

MONKEYS IN RELATION TO AGRICULTURE IN S. INDIA *

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Introduction. Among the various animals which levy their toll on the South Indian agriculturist, monkeys occupy a fairly important status in many areas of the province; this is particularly the case in localities situated in the vicinity of hill ranges or along forest areas. Though the writer has very little experience of conditions outside this province it is probably similar in the neighbouring provinces also since we had newspaper reports of monkey trouble in places like Belgaum and Khandesh in the Bombay Presidency. Though in some countries outside India cases have been recorded of monkeys being trained in farms for useful items of work such as fruit picking, coconut gathering, scaring away other pests like crows, etc., in India so far as the writer is aware, the monkey is only notorious for its destructive habits. Any one visiting places of pilgrimage situated on hills like Tirupati, Palni, etc., can easily convince himself of the acts of mischief and the depredations caused by monkeys to pilgrims in various ways. I noted the monkey trouble even in Puri (Jagannath). In this paper attempt is made to record the writer's experience with monkeys on his small farm and in some of its adjacent villages, all situated along the foot hills of the western ghats, in South India in the Malabar Dist.

The economic role of the monkey in South India. In many of the thickly wooded and hilly areas in S. India cultivators have often to contend against the depredations of other higher animals like elephants, wild boar, porcupine, deer, etc., which occasionally cause wholesale damage to crops like paddy, root crops, sugar cane, banana, etc., but such a trouble is mostly confined to areas far away from homesteads not very frequented and is solely confined to growing crops and is preventible to a great extent. The monkey nuisance on the other hand extends to villages and even small towns some distance away from forest areas and is perennial in nature and the depredations caused are, as most of us know, in other ways, confined not merely to growing crops alone. Nor is the control of the monkey pest found easy for various reasons noted below. The nature of the damage caused by monkeys, unlike as with many insect and other pests which confine their attentions to particular crops or agricultural products, is of a multifarious nature and varies with local conditions and circumstances. Among the numerous human belongings which monkeys interfere with, may be mentioned many growing crops, different vegetable products either stored or exposed for drying in the sun and cooked food of all kinds. In fact their close

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zoological relationship with man's ancestors has developed in them scientific methods of damage known to us as robbing, thieving, housebreaking, etc. They are of course almost entirely vegetarian though occasionally one finds a monkey chasing and killing crabs or small birds. Cultivated crops which monkeys attack in South Malabar include paddy and millets of all kinds, root crops such as sweet potato, *koorkai* (*Coleus*), colocasia, cassava and yam and almost every variety of vegetable grown in South India; they do not however interfere with crops like chillies, momordica, hibiscus or pepper. Often they pull off tender bamboo shoots and feed on them. They cause very appreciable damage to crops like tamarind, mango, jak, banana, pineapple, guavas, etc. Though the writer has not yet come across damage caused by the monkey to coconut and arecanut palms, he has had reports from distant villages to the effect that the monkey occasionally attacks tender coconuts also. In farms and houses stored provisions of various kinds cannot be kept for drying in the sun safely unless properly guarded against monkeys; their incursions occur unexpectedly. Monkeys even enter houses through windows or open doors and carry away cooked food and provisions to the utter dismay of the house keeper. Sometimes cooked food or other eatables are removed even with the containers to tree tops or remote corners of compounds or fields. Sometimes fruits and other eatables are actually robbed by them from little children if the latter do not take proper care. Some of you might have experienced trouble with monkeys in some hill side railway stations like Kodaikanal Road, etc. In these various directions the monkey pest in some localities has become a veritable and perpetual nuisance.

South Indian monkeys and their habits. The commonest monkeys of South India are of two main groups. The first group includes forms with long tails and limbs and having no cheek pouches. These, which are known as *Langurs* or leaf monkeys, are typically arboreal in habits and are only found in thick and well wooded forest areas; they usually avoid human presence and do not go beyond forest areas. They generally make a long howling noise. We have two or three species of the langur in South India and of these the Malabar langur, *Pithecus johnii*, F. is the commonest in the forests of S. Malabar. Except in villages situated very close to thick jungles, langurs do not cause any widespread damage. The second group includes monkeys known as *Macaques* which are the commonest monkeys of the plains. They have conspicuous cheek pouches short and broad limbs and unlike the langurs venture into villages and even towns. The common macaque of the S. Indian plains is *Macacus sinica*. This has a dusty brown color with the face often brown to reddish. This is the typical monkey pest of S. India, and according to Jerdon "it is the most inquisitive and mischievous of its tribe and its powers of mimicry are unsurpassed". This is the species usually taken by village mendicants as show and performing animals. These creatures move about in gangs usually led by a hefty male (patriarch) and each gang usually includes three or four younger male lieutenants, half a dozen females some with their young ones attached to

their mothers and 10 or more of different ages and sexes. Each tribe generally confines its depredations to a limited area; the sphere of their activities generally comprise a furlong or two of a public road with avenue trees, an adjacent hill or two with brush jungle, and a few wet land valleys surrounded by dry areas dotted with homesteads and farms. As though there was an understanding, one gang does not generally trespass into other areas which are often the foraging grounds of other similar gangs and occasional trespasses give rise to very furious combats between members of the rival gangs. One great consolation in connection with the monkey trouble is that these creatures are purely diurnal in their activities and during night time the whole gang rests on a tall and well grown tree like a banyan, mango or jak situated usually in some isolated corner of their jurisdiction, away from human haunts. Soon after day break they start on their foraging expeditions which continue right up to sunset. Usually the leader either alone or accompanied by just one or two lieutenants first reconnoitres the proposed area of attack from a convenient vantage spot, often inspecting the landscape standing erect on its hind legs and then slowly ventures into the area. He is immediately followed by all members of the gang and they start their activities in the area causing a lot of trouble within a very short period. If it is a homestead compound the range of mischief is of a miscellaneous nature. Some polish away fruits from half ripe banana bunches, others tear open jak and mango fruits and drop the seeds after feeding on the pulp while some bolder ones venture into the house and explore the kitchen or pantry. Immediately an alarm is raised by any one, these creatures rapidly make good their escape by moving on to some vantage spot on tall trees. But during the short interval between the alarm and their retreat these creatures cleverly manage to cram their capacious cheek pouches with plenty of the spoil—be it fruit, food, or stored grain. The stalwart gang leader very rarely deserts any of his followers and does his utmost towards their rescue even at great risks. After some time the game is repeated either in the same place or in some adjacent one which is not properly guarded. In this way the monkey is found a very chronic pest practically throughout the year in some of the areas; this is especially so during the fruit season, February to July, and then during paddy harvest time, August and September.

Status of the monkey as a pest and its control. There is no doubt that in some parts of S. India the monkey is found to be a major pest causing very great harm to the cultivator and householder. In the opinion of the writer two or three main reasons which have made the monkey an increasingly important major pest in some tracts appear to be (1) continuous and unrestricted destruction of small forests both in the plains and in the vicinity of hill ranges; (2) gradual disappearance of old avenue trees along trunk routes; and (3) the blind veneration paid to this cunning creature as God's lieutenant and on that account a general aversion to harm the creature in any way. In the older days with the existence of plenty of reserve

forests in the vicinity of villages, monkey gangs generally had the habit of remaining confined to trees in these areas where they were able to get plenty of food and convenient lodgings. Gradually with the rapid destruction of forests these creatures had to find new avenues for their existence. The same is the story with many of the avenue trees along trunk roads. Huge fruit trees like *peepul*, *Eugenia*, tamarind, mango, jack, etc., were affording food and shelter to monkey bands; but with the death or destruction of these shade givers and monkey protectors of the old days, hardly any attention is being paid to renovate old shade giving avenues along trunk roads in many of these monkey-ridden areas. In addition to these two causes is the specific privilege and protection which the monkey has gained from people all over the country; just as in the case of the poisonous cobra, the monkey is held in some religious reverence and in some places of pilgrimage this mischievous imp is pampered as a divine being and even given food by pilgrims as the 'Sacred Hanuman'. Well protected under the cloak of this sentiment the monkey escapes the treatment it rightly deserves and carries on its depredations with impunity.

In the experience of the writer the problem of tackling the monkey pest is one which is beset with many difficulties. In spite of the patent and perennial damage caused by the monkey the villager is afraid to adopt the drastic method of killing it either by shooting or by trapping, due very much to sentiment. The usual practice adopted in the many monkey ridden areas is to drive the gangs every time they are found in compounds or crop fields by shouts and threats, and by throwing missiles often with locally made catapults. There are some specially trained men in some villages whose trained howls and threats the monkeys are particularly afraid of and the help of these men is often sought after by others. During fruiting and harvesting seasons special guards are kept to watch trees and crops from being attacked by monkeys and unless the watchman is exceptionally vigilant the creatures successfully carry on their exploits easily. Very often little boys and girls suffer at the hands of the gang leaders when they attempt to drive these monkeys from the fields or gardens. In some monkey ridden places there are stray cases of domestic dogs trained to drive, catch or even kill monkeys. But due to the fear of killing the monkey by using the dog, the ryots do not generally adopt this method though effective. There is little doubt that merciless shooting down of the gang leader or one or more of its lieutenants will give some substantial relief, but not a single cultivator could be induced to take this step in spite of the serious and perennial damage caused by the pest. Under the circumstances the only possible measure which might be tried appears to be to trap them in portable cages by means of baits and deport them some good distance away—beyond some natural boundary like a river or a steep hill. Of course a good deal of co-operation is necessary among neighbouring farmers since individual ryots cannot eradicate the nuisance easily. In the case of localities where the local ryots are too poor to resort to such a measure it must be

the duty of the village officer or the local panchayat to help the poor folk to get rid of the monkey pest. It is also desirable that the local and district boards which have control of trunk roads should improve the condition of avenue trees by planting and protecting more trees which will revert the activities of monkeys from their present undesirable spheres to their original haunts. The writer will be greatly benefited if any one interested or having had experience in this matter would help him with suggestions in this connection.

EXTRACTS

The Relation of Nutrition to Health, Agriculture and Economic Policy.
Final Report of the Mixed Committee of the League of Nations, Geneva, 1937.
(*Extract from Summary and Conclusions*).

The Adaptation of Agriculture. Improved nutrition must immediately or in a short lapse of time prove of general benefit to agriculture and fishing. Better nutrition means an increase in the demand for foodstuffs; and an increase in the demand for foodstuffs implies greater agricultural activity. Certain adjustments in agricultural production will no doubt be required; adjustments are always required whenever social progress occurs. It would, however, be a mistake to exaggerate the magnitude of these adjustments. The change in dietary habits to which we look forward will be steady and gradual; it will not occur in a day. Moreover the majority of the protective foodstuffs (milk, vegetables, etc) are of a perishable character, so that they must necessarily be produced not far from their place of consumption. As these foods come to play a more prominent part in national diets, therefore, their production will offer a natural stimulus and protection to domestic agriculture. But the energy-bearing foods still remain, and will remain, the basis of the diet: they play an essential role in human nutrition. We have dealt in this report only with European and certain other countries of Western civilisation. If the inadequacy of the diet of the lower-income groups in these countries, even as regards energy-bearing foods be considered, it is clear that an improvement in the nutrition of these classes should benefit the arable farmer; if the world problem of nutrition be viewed as a whole, the enormous scope for increase in the consumption and production of cereals and certain other foodstuffs valued chiefly for their energy-yielding qualities becomes at once apparent.

While national agricultural systems will thus benefit by the growth in the demand particularly for the more perishable protective foods, countries producing for export will benefit, as the primary needs of the poorer classes for energy-producing and less perishable protective foods are more adequately satisfied.

We have argued that agriculture has adapted itself successfully — albeit not without some difficulty — during the past twenty-five years to changes in the structure of demand, in particular where increased demand has expressed itself in higher prices. The adaptation required in the future will not involve a rapid transformation of the whole structure of agricultural systems, but merely the gradual change in and expansion of production to meet the new requirements. Policy must be directed towards helping the orderly expansion of agriculture and its adaptation to the changing demand.