpours when the crop is ripe can still be the farmer's undoing. Groundnut is no easy crop to grow, believe me.

However, it is grown, thank heaven, literally. I remember reading a passage by Thoreau on the sufficient joy of being alive in a world where one can have cobs of corn, boiled in brine, to eat. I have often thought how right he was and undoubtedly tender, boiled maize is creamy and delicious, but I am sure Thoreau could have achieved a more ecstatic passage had he known tender, boiled groundnut. You choose pods almost fully formed (but not quite), wash them well and boil them in salted water, and then eat the creamy richness within them, pod by pod.

The fully formed nuts should always be eaten with jaggery, to condone their tendency to promote billiousness. I don't know how jaggery does this; I only know it does. Science will, no doubt, discover the reason analytically and afterwards, as it has the soundness behind so many dietetic habits of the country. Mature groundnut is probably tastiest when baked in an earthen

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COUNTRY NOTEBOOK

(Continued from Page III.)

pot, when its crunchy, nutty flavour is brought out, but taste is not everything in the pleasure of repast. The best way to eat groundnut is to eat it roasted, on the field where it grew.

You ~~go~~^{set} out in the evening with a companion or two and walk ~~purposefully~~ on till you reach a chosen groundnut field, with the cultivator in the middle inspecting his crop. Having found him, your step and approach become suddenly casual. You discuss the weather with him and the prospects of the jowar harvest, yet to come; you hold forth on bullocks and fodder grass and the quaint habits of those who cultivate rice. Presently he invites you to sample his crop and you accept the invitation, still casually. Then he pulls out a big armful of groundnut plants, puts them down on a bare patch of earth and heaps handfuls of the dry leaves and twigs over the pods. He starts the fire and the blue, acrid smoke rises from the crackling heap; from time to time he pokes the heap with a stick to turn the nuts, or adds another handful of dry leaf.

The fire is then allowed to die down and you sit in a circle around the smouldering heap. Regretfully your host remarks how

much nicer the nut would taste if only he had jaggery to offer with it—it is then that one of the groundnut-eaters produces a large lump of jaggery from his clothes with no trace of embarrassment. The charred pods are raked out with a stick, split and the nuts eaten while they are still almost too hot to handle or eat. There is no affectation of casualness any more, no longer any small talk. You just fall to and gorge yourself.

When it is all over you do not thank your host formally, for it is not such things but a sincere compliment to his crop that he will appreciate most. You tell him, ruefully, how you had clean forgotten your digestive limitations in your zest for such truly fine groundnut, and add that you will have to think up some good excuse on the way home to explain to the wife your marked "no-enthusiasm" for dinner—for some reason (which is beyond me) I have found this last remark never fails to amuse a groundnut farmer. You take leave of your host after praising his crop again, and walk away, ostensibly homeward bound and thinking up excuses. However, you make no direct tracks homewards. One of your companions still has a lump of jaggery with him and there is plenty of daylight still; a mile away there is another field where the groundnut crop looked exceedingly promising, the last time you passed that way. You walk purposefully towards it.

SERPENTOLOGY

THERE are other breeds of venomous serpents besides the cobra, some with looks more arresting or venom more potent. The thick, squat-headed Russell's viper, blotched with heavy, black rings, has always struck me as a more formidable-looking snake—one look at it, and you know at once that it is virulent, just as you know by looking at them that some people are cantankerous—and though normally sluggish it can move like lightning when it wants to. The saw-scaled viper is smaller and less vivid, but not less venomous. And the modest, deadly Southern krait is more at home in human dwellings than the cobra and much more poisonous. But it is the cobra that has captured human imagination and compelled worship, from time immemorial.

Motive Of Fear

Psychology, however Freudian, may not tell why this snake should have been preferred above all others for worship, but I think I can. Of course the motive of fear is there, and the deeply, dimly-felt urge to placate that which is feared; possibly, there is psychological significance in snake-worship being connected with the concept of fertility. But all this does not explain the choice of the cobra. The belligerent territorial feelings of this snake, its intelligence and readiness to live at peace with humanity are the bases, I think, of the real explanation.

Cobras get attached to their grounds and will challenge intruders—and their hissing, spread-hooded challenge can be impressive! When they have long had the run of a disused house they will dispute the right of humans to occupy it again. I have been assured that if treated with firm kindness they will retreat to a far corner of the compound and give up their claim to the house—that the right thing to do, in the circus, is to offer them milk, and burn camphor in their presence (burning camphor does seem to discourage them considerably)—but on the one occasion I had to reclaim a cobra-haunted house I slew my cotenants, out of fear.

Temple Guardian

In a celebrated temple at Kerala where the worshippers enter barefooted (as in all temples) the ground literally crawls with cobras, but I believe no one has been bitten so far. I can attest, from personal knowledge, to a much less impressive instance of the willingness of these useful snakes to live and let live. For years I knew a Siva temple beside a main road, which had its resident cobra. I have sometimes seen the snake on the roadside, a few yards away, and have slowed my steps to admire its handsome repose; many others have seen and admired it likewise. One felt no fear at all then, in spite of its splendid proportions and proximity; it was only the temple cobra, it belonged there and had been there for years without doing anyone harm; I have entered the temple when its guardian lay close by the pathway. At times it moved away and at times it was apathetic to the humans on the road. In September 1953 I revisited this temple and learned, to my sincere regret, that the snake was no longer to be seen, having been

killed by some natural enemy, presumably.

In many parts of rural India where snakes are common, snake-worship is equally common and one can see many wayside shrines. These may be quite elementary, a slab of stone bearing the incised figure of a cobra stuck in the ground beneath a tree, or may be a stone pallsade around a peepul featuring carved snakes. However, I have seen serpentine figures of considerable finish and beauty at such wayside shrines, intertwined snakes and many-headed cobras carved with much skill, and sometimes, instead of cobras, superbly rhythmic figures of Nagas and Naginis—perhaps these belonged, originally, to temple ruins near-by, famous for their classical richness.

It is amazing how quickly and unquestioningly these images are accepted in the countryside. Once I had a very fine Nagini removed from her obscure hiding place and publicly installed, along with a few "snake stones," in the dreary compound of a court house, of which I was the presiding authority. I was surprised and delighted to find my court popular within the week, its compound meticulously maintained by all visitors including the handful of litigants who had business with me, and my "Honour" infinitely secondary in presiding authority.

Naga-Folk

These fascinating snake-people, semi-human and subterranean, inspire many folk legends, tales and mythological dramas in the South—I dare say, even in the North. Sometimes, in these stories, they are cobras which can assume human form at will and sometimes they are semi-serpentine Naga-folk: often they are

(Continued on Page III.)



The figure that lent grace and humanity even to my court.

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COUNTRY, NOTEBOOK

(Continued from Page I.)

presented sympathetically, not at all as dreadful figures—in fact, I know authentic folk-tales where it is the wholly human characters that betray the trusting serpents. It is a feature of these legendary snake-people that the very mention of the word "Garuda" terrifies them. The "Garuda" is the "vahanam" of Vishnu and a traditional killer of snakes; the name is specifically used in Tamil to denote the Brahminy Kite (which occasionally does kill small snakes, mainly water snakes), but no doubt it also connotes a number of powerful eagles and hawk-eagles which can and do kill large serpents. As a tail-piece to this note I may mention a popular saying based on this traditional snake dread of the "Garuda"—my rendering is from a Sanskrit stanza, but the saying in a compressed, pithy form is common to many Indian tongues: Do not associate with the lowly;

If you must, with the mighty make friends:

For the great cobra, having God's protection,

Enquired fondly about the Garuda's health.

M. KRISHNAN'S "COUNTRY NOTEBOOK"

FORTY DAYS S. I.

At midnight on June 26 last I was awoken by the angry terrified voice of a parakeet. I had just dropped off to sleep, but knew at once that it was a parakeet screaming—a few seconds later I heard the scream again, then, every few seconds, it was repeated. I knew from the sound where the bird was, on top of a clump of coconuts in my neighbour's compound, some 25 yards away. It was too dark to make out anything and my run-down flashlight was unable to shed much light on the situation, but I suspected the bird was being attacked and that was why it screamed. I heard no sign of its attacker—as I said, it was too dark to see what was going on, especially what was going on behind the screen of the great coconut leaves. The screams ceased and I returned to bed. Presently they broke out again, apparently from ground level this time; I heard the flap of wings coming towards me, then there was silence once more. With the aid of the flashlight's glimmer I located the parakeet in my compound. It was lying on its side on the ground, bleeding profusely. When I picked it up, it lay inert in my hand, too exhausted to protest.

It was an adult male, as shown by its black-and-red collar, and it had no tail feathers except for two freshly sprouting pins—clearly the attack on it had nothing to do with its taillessness. There was a deep wound on its left side (the kind of wound described as a "stab injury" in medico-legal books) and it was also bleeding from injuries to the left wing and the crown of its round head. I put it into a roomy cardboard box where it would be safe from further assaults till morning—if it lived that long.

★

I had a glimpse of the attacker as I conducted the rescue. A single caw came from the foot of the coconuts, then a crow flapped up and showed in darker silhouette against the gloomy night sky momentarily before disappearing.

To my surprise, the parakeet recovered. For the first few days it could hardly stand on the sawdust flooring of its cardboard box. It leant against a corner in a comatose depression, and there seemed little cause for hope. It had to be fed with an ink-filler or a teaspoon every few hours—it was amazing how quickly it grasped the idea that the spoon meant nourishment. Every time I picked it up (a thing I had to do with the utmost care because of its injuries) it would bite my fingers till I had it flat on its back in my left palm, then it would stretch out eagerly towards the spoon, beak open, neck long and thin with extension.

I fed it glucose-and-water, milk and tomato juice for the first few days; it would not or could not take even well-mashed semi-

solid food, probably because one side of the neck was also injured. So quickly did it recoup that on July 2 I had a packing case converted into a large cage with an assortment of perches, and my bird was able to clamber about and perch.

It lost its two tail pins soon afterwards—birds in an enfeebled condition often shed growing rectrices. It grew wilder with each passing day, and noticeably stronger, and no longer required to be fed by hand. On July 4 it escaped, when the lower door of the cage was opened for cleaning the floor, but obviously it could not use its wings yet. It flapped along, a yard above ground, and came to earth within 20 yards; as I was about to recapture it it flew away again, crossed the road and landed in the miry ditch.

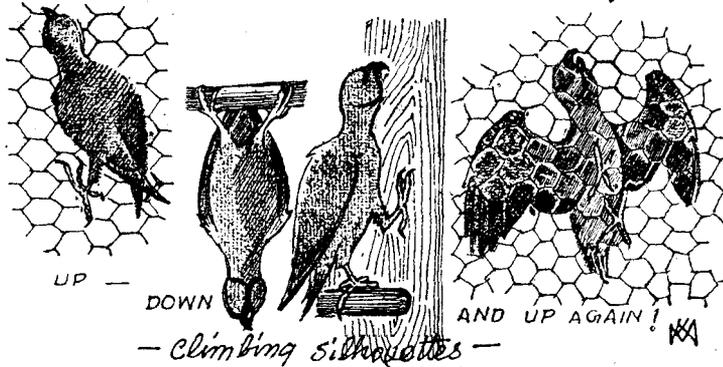
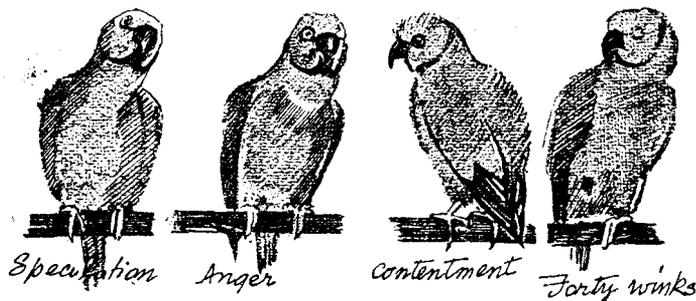
I feared it would soon meet its end if allowed liberty while still so weak of wing, and so ran after it, plunged into the ditch and grabbed it before it could essay flight again. A highly refined-looking gentleman happened to be passing that way, and he watched me as he walked. He said nothing, but his eye spoke his contempt for hulking, grown-up bullies who pounce upon poor little birds.

★

I released my bird, after inspecting it to make sure that it was fit, on August 6. I had to wait a couple of days for bright weather and during this wait abandoned my original intention of ringing it, so that I would know it again if I met it. (i.e., a child who visited me to see my parakeet, and the servants) warned me that it was cruel to give the bird its liberty, for sensing the taint of its human confinement somehow other birds would mob and kill it. I was also advised to liberate it near a temple, if I insisted on being so cruel. That was sound advice, for a parakeet can find just the kind of natural retreats it would seek against attack in a temple dome.

I had a suspicion (I have it still) that my bird was an old and frowzy parakeet that I have sometimes seen on my neighbour's coconuts. So I released it in my backyard from which it could get to the coconuts if it wished to, and sure enough it made a bee line for the trees. It disappeared behind the leaves and though I watched for nearly two hours, I could get no further glimpse of it. Perhaps I will see it again.

During the 40 days it spent in my



— Climbing Silhouettes —

prison I gained the impression, slowly, that it was a very old bird. It quite refused to make friends with humanity and was idiotically scared if anyone went near its cage, but it was indifferent to the cat—curiously enough, the feline was equally indifferent to the cage.

Parakeets fly swiftly, but they are essentially climbing birds. Since my bird had no tail, there were no feathers to obscure its legs as it clambered about and I was able to study its climbing technique closely.

★

Most birds have rigidly set feet, with three toes pointing forward and one behind, but a parakeet can reverse its third toe and most often its feet have the toes in opposed pairs, the better to grasp with. Moreover, its upper beak is not firmly joined to the skull as in other birds but is capable of a certain play—this gives that massive, curved, overhanging hook-bill a measure of delicacy and "feel" that is invaluable to a climber. A parakeet always goes beak foremost, whether climbing up or down.

It is said that when a parakeet goes to sleep perching on both feet it is a sign of poor health and that a bird in good health will perch on one foot. I can testify to the truth of this from observation. After the first two weeks (when it used both feet) my bird slept perched on one foot. I have the definite recollection that whenever I saw it asleep it was perched on its left foot, with the right foot drawn up, but I cannot say that it ~~never~~ used its right foot for

perching. Had this occurred to me yesterday, I could have verified my suspicions, but you know how it is with these things—this has occurred to me just now, five hours after releasing my bird!

"UNBORN TOMORROW AND DEAD YESTERDAY"

WHEN I was a young man of eleven, I went on a holiday to a place where there was a famous zoo. Almost every day I visited that zoo and often held lengthy discourses with its Superintendent, a grand old man whose taxonomy was shocking but whose love for his charges was unbounded. Occasionally he rewarded my constancy with some special favour—once, he even took me with him into an enclosure which held yearling lions with embarrassingly playful manners. But what I remember most vividly is the day when he conducted me to a private section of the gardens, where a keeper was walking a full-grown Hunting Leopard on a leash.

I was allowed to stroke the magnificent animal (which purred loudly when stroked!) and learned that its name was Lakshmi. When the Superintendent was called away on some business, I furtively stayed behind and persuaded the keeper to let me stroke his charge again, and even to offer it a treasured half-bar of chocolate. I asked him to make the offer, for I was afraid it might snap in its eagerness, but the proud creature just sniffed at the dainty and then turned away, whereupon the man promptly put it into his own mouth.

★

Before I left the place to return to my home and school, I saw Lakshmi twice again. Some three or four years later, when I revisited that zoo, the Superintendent was still there and so were most of the inmates; when I asked after the Hunting Leopard he led me wordlessly upstairs to a large room, full of stuffed birds and beasts, and there was Lakshmi, on a pedestal, looking unutterably translated and graceless, for all the skill of an expert taxidermist.

That was the only time I ever saw a Hunting Leopard. I may not see one again. There are people who believe there are still a few specimens left in the country and hope that they will re-establish themselves—I share the belief but not the hope. There is good reason for believing that there may be a rare Hunting Leopard or two in India today, apart from the ones imported from Africa for sport. Mr K. M. Kirkpatrick reports seeing a specimen on the road near Chandragiri on the night of March 28/29, 1952, while motoring—the circumstantial details of this sight-record leave little room for doubt. A few years ago a noble sportsman shot three undoubted Hunting Leopards from his car, as they stood on the roadside dazzled by the headlights—there was a photograph to vouch for the deed.

In Mukumpi, on the borders of Hyderabad, I heard reports of "sivungi" (the Kannada name for the beast) in 1951; the reports may have been exaggerated, but the people who claimed to have seen the beast knew the difference between it and a panther all right. The country there is well suited to Hunting Leopards, very flat with bushy, boulder-strewn hills here and there; there are blackbuck and chinkara there, besides hares and birds and such small fry;

moreover, it is known for a fact that there were Hunting Leopards here formerly. All this does not, however, warrant the hope that the vanished species will come back of its own accord.

What has led to the virtual extinction of the Hunting Leopard in India within the past 50 years or so? It was never a numerous beast but it was certainly not uncommon two or three generations ago. No doubt ignorant and bloodthirsty men hastened its end, for when a species is reduced in numbers to the biological minimum necessary for its existence, each specimen shot greatly lessens chances of survival. But it is a fact that the Hunting Leopard was not hunted with the same ruthless zest as other Indian fauna, and I believe the plough and the wheel, rather than the gun, were responsible for its exit.

The Hunting Leopard in India lived mainly on blackbuck and chinkara and other small beasts of the open. As everyone knows, it is highly specialized for running down fast-fleeing quarry, and is probably the fastest quadruped in the world



over the first few furlongs. When the open country that formed its hunting grounds was annexed by man, or so cut up as to drive away the animals living there, the Hunting Leopard was naturally affected. Its staple diet (antelopes and gazelle) was no longer available, except with extreme difficulty.

★

It is sound to say that the animals that die out most easily are the ones that are most specialized for a particular mode of feeding—woodpeckers, for instance, have paid heavily in America for their inability to change their feeding habits. During the past 50-years blackbuck and chinkara (especially the former) have been considerably diminished in numbers and large stretches of hill-girt open country, free from men, are no longer available.

I think the most worthwhile contribution towards wild life preservation that can be made is the setting up of sanctuaries for the fauna of the open country. We lack such sanctuaries utterly in India, though there are sanctuaries for forest-loving creatures. Naturally any scheme for rehabilitating the fauna of the plains will require plenty of space, and also much more efficient protection than what is now offered. But, if the choice is wisely made, it should be possible to build up a really good sanctuary with about 100 square miles. After all, the displacement of humanity and agriculture this will involve

(Continued on Page III.)

Country Notebook

(Continued from Page 1)

will not be unique, for many recent schemes meant to benefit humanity have involved similar displacement.

In the Deccan there are areas that have long held blackbuck, wolves, foxes, and the Great Indian Bustard—typical fauna of the open—and which still hold every one of these in much reduced numbers. There are usually a few hills outlying the flat stretches. If such an area could be freed from humanity and rendered really poacher-proof (not only on paper), there is little doubt that Nature would rapidly re-establish herself. There is every reason to think that Hunting Leopards, introduced into such an area after the herbivores have secured a firm footing, will thrive and provide that very necessary check on exuberance that the balance of nature requires.

PONDEROUS THOUGHTS

RECENTLY, I have been reading a number of Western naturalists and biologists on the origin of domestic animals. Some of them have stressed the evidence of palaeontology and anatomy, others genetics or behaviour, but their conclusions are remarkably similar—they prefer to indicate probabilities and expound theories, rather than commit themselves to irrevocable findings, on the origin of the domestic dog, the less domestic cat and the wholly tamed cattle; they are surer of the ancestral bones of horses, and many birds as well as the camel and the llama are definitely the descendants of particular wild species.

One other point on which they agree is that domestication was a long and selective process, where in all animals that were amenable to human will were retained and the recalcitrant weeded out. There is much truth in this, but had these experts known Indian domestic animals well they might have been less ready to presume that countless generations must pass before any species is domesticated; this is certainly a presumption, for there is no fossil or living proof that the process was a long, long one.

★

Here, in India, we have long been used to catching and taming wild animals to serve or amuse humanity. At least one of our common domestic beasts, the placid and sentimental buffalo, is in no way different from its wild progenitor except in reduced size and will freely interbreed with the parent stock. The now virtually extinct Hunting Leopard was always caught wild and full-grown and trained for the peculiarly Indian sport of antelope hunting. Falconry was a much fancied sport all over the country till yesterday, and even now the common partridge is often caught young and taught to follow its keeper like a dog. I realize that these creatures, tamed for sport, are not domestic stock, but mention them to provide corroborative evidence of the Indian genius for taming wild things. My conclusive proof has far greater evidentiary weight—it is, in fact, nothing less than the Indian Elephant.

For thousands of years elephants have been caught wild and swiftly tamed to man's uses in our country, and the art is still practised. Ages before Alexander set foot in the North, elephants were used in war and peace in the South, and were considered quite essential to royal estate. The tamed elephant is surely a domestic beast, much more reliable than any recognized household pet except, perhaps, the dog and second to none of them in versatile utility.

★

I have never seen an elephant being caught, but have closely studied the next best thing, a cine-film of the capture of a magnificent tusker taken by a friend (the film, not the tusker). I have seen elephants captured only a fortnight previously (they were already tractable and knew their keepers) and all sorts and conditions of these beasts, from infants to venerable elders; I have even lived next door, literally next door, to an elephant for four months, and I must say I never had a more distinguished or considerate neighbour.

I have heard the theory that it is because the elephant is not really intelligent that it tames so readily. On few other topics has such absurd twaddle been written than on the question of elephantine intelligence. Men who were otherwise formidable ex-

perts on these great beasts, like Sanderson, have betrayed a certain lack of understanding in discussing this question. Gradually we are realizing that the apprehensions and perceptions of many animals are widely different from ours—it does not show much intelligence on our part to judge them by our standards.

I am afraid that at times my enthusiasm for modern scientific methods of determining animal intelligence is qualified; for one thing these tests rarely take note of the fact that in every species there are born fools. I will go further and say that even in regard to human intelligence, it seems likely that as our knowledge increases many of the methods now used for rating it will be discarded—but perhaps I say this from a sense of frustration, my own performances at examinations and I.Q. tests having been so uniformly third class.

However that might be, it is wholly wrong to argue that because the elephant, which can so easily defy man, never does so when it is tamed (except under uncontrollable excitement) it lacks intelligence—if that is the criterion, the Fishing Cat would be among the elite of the earth because it is among the most savage and untamable, and man himself (who has often suffered peaceful coexistence when rebellion was possible) would rate pretty low. The elephant is undoubtedly sagacious—in an elephantine way. That it is temperamental at times means nothing; possibly that is due to the lack of understanding of the humans who have trained it.

★

All this is rather beside the point. Whatever the intelligence of the elephant, the fact remains that it is the most easily tamed wild beast on earth. In fact, so quickly does it tame that man has never tried to breed it to secure his stock. There is good evidence to show that the wild buffalo (which is also a massive and powerful beast) can be tamed in a few generations. Apparently certain wild beasts have peaceful temperaments and are quite willing to live with us, and even develop an affectionate attachment, once they comprehend that their needs will be provided and that no one intends them immediate harm. It is unlikely that they ponder and brood over the loss of dignity and freedom involved in being useful to others—that, again, is a peculiarly human thought.

M. Krishnan's Country Notebook**AN EXCEPTIONAL WARBLER**

THE warbler tribe is the most numerous anonymous of all birds. There are several hundreds of them, wren-warblers, willow-warblers, tree-warblers, fantail warblers and just warblers, all smallish birds, most of them quite tiny, and all more or less of a dull feather. They are inconspicuously grey, brownish or greenish, much given to playing hide and seek in bushes and no less given to warbling, or to feeble call-notes. It is not hard, once you have the hang of the family characters, to know a bird as a warbler when you see it. Further identification, however, is a matter for the warbler specialist, and even he likes to have the bird in one hand and the text-book in the other.

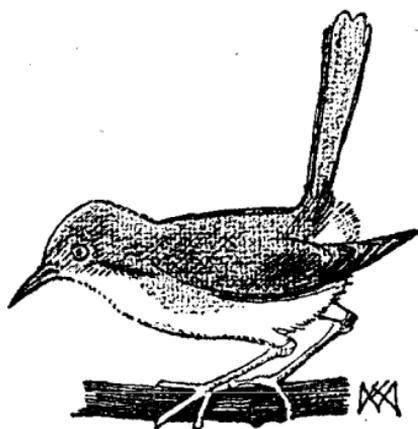
It is surprising, therefore, to find that one of the most familiar and easily-identified of our garden birds is a warbler. It is *Orthotomus sutorius*—if that fails to mystify you, I might as well use the common name and call it the tailor-bird. There are few gardens in India, however modest, that are not graced by the presence of a pair of tailor-birds.

★

True there are other warblers that look like the tailor-birds; there is the Ashy Wren-Warbler, for instance, another small, slim, energetic bird with a cocked up tail and the habit of flitting airily about bushes. It is more grey or dark brown on top, in any plumage, than the olive-green tailor-bird, though both are of a size and shape and both have pale undersides, but it is not by their looks that you tell them apart, not even by the cock tailor-bird's tail pins, for these are shed after the breeding season. The wren-warbler makes a curious, quickly repeated snapping noise, faint but audible and unmistakable—if you hear a tailor-bird making this noise, put it down as the Ashy W-W.

Tailor-birds have many calls, among them a rapid "chick-chick-chick-chick" (I think this an alarm call, or rather, an alert), a loud monosyllabic "Tweet" and a louder two-syllabled "Towhee." No other bird of that size has such a loud, bold voice. And if you watch a tailor-bird while it is calling, you will see a transverse black bar appear and disappear on either side of the neck with each call.

The beautifully-sewn nest is, perhaps, even better known than the bird. One would think that such a work of sartorial art is the true and unique hallmark of the



tailor-bird, but at times the Ashy W-W builds an almost identical nest, also slung within stitched leaves. However, if there are eggs in the nest you can tell the builder at once. The tailor-bird's eggs are speckled, and the wren-warbler's are a deep, shiny red.

The very first nest with young that I watched was a tailor-bird's, in a *Hiptage* bush just below the verandah of a house. Sometimes these birds build their nests close to human life, even in a potted plant on the verandah at times. So bold and confiding are they that they will continue to feed their tiny, wide-gaped young while you sit and watch the process from two yards away, provided you keep utterly still and don't stare too rudely. No other nesting bird is so easy to watch.

★

Off and on, for the past two years, I have been watching a pair of tailor-birds that frequent my garden. They are there all day, and I think all night as well quite often, for I have often seen them roosting in a yellow oleander bush late in the evening. They seem to like my neglected and rank garden, and to feel very much at home, but though there is plenty of insect life here to feed them and their broods they have never nested within my compound walls. Where large-leaved creepers and bushes are available, tailor-birds prefer to nest in them, and there are few such plants in my garden. I have taken great pains (what a lie!—it calls for none, to allow the plants here to run wild and fight it out among themselves, and am reluctant to interfere with the perfectly natural growth of many years, but I think that one of these days, when I can find a lusty seedling and the energy, I will dig a big pit by my kitchen wall, fill it with something less inhibiting than the clay soil of my compound, and plant a *Hiptage* seedling there for the tailor-birds to nest in.

M. KRISHNAN'S "COUNTRY NOTEBOOK"

HOUNDS OF INDIA

THERE are only two types of dogs in India, if you leave out Himalayan breeds. Naturally, you must also leave out every sort of city and suburban mongrel, for though some of these are admirable dogs and companions they are not truly native, having mixed imported blood in them. I have observed the dogs of the countryside over years and in many places, from Hardwar and Banaras to the southern tip of the peninsula—in this vast area there are only two indigenous canine types. One is the native herd dog, disparagingly called 'pariah dog' and 'pi-dog', a splendid animal whose sensible, even build and utter trustworthiness have not been exploited at all. The other is the hound type.

Both types have certain things in common. Both are more or less smooth-coated, both have squarish builds and both are, in their purest strains, whole-coloured. These points may be briefly considered here, for our dogs have been maligned by experts, in English dog-books.

IN RURAL AREAS

The herd dogs have thicker and longer coats than the hounds and their tails may be feathered, but I have not seen a shaggy specimen anywhere. Incidentally, the pariah can be found in any degree of purity only in remote rural areas, well away from District H.Q.s and cantonments. Typically it is somewhat like an old-fashioned, smooth-coated chow, but not so stocky and short-coupled and not so straight-hocked. Forsyth speaks of a Banjara Hound in his 'Highlands of Central India' (1872); he says it was "about 28 inches high, generally black mottled with grey or blue, with a rough but silky coat" and com-

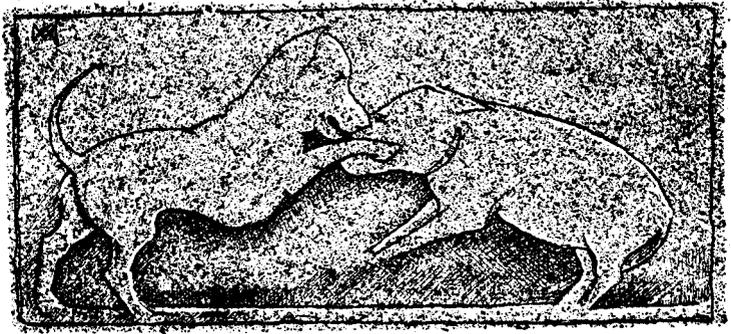
ments on its resemblance to the Persian Greyhound (Saluki). Undoubtedly Forsyth, who experimented with these hounds, knew them well, but the breed has not been mentioned by other writers and it seems probable it was an exotic strain brought in by the wandering Banjaras. Indian hounds are smooth-coated. They are not 'long dogs' really, having the build of a Great Dane and not that of the greyhound—in fact some of them look very like small editions of the Great Dane, but have more houndy heads.

AUTHENTIC

While some true-bred pariah dogs may be pied (black or brindle, with a little white on face, neck and chest, and white stockings), the most authentic specimens are whole-coloured, usually some brownish colour from buff to deep shades. All our hounds are unicoloured, if of ancient blood. However, a darker back stripe is usual, and in breeds like the Sippiparai dark spots on the skin may show through the short, white hair bluishly, as in a Dalmatian diligently rubbed with a chalk-block.

There are not many breeds of Indian hounds. The Rampur of the North and the Sippiparai, Kombai and Rajapalayam hound of the South are the best known—the last is the breed termed Poligar in English. There is also a Mahratna Hound mentioned by 'dogologists'—the only hound I have seen in Maharashtra is the Mudhol Hound, and the only representative of this breed I saw had the wasp-waist and snipy muzzle of a whippet and was pied—perhaps it was not pure-bred, but it was no Indian hound.

It is easy to tell the hound type apart from the pariah, though



Kali and the boar (facsimile).

Professor Studer has said that all greyhound types are developed from the pariah. The skin and coat, the ear-nose-and-throat, and the tail are typically different. Our hounds have a pliant skin that forms a reticulate pattern on the side when the dog bends its body, and small dewlaps on the throat—at times it forms into thoughtful creases over the forehead. The coat is short, fine and hard. The ears are never pricked as in the pariah—the Rampur and Poligar have drop-ears and the others may have a tendency to button-ears. The nose is Roman, and in spite of a stop the dogs are down-faced, as a rule. The tail is rarely raised above the level of the back, and tapers noticeably after the basal third of its length—gay and tightly curled tails are characteristic of the pariah. It is hard to say which of the two types is more ancient, and both may have been evolved from the same stock. It is significant that in crosses the hound characteristics predominate.

FOR THE HUNT

Our hounds were evolved not for the chase of the hare or the gazelle as the Western and Persian greyhounds were, but for hunting deer and boar. In the Government Museum at Bangalore there is a hero-stone to the memory of a boar-hound named Kali that lived a thousand years ago. The placard reads: "Shila Sasana of Krishna III and Butuga II. This is a monumental record which narrates a fight and the gift of the favourite hound of Butuga II named 'Kali' to his follower. The hound was pitted against a boar and both were killed. 950 A.D." Now it takes a dog of the largest size to kill even a subadult boar in single combat, though it fights so hard it dies in the process. The hound in the hero-stone (copied in the illustration) is clearly larger than the boar—and a half-grown boar scales some 150 lbs. I point this out only to say that this means nothing at all.

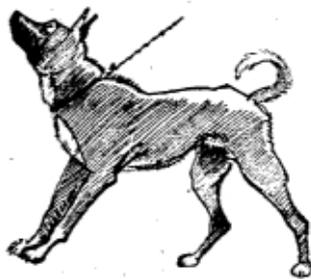
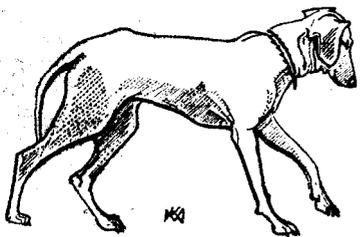
In such monuments to deeds, the figure commemorated is shown heroic-sized—so, in a relief depicting a man slaying a tiger, the

man is shown considerably larger than the tiger! However, there is no need to suspect the eye for form of the sculptor who carved Kali—his boar is proof of his mastery of animal figures. The boar-hound was obviously heavily built and had a domed head and deep jaws. The Poligar, in spite of its size (it is very hard to get a pure-bred dog 24 inches at the shoulder, though the dogs are much larger than the bitches), is powerfully built and has some basic affinities to the hounds of old Indian stone. To suggest that the Poligar is a recently manufactured breed, to which the English Greyhound contributed (as has been suggested in print and by experts) is ridiculous, to say the least.

RAMPUR HOUNDS

The Rampur is the largest of our hounds. Its ancestry has been questioned—it is said that the Afghan Hound or the Saluki (not the smooth-coated and much more Rampur-like Slugh!) was used in the making of this smooth-coated breed, but I see no reason for taking the allegation seriously. However, it is not everyone that likes the colouring and sour-faced look of the breed. Of the Southern breeds, the lean, fierce Kombai, deep red with a black mask and a black line down the back is virtually extinct. The Sippiparai has, probably, English Greyhound blood in its veins—if it has, it has inherited not the best qualities of that noble breed. The Poligar is in a sad way. There are few pure-bred specimens outside its home, Rajapalayam in the far South. The purest blood is much inbred, and an outcross may do the breed good in the hands of a skilful and conscientious breeder. The great difficulty is to get a good specimen at all—one must go to its native haunts and choose a puppy after inspecting the parents to give oneself a reasonable chance of securing a real Poligar, and this is complicated by the fact that the puppies are never offered for money, only as a sign of esteem. However, I can say from personal experience of the breed that anyone who lives in the country (it needs plenty of space, miles and miles of it) cannot own a handsomer, truer or better dog than a Poligar.

I must add that I cannot help any reader in acquiring a puppy, because I have always been asked if I can so help, whenever I have written about this breed, and to my deep regret I am unable to be useful, much as I would like to contribute to the popularizing of a dying and most worthy and wholly Indian breed. Unless you can get an introduction to someone who owns these dogs in a reasonably pure strain, you cannot get a puppy. I lack such friends.



Poligar Hound and pig-hunting Pariah.