SRISAILAM TIGERS ROAR AGAIN





by: **D.S.Gangakhedkar,** IFS







Author: D. S Gangakhedkar

B.Sc (Osmania), AIFC (Dehradun, INDIA)

1957-60 Indian Forest College

Indian Forest Service (1988 – A.P Chapter)

Retd. On 30/09/1992

The author is responsible for saving of Tigers from extinction in the State of Andhra Pradesh and for the creation of the only Project Tiger Reserve in the State.

Dedicated to the cause of **Conservation of Endangered Wild Life**

and

to My Father

Late Sri **Shreedhar Rao Gangakhedkar**

S/o. **S. Rang Rao Gangakhedkar**

to My Mother

Late Smt. Sow. **Ramabai Gangakhedkar**

FOREWORD

It is hearing to note that Sri Gangakhedkar, B.Sc (Osmania). AIFC (Dehradun, INDIA) had brought out reminiscence of tigers in Andhra Pradesh of his service experiences. As for as I can remember, no forest officer from A.P. had brought out a compendium on the wild Life Conservation in A.P.

Sri Gangakhedkar is a single man army, a lone ranger who during his 37 yrs of long service had done yeoman service to the cause of Wild Life Conservation in A.P. No obstacle had ever deterred him from handling the bull by the horn, from seizing an elephant without papers, snakes being exhibited violating the Wild Life rules or a friend keeping an endangered bird as a pet, his motto was duty first later comes the relationship. In the process he had weathered many a storm, successfully.

The ancedotes of Sri Gangakhedkar narrated in sequence are written as written as witnessed by the author in person in the field in the jungles of A.P. while discharging the duties. The narration has its own prose and style as characteristic of the author bringing out the small nuances of nature, from the kill of a cattle or the charge of a tigress with cubs, the narration is gripping.

I wish the author of the book all success.

Sd/-

Sri S.K. DAS, IFS
Principal Chief Conservation of Forests
Andhra Pradesh, Hyderabad

Dated : 18-10-2004
station : Hyderabad

PREFACE

Historical evidence indicates that Indian forests had 40,000 Tigers before the 19th century. But events and reasons for their alarming decrease to hardly about 4000 only in 1970 could be attributed to illegal poaching and organized shikars and export of their skins to outside India, especially the Arabian countries.

Andhra Pradesh had no viable number of tigers in any of the sanctuaries or forests up to 1977. The 64000 sq.kms of substantially good forests of the State had only stray numbers of the species and as such the State could not notify any area as "Tiger Reserve" under "Project Tiger Scheme" of the Government of India. After the Government's notification of the wild life (Protection) Act, Act No.1 of 1972, the State implemented the Act, with a long delay and only in 1977 they initiated some action by creating a few anti poaching squad divisions in the State to save the Tiger.

In spite of no executive squads attached to the anti poaching division for Achampet territorial areas, I carried out my own efforts to protect the 5 or 6 tigers reported in census of 1975-76 in this division. The protection measures were entirely not the routine type, but were simply an approach of publicity of the Wild Life (Protection) Act, 1972 and its penal clauses widely made known to the peripheral villages around Amrabad and Kollapur extension Reserves of the Division. Camping places were often searched for any poachers or any intending shikars strictly speaking all interior forests were frequented in patrols by jeep and this worked magic in two helpful directions. The one was to know the existence of Tiger and secondly study the various cattle killed locations and tiger movement and their new born on getting the reports from the owners. The next step was that I proposed cash compensation to the victims which helped in tracing and trailing tigers systematically

Factually, no case of poaching ever occurred except the one in which a local revenue official of Achampet was involved. This was detected by me from mere fresh tracks of his jeep moving in an open land. The enquiry report was referred to the Deputy Collector Achampet, who did the final enquiry and got the culprit punished. 5 ½ years of such patrolling resulted in no major poaching activity and this gave impetus to the breeding and increase in the tigers especially in Amrabad reserve.

My posting at Achampet was blissful to me in many ways. Firstly, I could study tiger and its way of killing cattle, bulls, cows, buffalos and even horses and also its behavior when encountered with man. I could jot down locations of kills, water holes and all the beautiful sites like the Nilgiri view point on escarpment of the geological formation with its vertical fall of over 500 feet and the view of the vast stretch of forests below including the view of the lake below. Another interesting point was the eco point discovered by me for the generations of visitors, the third was the 200 feet waterfall in a deep location, the water falling as if from a roof in the deep cut between hills.

All these are a haunting memory to me even after my retirement in 1992, with over 10 years spent this way even. The ghat road from Rangapur to Srisailam over 60 kilometers with over 32 hair pin bends and along elevation changing from 600 feet at start to 3030 feet all the way to the sacred temple, simply is enthralling with views of deep forested valleys and abounding wealth of wild life crossing the tar road makes one feel that life should be spent in such a serene and calm environment. I did spend my 5 ½ years like only five days in this enchanting solace, not ever feeling the missing family life at home in the company of my three sons.

I must therefore, firstly thank God for giving me opportunities to be able to witness various nuances of nature and wildlife and study them as closely as though often I felt that I was a part of the system. My gratitude to Late Sri Pushpa Kumar, IFS, the then Chief Wild Life Warden, who was a source of inspiration and cooperation to me. The confidence that he reposed in me strengthened my resolve to protect wildlife against all odds. He was also instrumental in me getting opportunities to contribute to wildlife protection in the Chintapalli forests of Visakhapatnam district and in being of help to local people of Hindupur area of Anantapur district who were facing menace of attacks by hyenas. He was also the inspiration behind my work in the deer parks at Harina Vanasthali, Shamirpet and near the Chilkur Lake.

My ability to undertake compiling this book is mainly due to the interesting episodes I wrote in the draft manuscript which eventually were read by my close friend and a benevolent colleague Sri Ramesh Kalagahatgi, IFS,the then DFO Narsipatnam in Visakhapatnam district. He whole-heartedly encouraged me to complete the write up

But for the loving friendly gestures I would have never ventured to complete this book even as late as almost 20 years from my stint at Achampet.

My special thanks are to my wife Smt.Pramodini Gangakhedkar for her full cooperation in difficulties in my absence as she bore to raise three handsome sons education for years right from my posting at Nalgonda in 1976, Achampet, Vizag and even at Hyderabad over twelve and half years.

My sincere thanks go out to Sri. Kirti Kumar Deshpande for helping me compile my photographs for storage in digital media.

I thank Sri S.K.DAS, IFS the present PCCF for allowing me the access of library and also for helping me to undertake this venture. Hope his good wishes will carry this work to the hands of wildlife managers and will be of use in wildlife management. .

Hyderabad, 01.01.2004.

D.S.Gangakhedkar,IFS (Retd.)(AP Chapter)
1957-60 batch of
Indian Forest College, Dehradun.
INDIA.

Chapter 1. The Forests of Amrabad Plateau

Achampet Forest Division comprises the major forest reserves of Mahabubnagar district of Andhra Pradesh. The main blocks are the Amrabad reserve and the ex-Jagir forests lying to the south west, Kollapur, that were taken over by the Government after abolition of Jagirs under the Act of the Government of India. The so called Jagirdar was the Raja of Jatrapol, staying close by at his palace built at Kollapur, the Taluq headquarters.

Both these forests are mixed deciduous type with the sprinkling of teak (Tectona grandis) and groves of bamboo (*Dendrocalamus strictus*) and are perfect habitat for the Tiger and associated animals like the Sambar, the Neelgai, Spotted deer, the Chinkara and Chousingha amongst the herbivores and the Panther, wild dogs (*Cuon alpinus*), the Hyena, the wolf and the foxes being amongst the carnivores of this area. Slithering animals like the Python, the Cobras (*Naja naja*), the rat-snake, Russels viper, green snakes are also found in the thick shrubs and grasses in the high forests, especially the deep valleys and along the hills that rise even to 3500 feet above mean sea level.



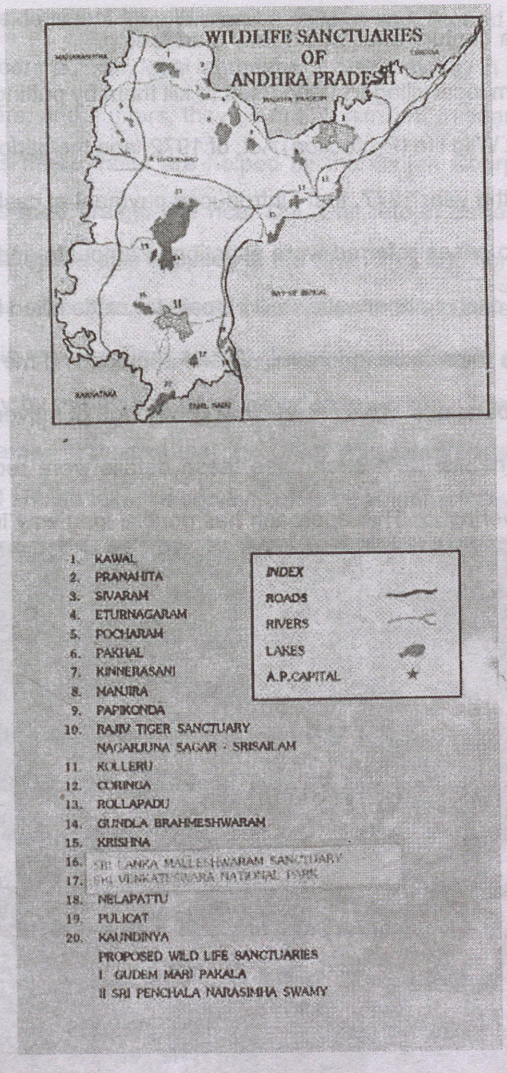
Tiger in Bamboo Forest

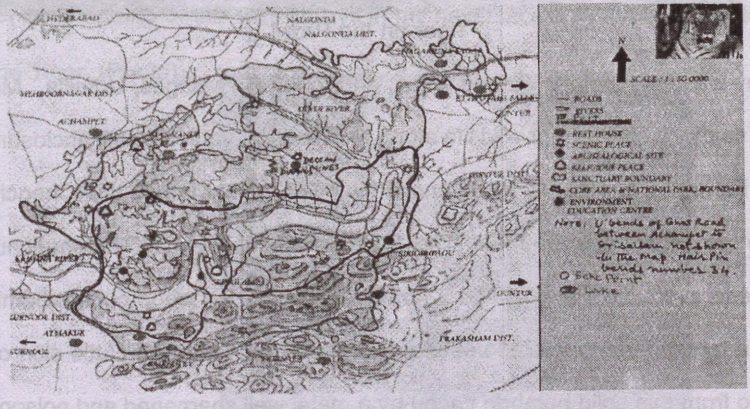
These forests are bound by the river Krishna, on the south and partly by the Dindi river touching the eastern plateau, which joins the Krishna. There are a number of fresh water springs within the forests and their flows fill up tanks like the Rasool Cheruvu in plains, the Budireddipally in the plains. The topography is full of valleys, rising hills, above a general plateau 2000 feet above MSL thus enjoying a cooler climate.

The erstwhile Government of the Nizam of Hyderabad liked the Amrabad reserve as a forest for shikar. It was declared as a Shikargah (Sanctuary) under the then promulgated the Hyderabad Forest Act of 1337 Fasli (1927 AD). Shikars were aplenty and shikar camps used to ~~be~~he organized from the royal rest houses at Farhabad and Mannanur built earlier in 1905 AD. The former is now not habitable though massive structures exist including a high garage like building used for their elephants which were used for riding during "hakahs" (drum beat) to drive the tiger to shikar point. At present it's open grounds are utilized for conducting training programmes in wild life management. The Mannanur FRH is still in good condition and is in use.

Between 1947 and 1956 (the latter being year of formation of Andhra Pradesh State after acceding the territory of Nizam by the Government of India in a Police action), these forests were managed for timber extraction. Nothing much was done for the protection of wild life, especially the tiger.

In the ex-jagir forests of Raja of Jatrapole called the Kollapur extension forests reserve now, the then Jagirdar and his relatives shot 108 tigers and three crocodiles upto 1924, before his death as per the records maintained in his palace. He had adopted a son to look and manage these forests till the same were taken over by Forest Department in 1956.





Tiger Reserve of Andhra Pradesh

But by 1977, Tigers population was almost getting extinct. The Raja's adopted son has a big building housing all the trophies of Tiger skins, Heads etc, located in Hyderabad city. I had a chance to see the cured Hides all neatly fixed to the walls of a big hall there as if it was a colourful plastering done with yellow and dark tan brown stripes with the awful mounts of heads, overlooking the visitor. The grinning Tiger heads with the rolling big artificial eyes added life to this stately exhibition. I was told that the hides of this great assembly were all got tanned from the only expert tanning center at Madras (presently Chennai) run by the Vanningens. They were acclaimed as the best tanners of wild animal hides. These tanned hides last for half a century after which they start fading.

In my attempt to save Tigers from local villagers, who used to kill them by putting poison, like Endrin on the cattle killed by Tiger, I gave wild publicity about Wild life (Protection) Act, of 1972, and the serious consequences of punishment by imprisonment and fine. It was during the year 1977, that I introduced payment of cash compensation to the owners of the cattle killed by Tiger. Initially only two cases referred were sanctioned amounts and paid to the victims. Soon there was wide publicity amongst villagers that cash compensation will be paid for cattle killed by Tiger. The result was that the affected, mostly the lambadas who graze their cattle in forests, started approaching me for compensation. In each case I had to visit the site of kill, study the surroundings. This allowed me knowledge of movement of Tigers, identifying Tigers by their sexes, their hunting and other habits. . In each case these details were recorded by me verbatim in each Panchanama made and in my report covering it. This approach has gone a long way in conserving and protecting this endangered species.



Tiger on the Prowl

My usual journey was to Amrabad Range office, and to interior villages, Udmilla, Maddimadugu, Vatvallapalli enclosure and forests to study the forests for wild life along Mannanur, - Vatavallapalli enclosure 22 km away or on side tracks visits to old FRH Farhabad or also the most enchanting view point through the Chenchu village down the badly eroded ghat road . Here the drop is over 500 feet. There were many usual huts. The chenchu tribes, a dwindling race, living as gatherers of forests products like fruit, seed, honey etc are expert wood cutters bamboo harvesters. They do use Bow and Arrow made by bent bamboo blade seasoned by fire treatment with cattle skin or the splits of bamboo as string and the arrow being from thin solid bamboo tipped by a metal well sharpened and poisoned. I tested their ability to

shoot a point, a tree, 30 yards away. They did perfectly using the bow in a horizontal position unlike what we do the same act by its vertical hold. When I tried it, the bamboo string of the bow caused me a burning wound when it screeched the release. The Chenchus though a weakling type of race of tribes are perfect in the Archery, the art of felling of trees using axe and in honey collection from precipitous rocks where honey combs are made by rock bees (Apis dorsata). They can go without water for long hours in journeys in interiors. They ward off thirst by chewing tapsi gum from trees or some bark even. A few huts in a forest opening make their village. The huts are of a conical shape of Twigs, climbers, tall grass all held at the top. The shape in side is just for a two and a child or so. Around the few huts in each village, they would have small cultivations raised on contract with local lambadas of plains mostly in 50: 50 share of food produce like, Jawar and Maize mainly. Being gatherers, and hunters, they go out by families, in search of edible fruit, seed and mohwa tree floral parts. In Achampet forests these tribes are helped by the Girijan Coorporative consumer society stationed at Mannanur. The society supplies food grains, like rice, Dal, Salt, etc in barter of the forest produce brought by the Chenchus. Honey bee farming boxes are also supplied to the Chenchus and honey purchased from them by the society. The Chenchus have small villages spread out in good interiors in Amrabad reserve.

In the year to follow again several Tiger and Panther attacks on cattle grazing in Amrabad Reserve, resulted in over 50 kills all inspected serially by me as and when reported in person. The Lambadas used to report the kill and I used to move and inspect the same. It passed that the Chief Wild Life Warden issued a circular instructions that for valuation of cattle killed by Tiger, I should take the services of local veterinary Doctor of Animal Husbandry. The situation was that this Doctor was at Achampet and kills used to be atleast 20 km from Mannanur and total distance would be 40 – 60 kilometers for one such inspection. Added to this it was not made binding by Government order on the veterinary officers. Further that they would not leave official dispensary and be away for cattle kill inspection for more than 6 – 8 hours totally. The circular failed in this practicality of the implementation. However not bothering over this, I used to take the first opportunity to go over with the owner victim of the cattle killed along with his followers. It involved sometimes even late evenings or early mornings in remote jungle visits for carrying out panchanama over the kill.

Very often many a state officers including District Collector, Superintendents of Police and Secretaries of Departments would programme to visit Srisailam temple and en route halt at FRH. Mannanur. This visit of theirs was a boon in kind, as I frequented to meet them and explain the need for protection of Tigers and general other wild life. I had many a good collection of photographs of wild animals including the one that of a Tiger male climbed a big tree and holding on it. No one ever, has photographed a Tiger half way up a vertical tree stem and this was the rarest photo perhaps in the World. An enlarged photo of this was always in my haversack only to be shown to VIP's for admiring my protection efforts to save the Tiger. (Photo)



Cattle Killed by Tiger

So also photos of several kills involving cattle head were also displayed to visiting officers for the much and the desired publicity. The effort paid dividends no doubt and even the District Collector was happy.

However, I went on my tours in Jeep to remote areas of interiors. Studied and located water holes and surrounds were inspected to place the number of tigers of the locality, and prepare maps on S.I. sheets purchased specially. There are several springs of water from nowhere. These springs were the local points for villagers to obtain drinking water. The cascades from such source would attract beautiful birds. In fact at one such source, I created a natural pond with continuous flow of water and this attracted special birds like the Green Pigeon, the Golden oriole, the Tree pie, Black headed oriole and many others. Here I used to spend hours together to study these and identify them from the "Birds of India" book by Dr. Salim Ali, the renowned ornithologist from Bombay. On some occasions preying birds like the Kestrel or Serpent eagle or a Buzzard or a Fishing eagle would make steep dive attack from tall trees around.

Chapter II. Little known and Unknown facts about Tiger.

1. Tiger's walk is a zig zag sinosydal one due to its long body portion in between the front and back pairs of legs.
2. Tiger's big bulging eyes on the forehead makes visibility of any moving object over long distances and on sides possible. It is this advantage which is used for planning attacks on his prey.
3. Tigers, in movement avoid stones or thorny plants and skip over by small swift jumps to land across such obstacles.
4. The pug marks of front pair legs and that of hind ones are different in size. But as age advances these appear almost equal sized in very old tigers (about 15 – 20 year age).
5. Tigers simply walk or trot over long distances in search of prey animal.
6. Tigers rarely sleep on one side of their body frame on the ground. Very rarely one comes across full impression of tiger all stretched on soft soil over ground. Even the impressions of their moustaches and head get impressed onto the fine soil on such occasions.
7. They move solitarily or in pairs unless it is a Tigress with cubs which is seen to move only with the cubs.
8. They move on beaten track earlier identified as safe. These tracks can be open paths or Reserve boundary lines mostly. Where there is vehicular movement along paths or roads, they move along edges of the sides of the road, occasionally crossing the road (even Tar roads) at culverts or low points as it is easy to spot any moving vehicle up the high ground.
9. They are not much disturbed on seeing a vehicle nearing them from opposite direction. This is to identify the contents of the vehicles as the insiders are not visible directly due to glass windscreens etc. No sooner they see movements within the vehicle from a point almost at right angles to the sides of the vehicle, they simply move or jump in the opposite direction to avoid confrontation.

10. Tigers have thick paddy under feet called pads including all four toes, latter all individual. These pads are very sensitive to feel any stones, thorns etc. Upon touch to such objects the reaction is spontaneous and the tiger jumps or evades to put full weight of the body along the foot on the ground. They make small quick skipping over such objects and change direction of their movement. The pads get pressed upwards towards the bony parts of foot like rubber against object and before any injury is possible the sensitiveness warns the tiger to step aside. However mud or sand does not scare the tiger from movement on the like surfaces.
11. There is a high sensitivity of hearing by Tigers. This is mainly due to the very high sensitive hair follicles on the front and back of ear lobes. The ear lobes make immediate turn towards direction of sound sensed even when the source is at the back.
12. Tigers lack good sense of smelling power. They do not mind sitting in a muddy pool of water having cow dung as seen by me on the hill touching Dindi River. They do not mind tolerating the rotten parts of kills, though they do not like contents of the stomach and intestines of prey animals like cattle, horse, buffaloes etc. As such they sever the stomach bag with intestines and separate it from the carcass of preyed animal and shift the carcass over some distance away. The carcass shifting usually leaves a trail on the ground as it is dragged each time after a square meal of the mutton, usually it is once a day.
13. Tigers, when alone, start feeding from the prey involving cattle, horse etc, only after they go and drink water after their exhaustion in the attack to kill the prey.
14. The killing of prey animal by Tiger is a neat skilled operation in which the tiger clutches the throat of the animal with his strong canines hold. This strangles to death the prey animal. This, it confirms after watching the animals tail fall lifeless on the ground. One can see the preyed animal's tail markings on the ground after its repeated flapping until it is lifeless.
15. Tigers after killing prey, start their first meal from the hinds of the preyed animal, eating about five to six kilos of mutton at one feed from that side, without any other openings made for mutton. Whereas Panther eats away genital parts of prey like the cattle and hurriedly opens out stomach of the preyed animal and leaves once for all the kill unlike tiger returning to its prey daily for 3 to 5 days even each time dragging the carcass away for small 10 to 30 m distances to hide it under the bushes from other carnivores including the Vultures.



Cattle killed by Panther

16. Panthers are also neat killers of cattle by the canine hold on the throat of the cattle. But wild dogs (cuonAlpinus) kill the prey by 3 to 5 pronged attacks by the elders. They chase the prey with bites at any parts of the targeted animals. This includes its tail or leg or mouth and ears and also eyes, to blind it and fell the prey to the ground. The pack elders first finish their eating of the live hot flesh of the prey. The younger cubs are allowed after the elders have munched the live hot flesh of the prey. In the process each dog snatches parts of the prey leaving practically nothing, except markings on the ground about the snatch and run by the young ones.

Chapter III. Pug marks and the census data

Forest officials have been carrying out tiger census every five years or so by using the tracings of pug marks on the ground or also by plaster of Paris casts in situ collected from these pug marks. I caution the defect in both the processes. Firstly, that round each pad of toe which gets pressed on to the soil of various kinds and conditions, the bushy hair from in between the gaps to pads and in between toes also cause impression on the ground. This impression by hair actually spoils the pug mark all along the periphery of the pad marks of each toe and the main pad itself. This obliteration of pug mark periphery by the hair actually pours in small quantity of soil in dry conditions, especially so, in sandy tract. In muddy or wet soils the mud smeared to the hair in between toe pads, get pulled up changing the dimension of the pad marks of toes and main pad. In sandy soil more soil gets deposited in the impressed pug mark of the pads of toes and main pad. Thus a wrong outline gets traced on the tracer or a different sized plaster cast isn obtained. (Tracings of a practical verification done in I.G.Z.P. Vizag is herewith shown) It is therefore necessary to locate pug marks of the tiger when it has actually moved on a hard surfaced land having very thin cover of soft powdery soil on it. The tracings on such soils would be the nearest correct size of pug mark for a better identification of its home range, its difference with other pug marks of other tigers and of wounds if any.

Pug marks of tigers have different impressions from just born cubs to mature old tigers. The gait of movements also differs with age, so also the strides and the distance between each pair of the hind and fore legs pug marks on same side of its movements. In cub stage there is a wide separation in the pair itself and this narrows down as the age

advanced. One comes across super imposed, partly or nearly pug marks of front legs by pug mark of hind foot of same side. This is found only in mature to old aged tigers. The super imposition could be almost 90 – 95% even showing only a peripheral mark of the front legs top side in pug mark. A mistaken tracing or plaster cast thus can occur during census, often confusingly. Un-trained subordinate traces the foot marks of even a bear and makes a record as tiger's pug mark. This is absurd.

A bear's movement casts a foot mark which even shows sharp but long marks of the nails on front side of the pug mark. The nails even throw out soil on to the pad mark of the bear. The toes impress which are gradually smaller towards outer side marks at an angle and on one side of the thumb impression in the case of Bear's foot marks just as in humans. Whereas there is no thumb pad mark at all in the case of Tigers as they have only four toes to their foot each and these leave toe pads marks in a parabolic or circular looking markings, the smallest toe mark being on outer side of the movement of the tiger. Here also there is difference in pugs of male to female.

The stride of Tiger is measured and recorded as length in between basal end line of main pad of front leg and the basal end line of main pad of hind leg of the same side of the body. Whereas the length between each of the pair of pug marks close to each other and on the same side of the body movements, is a measure of estimates of probable age of the tiger. The longer the separation the younger the age. Super imposition partly occur on the front pug mark by the hind legs pug mark means a middle aged to mature old tiger depending on the overlap being very minor say 50% or more than 90% or so. Exact age cannot be made out. The tiger moves with a flappy thumping of feet in very mature and old tigers. It is believed now that pug mark size differentia is very negligible in mature to old tigers, almost half and inch less overlap on front legs pug mark. They tend to be equal at old age but difference does show off if minutely observed in the angles of the pad marks of toes or separation in them or elongation pattern of the toe pads and main pad of the feet.

Stride measurement has to be on even surface land where the tiger had just moved and a number of measurements along such tracks is averaged out for a record. Tigresses, generally mate, during October to November,(when they are in heat) move about by "marking" along routine tracks. This marking is by spraying particular aromatic fluid through their genitals. These are pheromones sprayed on small bushes and even on tree trunks which when smelt by the male, the latter is impassioned and follows location of the Tigress in heat. The Male when it comes across this marking of Pheromones sprayed by a tigress in heat,. it is easy to photography the male Tiger grimacing in "Fleighman" style at site by a proper hide of self and camera. This style is nothing but opening of the jaws and twisting the forehead muscles for a pretty long seconds right at the spot of marking by the tigress after smelling the scent. This arouses passion in the male and he starts in search of the tigress in heat.

Forest officials and Photographers should not miss such sprayed points along paths of regular movement of Tigresses. The histrionic pungent deep penetrating scent like smell cannot be missed by observant humans.

I have carried out tests that inspite of application of water on the twigs of leafy growth on it where tigress sprayed its pheromones, they are effective. Some mammals like bats, the females do have such powerful pheromones to attract the male. I watched and studied that bats identify edible fruit bearing trees where such pheromones are marked by the females and in flight they can spot the marked trees as such by its aroma in air. Migratory birds like the cranes (Siberian) which fly high over long distances smell the pheromones of theirs along the first flight as the aroma gets lifted high up in air currents and this can be followed flawlessly by the migratory birds in their annual migration for food and breeding. Vultures in the sky also smell the dead animals rotting as the air currents carries the smell high up and over long distances too. This smell brought by air currents is followed in reverse back to its source of origin on the ground. The vultures in search make very high flight hovering in fluent circles and when ones they locate the increasing quantum of the smell, they hop down in fast loops on big tree branches very near to it and finally spot the carcass and attack the same for morsels of rotten meat.

Chapter IV: Cattle prey food and instincts in tiger

The Tiger's way of eating from the kill starts from the hinds of preyed animal. Though tiger kill the prey by its strong bite with the canines held across the throat of animal (cattle, horse, Buffalo etc) it will not open the wounds at the neck of the kill. That is why it is called a neat killer and hunter with a great skill in the art of killing huge animals. Occasionally even two big buffaloes are killed in one place by a lone Tiger. This occurs due to the second buffalo trying a counter attack on the tiger on seeing the first buffalo getting killed. The Tiger physiologically gets bound to attack this second intruding animal and kill it also. This was seen actually happen. The second buffalo was physically ridden on the back in circles twice and finally by a plunge at the throat., this latter buffalo was grounded for death soon. First cum first serve saying holds good in the case of tiger killing two animals in one place due to such accidental happenings only. The tiger started opening of hinds of the first killed Buffalo and did not touch the other buffalo over the next few days as seen by me.

In one case of a she-buffalo killed by a Tigress it was found that the she-buff was carrying a calf in its womb. Here it was clear that the Tigress instinct knew about pregnancy of the she buff. So it started carefully from the hinds of the kill but carefully opened the womb sack to bring out the dead Calf as if it was a Scissarian.. This was a rare study of such wild tigress behavior and is the first of its kind. The full intact carcass of unborn calf by the scissarian done on the she buff was lying on the ground on the second day of kill. It is a certain view and belief that the placenta covering the unborn in the womb is a poisonous substance until it is weathered out as food for other animals, though the mother Parent does eat away such placenta off the body of the new born in most mammal animals. The capacity of the art of carrying out scissarian operation by tigress in this case is astounding. The unfortunate part is I had neither movie camera to photograph this as occurred in the wild, nor even a still Camera on the day of this inspection.

About drags of kill by tiger. Sprightly and stealthy attack on cattle by Tiger is most astonishing to the cattle itself. The Tiger hiding behind a bushy growth of shrubs, suddenly dashes on by long leaps on each foot landing at about 110 inches (9 feet and more) apart and the third landing is directly on the prey animal, in this case a bull, which forced the prey to fall down on the landing weight of tiger wholly on it and a fast speed of roughly 330 inches in four seconds only. Instantly the tiger grapples and holds its canine hold on the throat of the cattle head. After waiting till the tail of cattle stopped any movement and dropped down, the canine hold is released. It is a misnomer and an imagination that the tigers drink blood from the throat of the prey animal. The death occurs due to only suffocation for the cattle and not due to any wounds. It is seen over two hundred preyed cattle heads by the tiger or tigress that there are no any other wounds on the preyed animal other than the four canine held holes on the throat of the animal killed. The tiger does not drink blood in this action.. Even here one has to know differentiation in the canine held marks on cattle kills by Tiger and that of Panther.

The Canines of Tiger are flatter and thicker at the base and hence the wounds, caused on the throat of cattle kill by canine hold are in the shape of longish slit cuts of the skin on the throat and not circular holes. Whereas the Panther has Cylinderical cannines and as such they cause only round holes only and not the longish wide cuts as by tigers killing cattle by their typical canine holds to throttle the cattle to death. Panthers do kill cattle by their canine holds of their throat in the same way as by Tigers. However they seem to be in a hurry and eat away the genital parts like, Pouches of Udders of cows and then open the stomach parts.

Chapter V: Face to Face study of Tigress Psychology.

During 1982 April, the Forest Department carried out Tiger Census all over including the Tiger Reserve of Srisailam, Nagarjunasagar, Project Tiger area in the five border Districts Forest covering parts of Achampet division in Mahbubnagar district. Nalgonda, Kurnool, Guntur and Prakasam districts over an area of 3568000 Hectars of reserve. For this Census, the services of trainees of the Crocodile Institute of Hyderabad were made available, headed by the FAO Expert Dr. Sale.

From camping grounds at the dilapidated Forest Rest House, Farahbad, we started before dawn with pack lunch and Dr. Sale and Trainees and myself (D.S. Gangakhedkar, AIFC, DFO, Anti Poaching Squad, Achampet) all in FAO, four wheel drive Jeep and moved down the ghat and about 35 kilometers and reached Rasoolcheruvu a vast tank inside Amrabad R.F. The trainees had a lunch on at Rasoolcheruvu and we went interiors towards a falls, studies went on till late evening when we returned to Rasoolcheruvu surrounds. That was a lucky spot in anti poaching where we could locate tiger pug marks of the male as also fresh ones of that of a tigress. This is where the story begins. The trainees traced the pug marks on glass tracer and also took plaster casts severally from these pug marks. They all were very jubilant; the pugmarks of tigress were fresh. It was getting nearer to sunset on this day of census work allotted to us.

(This was Saturday). On Saturdays I do fasting till late evening, so the pack lunch brought by me had remained in my haversack till late evening. It was incidental that I could not take bath before we started for census work by dawn. And as such I was unable to open the pack lunch. Rasoolcheruvu, I had visited several times and had noted that there has been a family of tigers habitating a calm life round the Rasoolcheruvu. Usually attacks were on stray cattle moving below the Tank Bund, which has dense tree and bush growth. The canal~~'s~~ leading from the tank were the usual resting place for tigers. The waters of Canal did attract the tigers during hot summer months of March to June first week. Even I had followed up to a Tiger crunching at the last bones of hip joints of cattle head killed and dragged down on the bed of the canal about 300 yards down side of the Tank Bund. Incidentally one could visualize the huge size of tigers in the area from the drag marks of carcass of the cattle head killed. In one such cattle kill approached by me, I heard the whizzing retreating by the tiger, which was making cracking sounds of bones being chewed by the Tiger right in the bed of the canal.

As the evening was setting in and it was time to close down our census survey by our team, I had a startling inquisitive idea that I should leave the team for some time and walk down towards the canal to locate a possible Tiger there as the team had found fresh pug marks of Tigress about 300 yards from the canal in the open patch. Further I had not taken bath to finish my pack lunch, so late in deed. With the irksome idea, ~~So~~ I told the team members and Mr. Sale, the FAO Expert in Wild Life Management., I shall take a chance to spot tiger near the canal and shall be back in about 10 minutes. The idea was also to take a hurried bath in the bed of the canal running with water. Leaving team, I managed to ask the Forest watcher who accompanied to simply follow with me as it was getting dark and the sunset was almost on. We walked by a cattle path about 300 yards and neared the canal Bank. Hence I told the watcher to sit a bit away as I wanted to take a bath in the wild in the canal bed. He obliged and was out of site. Hurriedly I took off my Khaki clothing and shoes and entered the canal bed after climbing its banks. Water was gushing in the canal and one could hear its murmur sound only, in the calmness of the jungle on this late evening. I splashed a few handful of water from the running canal on my body and head as it was not deep enough for a dip.

At this moment when I could see the last embers in the sky and visibility fading very much, I hurried the process of "Sayam Sandhya" while in the canal bed itself. It struck me after this treat, I should also chat the Shloka about Lord Sri Hanuman whom I worship, especially on the evening of Saturdays for almost past 12 years now. I did that too. At this juncture I just had a deep thought that I should be lucky to see Tiger visiting the canal on this hot day (April month). My concentration on the thought worked very immediately as I heard the heavy foot steps of an animal treading on dry leaves. The sounds heard were from the east of the canal bund where I was squatting in small running water. As I strained my neck about the bund high, I saw the animal which made the dry leaf cracking sounds, heard from over a distance. The sound heard was that of the Tigress moving in a small canter like hurried steps. The Tigress was about 150

yards from my position in the canal bed. It was a lighting thought in my mind to see a tiger and lo:, the Tigress was seen moving very close now. Instantaneously made a spontaneous decision to stay back to study the psychology of the Tigress when it comes down to the canal to splash down in water in order to cool down from the summer heat. I just prayed Lord Sri Hanuman to give me strength to hold on firmly at the spot to watch the Carnivore's next move. I could see from about the eastern canal bank, the Tigress moving and which movement made the sounds of leaf crushing down under her feet. A split second later I was struck absolutely at the idea that the path taken by the tigress leads to the canal just within 7 to 8 feet from me down the flow of canal and if the Tigress dashes on to the bank and thence to the water, I could be just within the reach of her paw attack only and I would be killed in this attack , when Tigress sees me in the canal bed seated there. I went on watching across the bund from my squatting position in which I could see the yellow and black bands on the tigress's head move on towards where I was. My first imagination was that if I sat in the same position in the canal bed , I would be an easiest target of first attack, once the tigress just scales over the mound of the canal bank, as I was just seven feet or so from the cattle path entry point to the canal.

I decided, in the few seconds left, to stand up and face the tigress rather than be an easy target of attack. I prayed again to Lord Hanuman to give me enough strength to tide over the situation.

I stood up all naked facing the nature's beauty of naked jungles of green trees and casting dark shadows now and was facing the naturally naked tigress with its full dazzling colours of Yellow and black stripes moving in shade of bushes on and off with its flatter top of its head moving as a float over small lake of bush growth along the trail. Well this was the actual sight and I kept myself cool and calm with controlled breathing even and my naked body faced the naked truth of the witnessing naked fury of a tigress in the naked nature before me. Any one else would have either sped away or shouted at pitch of fear announcing tiger's presence. I had no doubt studied animals in the wild over past four years or more and knew their psychology to some extent. But never had a chance encounter a tiger in the wild. My dare devilness prompted me to take up the decision on the spot to study the psychology of a tiger even when the huge stripped animal was on its way to the cooling down water in of the canal, an usual water hole for it. I did not shout nor move from the spot, but steadied myself and stood in silence to face the devil. At the time the Tigress seems to have not expected my disturbance to her approach to the cooling place which she often visited severally, in summer. Her calm, careless, canter finally ended on the eastern bank of the canal just seven feet away from me where I was standing in cold feet of the cool tumbling waters of the canal. Any one else would have fainted down on seeing the Tigress so face to face and so close. But that was not my luck, A sort of telepathic control that my experience brought the Tigress so near and close distance to me. I steadied my gaze without any movement. The Tigress came on the ramp of canal not knowing ever or imagining the presence of a human being in the usually used cooling place of hers. I was staring straight into her eyes and the Tigress too saw me straight for a few seconds only. If she wanted to attack me it

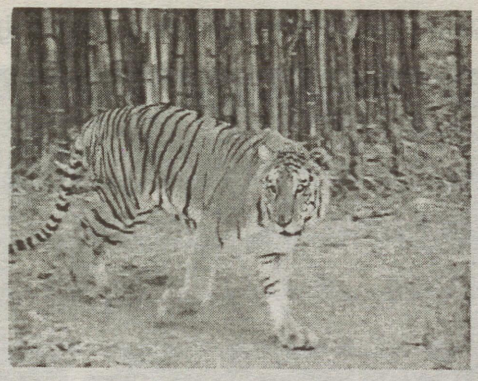
was a simple one springy attack from that 7 feet distance and that too from a higher point of the canal side wall mound. A full view of the tigress and I was staring at her. Her naked beauty in splendid of colors of stripes of black and dark yellow with her stare from her mottled spots and lines drooping from temple and from below eyes and the glisterning flow of moustaches was all a sight offered. I can never forget. The silence and the staring each other instantaneously was over as the Tigress gave a small grunt, like a coughing sound by man. The tigress turned from that face to face encounter or a naked man in front and right at 180° she retreated by her approach path, all the way back to the points about 150 yards away along the dry leaf covered path which she had earlier used, perhaps disappointedly because she could not cool down into the canal waters, or perhaps that, my hypnotic gaze on her made matters difficult for her to choose between attacking a naked human being in front, or her usual sprightly jump into the canal waters to cool down. On finding that perhaps no harm done to her, she coolly walked away in a calm demeanor to find another place to cool down or to be vigilant on the moves of this intruder in her domain. This over, it was almost quite dark with last embers too fading out in the partly visible sky over head. I just became too overjoyed at the happenings in my life for the first time. I wondered whether the tigress could differentiate a dressed up human being from that who is naked fully and getting confused over the sight, it simply skulked away with no challenges whatsoever.

I became so much overjoyed that I just hastily came out from the canal bed and picked up my pant and wearing it carried all other clothes and the shoes in my hands and dashed for the foot path along which I had come. The poor watcher, who was sitting on the ground in the usual way the Tribals do, was surprised to find me only in pants worn on my body. I simply told him in a hushed up tone that I have seen the tigress and directed him to keep silence along the cattle path leading to the opening where we had left the crocodile institute trainees and their Lecturer Dr. Sale, the FAO Expert. However as we walked slowly, we heard the sounds of the animal walking on dry leaf again along the left side of ours. Then doubting that the tigress might have heard us and may well plan a strategy of attack, I started to talk in a lower tone and finally reached the opening where all were waiting for me.

I waved to the trainees to silence them. By, sign I told them I have seen a Tigress and that it is following us and also that we may by chance see her in the opening there. My clothes and boots in hand, I slowly reached the mound of sand and then made all sit in quietude to look for Tigress. But the Tigress did not show up, disappointing all including Dr. Sale. While dressing up I narrated how I saw the Tigress while I was naked. Instantly I created a stanza saying: " I was naked, she was naked, the nature was naked before me, I saw the tigress naked in nature"

Upon this the amused FAO Expert Dr. Sale, simply coined another line saying: "If you want to see a tigress move naked in the nature". Well this is what happened to me in the vast, jungles of the Nagarjunasagar-Srisailam Tiger Reserve of Andhra Pradesh.

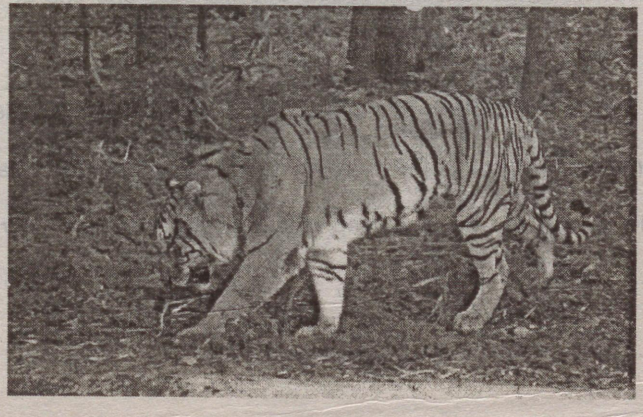
I hope after reading this narration one would definitely take a chance of once in a life time in the company of nature and natural tigers.



Tiger near a Bamboo Clump

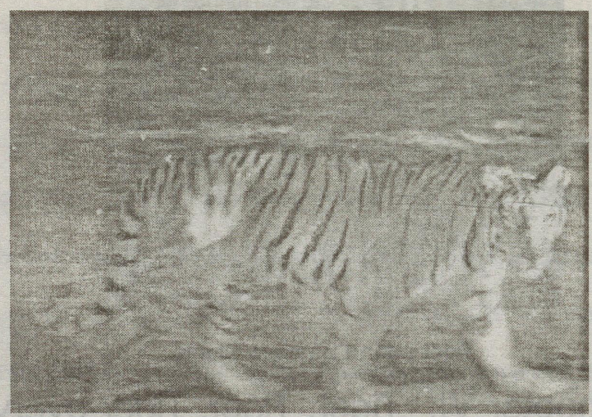
Chapter VI: Tiger, Tiger, Tiger everywhere.

It sounds rather awful– just as in the case of "Water, water every-where, not a single drop to drink". One cannot think over the idea of Tiger everywhere because it cannot be seen so easily. The glimpse can be like the drop of water not available for drinking as one is traveling in a boat in an ocean. This was the situation for some who know that there were Tigers everywhere in the Amrabad Reserve Forests of Achampet Forest Division. But these inquisitive young men from malaria eradication programme of Mahbubnagar District of Andhra Pradesh, wanted a glimpse of Tiger during their camp at Mannanur during the shivaratri festival being held at the famous " Traitir linga" of Mallikarjuna swamy temple at Srisailam on the southern banks of the meandering great river Krishna in Andhra Pradesh. The famous temple is situated just at the bend of the Krishna when it taken the eastern path through the eastern ghats and deep valleys. It is a mighty river now ——bunded and whose flood waters are tapped for the hydroelectric power development at two selected spots. Namely at the Nagarjunasagar with the highest masonry dam at Vijayapuri and the other at the upper reaches of the Krishna at Srisailam about 110 km along its upper course. Actually during the construction of these dams, the famous archeological monuments found at the banks were lifted and rearranged at the highest level Nagarjuna Konda Island in the big span of water formed by the dam. So also the old monumental temple of Srishailam along with the dominating deitees of Sri Mallikarjuna Swamy and Sri Bhramarambha protected by a compound with the big walls of Sandstone carvings was also lifted to the present higher safe level on the southern bank of the Krishna.



Tiger Picking the Scent of Tigress

Mannanur my usual camping place at the Forest Rest House has the Forest Departments check post and these two malaria personell one fine morning managed to quench their long thirst to see a tiger by appearing before me.



Tiger on prowl in the late evening

On the dawn of the day at the check post there I was sipping a special cup of tea before I start my routine for general Anti Poaching work, having been posted at Achampet headquarters as DFO Anti poaching squad Division since November, 1977. The duty was typically dumped on me as there was not even a single executive staff in the name sake "squad" necessary for the division.

So much so, I engaged myself all alone to do my best in the anti poaching work expected. The censes of tigers done in 1975-76 had given the existing tiger numbers at 5 or 6 only. So I decided to move all over and also did surprise checks at various rest houses and forest interiors for any poachers. Villagers on the periphery of the forests of Amrabad and Kollapur reserves, were given enough threats in person that any killing of tigers would mean arrest of the culprit and imprisonment for over six months with fine as per the wild life (protection) act, 1972, applicable in the State of Andhra Pradesh since 1973.

As a sole protector for the wild life, I used to move in Government Jeep almost all over and the nooks and corners of the forests of Amrabad and kollapur. These forests were the hunting grounds of the Nizam of Hyderabad prior to 1952 well known as "Farahbad shikargah". The Nizam's government had even built two good forest rest houses in 1905, one at the interior in the hearts of forests at Farahbad and one at beginning of the plateau at Mannanur village.

The Amrabad forests form a high plateau at about 2000 feet above mean sea level and gently rises up even to 3500 feet near Srisailam on the other bank of the Krishna. The ghat road from Mannanur to Srisailam was formed during the construction of Hydel Dam. The views of deep valleys clothed with high natural forests is really enchanting for any nature lover.

The Chola dynasty kings had their one fort at the top of the Ghat road to Mannanur. The prataparudra Kota is on top of the hill at about 3500 feet above m.s.l. and has a pleasant over view of the plains and lakes north of it. Within six kilometers from the Fort arch like deep vertical edge of the escarpment of sandstone formation has cave like structures with a small temple and this forms the northern entry point for pilgrimage to Srisailam temple through forests.

All along several scenic water spots are located along the stone paved path, over 60 km in length. It is in these paths of forests around Pratapa Rudra Kota and Arch and temple, that I had located the movement of a tigress with just born four cubs during February of 1982. Their movement was almost known to me and the tigress was heard frequently along the reserve boundary at forest check post and staff colony at Mannanur. I used to walk all alone to study the routine movement of the local Tigers around Mannanur FRH in the village outskirts. The two malaria personell approached me and requested that they too be allowed to accompany me to chance sighting of tigers. I agreed for it on three conditions. The first was to maintain utter silence and the second was to follow my instructions unfailingly and lastly they may have to walk long distances with me through the jungle.

It was just about 5 o clock in the morning of 22nd February, 1982, that we started from FRH Mannanur after sipping cups of tea at the thatched hut hotel in front of FRH, this was then the only sort of hotel I had to depend upon. I was not given the personal attender post , but the one was stationed at office at Achampet. Personally no officer would have continued in the post which I held for 5 years almost, with all these inconveniences and I had to cook my own food or simply depend upon a couple of buns and a special tea. Occasionally, I used to join the territorial DFO's camp food as he was a jolly person who used to appreciate my work inspite of the several handicapping situations. Like no subordinate under me., No personal attender and the late annual sanction of the continuation of the division right from 1977-78 itself. During such delays myself and office ministerial staff did not receive monthly salaries for 3 to 4 months even payable from March. My interest and love for nature and wild life made me pull through all such difficulties inspite of the fact that my family stayed at Hyderabad and never joined me due to the education of my children given top importance of my life. Well this sacrifice paid dividends.



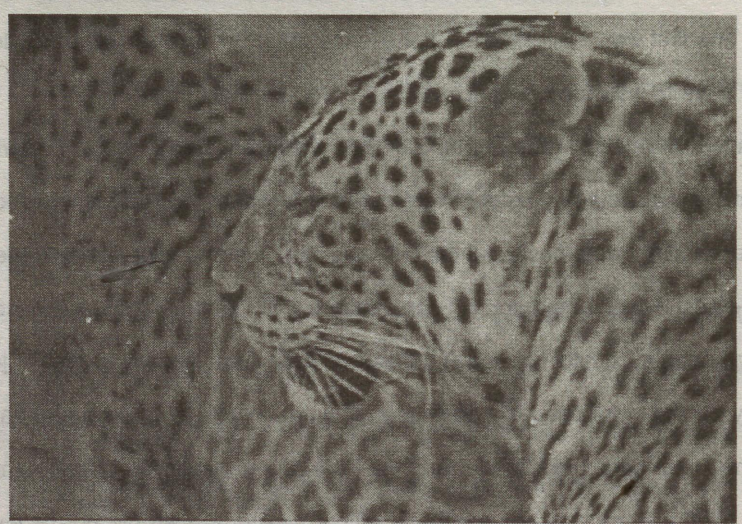
Camouflaged Tiger

Chapter VII: Sightings and Encounters.

Male Spotted Deer with Antlers

My routine trips almost any where in Amrabad reserve or Kollapur extension forests enabled me many a sightings of Tiger.

From Mannanur about just 8 kilometers up the Srisailam road on the ghat road a Tigress of huge size crossed the road. On another visit a pair of Panthers just within 30 feet off the road was seen on my return journey in the evening. Both were very near and clearly seen at the hairpin bend. I saw them through my 10 x 50 Binoculars; the state government had not supplied any paraphernalia of this kind. Their bright golden hues sprinkled with rosettes of dark brown to black, simply were sights/ I can never forget,. But soon I was disturbed by my driver Chennaiah, who simply stood upon the foot board right of driving seat. The two Panthers saw this sudden intrusion and suddenly leaped and crossed the Tar road from the hairpin bend and walked down the valley touching and disappeared. I virtually scolded the driver for his hasty action.



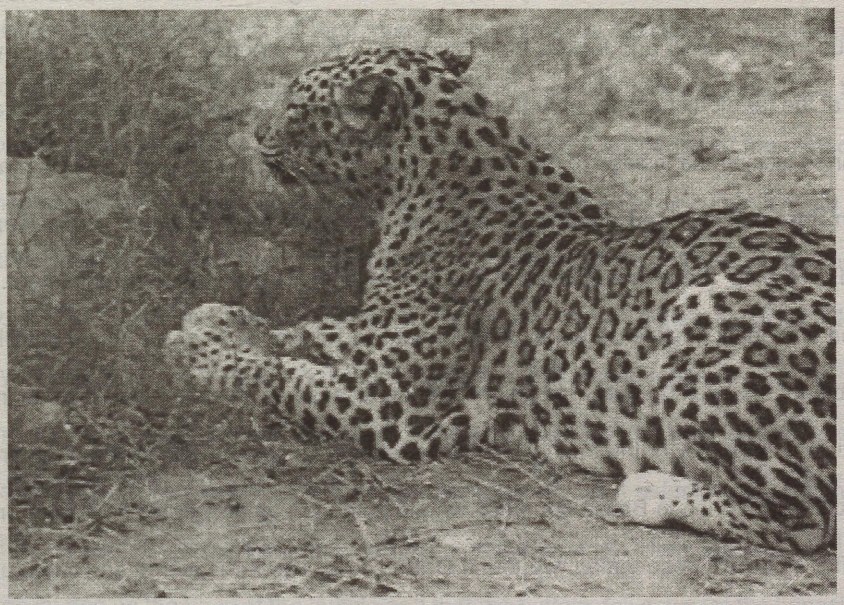
Panther Couple close-up

In one journey in Jeep I was moving along the cross road from old Farahabad FRH to the east of it on a long straight stretch. As I rolled half way, I saw the big Carnivore coolly traversing in the same direction of our movement. My driver and I had a satisfactory sighting. But soon I realized that my Jeep neared the animal very much about 100 yards to be precise. Also that my Jeep's diesel engine would disturb the



Panther's Head – a close-up

animal, so also any change in the gears noise too. I slowed the Jeep to the best possible in the third gear itself. But eventually the sound was heard by the male and he just moved right side in the bushy growth. After waiting for 10 minutes in a hope that it will come out and again follow its intended walk, I drove forward upto the point where the Tiger swerved into the bushes. But no where the tiger was visible on this afternoon. We drove further near an Oota (a spring) near a hutment of the village. Luck had it that in the open grass land with sparse trees we could see a family of Sambhars grazing. It was surprising to see one male as head of family of the Sambhars with one female and two grown up Fawns of almost equal age. This indicated to me that they could be twins born to the Sambhar female. More research could not be done in this direction. But I was sure about the off springs being equally well grown with their physique look alike.



Panther lurking behind a bush

We spent almost five minutes seeing the sambhar family. Later we moved to the barren village of the Chenchus. To my amazement I saw a fawn of a Nilgai helpless wagging his body from one side to other in the squatting position. Inspite of our close approach this swinging continued.



Panther's colorful Rosettes

I then conjectured that it has some disease and so it is unable to stand up and run at our close intrusion. My thoughts wavered as to what step I should take. Finally I decided to take the animal in my Jeep for treatment at Government hospital. Though the thought was instantaneous, I had a stupendous task ahead for implementation. I told the driver, Chennaiah, to cut some climbers to make rope like material so that we could bind the four legs of the Nilgai and lift it into the Jeep. He went away for collection taking an axe I used to carry in Jeep. In the mean while I went on seeing the animals pitiful swinging of body side ways. Soon we both approached the fawn and managed to tie the climber lengths forcing together all the four legs of the herbivore. This step over, now we wanted to lift the animal and put it in the back space of the Jeep. The animal was a bit heavy may be about 50 Kgs or so but we neared the Jeep and with difficulty managed to lift it up into the Jeep and locked the back door. I then stopped my further journey as I had to see that I deliver the animal at the far off dispensary at Achampet. We reversed our journey and started back. It appeared not so simple. Animal started kicking the insides of the Jeep. I was afraid that the binding climbers may break and the animal becomes free from the shackles and attempt to jump out or simply fall from back of the Jeep. To avoid this nasty situation, I started caressing the animal and loo it worked to silence its crashing legs movement. The Fawn even licked my hand as a token of friendly gesture perhaps. It took about an hour or so to reach Achampet Dispensary. Luckily Vet. Doctor was available for his evening duty. He diagnosed the disease as Beri Beri and gave an injection of vitamins and assured us the return to normalcy of the animal. These veterinary Doctors in Andhra Pradesh are not trained in dealing with wild animals unlike the ones in British countries who love the job as also deal all kinds of animals and birds even.

Luckily after an hour's observation, we found that the Nilgai fawn recovered and stood up. We fed some green leaf to it and again lifted it in the Jeep for fear that any stray dog might bite at it and it will die if left at the Hospital. I got it shifted to Mannanur in the Range office compound which was incidentally a well fenced open area.

The responsibility over my actions was not over at this stage. I instructed to the local staff to feed and upkeep the animal till it is normal.

One fine morning again I managed to take the Nilgai fawn in my Jeep and drove a long distance towards Farahabad tank side and released the animal in its natural habitat for future survival. I felt satisfied at this job of human action done safely.

One day I travelled by Jeep towards the eastern flow of the Dindi River. The hill facing the river having good forests is a good haunt of local Tiger. This was summer time. On locating pug marks all fresh I was sure to locate the tiger on the edge of the hill facing the Dindi. I followed the spoor markings for a distance all alone. As I continued I heard some splashing of water nearby. I turned my binoculars and peeped all surrounds. At one direction of the pug marks on ground I could spot the carnivore about 100 yards from me. Evidently it was cooling down in this high located water hole.

On the slightest sound of my boots treading dry leaf, the Tiger jumped away and disappeared. Inspite of this happening I dared to move up to the water spot.

When I neared it, there was awful smell of Cow dung. I guessed it to be of a kill involving a cow. But to my surprise, I saw only a pond of about seven feet diameter all with muddy water spewing with cow dung. The wet pugmarks from this pond confirmed that the tiger left just then. The fact was that the tiger was cooling down in the only six inches of dung mixed stinking water. What a water hole I thought. How the tiger did not mind the cow dung stink emanating from the pond. The observation was that cows grazing locally in hot summer also used to cool down in the pond and their droppings also fell in the pond. Tiger does not mind awful stink of this kind. His visits there were for preying cattle.

I noticed from inspections of cattle kills by Tiger, that the tiger does not attack a herd but maintains a close watch hiding under bushes to take a first chance of attack on a straying animal or two from the herd. The tiger follows routine cattle here reaching forests for grazing and in advance he takes up position. Incidentally I happened to be very near a spot from where came the sounds of a thud on the ground. Cautiously I dared to see what it could be. As I moved to the spot I could see under bushes, the first lurking position of the Tiger with signs of its pug marks on the ground in wet condition. As I moved further I could see only one pug mark at a distance of 110 inches away from the bush. The touch to the ground was only by one leg. The next touch down was another 110 inches measured by me. Here also only one leg touched the ground as if it were a hop-step and jump in the wild. And loo the third landing was seen no where on the ground. I was perplexed as to how and where the tiger disappeared. But astonishingly I found ground markings wherein it was evident that a buffalo struggled hard after falling on the ground. There was no need to surmise except that the tiger's third step landed on the body of the buffalo and that the buffalo fell down at the impact. Further the Tiger held the neck of the buffalo by its ferocious canine hold to suffocate the animal to death. In the process the buffalo struck its tail on to the ground till life spilled out of its body. The tail strikes too were fully evident by the ground marks including a few long tail hair stuck up in the mud. There were no other pug marks on the ground and the buffalo lay dead with the connine holes markings on its neck. The operation to kill can be imagined as fast as a hop-step and jump on the prey itself.

In several other kills by Tiger, the various species killed as seen by me were the cows, bulls. He and She-buffs and Horses also.

Amrabad Reserve has the following enclosures and tribal villages.

1. Vatvallapalli over 300 acres.
2. Sarlapalli about 200 acres.
3. Kudichintalbavi. 75 acres
4. Eaglepenta about 350 acres.

5. Naljama.
6. Udmilla about a 1000 acres, central in north.
7. Akkavaram . On border touching Dindi river on north.
8. Ippalapalli , as part of enclosure with Maredmadugu.
9. Madhyamadugu on the east a combined village with Ippalapalli together about 800 acres.
10. Arimanpenta near Krishna a small one.
11. Ushkaregadi near Krishna river – a small one.
12. Tetlabailu
13. Nagireddypenta just near Nagarjunasagar spread above the dam.
14. Nallajama about 100 acres.

There are several Pentas or grazing pasture open lands. These are (1) Rallabanda (2) Kollempenta (3) Kammarpenta (4) Errabandla Chenu (5) Titigundal (6) Paturbailu (near v.v pally) (7) Narsipenta (8) Tapasipenta (9) Thimmareddypally (10) Pullaipally (11) Appapur and (12) Bhaisapur.

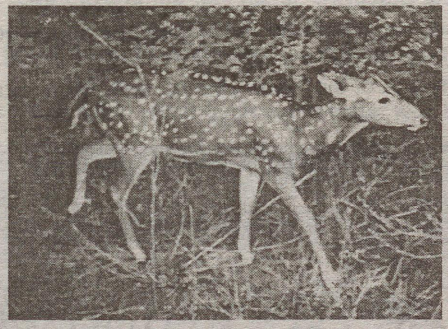
My other visits were to 1. Godown. 2. Farhabad (a school for Children) with Nelgiri escarpment which runs upto Bikitla over 20 km. Rangapur, in plains Agarla etc. The road from Mannanur has access to Amrabad, via. Masaram tank side an avian paradise and thence to Jumgamreddypalli to Padra to Venkateshwaram to Chitlamkunta to Laxmapur then road passes through reserve to reach Udmilla with big enclosure. From here is the famous Merredgu and Ippallapalli village. Further east south is the Madhyamadugu a haunt of tigers and their roars could be heard. From Mannanur on north west is the hill range having Prataparudra Kota fort and also Umamaheshwara Temple which is the north pilgrim entrance to Srisailam temple, banal, laxmapur and Billakal just out side reserve having main access to Rhishila Cheru(Rasool cheru) in R.F. the escarpment running from Gudem, via Nilagiri view point runs upto Bikitla. Here the tiger used to maintain family and walk along the escarpment very often with kill seen by me at view point. Burjugundal has a natural tank with rocky sides and a falls supplied by rain water. Here many a times I came to see Tigress with two cubs strolling along jeep track.

On the south of Krishna the famous spots for Tigers is Pedcheruvu tank and surrounding moist forest including bamboo brakes in the Nandikotkur R.F. of Kurnool division. I made thrice Jeep travel to Bairluty FRH via Pedcheruvu from Srisailam via Domalpenta and temple enclosure and seen the highest view point at 5000 feet above msl. Which over views the eastern bend of river Krishna as also one can see the full view of Srisailam temple complex from this. It is believed, by created story, that the person who can spot the golden top of the temple of Mallikarjuna and goddess Bramarambha, he shall attain "Moksha" or salvation for his soul. Late Pandit Jawaharlal Nehru, first Prime Minister of India, who inaugurated the Srisailam Hydel Project, incidentally was taken to this view point and it seems he saw the

golden top of the temple correctly. His death came off very soon in 1967 leaving the country into the hands of then successor Mrs. Indira Gandhi his own daughter. The other main Reserve south of Krishna is the Markapur RF of Prakasham district. Further north east of the river is the part of Nalgonda district with Nellikal R.F. and Rajawaram RF. mainly grass lands, with little or no forest. In 1982 I was deputed on the census of southern tiger reserve, I could enumerate only 9 tigers against 40 in the Amrabad reserve and 7 in the Kollapur RF. (Ex-Jagir forests) which figures were the result of my strict protection as Divisional Forest Officer, Anti poaching squad, Achampet.

Water holes in Achampet Divisional Forests: As we start from Achampet we come across the vast expanse of Chandra sagar before we ascend to ghat road to reach Mannanur FRH. The Forests of Amrabad are spread on the west of hill encasing the Prataprudra Kota fort and rain water of this hill range drains outside the Sanctuary into the Chandra sagar.

It so happened that I used to drive my jeep along the base of this hill going north wards. It was a chance that a male tiger killed a bull just near the Chandrasagar adjacent down which was the firsh nursery raised by Animal Husbandry Department. The Tiger was evidently from Prataprudra kota. It dragged the kill almost over 200 yards to enter the R.F. line to avoid disturbance from moving vehicles. The Tiger kept watch from top hill side and when he spotted the bull, he descended and killed the lonely stray bull- chandrasagar serves as a water hole for the Tigers of Amrabad nearby hills outside reserve forests. As we climb up the Ghat road and also the Kota we can see fresh water on top inside a rock cavern spring and this evidently was the abode of a family of Tigers as they could locate any prey species down the hill side. At least three times I could see Tiger atop the fort wall walking majestically in the evenings. Here the group of langoor monkeys could also be seen plucking the unripe fruit of Gumpena trees. They are fond of these fruits and can be photographed easily at the top of branches of trees from the Ghat road. Crossing the highest point of the road is ascend. A dense forest area with a perennial brook flowing down west with pools of water on the rocky part of flow.



Spotted Deer Fawn

I liked this calm deep falling river and often spent late evenings or even early mornings. Watching cheetal move in singles and often the great giant squirrels moving branch to branch.-on the Anduk and the silvery white barked tapsi trees as also a few tamarind ones. For those who stay at Mannanur FRH a walk upto this point overseeing the valley below and the Kota uphill was the only time pass. On way a teak nursery opposite a dilapidated temple of the time of pratarudra king (See photo) used to be the point where a tiger family would cross the high way to move down the nallah. Even Tiger sat at the temple surrounds many a times.

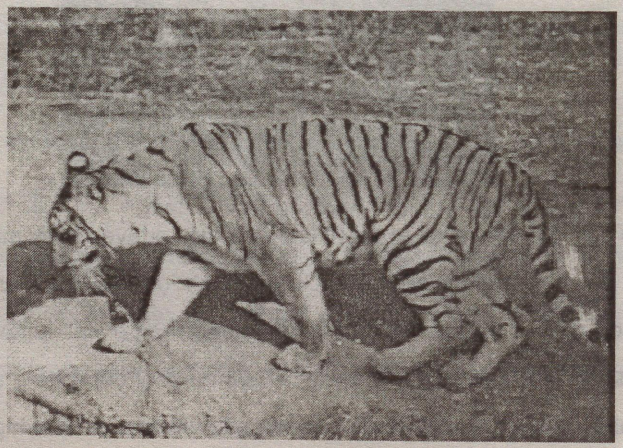


Spotted Deer in velvet

As we go up further along the flowing rivulet, I came across an old well like structure. I then suggested to local territorial staff to construct a mini dam to divert water into this well. It was done and this water hole is now a big attraction to the langoors, sambhars and the panther and the Tiger of the locality. Sambhars calls were heard several occasions in this valley, just 2 to 3 kilometers from Mannanur FRH. In the developmental works after the declaration of Tiger Reserve in 1982 –83 a beautiful tank is created by bunding a nallah just opposite the temple. Such steps definitely attract wild life including the Tiger. However the Director did not introduce fish in this tank as yet.

From Mannanur along the Amrabad road lies dense forest on the north of the road. Here, too, tiger made kills of cattle twice and the same tigers would patrol upto the valley and frequently cross the Hay packing unit of the Animal Husbandry Department and move west ward along the RF line behind the staff quarters of the Forest Department.

Along this RF line once I have photographed ~~e~~an impression of tigress sleeping on the hard ground topped with very soft soil. I think no one ever got such a chance nor have ever photographed a complete impression of tigers body which included even the marks of whiskers of the face (Photo) and also the tail.



Tiger smelling

On the further west along this RF line, I could locate frequent movement of spotted Deer herds along the nallah and also the presence of Bear as per markings in the bed of the sandy nallah.

From Mannanur village just as we enter the Reserve along the Srisailam Road, there is the tank with water spread inside R.F. Here spotted Deer herds move about, so also the tiger and bears. The bears are attracted during winter when the vast spreading lantana trees have ripe fruit all as globules of violets on green background. It was interesting to know that a flock of pea fowls would partake and relish these violet fruits of lantana camara, this latter species is treated as a dangerously spreading type, the uprooting of which is almost impossible even on employing elephants for the same. The bear, especially the female one with a young cub and the pea fowl flocks like the ripe fruit. The droppings from these, animals are also voiletish in colour. I , too, tasted the ripe lantana fruit, the result was the same as in pea fowls.

One December morning I just drove near the tank and walked down along the lantana groves on the side of this lake. A hundred steps I had moved in on the misty morning, suddenly I saw a shady movement of a black animal. Inquisitively I moved closer only to witness a bear standing up right holding branches of lantana camera having the violet and green fruits and nibbling the ripe ones.

In a few seconds its young one appeared on the scene, both being about 60 feet from me. I made a quickest decision to stop going further and slowly retraced my foot steps back to the Road. It was sheer luck. Had I moved further the mother bear was sure to attack me and maul me.

As usual I had the presence of mind to act. I had no camera to snap the Bear in action. Well! there are always a misses between a cup and a lip.

Often I would travel up the ghat road beyond the Mannanur enclosure and once when I climbed the first ghat hair pin bend I saw a Sambhar suddenly going down from the road. I stopped and got down towards this slope. About 10 meters down in clumps of Bamboo there was a thin water source and water was trickling steadily. The Sambhar's foot marks were on the wet soil. Without a second thought I scurried out some soil and made a bund across the flow, creating a small pool then and there itself. The idea was to watch for any wild animals' movement there in my frequent journeys. Yet it was a paying action indeed.

Leaving this spot I reached the high point to reach the big opening on both sides of the road. On the left, to my amazement, about 50 yards away I saw a Tigress with her cub in the water pond over the rocky base of this opening. I had to stop without change of gears of the jeep. I spent a couple of minutes watching the two animals at right angles to me in the wide open area. But a gear was changed to neutral the jeep made sudden type sound and engine stopped. This change in sound made the tigress move away along with the cub. However I had true lucky view and was happy that breeding is on the rise in tigers because of my strict protection.

Once while motoring in jeep away from this spot along the road here straight for over a kilometer, with both sides having good forests, and Bamboo brakes. I saw three water fowls take to wing from the pond on left and they flew along the road just above my moving vehicle. I identified them as spot bill ducks. Further up suddenly one peacock with long entrails flappingly took off from left jungle and flew across over the front of my jeep and crossed into the other side to land on a high tree. Well! Jungle splendor can not be expressed but felt only by the inner joy at such natural happenings.

I found the road a perfect straight one and after about half a kilometer in front, I saw a bull Nilgai in its bluish as-kblack coat standing opposite facing our jeep. Perhaps this animal was very often seen here along the road or on side jungles, all alone, a male bull.

Chapter VIII: Other encounters

Coming to encounters with wild tigers my appetite to see a tiger and photograph it, went on and on as I got reports of cattle kills by the tiger, in Amrabad reserve of Achampet division. This trend went on and I was able to map locations of tigers, tigresses with the cubs etc. and map their home ranges and territories based on the prints of their fresh pug marks, their size and the kills involving cattle. A glass tracer was added to my luggage haversack for tracing the actual pug marks for making a record of their sizes and stride, would indicate the sex and approximate age of the animals.

Once it so happened that a Field Manager of Sirpur Paper Mills touring in Achampet division informed me that he has seen four cubs with a tigress along the climb near the Prataprudra kota fort during the first week of February, 1982. It was cold season just fading out. During rainy season that cubs are usually born to tigresses and reared by them until they can find prey for their food. I was eager to see this heartening increase in the tiger population around the Prataprudra Kota which was a good hide out and safe place for them. The Kota or Fort had a water hole and the fort was high and thick, rubble wall all round atop the hill and had stone paved climbing path beginning with an entrance arch of monolith carved stones opening on to the present tar road of the ghat. It is just 15 minutes walk from forest rest house Mannanur. I used to frequent the Kota and below along the small rivulet which makes its exit into small pools and with blind turnings amongst huge rocks and forests shading it down to a breached dam below near forest nursery in the plains. The Kota is about 2500' above sea level. From forest rest house another walk, which I would usually follow, was the north side reserve boundary line leading to hill range on west and where a nallah flows along its base with 3" to 6" of water flow and with small pools. Here I spent much of my time to study the new findal that of the tTree sShrews, which resemble a three striped squirrel and which are of the same size but having a brown uniform colored body with bushy long tail. I had dug out number of small ponds in the sandy bed of the small rivulet. I used to watch the new find very closely by making no movements while holding an Agfa Isolette III camera in hand and snapped the animal a couple of times. Along this rivulet, I had seen often round here pug marks of the local tigress in her moves also along the reserve

forest boundary line which runs west. Along this line, too, the tigress moved often and crossed the tar road at the check post of Mannanur erected by the Forest Department one kilometer along the north RF line there is another water hole frequented by tiger, bears and birds.

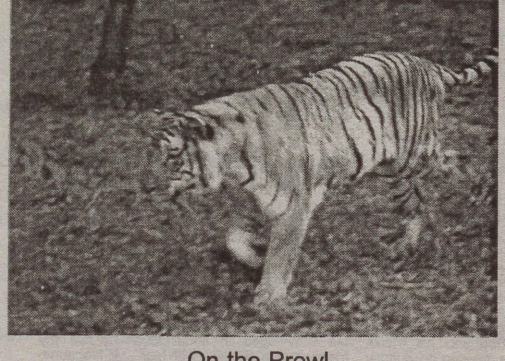


Cooling out in Summer

On 22nd February in the year 1982 I was at Mannanur camp, I sipped a cup of special tea from the only hotel of a dusky hut opposite forest rest house by just ordering it by my usual signal from the check post cross bar where I stood leaning against it. On this fine dawn on a slightly chilly day, the malaria staff was camping at the forest rest house too and had started giving inoculations to all visitors against possible outbreak of cholera etc ensuing the jatra of Shivaratri at Srisaialm. All bus passengers were being so treated on their way to the famous temple. Two of the staff members, whom I never knew, just approached me at the check post bar and requested me permission to join me for a look at local wild animals including the much feared tigress with four cubs which group was seen on tar road even by passengers of Srisailam bound express bus. It was about 4.35 am. We started off all with hopes of seeing the tigress or its cubs. My instructions to them were that they shall not talk enroute and that they shall follow my directions quietly and unfailingly and also walk long distances silently. In our first move along the west RF line over a kilometer from check post and staff quarters I could see there was no sign of tiger or panther movement even as noticeably by their pug marks, up to the water hole of the seasonal nallah. Thence I told that we go to another likely point along the nallah. Here too, in the windy sounds of forest growth, I could hear the high breathing of my follower. He was actually afraid of wild animals, especially, fearing a bear or a tiger. As we entered a trail leading to the flowing rivulet, we first heard sound of branchlets moving from bushes and also the crackling noise of treading on leaf litter. I could see two tiger cubs in the ~~lea~~bushes on each side of the walk. The yellow tiny stripes moved small distances about 10 yards on either side. I silenced the two guests by signs to inform them that small cubs can be seen on both sides within 10 to 15 feet from me. They tried their best to spot them. But I think they just imagined their presence only. The pranking animals were a bit dazed at man's presence. On silence caution to my friends I moved further a few yards along the cattle path only to smell the strongly blood acidic faeces of local tigress all fresh at the centre of the path. Near it, was a fresh just an hour or two old big sized pug mark

of the tigress on the small sandy island in the rivulet. I directed pin drop silence with no movement. This mantra worked and I could show them the animal. The tigress evidently had killed and eaten parts of a cow on the previous day or night. The loose greenish faeces were awfully stinking with bloody and acidic obnoxienous smell now fresh on the ground. The faeces are different in other kills of cattle. The tigress had moved in the same direction as we were moving, and the cubs left were on both sides of our walk. I took out the tracer from my haversack which I carry always loaded with a water bottle, note book and a Tiffin box. I traced the outline of the pug mark, again cautioning my friends not to talk. We then left the point to reach the running brook just 5 yards away and I suggested to cross it only to sit on a rock, where I used to sit during many visits. As we sat facing the approach we just made, I had a passing thought as to why not make mimicry of how a tigress calls its nearby cubs by its typical cough like calls. I acted on this mimicry in the seconds that followed, unerringly, in the presence of the two embarrassed guests both in awe and fear. They were surprised but looked panicky. But shockingly there was an instantaneous response not from the cubs, but from the mother tigress from behind us from the top side of the hillock of the range. From her came the first roar of anger. The roar was quite a distance away, may be about two to three hundred meters and from over the top of the hillock. It was soon followed up with more echoes of roars and the terrifying increases shattered my friends. I knew then the tigress was in an attacking approach in great anger against us – intruders in her domain especially being near her four cubs. As a top caution, I turned and stood up and faced the direction of the thundering roars and then whispered to my followers not to do anything except follow my instructions and that the Tigress was angry. They were trembling, standing like logs. I had now to take a very quick spot decision either leave the spot along with the two or wait standstill to observe and face the repercussions from the wild angry tigress. My mind was for study her reactions and psychology in the few second left before she reaches finally at our mute positions near the brook. We carried no weapons of any in self defense, not even a stick or stones in hand. I had made a bold venture as in trying to learn the behavior of the tiger in such encounters and confrontations. Now we men were in the middle between the angry tigress and four of her cubs on the other side of the rivulet. In between the cubs and all there was the humming murmur of the running water sound perhaps other than the big roars of the tigress. Our ears were just hearing nothing except the roars of approaching 400 pounds of four legged danger now with only a few split seconds were still available to me to take any further steps or decision. I became bold with the only thought that I am also a top animal of evolution with an apt and developed brain and as such why not make a show of my superiority over the animal of lower category. This thought soon brought in the next one that I have a full responsibility for the two colleagues safety too and my action shoud deliver the goods and return them back alive and safe at the Forest Rest House. I pulled up myself and decided to face the tigress. In doing so I prayed my worshipped deity Lord Sri Narsimha Swamy and his consort Sri Lakshmi and also for the strength the Lord Sri Hanuman who is a main deity of energy, physically and spiritually to me. The latter Hindu God has been responsible to give me the right

inspiration, in need of the hour for taking up any arduous undertaking, besides giving me in advance notices of what is going to happen next. In fact my love and whole hearted worship of these deities and the tiger in the wild brought me immense knowledge about nature studies and also an intuitional know how about next actions to be taken. Based on this intuition and my courageous adventures to study tigers, I decided to face the tiger by acting as a higher animal only. On this decision, I told my colleagues to strictly follow my instructions but just being very close to me in this emergency. The roars had already created quivers in the body of the Hindu colleague but ~~he~~ other man a Muslim was stead fast and of strong mental preparation and was not afraid (I learnt later that he had accompanied a few shikar parties earlier). The flying split seconds just continued as the roar became enormously closer and closer and deafening and thunderous, showing that tigress was fast moving towards her cubs to avenge any danger to them from alleged intruders. On all back boned animals such a tendency of protection to their young ones by the mother parent is well known. Now the enraged tigress moved roaring down the hillock and I could just see it emerge from bushy trees growth and take a last stance for a springy attack on us from the attacking distance of about twenty feet only. As if end has come near, I prayed my last wish to my Lord Sri Hanuman to give me all the energies to ward of the immediate danger I was facing. At the peak of my throat's ability to shout I too roared simultaneously gesticulating and throwing my arms side wards in a similar attacking posture. I now remember that the pitch of my vocal cord must have crossed 100 decibels definitely as it echoed in the hilly back ground echoing in the otherwise silent valley of these forests. The posture and the tympanic membrane breaking long vocalization on record surprisingly suddenly had the reaction on the attacking carnivore. Its roar suddenly stopped and the tigress stood up, then gave a low grunt, only in next seconds that followed the tigress turned but was in full view of my accomplices, with low growls and grunts it walked opposite to us and disappeared to the dizzy amazement of my colleagues. No sooner she disappeared, I turned to my friends only to find that the Hindu friend had run a small distance all wet in his pants, whereas the loongiwala was still by my side only.



On the Prowl

I had seen the tigress so close and so fierce. The sight was first of its kind for them which made the Hindu quiver down his spine and his entire body was shaking. I just shouted by action only to call him back and made gestures that we all three would meet the challenge together and he should join us. He did so, tremblingly. He could hardly speak and his

lips and teeth together made a grinding rattle as if struck with high cold one a December night of north India. I gave him courage that we three would face the danger together. Then we quietly took to the return journey, my friend trembling all the way till we reached the check post in next fifty minutes or so. I left them there and walked in to the forest rest house Mannanur. I soon took bath and sat in the back verandah of the forest rest house musing over the past three hours which gave me an introspect of studies on tiger in the wild. But this was soon disturbed in a few minutes only when a large group of people appeared at the back door of the forest rest house and on seeing me requested permission to enter the verandah to meet me. A shock ran through my spine. I quivered out of the choking thought in that, may be that the trembling Hindu was shocked to death with a massive heart attack or so. But to my next surprise, I found that the providence had saved him only to be before me along with the group. Thank God. In fact, I asked them as to the purpose for which they had come. The Muslim chap came forward and informed me that they all came to pay obeisance to me. I simply told them that whatever was done by me was as per my entrusted work of saving tigers and them too. But not bothering about my comments, they, about 15 in number, one by one bowed in reverence and touched my feet individually. After they left I had my full break fast and a special tea from the thatched hut hotel opposite the forest rest house. This incident increased the faith in the people locally that I am sincere to my duties of protection of the wild and was always helpful to them under all circumstances and also in paying compensation in cash for their cattle killed by tiger. Following this incidence at the forest rest house, on 26th February 1982, some of the local territorial staff approached me at the forest rest house Mannanur and surprised me with a statement that my name has come in news papers. Here again I was taken aback as to what matter it could be about. On my persuasion, soon the forester brought a cut out of the Hindu of 26th Feb.1982. When I read it I thanked the now absent malaria persons who made a full and correct account of the encounter with the tigress as per actual and as no masala was added to it. (a copy is herewith) I learnt that both returned on the same day to Mahboobnagar to inform the Deputy Director, Animal Husbandry, but as he was not there, they dashed straight away to Hyderabad and informed the Director. On latter's advice, supplied the facts about the encounter to the news agency. A copy of the news item in the Hindu of 26th February, 1982 read as follows:



- 1982

Miraculous escape from jaws of death

From Our Staff Reporter

HYDERABAD, Feb 25./82

Curiosity to see tigers in their natural habitat brought two young men 'within 10 to 15 feet of death' in the Mannanur forest in Mahbubnagar district this week.

The two and Mr. B. S. Gangakhedkar, Divisional Forest Officer (Wild Life), Mannanur, were sitting under a tree beside a stream when a full-grown tigress ched at them, but suddenly 'changed its mind' after they shrieked at the top of their voice 'out of sheer fright'.

Narrating the harrowing experience to THE HINDU, Mr. T. Nagabhushana Rao, a Government employee working in Mahbubnagar, said he would not have lived to tell the tale but for the "life-saving" advice of Mr. Gangakhedkar — 'Shout at the top of your voice and don't run for life'.

Mr. Nagabhushana Rao and his friend, Mr. Durrani, had a chance meeting on Sunday morning at a tea stall in Mannanur with Mr. Gangakhedkar whom the former knew well. The two accompanied the forest official to a nearby spot where a tiger had killed a bull. The two saw the DFO take pugmarks of the beast and some cubs.

As they went deeper into the dense forest, fear gripped the two men, venturing into the wild forest, unarmed for the first time, as they watched several peacocks making noise and running in fright. This indicated the presence of a wild animal in the immediate vicinity. 'My doubt was simply ignored and we proceeded', although both were too eager to get back to safety.

The DFO, who continued his trek, stopped suddenly and signalled his friends not to make any noise or movement, for some wild animal was around. Sure enough, they spotted tiger cubs — two on each side. The cubs disappeared as the party continued its trek.

The charge: The three reached a flowing stream and sat under a tree when, according to Mr. Nagabhushana Rao, the forest official let out a loud cry similar to that of a tigress calling its cubs. Within a minute, a full-grown tigress charged towards them from behind.

The two, 'shaking like leaf', jumped into the stream and started running for life with the growling beast hardly 20 feet away. The DFO shouted at the top of his voice and beckoned his terrified friends to do the same without running away.

"My clothes were wet with cold sweat, but I managed to shout loudest while my friend was struck dumb with fear", Mr. Nagabhashana Rao recalled.

The DFO's gamble paid off. The tigress stopped abruptly, but shook the forest with her ferocious growls, even as the four cubs joined her. The three stepped back inch by inch to safety — happy, but dazed.

"Myself and my friend have not words enough to praise the heroism of Mr. Gangakhedkar and even now I am at a loss to understand what prevented the charging tigress from tearing all of us into pieces", Mr. Nagabhushana Rao wonders. Perhaps the tigress which feared danger to her cubs, relented after she found that they were safe.

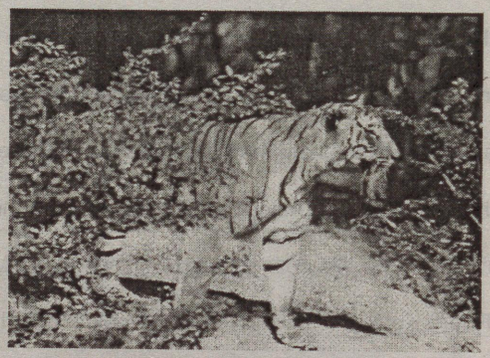
"The Hindu" 26th Feb, 1982

Chapter IX: One more encounter study

It was the first tiger census in progress in the first week of April 1982 – to carry out census local forest staff, batches of locals with experienced other forest officials from Hyderabad too, were to operate. Earlier the training lessons were given to all locals in writing and also orally too for conducting census. It was chance and circumstance that a trainee's batch from the Institute of Crocodile Management, Hyderabad along with their Director, a foreigner and expert of FAO and their lecturers were camping at Farahabad at the dilapidated forest rest house, which building was almost in ruins, located deep into the jungle about 21 kilometers from Mannanur. This rest house was constructed as way back in 1905 during the regime of the then HEH the Nizam of Hyderabad state. The royal family members and relatives and guests of the Nizam had the privilege of stay here for organized shikars for their past time. There was no regular road, like the present tar road half way up from Mannanur to the Farahabad forest rest house. The royal family with all paraphernalia including elephants and khansamas and cooks of the royal kitchen would camp at the specially located camping place. The Institute officials too decided to camp at the dilapidated place with their tents erected in the central open place.

The foreigner, Dr.Sale an FAO expert on wild life Management had two special tents just unpacked. The cozy small tents had special mosquito proof windows nettings. On the day these brand new tents arrived, being a parcel from South Africa, I was luckily present at the Farahabad camp site. We settled for the night halt as census of tigers carefully had to be started from next day dawn itself, after different parties were assorted for the census of tigers and given suitable instructions. The Saturday, I remember well on this day I used to fast whole day and have my dinner in the night after prayers to Lord Sri Hanuman, the Hindu God. Khansamas of the institute then kept themselves busy till late of Friday night for preparing pack lunches for all parties. Each party had to move in different forest zones as planned in advance. Then by dawn all except me as I had to fast till evening, had a hurried tea and breakfast. I remained on fast but had only a cup of tea and picked up my lunch pack as other's acted similarly and we left the camp in the foreign made closed jeep run on diesel, Dr.Sale too was with our group. We descended the ghat road to Mannanur about 21 km.and then further down along the base of the Pratap Rudra Kota fort. It was April first week and fairly hot on the plateau of Amrabad though at 2000 feet msl. Down into the plains, it became warmer and hotter in the day. Our group was to operate around Rasool cheruvu, big natural tank in the plains surrounded all-round by thick forests and on the western side the escarpment rising over 500 feet. Our actual work of census began late in the evening almost round the famous Rasool cheruvu tank. I was a regular visitor to this habitat round here and knew where tigers had been moving. As such I guided the party to a canal from the tank bund. We soon stopped in an opening as we saw some old and some fresh pug marks of tigers. The fresh one was that of the local tigress, a big sized one which once I had come across during inspection of cattle killed by her, right in the canal bed itself. She was then breaking down bones of the kill and as I ventured nearer, she had left

the place. In the canal bed I could see only the hip bone of the cattle still in unbroken condition. The entire other parts had been devoured completely. As our party had found the pug marks of freshly moved tigress of area, I guessed that the animal must be the same. The students of the crocodile Institute soon traced out the pug marks on glass tracers and recorded stride etc. It was explained as to why the pug marks seen were that of tigress and not that of Tiger (male). All the party members had finished their lunch and had emptied the pack lunch packets earlier but to me it was Saturday fast and I then remembered that I had not taken bath too before starting for census work at Farahabad camp. It was nearing dusk and we were thinking of closing down our field work,. on the happy note that they found the tigers on the move here. But then it struck me that I could go to the lonely canal side, a water hole of local tigers and have a quick bath in the running nallah and then only eat my packed lunch, to finish now as supper. I gave slip to the party members and directing a local watchman, who was with us, to follow me, I moved to the water hole, about 300 yards from the forest opening. I cautioned the watchman to stay away a distance to facilitate me to have a bath in the running canal from Rasool cheruvu tank. He abided by my instructions and I went to the canal. Leaving all my clothes and boots, I was soon in the 6" deep running water. All I had to do was to splash water on my body in cups of my hands only and these ways have my bath. After that I finished my evening 'sandhya' and prayer to Lord Sri Hanuman as it was Saturday. At this juncture a natural thought swept my mind that I may see the tigress here now on this summer evening. And lo! the thought became a live drama right from that moment. I heard foot steps of wild animal trampling the fallen leaves about 150 yards away from my bathing point. I craned my neck a little above the side bank only to spot the tigress walking up stately from about 150 yards from nallah, As I was sitting in the canal, I thought that my sitting posture will be dangerous once the tigress appears on the side bund and plunges herself into the cold water as the trail ended just seven feet away on my right on the nallah embankment itself. I could see the tigress's head moving nearer and nearer she not knowing for herself that a man was there in the water hole to be encountered by her. Examining the peculiarly dangerous position I was in, I simply made a bold decision that I shall study the reactions of the wild beast as she discovers or notices my presence at her usual summer resort.



Emerging from bushes

Now the tigress was within forty meters from me still not knowing my presence as I was seated in the flowing water, hidden upto head by the banks of the nallah. Here once again I had to think twice in split seconds before my next step was to be taken, as I could see only the head portion of the tigress moving closer and closer along the trail like a small boat moving in green water. I prayed God Lord Sri Hanuman to give me full strength. Immediately I decided to stand erect facing the approaching devil. I was still lucky that my color of the body mixed well against the dark western jungle growth and I was yet to be noticed by the incoming tigress. The bank of the nallah on the right was the only

protection. I took the decision to stand erect thinking that I may have to face the tigress if it attacks and if I had continued to squat, the tigress, upon entering the nallah, would just be within seven feet from me and could just thrash a paw to tear my body and maul me to death. Up till this point I maintained all quiet. Luck or for that matter my will power had it, the tigress walked up to the right bank just seven feet away from me standing in front of me naked. But I had taken full precaution not to make any kind of movement and controlled my breath too in a slow way to avoid any nasal sound even. She saw me in that naked standing position from the high bank where she had just reached. Water was flowing with a murmur and gushing sound to break the monotony of split seconds as I stood steadfast and straight away gazing at the animal's face and her eyes without even any blinking of my eyelids. The tigress stood face to face before me for a mere couple of seconds only and upon looking at my surprise presence she gave a low grunt and turned 180 degrees and walked away in the reverse direction of her approach. Since I was standing now, I had a full view of the golden and brownish black striped tigress against the dark green of the jungle and brightened by the last embers of the sunset, all along its return journey over the 150 yards again. The only sound I could hear was of her canter crushing leaf litter. She soon disappeared. I had seen a tigress at so close a proximity, this itself made me instantaneously thrilled in the present adventure of study of psychology of the wild tigress. In seconds to follow I was simply too jubilant in the closing in of darkness of the evening. The joy knew no bounds. Just then I knew that I was without any clothes on my body and as such I withdrew from the nallah and made a leap to the trunk of a tree about five yards away to grab my clothes. I hoped that the watchman has not seen me thus at this move. I put on the khaki pant quickly and picked up the balance clothes in one hand and the shoes in the other and quickly walked towards a thicket where the watchman was sitting. With signals and gestures only I narrated to him that I saw the Tigress. He was a little puzzled to find me bare on the chest and with shoes held in one hand and clothes in the other. I whispered and told him in telugu language he knows, all about the encounter quickly and directed him not to speak loudly. I heard again the foot steps perhaps covering our movement now. As I could not stand the test again, I started talking loudly with the watchman and walked the 300 yards along the trail and reached the opening where the foreigner and trainees were left by me. In fact here too, I made signs that the tigress may come in the skirting of the opening. They were all taken aback on looking at me in the half dressed condition. We sat a couple of minutes on a mound but the tigress did not give her darshan as a deity of the locality. I then narrated the whole episode to all. Upon which Dr.Sale quipped a sharp joke of the year. He said simply, that if one wants to see a tiger in the naked nature, one should move naked in the jungle. Well it was a naked truth that I faced a naked tigress while I was naked in a very close proximity of only seven feet. As an after thought I began musing that had I been dressed the tigress would have located my presence from a distance itself and would have avoided me and would have walked away elsewhere . The episode became a great fun past time amongst the census members and the FAO expert in the next few days of our tiger census work and Dr.Sale carried this fun all the way to Hyderabad only to be narrated amongst

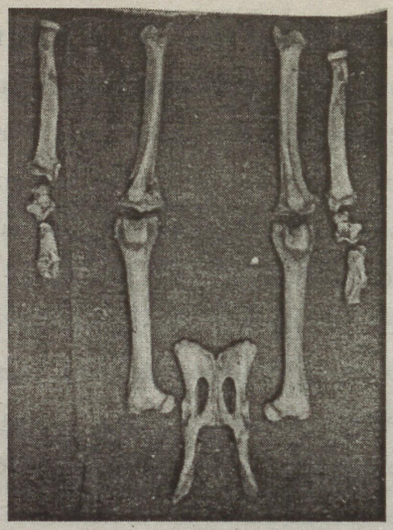
all the forest officers he met including the Chief Wild Life Warden of the State. On my side soon after the tigress had walked away, I felt ripples of internal joy and happiness of this wonderful encounter in nature. I loved nature as a second self and each such encounter brought me additional knowledge and understanding of how I could get telepathic control over natural life, without referring to any bookish knowledge about it. I can never believe now that in nature no individual tiger can become a man eater as they are afraid of man and avoid him. It is all cock and bull story by poachers who just want to get opportunities of shooting the tiger on such pretext. In fact poachers including officials of high ranks in the Mahabubnagar district as also at Headquarters of the State show great interest to see that local public make a hue and cry about attacks of mauling or death as if caused by tigers whereas they are injuries by bears or by hyenas even. In my five and a half years lone wanderings in the territories of old and young tigers too in Amrabad and Chintapalli forest, I never was a prey nor there was any attack on me by any tiger. It looks as though Jim Corbett's "Maneaters of Kumaon" was a well cooked up narration of the form stories about man eaters of fictitious nature only. I can believe now that a man may be attacked accidentally by a tiger and he may die of wounds soon and later some scavenger animals like the wild boar, hyena and vultures may have eaten the carcass only to be mistaken as eaten by tiger.

Chapter X: Tiger not a man-eater

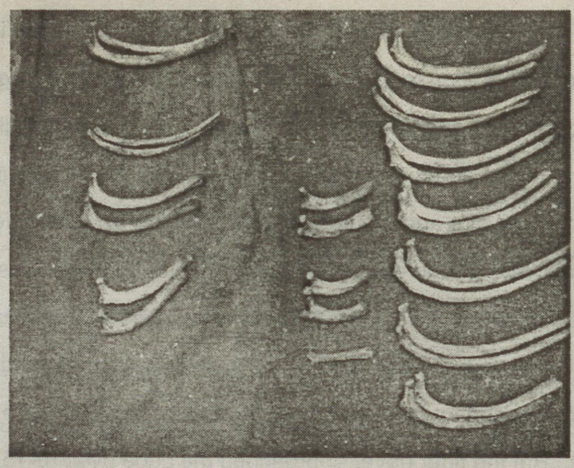
I hold that the Jim Corbett's written books are only to avail chance to shoot the tiger. There were nine human mauling by bears in Amrabad reserve during my entire stay for over five years, there, as DFO Anti poaching squad and I had made thorough inspection of spot studies locating the spoors and foot marks of bear at the points of attack and noted that tiger's pug marks were not found human attacked point. Now my thoughts waver round all these happenings of how majestic this animal is, the Royal Bengal Tiger, now safe from extinction in Andhra Pradesh to my singly handling the anti poaching works for over 5 years at Achampet.

The painted up stories written by the famous hunter the British, Jim Corbett, though written for interest in wild tiger's hunting are actually viewed by me as fake write up on man eaters (tigers) This I believe as per my own observations in Amrabad reserve wherein one could see over middle aged tigers and tigresses now after they were saved from poachers guns during the period between November 1977 to April 1983 by me singly working. Even when I moved to kills as shown by victims whose cattle were killed by the tigers and when we even drove away the tiger from his kill while munching the mutton, by shouts and even by throwing a few stones in the located place at the kill site, the tigers or tigresses have not attacked as even when we were few humans at the close vicinity of the kills. All I could study well was that tiger avoids humans and shuns from some kind of danger to it from human. It needs to be confirmed whether totting guns and rifles by past shikaris on tigers earlier generations tigers had some psychological impact of fear of attack on them and that is the reason that tigers avoid human beings from a distance itself here in Amrabad forests. But here again, I studied another case where a tiger was chased by a 'haka' by 30-50 villagers under direction from Conservator

of Forests, Vizag that a tiger had attacked a tribal who succumbed after, near Chintapalli coffee estates of the forest development corporation in Vizag district. The CF after arranging the Haka through the villagers and tribals, went a step forward and perhaps after locating the tiger in bushes, fired blindly using a .12 bore double barrel gun. It was wounded, perhaps, and or got angry at the shots big bang and the closing in noise of 'haka' men, it suddenly sprang on to another tribal and attacked him and mauled the man and ran away into deeper jungles. Here tiger became offensive because of bullet fired at it and wound caused on there after; oOfficially, I was entrusted the capture of the tiger or kill it as man eater. A month long search to locate the tiger was continued by me in vain. Even a capture cage with strong iron bars to it was brought to the probable prowl area of the alleged man eater and installed and a live bait of a goat also tried. Each day late evening we used to camouflage the capture cage with leafy material and leave the place. This site was along a small nallah bank. But the tiger never approached the cage over 10-15 days. At this disappointment and careful studies made, it struck may brain to invent new methods or ideas to capture it. During that period I had a small visit to the Indira Gandhi Zoo Park at Visakapatnam where I had my office namesake. Here, I learnt that one of the tigresses of the Zoo was in heat. This sparked off a first idea that the wild tiger could be baited by using the Zoo tigress in heat provided the Chief wild Life Warden of the State permitted the transport of the Zoo Tigress to the prowl area of the alleged man eater. I suggested the operation as an adventure, first of its kind, in the world and it was approved instantaneously by the Chief Wild Life Warden, who gave suitable instructions to the Curator of Indira Gandhi Zoo Park at Visakapatnam. Soon a truck loaded with two cages, one containing tigress in heat (I believed the curator's version about the tigress being in heat) and the other with the arranged gate that falls at the slightest touch of a slight weight on its moveable floor. As the gate falls it traps the entered animal separately in this cage and the tigress in the other cage behind this cage, remains safe from any attack by tiger. For this arrangement also we, including the curator and his staff, had to work up camouflage of the cages daily in the evening after necessary study of surrounds to locate if any tiger has paid a night visit near the cage. We found that there was no movement inspite of a month long operation capture by this method. The operation seemingly failed. But the tribals and public were happy and thronged about the activity resorted to by the Forest Department. However, it so happened that there was a heavy down pour for three days and except my jeep moving in the surroundings and daily feed keeping for the tigress in cage, no other activity was possible. As the rains stopped and hill streams scoured, the eroded side banks, flash information came to me that a tribal saw a carcass of tiger on one such bank of a hill stream. I rushed to the spot late noon and saw the nalah bank. A typical stink indicated a dead animal nearby upstream of the nalah. And lo! We found the dead tiger's carcass with its skin covered away by flies of the jungle. The Tiger, evidently tried to save himself by climbing a branched tree trunk close to the ground on the hill stream bank. Part of the body was above the tree trunk branch. The head was quite big size as evident from the skull. I made a big mistake to return for lunch and also to bring some staff. The left back skeleton evidently attracted some tribals. The skull had very beautiful long white teeth, prominent being the cannines. No sooner we returned from lunch, we were shocked to find the disappearance of the marvelous skull.



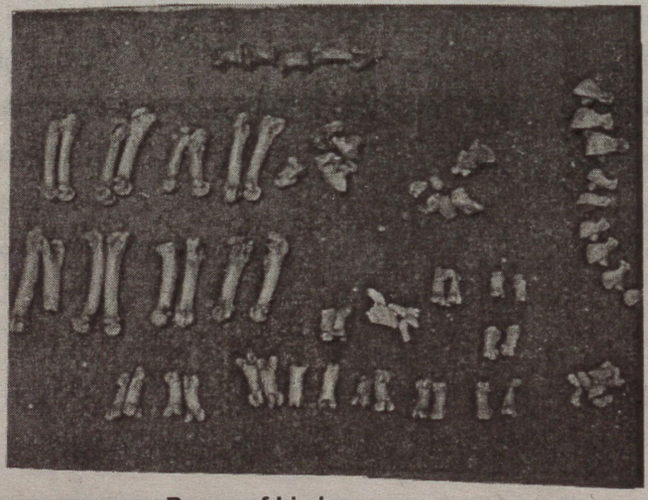
Tiger Bones



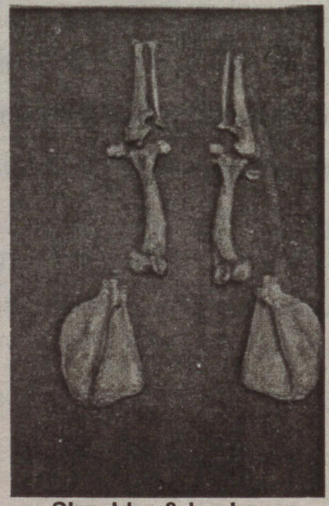
Rib bones of Tiger

This was very unfortunate for me as I missed studies on the skulls of tigers including the presently found carcass – the floods and continuous rains and perhaps the 0.12 bore gun bullet wound fired by the CF Vizag caused septic and gangrene to this tiger and it died at the water spot during heavy rains. There was no attempt to remove the carcass earlier, otherwise the skin too would have disappeared. Due to rains the body remained partly on the tree trunk till the swarms of forest flies riddled most of the skin.

This became useless on this day of detection of the dead tiger. I could salvage the remaining bone system for preservation. The carcass was then carried to divisional Forest officers residence and was buried down in soil pit freeing meat pieces adhering to it. After about 3 months, I got the pit opened up and all bones were salvaged and later photographed after wash. Later in order to preserve the bones systems for future studies, they were washed using washing soda and cleaned with hot water and dried. Soon I gave a coating of French polish to all the bones and preserved them carefully to hand over the legacy to my successor of the anti poaching squad division. Except for the missing skull and nails the bones were found all present but the lucky bones missing.

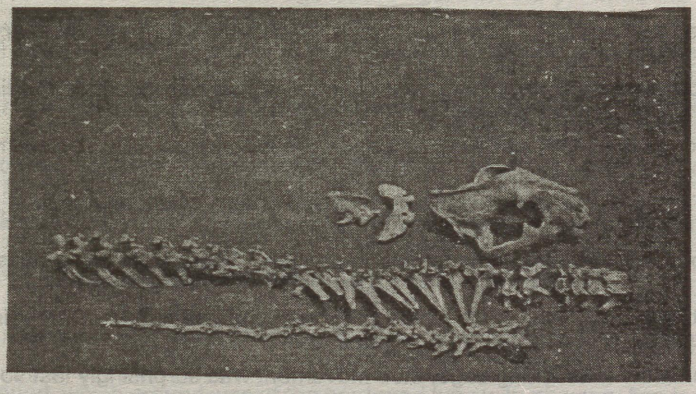


Bones of Limbs



Shoulder & leg bones

This news of death of tiger spread very fast like fire, in the tribal area and the scare which haunted in the coffee estates soon subsided as no more sightings or movement was reported further. This ended the episode of the alleged man eater scare in the Chintapalli tribal areas. People especially the tribals showered thanks to our actions in right time. The tigress in heat was soon restored to its life time home in the enclosure of the Indira Gandhi Zoo Park at Visakapatnam. Luckily a newly built up high walled enclosure offers these caged Tigers some freedom of movement as if they move in a deep valley at the same time these big cats are nicely visible to the visitors of the Zoo from top of the wall and that the animals themselves get natural exercise from movement in the new enclosure. They could clean their claws on the existing few trees as a natural means.



Bone of the Head, Spinal cord and Tail

Tiger cleansing Claws



Tiger

Cleansing Claws

Chapter XI: Experiment to study Pugmarks of Tiger

It struck me soon that the Zoo Tigers were being safely transferred from one cage to another and also to the outside in the new enclosure, why not I make an attempt to study pug marks of male and female separately in the path of the transfers being effected. This idea was soon implemented through the full cooperation of the Zoo Curator and the keepers of the enclosures, the latter being well known to the tigers. The process I introduced was to spread broad plain sheets of paper white or brown on the path of transfer area in between first and third cage, each cage having facility for opening and closing it by push door all with steel bars and safe too. As the tiger male or female duly identified was made to move to the cage across spreads of paper it had moved from its original cage in which soiled light muddy slurry was already spread over, it caused the pug marks impressed on to the plain paper sheets. Within next seconds the tiger is moved to the third cage, thereby leaving the markings of its feet intact on the paper. These papers were soon removed and allowed to dry. A clear picture of sets of pug marks in brown soiled marks on these sheets of paper was thus made available from the imprints of the wet soiled feet of the tigers - male and female separately. Though the experiment was spontaneously successful, the close watch resulted in one more study of the psychology of the tigers. On seeing an altogether new object, that of the spread out paper in the intervening cage, their movement was surprisingly fast so as to avoid the paper itself, which paper to be trampled as it was spread over the entire cage area. The tigers were afraid of trampling the paper – a new object such items are never come across by them in their natural habitat or even in cages. This natural instinctive behavior showed that instincts die hard in all such even carnivores like the tiger, whether they are brought up in caged conditions or in natural habitat of the forests. They try to jump off to avoid such new kind of objects. I have noted this behavior in the forests along their usual trails of strolling along Reserve Forests boundary lines or other paths. Here the pug marks indicated that to avoid stones the Tiger jumped away avoiding the stone itself and changed direction of movement.

My experiment also revealed one more aspect of facts that a false outline is also created by each central pad or toe pads of the feet due to the bunch of hair growth inside the groves surrounding the toe pads and main pad even. These hair are protruding down beyond the pads and as such cause a clear outer second periphery mark on the ground over that of the actual periphery of pads created by the impression of the pads of the foot. These hair around pads are very sensitive for touch and hence tigers (or for that matter other such animals like cats, dogs, etc. who possess pads to their feet) feel the ground by this touch of sensitive hair around their pads of feet and jump off if any danger is sensitized and signaled by the hair. Even the pads act doubly to indicate if the surface trod is normal or dangerous like with thorns or pointed rock etc.with light pressure these announce dangerous path and when no such sensitiveness noted the full pad is pressed down in the second stage. Thus the natural pads are like rubber and the hair around the pads are

delicately sensitive and feel the nature of the ground below in order to avoid dangerous objects. Simultaneously the hair around pads does create an oversized pug mark of the pads due to scooping extra soil in the movement. In mud these cause an abnormally big sized pug mark. In sandy soil the hair around pads causes movement of sand round the actual pad marks and obliteration also occurs partly and over sized pug mark is seen on the sand due to sand dragged down by the hair in the impressed pad marks. On the other hand when the tiger moves on a hardened soil base but having soft fine powdery soil on it, the pads make a clear pad mark each and very minor disturbance of light fine soil occurs by the hair around pads. Only such pug marks should be recorded as plaster casts or on glass tracers to assess the nearly accurate size and approximate age of the tigers on the prowl during census operations. It is not desirous to record plaster casts of tiger pug marks in thick sandy soils or mud or deep fine loamy soils. They give an altogether over sized dimensions and the record becomes un technical and misleading. Any deformities in pug marks thus are clearly discernible in hardened soils with fine soil cover atop of it. Any cuts or wounds can be made out from such more or less actual records of pug tracings or plaster casts of pug marks. These serve useful records in census of tigers. This approach needs to be explained to all enumerators in such censuses.

Interestingly during such a study once I encountered a full impression of the live body of a tigress sleeping on the ground, which ground was of the hardened type with powdery fine top soil. The entire features of the facial impression along with hair of moustaches, the curves of the body touching the ground, the legs and tail all touching with their hairy sides to the ground, the mane and the shoulders hunch all were clearly impressed on the soft top soil. I ventured to take the photograph, indeed very rarest ever, and recorded it in my album. One day it will be published on a larger dimensions and presently only a small size is printed in this book. (photo). The site of this top valued impression was along a reserve boundary cleared line (20 feet wide usually) in Amrabad reserve touching Mannanur village enclosure. Actually it was the enclosure line along which the tigers used to move and cross our forest staff quarters and the check post, frequently, to move towards a natural water hole on the east just abutting the village to its north. A kill or two were also recorded along this line.

Tigers like to walk along paths like footpaths, cart tracks, road boundaries and extraction roads in forests reserve boundary, cleared lines. Definitely they never choose to walk along the trails of their prey animals like the sambhar, cheetal, chinkaras and neelgais and even that of domestic cattle moving regularly into the forests for grazing. They usually ambush stray cattle head or two together but nowhere have they chased their prey over long distances to pin them down. These movements of tigers precisely indicate their home range over which they survey for prey. They are not afraid to move along such beaten tracks and take up these tours almost regularly. They even mark any crossings or turn points by urination and scratchy spoor marks. A tigress in heat sprays its pheromones from anal glands on such turn points on bushes or rocks.

Chapter XII: The calls of Tiger

Tigers call vary at different occasions and needs of the animal. An echoing call through thick jungle and continued for some time and repeated is only to call the cubs to announce that a kill is made and that they should come and share it. This is a loud "Aanhhoo" ending after repeating with a Auhn, Auhn, Auhn. A wailing call is one after a long search for its cubs, the tigress visits at the spot where she left her cubs and gives deep growls of "Aaanoohh" heard over long distances. While lazying a tiger gives a yawn type call sounding like trumpeting down "Aaaaaooh". When calling cubs the mother tigress issues a coughing type call repeating three four times like "ehhh" ehhh' ehhhh'.

I was myself surprised when I tried imitating this call for calling cubs by the tigress on 22.02.1982 about 2 km.from forest rest house Mannanur and on west north west of it near a running brook. Sooner the tigress heard this imitation, she got angry and came down a big hillock with thundering growls in a mood to attack the intruder as her four cubs were near where we sat at the brook. The thunder of the growl grew louder and louder as the tigress neared us. We were three, myself and two from Malaria department and when she spotted us and was ready to pounce on us at a close distance of 6-7 yards from us, I made a huge and long shout swerving my hands in the air in an attack position of a higher animal. Two of my followers closely standing where I stood, were simply aghast with fear of attack by tigress and of my counter shook them both. One of them was already wet in his pants and shivering heavily. My gestures of a superior animal proved success, the tigress suddenly stood up from her attacking crouched position and made a low grunt of 'onh' and turned and walked away her original approach. The aghast four eyes of my followers simply were got fixed fully dazed at the sight of the tigress. A grunt of the kind heard followed a satisfaction that of danger overcome is evident. Usually tigers do not make any sounds other than narrated above, but yawns by them do produce long drawn sounds and while drinking water from ponds, a slurping type sound is heard with every lapping of water by its tongue.

A typical retreating reaction after the male tiger has had one of its coitus with a tigress in heat, is with a shrieking and hissing vocal sound and this is repeated a number of times during the coitus game, which can go for half an hour or more even along a lonely spot like ravine or a nallah bed. The male tiger holds the female's skin around neck with his jaws and shrugs off with its release as soon as he has finished one such coitus and moves away from the tigress. One can hear these shrieks and cooings over a kilometer distance even in the silence of the jungles. Usually a nallah bed suits their coitus for lovemaking and the tigress often moves up and down the nallah bed in the process several times, the hissing repeated at every separation in this coitus can be heard for a very long time and in which process perhaps any intruder remains unnoticed by the couple. It is guessed that each coitus is painful for both and the male jumps away screamingly. The cubs are usually born in January – February and during last rainy days. The rainy season is favourable for births as the cubs get natural protection as intruders in jungle are very minimized due to rains and the reach to such points where cubs are delivered are quite remote interiors near rocky hide outs and the thick jungles. Gestation period

though not studied by any observation in nature, it is learnt to be around 90 – 105 days. Usually births are in pairs, two or 3 pairs at delivery. This number is a safety for the future of the breeding cubs as one pair each (male and a female) separate out after they become fully capable of carrying out a hunt on prey species safely and thus become directly independent of the parents couple. Mother care for the new born is in isolation against the male parent who leads a temporarily separate existence but all do converge at a meeting point reached from opposite directions. Tigers, it is observed, lead a family life even when cubs are born to the tigress. The tigress feeds the young siblings after a stage of teats feeding is over. The feed consists of regurgitated meat by mother tigress. Tips of fresh grass especially darbha grass is swallowed by the mother and she vomits out the semi digested meat before the cubs and the cubs lavishly attack the food.

I have come across a kill involving cattle killed by a mother tigress that had three growing cubs. I noticed that the mother sits quietly at a small distance from the opened out hinds of the cattle head killed and allows the cubs to attack the meat as food. They snatch a pound or quarter of a pound of the mutton of the opened out and move away to avoid the disturbance from each other. In doing such snatch and run play much of the ground cover of grass and weeds gets uprooted in patches and expose the soil. The three cubs in action thus actually cleared a 9 meter diameter area al round the kill. Once this fulfils their appetite the mother tigress enters the area and makes her own meals of 5-6 kgs.of mutton of the hinds first and then drags away the carcass to nearby cover of trees and she leaves for drinking water along with the cubs. This care taking of cubs by the tigress is usually done away from the male parent to avoid clashes with cubs.

In this breeding process one can see the tigress moving followed by the cubs from behind. The just born cubs are physically picked up in the jaw holds of the tigress and lifted to other safe places after they are just born, a usual animal instinct.

This particular aspect was personally seen by a shiva bhakta who vowed to visit Srisailam temple all by walk from Bombay (Mumbai) now). He met me at Forest rest house Mannanur in the winter of 1979 and requested me to allow staying for food and then he would move for his trek to pilgrimage. As it had grown dark I advised him to desist his move to the next day dawn. He agreed to this on knowing that the highway runs through high forest over 56 kilometers and no halting is possible in the mid of the night as there was only one village almost half way namely Vatvallapalli enclosure. He got up by 3.30 am. Next morning and initiated his walk..

The fat Gujarati with his fat bulky and heavy feet moved after a breakfast involving only 1 kg ripe tomatoes, which he had purchased on way. He told me he ate nothing other than such raw food all the days he traveled by walk from Mumbai to Mannanur (a distance of over 650 kms.) I was surprised tc note this and also that the middle aged person was almost like oozing blood from his fair red skin and face. He had brought with him dry papad-like chapattis

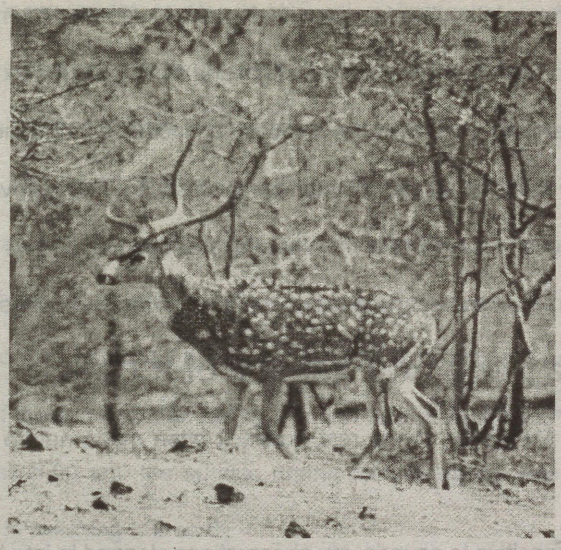
called "kharotis". He informed me that these are already roasted as such and can be retained as such for about 6 months and are very useful as food when cooking food is difficult. I tasted a few kharoti and enjoyed this as breakfast.

He left the place and entered the forest at the northern part of the only tar road to Srisailam. Armed with a heavy bamboo as a support in long walks he has undertaken and perhaps for his own personal safety, the lone pilgrim left Mannanur in the darkness about 3.30 am or so. His effort of undertaking about a thousand kilometers by walk between Bombay to Srisailam in Andhra Pradesh deserves all praise. By about 5.00 am or so I too ventured out in my jeep towards the same route. I was stunned to see this pedestrian pilgrim returning back at a point on road about 6 kilometers from Mannanur. When asked why he was returning, he said he saw Goddess Bramarambha the chief deity of Srisailam, crossing the road in the form of a Tigress with cubs. He narrated further that he saw the tigress cross the road three times and at each time she had a new born tiger cub in its jaws. Firstly, he did not expect such a sight so early, soon after our talks on the subject at the Forest rest house. Secondly, he was all the time walking in fear that a tiger may come across and may kill him. Fearing such imaginative hallucinations, he simply stopped his journey there itself and excitedly and with fear, decided to return to the forest rest house only with the idea to undertake the journey after day break visibility. I then told him that he is most lucky and his pilgrimage is now fully awarded by the Goddess of Srisailam. Of course, he was enchanted and became very happy to resume the journey, without fear. Nature blessed him with its glorious show, all when he was alone that too on foot in a deep jungle road. The three cubs lifted one after one by the mother tigress, were just a few days old indicated that tigers are breeding briskly. I too became joyous on this incident and once again after about two months when these three cubs grew up as they were again seen by my third son and jeep driver both in the jeep, parked just at the enclosure line of Mannanur village. I had left them there and walked some distance along the eastern running Reserve boundary line of the enclosure for verifying if any pug marks of tigers are fresh there. The driver, by name Chennaiah suddenly appeared along the line and informed me about the sighting of the grown up tiger cubs on the road. I briskly walked back to the jeep and saw the three cubs just crossing the tar road at about 150 yards away from our jeep. My son too became very joyous as he could think of narrating the sighting of the three tiger cubs to all relatives at Hyderabad on his return. My son must be very lucky child. This all occurred at dusk on that day but the three cubs were clearly visible to the boy and to me and also the lucky driver Chennaiah.

A little distance away we covered beyond where tiger cubs were sighted but they could not be seen again, disappearing perhaps at the sound of the diesel engine of the jeep.

At the same reserve boundary line we used to see herds of cheetal frequenting surrounding bamboo breaks at lake inside the enclosure of the Mannanur village, just abutting the forest line. During rains once we saw all flies taking off from a spot raised mound as an ant hill. As I came near I could see a monitor lizard right atop the ant hill from where these drones flew out and which were the square meals to the spring like tongue of the Monitor lizard that went on ticking

them one by one. In the study of habitat of tiger one can thus enjoy nature's variety of animals and their roles in its environment.



Male Spotted Deer with Antlers

Chapter XIII: Nature studies

On several occasions during nights I traveled in the deep jungles of Amrabad reserve. A few night travels in jeep gave me glimpses of natures gifts to man. Once the myriads of glow worms flying like blinking stars made me very happy. But being a close observer of nature myself that I am I ventured to count the blinks of the two types of glow worms I caught. I was shocked to note that one glow worm gave 72 blinks of its efflorescent light from its hind portion of the body and whereas the other a larger glow worm gave 144 signals of these flashes per minute. This observation may not strike to a normal person but it did to me and the result is that the two were two different species of glow worms. I was thrilled at this discovery which led to thinking whether the glow worms have heart beats of equal number as the flashes. Huge swarms created natural light over trees of ACacia instia a thorny climbers group all flowering. Interestingly the double colored pink to violet flowering of this climber has a faint but aphrodisiac smell and it smells all-round such thick bushy spreads of the climber during flowering. Merely from the number of glows per minute from these two species of glow worms, I discerned that two species surely exist. The twinkling charm of these glows in pitch dark nights is a scene to be admired as myriads of small stars against night darkness. I was curious to know whether the insect actually has any glowing substance. To know this I killed one and found to my amazement that the thick viscous fluid in the body of these small insects does contain fluorescent radium and even after death the fluid emanates the fluorescent light of blue in violet color for some time at length. Glow worms enlightened my knowledge by their splendor. Tribals do collect large number and carry them as lanterns being kept in light cloth bag. How wonderful is forest and nature itself. I thank myself for having enjoyed the company of nature and forests all the five and quarter years in the capacity of DFO anti poaching squad Achampet. For all these reasons of increasing my knowledge about nature, forests and wild life, I sacrificed other comforts usually enjoyed by a DFO having staffed both executive and ministerial under him and contractors of various

leases. I could buy fresh honey directly from tribals while moving in interior forest and villages. In the process I came to be known as 'puli dora' meaning tiger officer. Literally a fear psychosis was also created by me amongst the local villages that I would book them for killing or poisoning any tiger or other animal and send them for six month jail after prosecution. As the protection was continuous for over five years, the tigers population increased from mere 5 or 6 in 1975 – 76 to 45 tigers by 1982 census, though five were found dead and their full carcasses were fully recovered by me. This is the first time that dead tiger's carcasses were ever recovered in the past several decades in this historical 'shikargah' of the erstwhile Nizam of Hyderabad. They are now in departmental custody the skins and bones even.

Chapter XIV: First call of a bird

While I used to stay in camp Mannanur, forest rest house, I often made nature studies on plants and wild animals and even birds.

Since I was an early riser and sensitive to sounds, my observations stepped in into the dawn earlier at the forest rest house.

This time it was a cuckoo and also a red vented bulbul and the observations spanned over two months of May and June and again, in winter February to April, December and November. The male and a female koel (Eudynamys scolopacera linn) or kokila, both had been resting daily in the nights on the tamarind tree in the compound of the forest rest house. I became rather conscious of their frequent calls and ventured this study into it.

Before dawn daily I used to hear a disturbance due to call at 5.15 am in the months of May and June. I could hear these calls almost regularly daily and read the timings as 3-15 am .and again at 5.15 am.

I began musing over this regular calls by the bird, especially noting that at 3.15 am it is quite dark and that at 5.15 am used to be the sunrise with rays of the rising sun falling on clouds if any making their borders all glittering with the usual reddish golden hues and when no clouds, only the radiant brightness of goldishness of the eastern hemisphere region.

It became my second habit almost, to wake up at the first call of 3.15 am due to the call of this bird. Whereas the cuckoo call was again heard at 5.15 am, it used to be followed up by the small and beautiful bird namely, red vented, bulbul at 5.30 am, a little later than the cuckoo's call. Both the birds were very punctual in these calls. The cuckoo remained silent after its first call at 3.15 am and one could hear another cuckoo responding to this call from a far off tree. This went on and on. The bulbul was very punctual at 5.30 am but I did not catch any response by other bulbul. I could not reason out in this latter bird's habits.

Scientists had already notified that there is a shower of x-rays and ultra violet rays of the sun, falling onto the earth before the sun rise daily, though they may not be perceptible to the humans in general. I gave a second thought on this fact. The earth's atmosphere including the stratosphere surrounding it, absorb the sun's rays on the surface and get

refracted and thus enter the stratosphere and finally land on to the earth's surface. This happens for the direct rays. But before the sun rise, the earth's movement, so also its abounding stratosphere with it latter receives angularly the rays of the sun and the surface of the stratosphere thus reflects these earlier rays first. These reflected rays of the sun, cause what is known as 'the total internal reflection' in the stratosphere and these totally internally reflected rays reach earlier to the surface of the earth. The time lag is there between these rays and the direct rays of the sun after refraction reaching the earth. I could surmise the coincidence of this time lag as the cause of the first call of cuckoo at 3.15 am and the second call coming at 5.15 am. Just at dawn when sun can be seen across the horizon.

This observation and my analysis of the same, goes to prove that the cuckoo bird (Endonmys scolopacera) is sensitive to ultra violet rays of the sun and their falling on earth timings in different seasons as timings are seen to reach upto 3.15 am. Its landing and 5.50 am. the sunrise during rainy season, when the clouds and water vapour in the atmosphere cause the delay in reaching the earth.

Further, observation on the red vented bulbul indicates that this bird does not have sensitiveness to x-rays or ultra violet rays of the sun, as it gives its call only 5.30 am and in rains and winter at 5.50 am or so and not earlier as done by the cuckoo shrike. On cloudy dawns or sun rises, there is delay in their calls due to rays getting obstructed by the clouds in the atmosphere.

In 1979, May month there was a cyclone unprecedented in the plateau of Amrabad and it was seen that before actually the cyclone was felt, the red vented bulbuls simply migrated away from Mannanur from early March to June period of 1979. This disappearance of the red vented bulbuls from the plateau due to approaching cyclone in May, 1979, gave me a satisfactory explanation that the red vented bulbul is an 'indicator' bird to forecast a cyclone itself.

Also that birds like cuckoo shrike and red vented bulbul as natural clocks to tell us time to get up as their calls are very punctual and regular.

Further, that cuckoo shrike shows us the timing of fall of sun's emitted x-rays and ultra violet rays on to the earth at any locality or area.

At Mannanur, I could make studies on the Indian Flying Fox (Pteropus giganteus) also. This mammal travels long distances from Amrabad village to forest rest house Mannanur over seven miles, even, to munch the ripe fruit of the vepa or neem tree (Azadirachta indica) during the fruiting season. At Mannanur I discovered existence of painted bat (Krivoula picta). This mammal exudes a very aphrodisiac scent from anal glands.

Peafowls devour the ripe violet berries of lantana camera. This ripening also attracts Mother Bears with their cubs and the animal could be photographed easily while plucking berries of the lantana standing.

Chapter XV: Plant studies – Marigold flowering

The Marigold flowering plant with its violet flowering strain has been observed closely. It is seen that petals arranged and number is different from flower to flower and plant to plant of the sub-species. Commonly some have three petals in two whorls. Uncommonly some have four petals in two whorls. The former have 6 anthers whereas the latter have 8 anthers. The stigma is three branched with fruiting in three locular capsules having number of seed.

Thus, depending upon the number of petals it is seen that the stamens number is governed. Even odd number of 7 stamens is seen in the odd petalled 7 (second whorl has 3 petals and bottom whorl has 4 petals). In the 8 stamened flower the ovary has 4 lobes. In the 7 stamend flower the ovary has 3 + 1 lobes, one in the underdeveloped lower position – where petal whorls are 4 each the stigma has 4 clear branches. Where the upper whorl of petals is 4 – 0, the anthers are six and ovary three lobed.

Naturally occurring honey yielding plants: Honey Yielder flowering plant – researched – An exotic and poisonous garden plant – Thevetia Peruviana (west indies – mexico) – Belonging to apocynaceae – Yellow oleander or Be still tree.

This is to inform all the foresters of India that I have done research studies over an year or so on a tropical evergreen plant with yellow flowers of which they yield direct honey, a drop (small one) each from its yellow attractive corolla tube of each flower. Flowering all year round in Hyderabad, it flowers daily in large numbers and these flowers which are on each branchlet and fall to the ground by late evening daily. It is an avenue plant found plentily in New Delhi. The plant is poisonous exotic from Mexico and WI. It is not browsed by animals, including goats. The foliage is ever green with glabrous long leaves hardly one inch wide.

It is observed that the flowers store honey naturally in between the Thalamus and Corolla tube just after sunrise., Blooming and utilize this honey to keep the flower in bloom and open for the day and by evening when the entire honey got exhausted, the corolla falls off the Thalamus to the ground with no honey found at the base of the tube of the corolla.

The plant being of Apocynaceae family it exudes milky juice (latex) from all parts of the plant, the leaf, flower, petals and tube and calyx also. As such I have employed a new method to extract the pure honey drop without contamination of the milky juice.

It is like 'where the bee sucks there suck I' said Aerial in Shakespeare's comedy.

The method used by me is to pluck the flower along with its stem of the calyx intact by about 10.00 am. This too has to be done carefully. It is at this time the storage of honey is maximum. I believe that the honey is stored by the action in the Thalamus itself. In the evening there will not be any honey content in the fallen flower, it is noted.

After the flower is collected this way, all one has to do is to separate calyx from the corolla by a light pull. Then hold the base of the corolla tube just above a clean stainless steel container or glass vessel and then putting mouth to the whole corolla opening blow out the honey drop into the container. Yes, this is done very successfully by me.

Though the sweet fluid may not be called directly as honey, it is the same one that the honey bees collect, so also by birds and butterfly etc. I have tasted the sweet fluid and found that if weathered as done by the fanning by honey bees, the same is 'honey' only.

It may be pointed out that this discovery of honey directly available in fair quantity in minute drops from each flower and also exploitable from this plant is the study. And this research is 'first of its kind' in the realm of Silviculture of trees so far. Such a note is not mentioned even in the Silviculture of Indian Trees' by Troupe.

My invention in nature studies is first of its kind even when I am not a botanist as my subjects in graduation were Physics, Chemistry and Mathematics as long back in 1953-55at the Nizam College, Hyderabad.

I remember very well how in the year 1959, after the so called Kashmir tour of the Indian Forest College during my training Mr.AL Rao, MSc.., AIFC., our lecturer for Botany, utilization and Silviculture did congratulate me saying that ' your herbarium collection from Kashmir tour is the best ever collected by an IFC trainees during Kashmir tour of the collage so far. Everyone simply wants to enjoy sight seeing mainly and return empty handed.'

I was lucky in getting these remarks of congratulations as it helped the Silviculture branch of FRI to know more about the flowering plants blooming in Kashmir valley upto Beas river and Indian border to Leh.

I must confess that I got the plant duly identified from Botonist of Osmania University being a non-botonist myself.

The plant is identified as "Thevetia Peruviana of Apocynaceae domesticated in India from Mexico, an exotic. Please refer the book "EXOTIC VOLUME –II." However, I did not keep quiet over this invention alone about one plant but continued investigative studies on other flowering plants too. It is now confirmed by me that flowering plants which have a fairly long corolla tube superior to Thalamus, all when flowered do contain fine droplets of honey which can be blown out on to a container.

Jasminum Humile, a climber, is examined by me in this context and found that the small one inch tubular corolla of these flowers exudes a tiny drop of honey of the size of pin head when corolla is pulled out from thalamus and air is blown into the mouth of the flower.

It is true to say that most of the flowering plants with flowers having tubular corollas superiorly growing over the thalamus do contain free honey drops each and honey bees namely 1. Apis Indica, 2. Apis Dorsata, 3. Apis Marmeleta all collect these honey and store the same into bee hives. It is seen that Tickel's Flower Pecker is an expert bird which pricks into such flowers for the honey till all the flowers are exhausted on the tree in the early hours of the morning. Such research is rarely done in nature and I hold the monopoly of this research as a unique one.

Forestry plants study – Teak:

I have a teak plant raised by me by planting a root-shoot cutting. But it grew very little till the cyclonic rains that occurred at Hyderabad during sept.and oct. What I have noted is that there were about 4 spells of cyclonic downpour for 3-5 days each time in September and October. The growing main shoot (the plant has only one stem) showed very closely growing opposite leaf pairs within one and a half inches from each other pair. But no sooner the last cyclonic rains stopped during last week of October (after diwali), there has been faster growth in the next pairs of opposite leaves to the main stem. Here the pairs are separated by 4 inches to 6 inches and more for next two pairs grown as on

14.11.1995. It is a main difference in growth pattern. Secondly, it is seen that even the leaf sizes, from the four nodes in pairs are smaller in width and length and total leaf area almost half that of the bigger five pairs below these on the stem. The five pairs of leaves below those of cyclonic effect are spaced about 5 inches apart from immediately below 3 pairs and 6 inches apart for next 4th and 5th pairs. The height of the plant is just 3 feet above ground.

These observations indicate that due to breaks of continuous rains over periods of 4-6 days including cloudy skies of these periods, created conditions to increase the number of vegetative surface area by more number of pairs of leaf growth at closer spacing along the stem. The stem is more congested with nodes of these four pairs of opposite leaf in teak growth.

The observation leads to the conclusion that closer growth takes place during such untimely rains due to cyclonic effects otherwise during normal rains the pairs of leaf are borne at normal spacing which spacing is longer than that created during cyclonic rains breaks. This leads to a point of observations quite contrary to the well accepted and recorded observation that in droughts spells the teak plant shows growth rings closer to each other than when normal rainfall occurs in a year. Whereas it is seen that closer rings are due breaks in rains.

The scientists who held earlier view have to now change their basic view on the occurrence of close growth rings in teak and record their detailed new studies by experiments as observed by me. It was uptill now held that stunted growth giving rise to closer growth rings in teak were due to droughts and not as in this experimental observation due to the more abnormal cyclonic rains of long durations with small breaks that occurred in September and October an abnormal occurrence for Hyderabad.

It has to be also studied as to why there was excess number of pairs of opposite leaves in these spells of rains, they were smaller in spread size than the normal huge size of a young plant in its normal growth before any unusual cyclonic rains.

The FRI may take up more research on these lines and publish separate papers.

Studies on natural shocks to plants: I used to water my plants of garden daily in the mornings during summer. A hybrid lemon plant (called china lemon) was also grown by me in the garden using vegetative propogation technique. It had flowered for the first time. It had two flower buds indicating fruiting too. By oversight one day I happened to water it right in the hot sun of afternoon of May month by about 2.00 pm. Next morning I was shocked that I had committed the grave mistake in watering the plant in hot afternoon. The result was the watering shocked the plant previous day and the flower buds had fallen.

This observation also led to my observation on coconut trees (two in my house compound) that the one that flowered frequently was getting frequent shock due to rains occurring at odd hot afternoons and the flowers fell. It is therefore apt to follow farmers routine of watering plants in the early dawns in summer.

Chapter XVI: Animals encountered

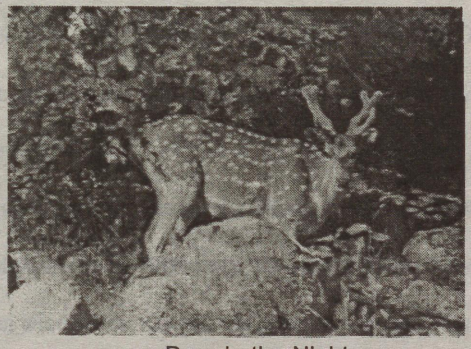
As usual I had the presence of mind to act. I had no camera to snap the Bear in action. Well! There are always a miss between a cup and a lip.

As often I would travel up the ghat road beyond the Mannanur enclosure and once when I climbed the first ghat hair pin bend I saw a sambhar suddenly going down from the road. I stopped and got down towards this slope. About 10

meters down the clumps of bamboo, there was a thin water source and water was trickling steadily. The sambhar's foot marks were on the wet soil. Without a second thought, I scurried out some soil and made a bund across the flow, creating a small pool then and there itself. The idea was to watch for any wild animals' movement there in my frequent journeys. Yes it was a paying action indeed.

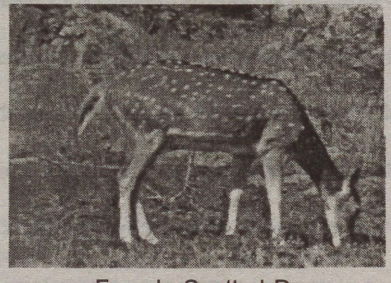
Leaving this spot, I reached the high point to reach the big opening on both sides of the road. On the left, to my amazement, about 50 yards away I saw a tigress with her cub in the water pond over the rocky base of this opening. I had to stop without change of gears of the jeep. I spent a couple of minutes watching the two animals at right angles to me in the wide open area. But as gear was changed to neutral the jeep made shudder type sound and engine stopped. This change in sound made the tigress move away along with the cub. However, I had the lucky view and was happy that breeding is on the rise in tigers because of my strict protection.

Once while motoring in jeep away from this spot along the road here straight for over a kilometer, with both sides having good forests, and bamboo brakes, I saw three water fowls take to wing from the pond on left and they flew along the road just above my moving vehicle. I identified them as spot bill ducks. Further up suddenly one peacock with long entrails flapping took off from left jungle and flew across over the front of my jeep and crossed into the other side to land on a high tree. Well! Jungle splendor cannot be expressed but felt only by the inner joy at such natural happenings.



Deer in the Night

I found the road a perfect straight one and after about half a kilometer in front, I saw a bull Nilgai in its bluish ash black coat standing opposite facing our jeep. I took snap of this by Minolta camera.



Female Spotted Deer

Chapter XVII: My studies on evolution

It is difficult to find clues to the natural creation of new species in nature. However, one would find lot of similarities and acquired new characters in some bird species as observed by me in the jungles of Amrabad reserve in Mahbubnagar district of Andhra Pradesh.

Take the first case of the latest find of the Jerdon's Courser now located in Cuddapah of Andhra Pradesh. The area is cordoned off as a National Park in Andhra Pradesh. Well I was lucky to spot a bunch of the Indian Coursers commonly seen by bird watchers in different parts of the country in Amrabad forests. This was seen and observed closely, aided by a 10 x 50 binocular, around a grassy open patch touching Reserve forest line south of Mannanur village in Achampet taluq of Mahbubnagar district. There were at least 8 – 10 Indian Coursers on the ground perhaps busy spotting insects for food in the open grassy patch outside the reserve. One or two of them were seen to bear spots clusters on the chest. Whereas others were of plain dusky brown colored chest parts. This evidently made me feel "eureka" (I found it) Joyous to report to the Chief wild Life Warden that I did rediscover the extinct species of Jerdon's Courser. However, after some days when I visited Hyderabad to declare the find, I noticed from the books on birds by Dr Salim Ali that the Jerdon's Courser is declared as an extinct bird in India. Further that the picture it shows bears black bands around the chest of Jerdon's Courser. Then I gave out my reasoning : 1. As to why a bird of the size of common myna should only disappear and become extinct, when cousin like birds namely the Indian Courser or the Brahmini myna or even the common myna are not extinct but exist in fair number all over.

My observations of Indian Coursers having patch of breast spots against the others with plain ashy bluish brown colored chests speaks volumes in nature's adaptations and one day it is prophesized that these Coursers declared extinct some 60 years back.

One fine morning on my usual walks in Reserve Forest north of Mannanur, I saw a new happening in birds species sphere. An Indian Pitta was seen having a mating with a spotted dove and when mating over it flew away leaving the spotted dove to spreen its under parts on the same branch there itself. I wondered how this could happen from a multi color small bird as the Indian Pitta mating freely with even a larger sized bird as a spotted dove. Soon my thoughts wavered on to the sight of a pair of Emerald pigeon flying past in the same forested area. This species of emerald pigeon has gorgeous colors of Emerald green and also colors near to that of the gorgeous Indian Pitta. Then I thought that nature itself has made a beautiful bird like Indian Pitta, possess power of natural sexual attraction to other birds like the spotted dove or ring dove for a mating desire and produce young ones of new species. I could not follow my further observations on the mated spotted dove female seen in the act of being mated by a male Indian Pitta which latter bird is known to have seven colors on its body and is typically very small of the size of a pigmy kingfisher or the like sun bird.

My thoughts rained on me new ideas. The one was that the Emerald pigeon is nothing but a cross bred from two different naturally existing species namely the spotted dove on one side (female) and the Indian Pitta male on the other side. The second thought was that, in animals like the donkey and horse crossing to form new species which comes to life as the pony. So also the dog Alsatian is a cross between a wild wolf and a domestic dog bearing in it main characters

of the wild one. This hybridization is naturally happening in the wild is all my observation. When one looks at the common crow, the cuckoo shrike and the jungle crow and sees the Indian crow pheasant, one very solidly comes to the observation that the crow pheasant is a crossed bird from the crow and cuckoo shrike as the latter goes on laying eggs in crow's nest or even eagle's nest. The shrike's long entrails spreading out at ends are just carried over in the new progeny of the Indian crow pheasant. Though Dr.Salim Ali has had no say on this particular issue of new species evolution from existing ones, I could observe the realties of nature as above. Take also the instance of the common Drongo and compare it with the Racket tailed Drongo which latter is having the racket shape long tail feathers and this species may have had crossing with the special attractive bird namely "Paradise Fly Catcher" – male. Even the sea birds have such a similarity in characters. Take the example of the Tropic Bird which has long entrails in white similar to that of Paradise Fly Catcher. A Cuckoo shrike has similarity to that of ~~g~~Green ~~b~~Beaked Malkoha and these usually abound in each others habitat. Cuckoo shrike and crows also share same habitat of each other.

The Racket tailed Drongos are found in deep dense forests of Gudem Marripakala National Park in Vizag district where also exist the Paradise fly catchers.

Chapter XIX: A Tiger family maintains a territory

It has been believed for years that a Tiger or a Tigress leads a lonely life hunting its prey for its food. And that in this way maintains a territory. This is observed by me over five years to be a false and imaginary belief only. A tigress after mating with a male of the locality gives birth to young cubs in about 90 days of gestation. It is at this juncture that the tigress secludes itself to a remote interior to rear the cubs by its sole efforts. She hunts a prey and after regurgitating a few mutton pieces, it vomits the same in front of the cubs, who can then easily swallow them. The vomiting occurs only when the tigress eats a few leafy twigs of green grass. This technique is known to all cat family and the dogs also. The reason for vomit is that the grass has hairy growth on the leaf surface and this irritates throat and esophaegal area of the animal and in spasms it vomits out the partly digested pieces. The cubs eat this at the first stage after the tigress disowns breast feeding the cubs. This stage is reached in about three months after birth. Usually tigresses bear cubs in even number – usually one male and one female each of the twos. This sex ratio is a natural one in the class of this carnivore for though it means inbreeding in the same family, but the pedigree continues till difficult situation arises. It is not unusual that a tigress bears even an odd number of cubs one or three and not five, when this happens, the one which is weaker and excess in the same sex, the same finds its death by accident or during in fights in the family itself.

While the tigress maintains a secretive life till the cubs are grown up for independent catching their prey animals, it is seen that the entire family i.e., the mother and the cubs follow a different round about route to meet the male – father of the family. This occurs occasionally in order that the parents continue their affection to the cubs and vice versa in their

own territory. This is how a territory covering suitable hide outs and pastures of prey find is maintained by one tiger family.

Tiger essentially leads a family life in a restricted territory till it gets disturbed from it. The territory is usually marked by pheromones from urination of Tiger and Tigresses. They do urination on locating any obstacle or bend in their path along the peripheral part of their territory. When in oestrus, the tigress leaves a spray marking on small trees or bushes or rocks by its urination along with oestrogen . This oestrus smells very deep and faintly and such marking even lasts months together. I have test checked leafy twigs of such oestrus spray by tigress. The intoxicating deep perfume like smell of oestrus remained for over a month inspite of washing by water and rain.

It has something common in the oestrus of tigress and a woman, atleast a part of the perfume like smell is the same in both. On smelling such oestrus the male gets excited and this excitement is seen by observing that the male tiger makes a typical 'fleighmen' posture of its head and wide open mouth. The nose surrounds gets squeezed wrinkles, and the jaw is thrown open repeatedly. Then the male moves to locate further such fresh marked points and finally locates its mate – the Tigress. The Tigress at first shows an annoyance at the presence of the tiger and gives out calls of a few low groans and hissing sounds. But soon she makes an attacking posture on the tiger. This goes on a few times and finally she yields. The tiger then holds close rubbing his face alongside of the body and face of the tigress. This arouses more passion in the animals. The Tiger then rises on to the body of Tigress from behind and holds her neck skin in his jaws and makes his first coitus. The coitus is evidently painful and very short 'timed and soon the tigress gets loose from the jaw hold of tiger and moves away a small distance. The tiger also makes 'onhoo' growl soon he releases the grip over the tigress. A few movements again the tiger is allowed to have a go in the same manner. The tigress goes on 'miaoing' in low tones in such coitus times. In fact this 'miaoing' can be heard in the lonely sport they choose for mating, the spot is usually a valley or a gully or a nallah bed with tree cover on sides. The coitus is repeated on and off many a times with same whoofing hissing and miaoing sounds along the nallah bed as they move up and down. One is able to know the presence of a pair mating in thick jungles, even from a 1200 to 1400 meters from such mating points. Such mating goes on even for over an hour or more if undisturbed. In captive conditions in cages also such coitus in tigers is seen for over long hours. So is the case of mating in panthers. Mating in tigers is generally in hot time of the day usually during summer period and the young cubs are born during rains or late winter months. Small cubs with tiny pug marks move with the mother tigress criss crossing the line of movement of the tigress. This sometimes is likely to create confusion in assessing the number of cubs moving with the tigress. A careful study is necessary about such pug markings. The male father of these cubs isolates himself from this group. It is seen however that, the male parent does meet the family at the far end of their usual trail and then moves away in opposite direction. A trail of this nature was come across along the Farahbad escarpment running almost over three kilometers, with pug marks of male solitarily seen along one direction away from those of tigress with cubs movement.

Feeding and care of the cubs: The Tigress alone works up hard to find a prey animal like cow or other cattle. Leaving the cubs in a safe undisturbed forested area especially with rocks and cave like natural hiding place in the forests, it moves

on a look out for prey. Soon she returns after having gulped a few kilos of mutton from the kill and when she reaches the cubs, the tigress munches a few leaves of grass. This irritates her stomach and she vomits out the swallowed mutton pieces before the cubs. This action may not be termed as regurgitation as in milch cattle, but it is a reaction of eating grass leaves. The usual grass selected for this purpose is the 'durva' grass known botanically as Ischemum The leaf surface has tiny hairy prickle like growth which must be creating the irritation in the alimentary canal of the tigress. In fact cats and deogs also resort to this practice in a routine way and vomit out. Rains offer a natural protection to the cubs while thus feeding. As the cubs grow and follow in the routine trail of the tigress, and when a kill is made by the tigress they learn the strategy applied by the mother tigress. The kill is made by the neat canine hold of the jaws of the tigress. Only four longish holes get bored in the neck of the prey animal. In the two hundred kills involving all cattle like cows, buffalo, bulls and calves, over a study period of about two years, it was seen that tigers kill neatly by their canine hold of the throat of the cattle. No other wounds are made. This was true even for hefty bulls or murrah buffalos or calves as the prey. This approach is to ensure perhaps that the exposed wounds be minimum so that the prey food can last longer without getting infested with insects or also that the other local carnivores may not detect the food easily from the putrefying smell that may emanate if wound is open. It is a fallacy to hear people say that tiger sucks blood of the preyed animal by holding the neck in his jaws. The canine hold actually lasts for a small period only as the jaw hold is to throttle the prey and this hold is continued till the animal stops its tail movement and the tail loses its movement capacity as it makes no sounds by hitting the ground one side to another. Soon the tiger releases the hold and leaving the kill moves to a nearby water source already known to him. If it is the tigress who kills it, it summons the cubs by making typical 'miawoo' calls to be heard loudly in the valleys. No sooner they join the tigress simply squats on all fours and gazes at the kill and cubs. Cubs move from different angles to the kill firstly to smell it and each makes an attempt to inch out a piece of mutton and move a distance away to eat it. The author has seen such a place where tigress having three cubs had made a meal. The fast and snatch and run away attack by the cubs had cleared away all grass growth round the kill a 10 meter distance radially. Thus they ended the meal in mid jungles. Evidently they all must have second and third meal. Inspections revealed that the Special Collector of Srisailam hydro electric project turned out to be a regular poacher of tigers and a notification to this effect was also issued by the government of Andhra Pradesh informing all officials to report to government immediately on detection of poaching done by him.

The DFO Anti poaching squad the Author managed to introduce for the first time proposals to pay cash compensation to the owners of cattle kill detected as that by Tiger though kills by panther was not included as a rule. This effort had paid dividends and his publicity in villages about the wild life (protection) Act 1972 and its relevant deterrent punishment clauses of rigorous imprisonment from six months to two years coupled with even cash fine, made a good impact on the villagers. The interior villagers mainly the lambadas penning the cattle, promptly covered distances to

report in person the tiger kills involving their cattle. This solved the main problem of locating local tigers, their approximate size and occasionally even the number of cubs they bore. It became possible to enumerate and also to assess regular movements and trails of tiger. The officer personally inspected all the sites of over two hundred cattle killed by tiger in the deep forests during the succeeding two years of this appointment and promptly reported the conducted panchanamas to the compensation sanctioning authority which was originally the head of the Forest Department but as the process needed detailed consideration, this power was shelved down to the Chief Wild Life Warden of the State later appointed under the Act of 1972.

This approach and continuous surprise checks at forest rest houses at Mannanur and Chintapalli brought down the poaching activity. One interesting case of involvement of even one Inspector General of Police rank moving about with guns and spot lights in the notified sanctuary, on a mid night just helped a total stop of poaching activity in this great tiger habitat.

The tiger census carried out twice before 1983 revealed a population of forty five tigers out of which five were detected dead due to poisoning involving two young cubs even whose mother tigress had miraculous escape. The officer visited the valley touching a bend of a small rivulet, where the same tigress went on visiting and giving calls for her cubs who never returned even when her calls continued for over a month. One such dead male tiger was eight and a half feet in length with his entire body intact lying on ground with its jaw open as if he died out of thirst. The bones of this dead tiger were collected by the officer after burying the dead body for over six months, revealed that its left leg knee joint was shattered a bit and it could be a bullet injury which turned fatal to the animal as the poison spread over his body and killed him in an isolated spot in deep jungle.

In 1991 census the same sanctuary showed a bouncing figure of 96 (ninety six) tigers with a sex ratio of 1:1 of male and female .

The then Anti poaching squad Divisional Forest Officer who is none other than the author made the attempt of protection all individually and singly between 1977 to 1983 April in the complete protection of these natural bunch of tigers of the presently known Nagarjunasagar Srisailam Tiger Reserve. The management of this Tiger Reserve, after its notification in 1982, was entrusted to a Deputy Director, Project Tiger with his headquarters at Srisailam.

Chapter XX: Nagarjunasagar - Srisailam Tiger Reserve

Located in latitudes and longitudes . The Tiger reserve covers an area of 3568 square kilometers right from Nagarjunasagar dam to the upper reaches of the Srisailam Hydro electric dam and covers virgin forests and fascinating deep and beautiful valleys on either side of river Krishna. The forest areas fall into the five districts of Mahbubnagar, Nalgonda, Kurnool, Prakasham and part of Guntur district. The river Krishna meandering through deep gorges and bends forms a vast lake over 110 kms. in between the two famous dams of Nagarjunasagar and Srisailam

and this is navigable. The Tourism Department has catered two most modern motor launch of Russian make for river journeys up and down to reach the dams. The entire tract of forests is at elevations from 2000 feet above MSL to 5000 feet even covered beautifully with virgin forests with scattered bamboo clumps Here and there one can find cattle penned openings in mid forests. These pens and the movement of cattle thereto formed the main prey food for the tigers and panthers of the area. Even the wild dogs in packs ranging from two to even thirty numbers gained access to prey upon calves and cattle and small animals of the forests.

The ghat roads with many a edging bends give many a green clad valley views of serene natural forests and valleys clothed fully with dense green forests and with escarpments with vertical falls of 500 to 1000 feet. There are beautiful water falls and at many places one comes across natural springs flowing from nowhere practically and from under rocks some with standing still levels but with clear drinking water. The pilgrims' old paths have several such spots with mango trees as shade trees serving as pots of fresh water. One wonders the engineering bestowed in the layout of these natural paths and those who laid the paths in the good old past which have been paved with natural stones. The story goes that the much respected and worshipped Lord Sri Rama and Sri Laxmana traversed these paths to reach Srisailam where they did penance. The four approaches by mountainous paths are from North, South, East and West as entrances to this abode of Lord Siva at Srisailam.

Chapter XXI: Faeces and kill identification serves census records

The droppings of excreta and spoor marks like the scratch marks on ground near these reveal the identification of the tiger and other carnivores and their home range can be assessed from these thus mapped.

Tigers moving along their beaten track always mark their visits identifying the routinely passed excreta and the scratch marks near it and urination done.

Unlike domestic cat which covers its faeces with soil or leaf litter nearby, the tigers leave their droppings in the open along their usual treks along cart tracks, foot paths or cattle paths or even earthen roads in the jungles. At each turning point these markings can be seen and they do a bit of verification by smelling these points of droppings. The nature of the materials in the droppings of excreta varies with the species killed by the tiger.

One may see dry type of droppings in the form of semi round balls close to each in a length. These have indication of a kill involving a bull or a sambar or neelgai as their mutton is coarser, whereas when a cow is killed the droppings are in the form of a greenish dark fluid mainly. When bones are crunched in, the small pieces also get embedded in the droppings along with hair of the kill.

Usually a tigress would kill a cow in order to feed its young cubs as the mutton is soft. The same is first regurgitated by the mother and she then eats a few blades of grass in order to vomit out the half digested mutton to feed the young ones.

The tigress in heat in their wanderings make their presence known to male tigers by a natural squirting from a spray of genital glands of hormonal fluid onto shrubs or rock along their path. This secretion in their urination has a typically powerful scent and it emanates for over a month even from the sprayed area. The male tiger when comes

across this scent mark, he grimaces over the smell and twitches its nose and upper jaw. This posture is termed as 'flehmen'. But this kind of flehmen postures and are also seen in goats, he buffalos and even panthers, and bulls. The male simply goes into ecstasy on smelling this scent and moves in search of the mate.

In one instance a tiger was seen climbed up a vertical stem of a tree to quench the thirst of passion as the hormonal discharge from a tigress was sprayed high up on the tree. I was lucky to photograph this tiger clinging high up on the stem of the tree and licking the point in his ecstasy. When I showed this photo enlargement to one Collector and some officials, they were awestruck simply as they never heard of tigers climbing a tree.



Aloft on a tree

I found that these markings and hormonal scent marks are found very frequently at turning points of changes in forests. Even once when the student trainees of the central crocodile institute had a trail walk with me alongwith their lecturer Sri R.K.Rao, IFS., on the hill approach to the Prataparudrakota (fort), north of Mannanur, I gave them all a shock treatment by pointing out that they missed something special and called them back downhill. I asked them all to change their vertical postured bodies to a horizontal one at the scent mark and smell to report, what is there. Only Sri RKRao could know that it was the scent mark of a tigress in heat and he then warned and cautioned the trainees that they should walk in forests with eyes open, hearing alert and lastly use smelling power to detect animal movement. He was all praise for my studies of this nature even when he knew I was no a zoologist or a botanist in my graduation. I had to tell them that when I carried away a twig of a tree soaked with the hormone of tigress in heat from one such point, and experimented to know whether it gets washed away in water over even a month long period, the twig and leaves continued to smell the scent. This he told is a finding no naturalist or a wild lifer has ever reported in their writings. I hold that the scent extracted by a solvent from this source would be ideal for sexual attraction even in the human beings.

The defecation and marking by scrapes by tiger and scent marking of hormonal secretion by a tigress in heat are the clues of the presence of both in a particular home range of the family of tigers.

Coming to panthers, I could not find their droppings of excreta any where in my tours. Evidently, panthers behave like domestic cats that cover it with soil or leaf mould.

In wild dogs (cuon lupus) it is studied that they often defecate where they kill their prey and eat it while the animal is hot in blood. Their droppings are more calcareous in lumps which contain the undigested hair of the prey killed, which later can lead to what animal is killed.

I was shocked to make out once that near Dharawagu valley six wild dogs had killed a tiger cub as their excreta dropped near contained the hair of the tiger. The pug mark of a male tiger cub along with the foot prints of the six wild dogs were in situ nearby in the wet ground markings. I was sorry that the census figure for tigers would be down by one.

This habitat of tigers met with the loss of one of its members that too a male [cub]. Of course interestingly, the inspection revealed that new born tigers are in the offing and protection given there is the unofficial reward to me given by nature.

I was lucky even to see once that four wild dogs chased a sambar fawn across an opening. Each one attempting bites on any part of the body of the fawn, even one held its mouth, one its tail and one its hind leg. Finally the fawn tumbled down in the strewn boulders and the four wild dogs made a hot meal within half an hour.

Wild dogs locate a prey animal by smell on the ground and chase it all along moving in a file, mostly along the bank of a nallah or an opening edge of the forest.

Chapter XXII: More about Pugmarks

Once as I walked along a trail of pug marks of a tiger in a sandy tract, to my surprise, I saw the approaching pug marks of a panther male upto the point where tiger's pugs existed, but the panther simply turned at right angles and walked off as seen by the latter's pug marks on the ground. This also showed that panthers avoid tigers to avoid confrontation and that they could even make out the presence of tiger from the smelling pheromones of tiger's pug mark or simply seeing it on ground. They are seen, however, to share the habitat of tiger without endangering themselves or attacking any tiger.

Pug marks of tigers and panthers, each vary with different soils. Round the pads of toes and main pad both species have hair growth and these edge out beyond the pads and are very sensitive for touch. While moving on ground these hair cause additional movement of soil, thereby making the traced out copy a little exaggerated and also this latter trace is not the nearest to the natural size of pads.

For nearly correct assessment of size and correct tracing method, I conducted a small experiment in the Indira Gandhi zoological Park, Visakapatnam, with due permission of the then Curator in 1984.

In this Zoo, the cages for tigers are in one line with sliding doors for closure and access to each. Tiger from one cage can be moved to adjoining cage and further to next cage also, all with strong barred gates. On seeing this, I did get big sheets of paper spread out on floor of a third cage and put muddy water thin slurry spilled over in the second cage floor. Tiger by known sex kept in the first cage was moved to the second cage to soil its feet. Next it is moved to the third in order to trample on the paper and finally shoved out into a fourth cage. Tigers though got a little scared at the unusual sight of paper, they quickly moved by trampling across into the fourth chamber, leaving the pug marks from their soiled feet on to the spread outs. Soon the papers were dried up in the sun, noting the name and sex of the tiger, and studied.

The prints of the same are reproduced after taking tracings showing hair dabs and pad outlines as per actuals done on hard stone paved floors of the cages in the said Zoo.

In forests one has to locate tiger pug marks on hard underground spread over by soft thin soil and trace out the same on tracers to get a nearest correct size of pug marks for census record.

It may be mentioned here that even great authors on tiger studies like Billy Arjun Singh, Schaller a great naturalist cum photographer – a foreigner, Valmik Thapar or Dr.Ranjit Singh and others including H.S Panwar, did not give out such realities about pug marks of tigers.

Sex identification from Pugmarks: Census operations are carried out, usually through unskilled enumerators even when they are trained before hand.

The pug marks of tigers are different by sexes, their age and on different soils. It is a practically difficult task because even the size and shape of front to hind feet pug marks differ from each other.

The front pug marks are more etched on to the ground than that of the hinds because the front part of the tiger's body is heavily built and hind position is a bit lanky. The result is that the toes of front legs get more spread out including the main pad and as such the pug mark is bigger in all directions, when compared to the pug mark impressed by the hind legs.

Anyway for the purpose of census, the pug mark of hind leg is only considered as a rule.

I did come across new born cubs moving with mother tigress. It is seen from ground evidence, that in cubs the separation distance between front and rear feet pug marks on the same side of body are widely separated than when cubs become adults. In the young cubs of 3-6 months, sexes cannot be differentiated from pug marks, easily.

However, the difference is seen in the nature of spread of the toes marks only.

As the cubs grow up, the pug marks of hind leg occur nearer to those of front leg marks on same side. This nearing of pug marks is more and more as age advances beyond middle age of tiger and then the overlapping over front leg pug mark by the hind leg pugmark does occur. This super imposition is never 100% on the front leg pug mark even in most matured tigers. It can be 5-7% less. In such cases, the rim of the pug mark of front foot can be seen separated by about 0.5 cm. or so. This has to be noted carefully.

Sex identification by mere sight of the pug marks on the ground involves much training and observation.

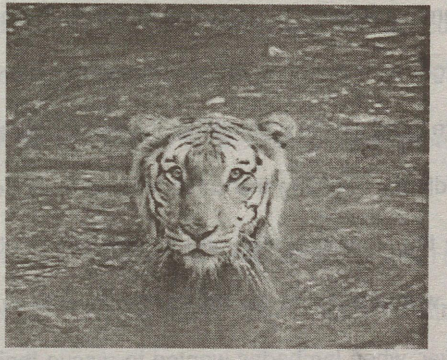
The male tiger's toe impressions of front leg are more roundish at the top and all the tops of four toe marks are along a uniform curve almost along an arc of circle. This is not so in the case of tigress's. The toes pads impressions in the case of tigress are more pointed at back side. Also the toes impressed by front legs are more splayed outer side. By much experience only that one can differentiate male and female tigers from the mere inspection of pug marks on the ground.

The tigers being with bodies with elongated type have their gait movement not in a straight line. They move in a swaying zig zag course being heavy at chest and head side.

Very often one may see a tiger roaring along its movement with its heavy head swinging more on each side. This is usually seen in old tigers.

Often an enumerator mistakes the front pug mark of a bear as that of a tigress. It is absolutely incorrect as there are altogether five toes to the bear's front legs and even the nails which are not retractile get impressed on the top side on the soil and on tree climbs by the animal. A faulty census of bear foot marks included is the result in such reported case by novices carrying out the census.

Chapter XXIII: Tigers are not maneaters



Many a shikaris including the famous british hunter cum writer of the "Tigers of Kumaon" Sir Jim Corbett, or earlier HG Champion have had described that some tigers were man eaters. This is absolutely false or a cock and bull story.

In my anti poaching post held over seven years in Andhra Pradesh covering six important districts of tiger prevalence habitats, namely, Mahbubnagar, Warangal, Adilabad, Khammam, Srikakulam and Visakapatnam, I never came across any man eater tiger at all.

In Mahbubnagar the famous "Shikargah" called Farhabad of Amrabad forest Reserve, I carried out inspections of over two hundred cattle killed by Tiger including even a few by Panther. These inspections over five years and four months were done as and when the owners of the cattle, namely, lambadas, reported each of the kills either within hours or latest by next day morning and I was pursued for carrying out inspection and the required punchanama in order to get the cash compensation from the Forest Department. They were lured to do this after I had done two such inspections, and had recommended cash compensation to the owner of the cattle, done in the first few months of my joining as DFO anti poaching squad (without actually having squad at all) at Achampet.

The prompt inspections were many a times with me going close to the kill even when the tiger was engaged in biting out lumps of mutton from the kill. All we had to do was to drive away the tiger either by shouts or by pelting a couple of stones with the help of the lambadas leading me to the kill. Soon I would reach the kill and assess its value and conduct the panchanama in the presence of the other witnesses.

No doubt sometimes it was a difficult task to scare away the tiger this way, but more than 90% kills inspected likewise, the tiger or tigress left the carcass for our closer study of details. In over 50% of the kills inspection, I used to move along the drag marks of such kills and record the method of these actions involving leaving of the cut out portions of the stomach bag with the intestines along the trail marks. This I concluded as done to avoid exposure of stomach contents of undigested materials like grasses, leaves etc. which could not be relished by the tiger. Sometimes the drags were made through thick bush growth and small low trees, thereby I had to almost bend and walk on fours over small lengths, to witness the balance carcass leading to final view of the head and legs of the killed cattle.

At no juncture the local tiger ever pounced on us in these intrusions.

Occasionally, even a cattle head was in a complete shape except having the canine punctures made by the tiger or even a panther on the neck girdle for throttling the cattle leading to its death. On these occasions no other wounds were seen on the cattle indicating the clear expertise of the carnivore in killing a cattle head including cows, bulls and buffalos even. Even when stones were thrown at the kill side to drive away the tiger it never attacked us.

On two occasions, however, when lambadas wanted to rescue their cattle attacked and held by Tiger, the tiger simply scared them away by a show of a charging attack accompanied with a thunderous growl 'aanhoo'. And when next day morning the same lambadas forced me the inspection, saying that they were attacked by the tiger and all had to run for life. In this act they left their 'shamlas', chappals and even axes dropped there.

As we approached the same spot the tiger was still goring through the carcass. Again it got angry and charged with a growl. Here again the fellows simply bolted away in the similar manner leaving me all alone. But my dare devilness persisted on this and I stood steadfast. However, when the tiger saw all had run away, it did not bother my presence at close quarters of about fifteen feet only. Taking very cautious reverse movements slowly, I managed to cross the opening and later joined by the lambadas. I banged them orally after handing over a 'shamla' and an axe left once more by these fellows at the alarm of attack by the tiger.

Well, it was but natural that the tiger showed force, as it might have been too hungry and was disturbed while eating morsels of meat from the killed bull. However, as we walked away from the site to reach the point on the hill to descend down about 500 feet to reach my jeep, we could hear another tiger's movement as if to cover up for an attack. But it showed that both a tiger and a tigress were at the kill. I had to direct all to speak louder to keep away the monster from attacking again and soon reached back.

Even this threat of attack was not for killing a man for eating by the tiger couple. Once again, I was standing in a nallah bed, when in the late evening a tigress just walked up the bank of this nallah just seven feet from me and all alone in thick jungle. Even then, standing still and looking face to face, I dared upon, which the tigress, which intended to cool down in the flowing nallah, simply gave a cough like grunt and turned right about and slowly walked away. Well! The tiger or tigress never liked to attack man even to kill leave aside killing for eating him.

In a third such incidence even an angry tigress who went on growling hard down a hill on hearing the mimicry call I had made from the nallah bed, the same tigress when taking the stance of an attack just about 20 feet from me, stopped dead on hearing my own great shout at the pitch of my voice, may be over 100 decibels of sound in the calm jungle valley and she simply gave a cough like growl and walked back without attack. Two inquisitive fellows who were with me simply were awed at this spectacle of the glorious march back by the tigress. I saved the final situation but it was seen that the tigress never intended to kill us and make a meal even when her four cubs were behind us in the bushes across the nallah.

This incidence was even notified by the two fellows in "the Hindu" newspaper dated 26th Febraury, 1982 from Hyderabad.

I have enough evidence to pin down that tigers are not man eaters at all. However, shikaris make a point of publicity of man killed in forests or on outskirts as if by a man eater when actually the attack on man is by a bear and later scavengers making a meal. In the period at Achampet, I got confirmed seven such mauling attacks by bears only in this great tiger habitat. These were poor lanky chenchu tribe men who intended collection of honey and were incidentally attacked by bear as per evidence of their foot marks on the ground at the site of attack.

Even on one occasion a tribal lady was attacked from backside by a full grown Hyena on the outskirts of a open village near Amrabad. The foot marks were clearly of those of Hyena only as inspected by me. The lady was soon sent to hospital nearby and the case referred for a suitable compensation for her treatment.

One can believe now that what Major Sir Jim Corbett hunted in Kumaon hills in Assam were no man eater tigers at all and that the so called deaths of human beings were merely by wild bears.

Some of my colleagues like late AVRG Krishna Murthy; IFS did take stringent actions in Vizag district against illicit transport of valuable teak in Visakapatnam. He even lime lighted the presence of huge standing and rare teak trees with girths of over 25 to 30 feet at man's height with 90 feet height growth each, in the dense forests naming them as "Rama" and "Laxmana", the epic dignitaries of our country. They stand like over a thousand years perhaps as on this day. Full protection is bestowed on this massive heritage of the Forest Department in Andrha Pradesh. I remember I have had a chance to see a big teak log in straight length of about 80 feet felled in Allapalli forests of Chanda district of Maharastra

state, preserved as a historical heritage in the form of a museum show piece duly preserved and painted up to show historical events in India over a thousand years. I hope now that the "Rama" and "Laxmana" stand the test of time to our next five to ten generations as marvels of nature's heritage to them. However, as matters stand there is a next danger to such trees from the 'podu' cultivators of oriya tribes pillaging forests of Visakapatnam district from across the border of the State.

Nowhere in Andhra Pradesh such gigantic teak trees can be found including the natural teak deciduous forests of Adilabad district and therefore, as done in archeological department, these two remnants of teak and their surrounding natural forests be declared as National monuments and World Heritage site.



Teak Tree (Oldest in Vishakhapatnam?)

Much about pug marks: Pug marks are nothing but the impressions left on the ground by the movement of feet of a carnivore. In herbivores, such marks are called hoof marks or spoor marks but in bears the same maybe called pug marks. Tiger, Panther, Wild cats, canines like the wild dogs, hyena, foxes, wolves and others like the cheetah all leave pug marks on the ground in their movements each identifiable species wise. Rodents too leave marks of there feet on various surfaces of the ground. On a muddy track and a sandy track, the pug markings of the same tiger or for that matter a tigress or of panthers vary in size and shape. On the other hand in a very soft powdery soil surface with hard ground below the pug mark is almost near to the actual size of the pads of the feet of the animal. These pads are highly developed in these carnivores so that they can feel the nature of ground being touched by them. These natural pads are for the toes and central base of the foot which touches the ground, the latter has a shape of human heart in the obverse drawing with a W-shape at lower side which side is the backside of the foot mark and body. The front feet being heavy due to the weight of the boney head and chest bones of the tiger, the pug mark is wider and broader than that left by the hind legs. The soft cushy padding of each foot and that of the toes caution the animal about trampling on harmful or pointed surfaces as and when the pressure of weight of the body is lowered on to the surface of the ground. Round the pads of toes and the palm pad lie the cluster of sensitive hair, which also act as sensitive pointers to the walking animal – these hair almost make a separate impression on the ground besides the toe and palm pads – the hair loosen the soil

very lightly round the pad marks. This requires a minute observation while taking a glass tracing of the pug marks, in general, during census of tigers, to avoid over size drawing the same.

In mud surface which is likely to dry in short period after a tiger has moved across it, the pads mark is a deeper impression, while the gaps in between toes and palm pad which do have hollow gaps, lead to leaving crest like markings around the deep pad marks. Here then is a clearer picture for taking a plaster cast of the entire foot mark on the ground for census or identification. It has been believed so far that the tiger's walk involves the hind foot superimposing on the mark left by the same side front foot. In fact it is never hundred percent overlap and the hind foot pug mark either is separate or overlaps partially but does not over take the position of the front legs pug mark of the same side.

In older tigers, it is observed that, the hind leg pug mark almost overlaps by 90-95% on the pug mark of the front leg of same side. This too depends on the speed of movement of the tiger. Added to this, because of a longer length in their bodies, the tigers move in a sinusoidal curving movement and not in a straight line as believed. Pug marks also indicate how the tiger evaded a rock or a thorn or pointed edge and jumped across to evade the same.

Gait and stride: In its usual walk movement, which could be deciphered as a canter only, the pug marks are seen in pairs each having front and hind legs' of the same side of body of tiger. If the distance between the pair is large, it is a young cub. In older tigers the pair get superimposed over partly as seen by the pug mark of hind leg erasing a part of that of front leg's pug mark. Complete superimposition is never come across even in old tigers in forest areas.

The animal size can be roughly estimated by these markings of pugs trail on the ground. All that the observer has to note is whether all the pug marks are uniformly apart over a length along a trail once they are found to be uniformly spread over, then measurements can be recorded as follows: The distance between the front legs pug mark's hind point to the next pug marks of front leg on the same side is a measure size of tiger. This severally taken at intervals, gives the stride. The distance between the individuals of a pair of pugs is an indication of age. The broader the distance, the younger the tiger and if overlapping partly is seen, it is a full grown tiger or tigress for that matter.

In sand bed of various sized sand granules the loose sand rolls back in the pad pits once the tiger lifts his leg and hence a smaller size gets recorded. It is always correct to locate movement of tiger on soft soiled surface with hard underground just below it. The tracings on such soils are nearer to the actual size of the animal as pad marks or the pug marks. When two tigers either a male and a female move one behind the other, the pug marks are likely to be a mistaken identity. So in the case when male cubs too move in such a way. Here the pairs of pug marks of each tiger cub have to be correctly located for stride measurement. This is so more because the pair usually are of the same age with sex difference only or of same sex rarely.

Sex identification from pug marks: Starting with the new born small cubs, one cannot determine their size from pug marks on the ground. Pugs of male and female look alike being of the same age. But as the cubs grow to over one year roughly, the differentiation is possible for census purposes.

The female (tigress) cub has pug mark showing wider spread toes in an elongate 'horse shoe' marking of the front leg pug mark. Whereas if it is a male, the marking of toes is uniformly spread out in an arc of a circle. The toes of female are more pointed on the top side along the movement line. Whereas, they are more rounded and oval in the male.

Similar such markings separate the sizes in tigers which are older.

At any stage of movement of tigers, it is seen that only one foot gets lifted off the ground, at any one time thereby the tiger can balance well on other three feet. However, in a speedy attack, it is seen that the tiger can balance itself on one foot. I have measured such markings of tiger when it attacked a he buffalo. From a crouching point under the over of a tree or bush, it leaped in such a way that the distance in between landed foot pug marks was 110 inches (a little less than ten feet) each in two lengths and the third step landed on the buffalo. The weight and speed of attack of the tiger , made the buffalo fall down and at that instant movement the tiger embedded his canine hold on the throat of the buffalo. This is a split second operation by the tiger and the buffalo is seen wriggling its tail on the ground till the suffocation by canines it becomes lifeless and the tail drops to the ground finally. Taking this as an indicator that the animal is no more alive, the tiger or tigress rests for some time and then only it opens out from one of the hinds of the kill and starts feeding on it, leaving intact the remaining body.

Interestingly, I came across about five or six kills involving cows killed by panther. The grown up panther killed the cows by its canine holds by its jaws on the neck of the cow, leaving no other marks or injuries on the cow. Panther too, is a neat killer, occasionally. Thus, a few photos taken by me reveal further that the cow killed is turned upside down to start feeding from the udders, which parts are perhaps the first choice for the panther. Incidentally, the panther, in these cases, was driven away by the owner lambada, cattle herder and as such the panther did not part take the choice food and left away.

As in tigers, the pug marks of panther are also indicators of their sex.

Generally, the toes of panther's feet make a mark on the ground with all the four pads marks in a circular arc of the tops and are closer and smaller when compared to that of Tiger's. I was, rather unfortunate in not making a detailed study of the pug marks of the panther. This is perhaps it is stealthy in its movement to avoid identity of its presence by herbivores and calves of cows its prey species. The pads are quite small but are quite different from that of dogs. In dogs, two toes get impressed together on top of main pad respectively, so also the nails get marked in continuation of toes marks.

Chapter XXIV: Was it a Hunting Leopard?

In one such kill of a cow, on my inspection initiated after a lambada reached me to announce it near Banal forests in the plains, I had much confusion to decide as to which carnivore killed the cow.

The ground markings in wet condition did reveal a new picture from those seen in routine by me in most of the kills by panther. Here too I was to be blamed for not taking photographs of the scene of this kill site.

The fact was, the foot toe marks showed four toes in a circular arc like markings with nail holes quite separately embedded atop of each pad mark. This separation of nail markings actually confused me. There were at least four carnivores that attacked the cow and also make a hell of a tussle in snatching morsels of meat from the cow. This too was evident from the unusually pulled out remains of the mere skin of the cow. This skin was also got wound up a stem of a bush showing signs that it was pulled simultaneously from both ends across the stem which helped leverage in the tussle between the carnivores. In this case the modus operandi was quite different from that by Tiger or panther or wild dogs. Added to this, the ground show of the pug marks of the four individual carnivores with nail holes a top of toe pad marks by a cm. or two away on top gave the suspicion of a different animal than that of panther's or that of even wild dogs in these areas. The soil that got disturbed in the tussle of pulls by the carnivore also was a new method when compared to that of a panther or of a pack of wild dogs or from tiger.

My brief but detailed observations on the spot simply diverted my thoughts to the idea of the record maintained in the palace of the Raja of Jatrapole at Kollapur. The record showed that the Raja had released one male and one female both old, hunting cheetahs, which he had maintained as pets with him up to 1924 when he died.

I jumped to the only optional conclusion that the four carnivores could be none other than the grown up hunting cheetahs, that bred soon after release from captivity of their great grand parents reared by then Raja of Jatrapole though there is a wide margin in years gaps after the release of the couple cheetahs, still one can imagine that this could happen in natural breeding in cheetah's or may be that these four carnivores were great grand off springs now wandering to hunt their prey. They eventually been selecting young cows for such attacks and this was the proof of their presence.

This all occurred in 1982 and I missed my journeys in these plain forest of Banal and Banal Loddi or even Kollapur extension forests and could not confirm the existence of cheetahs in Acahmpet divisional area in a fool proof investigation as, soon, as I was transferred in April 1983.

In the much detailed preparation of the Management Plan of Nagarjunasagar – Srisailam Tiger Reserve, prepared over 6 full years by Sri K.Jagan Mohan Rao, IFS in 1990 there is no mention of any natural existence of cheetah but he went on with prescription for the years 1990 to 1994-95. I am now told that even this Management Plan is revised and is waiting for sanction by the State of Andhra Pradesh. This speaks out further that no special effort was made for a search

of this species of hunting leopard in the tiger reserve or its left out area of Kollapur extension which formed ex – jagir forests of the Raja of Jatrapole of Kollapur.

For missing the opportunity of discovering the presence of cheetah officially, I feel sorry at this late hour when I wrote about it here.

I hold that the pug mark studies made by me even for the cheetah's presence are true and its existence needs full investigation. May be the lambadas who graze their cattle may one day accidentally report the existence of cheetah by mere sighting it.

The picture is very vivid in my mind that I made the discovery of existence of cheetah by the sighting and detailed examination of pug marks only, as these never were similar to that of either panther or wild dogs in this area, especially when the pug marks were seen embedded in wet soil conditions a day or two before my inspection and they gave the vivid picture on the ground.

In Tiger's kills of over 200 numbers I could study all aspects about their pug marks. Their method of killing, the drags marks and left overs of the carcasses, their home ranges and also family life including encounters with man or even with wild dogs in this Amrabad and Kollapur Reserves for over five years four months of my stay in the capacity of DFO Anti poaching squad.

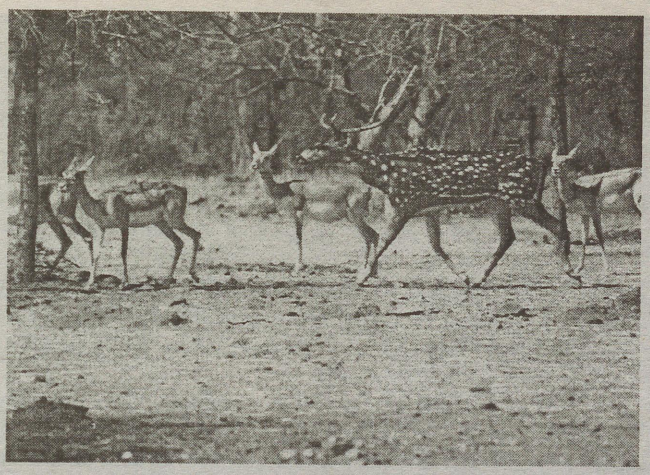
Further, I must bring out the fact that because of my sole and strict protection work in the capacity of DFO Anti Poaching squad, without the so called "squad" consisting of a Ranger Officer, two foresters and two guards, I accomplished a task not expected of me in such a capacity and saved the most endangered tiger in AP State. They were hardly five or six in number in the census done in 1975-76 and locally cattle graziers could have killed them by poison spread on the cattle killed as was the general attempt to save their own cattle. My job started in November 1977 and protection day and night by me up to 1983 April – brought up the number to 45 in the Achampet division area, alone.

This increase in no. of tigers, duly publicized by me, attracted the Central Government personnel in the scheme of "Project Tiger" under its funding. The result was that the areas of forests to a width of about 40 kms.along north and south of the River Krishna was duly notified as "Nagarjunasagar – Srisailam Tiger Reserve" covering parts of five districts of the State of Andhra Pradesh in the year 1982. Later on it is renamed as Rajeev Gandhi national park.

Chapter XXV:OTHER ENDANGERED SPECIES.

The Government of India had also notified that efforts, singly done or by institutions, they will be rewarded. But my misfortune that I am yet to be awarded for the accomplishments.

My efforts continued in all directions even after my transfer from Achampet in April 1983. During that stay itself I brought on record a thin population of the schedule I endangered animal namely, the Black Buck, at a far off place over 160 kms. From my headquarters i.e., at Mudmal village in Makhtal taluq of Mahbubnagar district. They, the black bucks were about 64 in 1977 December. As I brought this to the notice of superiors, protection was afforded by posting incumbent watchmen on daily wages for the village and surrounds.

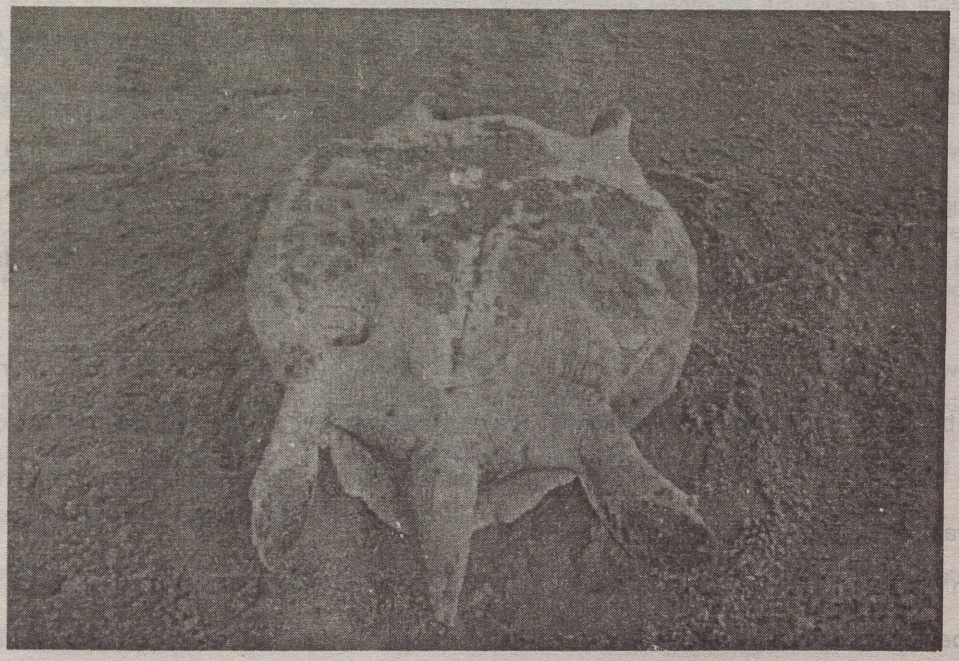


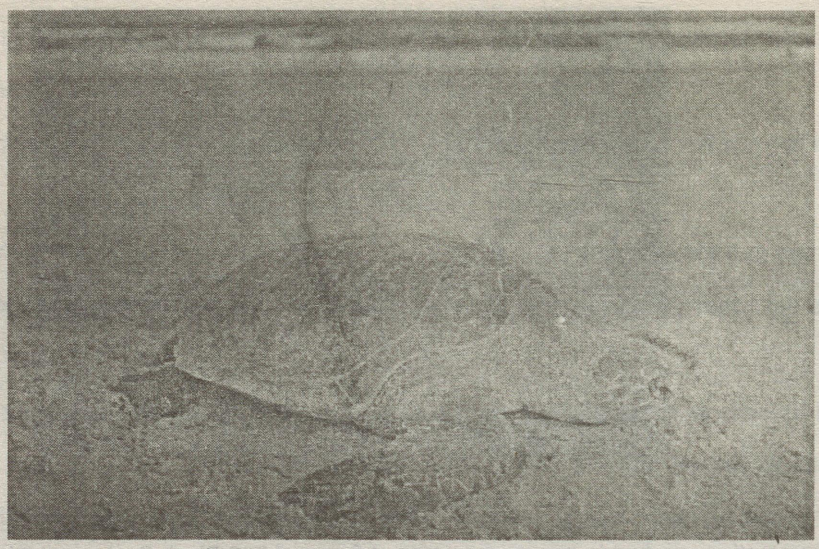
Spotted Deer and Blackbucks

In 1983 the protection resulted in the never imagined figure of 300 Black Bucks and later they spread all along the Krishna river up to Narayanpet taluq and number now is over a thousand there.

It is here I mention that there were no reserve forests to these natural jumping beauties in the said taluq areas even. However, constant patrolling by me and the watchmen doing a sincere job helped me save this endangered species to the status of "pride of Andhra Pradesh" now. Later on after my transfer the protection work was allotted to the territorial Mahbubnagar division, I learn. My sincere effort paid dividends to the State.

Incidentally, protection of wild life alarm clock was struck by me in the next posting at Visakapatnam for the anti poaching duties to cover the coastal belt of the three districts, Vizag, Vizianagaram and Srikakulam.





At Vizag also the tiger and Bison herds were saved along the Chintapalli - Sileru dense forests from the then poachers of the Industrial companies at Visakapatnam. A thorough job was done in protection even that of the sea turtles along the coastal belt covering 540 kilometers right between the HOPE island off the Kakinada naval port to Bheemunipatnam, Kalingapatnam, Naupada coastal villages and to the border most of Andhra Pradesh namely Icchapuram. This was a mere adventure of mine when I had no staff under me at all including even the Ministerial.. The apathy shown to me stands a very example of the State. Even a jeep driver's post was not allotted for my raids as an anti poaching DFO.

Even at Vizag posting, I ventured to locate new fields of protection at Noupada, near Telinilapuram for the Pelican and the Painted Storks as also the Flamingos in the salt water pans of the back waters of the Bay of Bengal sea. Near Icchapuram, a new breeding center of the migratory open Bill Storks in over 5000 numbers was first time discovered. These birds visit when in large number indicate a good rainfall prospects to the village Telikunchi. This village protection on their own was my personal discovery in the field of wild life management of the State. Added to this was a tank side trees full of Night Herons flocking in large number. I did not hesitate to post on well painted publicity boards at check posts in Vizag district and at the Ramakrishnapuram beach, where large number of people assemble daily to enjoy sea breeze.

A new located nature park was also made of the old cashew plantations in Srikakulam. Further King Cobra habitat in the border forests was brought on map for stricter protection in years to come. All this was done in over two years of stay there - The killing of sea turtles along the coastal villages like Kalingapatnam, Bheemunipatnam and Pudimadka was completely stopped by my frequent raids.

Even the transport of live sea turtles neatly put in baskets, by all routes like by boats, ships, train and lorries were all stopped by my raids all alone. In fact on my reports, even the state alert was sounded in this direction and the Government of Andhra Pradesh wrote to the General Managers of Railway zones to stop the booking of these sea turtles to stations like Howrah, Bhubaneshwar etc. where the export was for food purpose in hotels. It was learnt that soup made from sea turtles was main item in hotels in these places. However, in the coastal villages, the sea turtle was caught

in the fishing nets or while their mating was on and the live animal was brought to the village hut and tied down in its inverted helpless position on its back and when no fish was caught on bad weather days, this animal was sacrificed as food.

It was a heinous killing of this very innocent looking un harmful animal by such villagers.

To stop this, I suggested a better method. I told the villagers to use the community hall for storage of daily fish catch by any villager and the same is kept in ice or cold storage till a lorry load is ready for transport to Vizag for sale. Each villager to get proportionate share in cash as per the weight of fish contributed by him. They liked this idea and soon took up this practice as told to by. Me, in my third visit to Pudimadka village. This approach avoided daily transport in basketfuls by each fisherman or his family members paying extra for bus fares.

Chapter XXVI: Some serene and enchanting spots in the Nagarjunasagar – Srisailam Tiger Reserve of Andhra Pradesh.

To describe the large number of serene and most enchanting spots in the Nagarjunasagar Srisailam Tiger Reserve, one needs to visit the places himself and only feel the serenity and the beauty of nature. We may thank the erstwhile state of Hyderabad rulers by the VII Nizam of the dynasty of Kings, as regards the intact forests lying north of the Krishna River in the Mahbubnagar district. This state had sixteen districts under its rule – Mahbubnagar, Warangal, Medak, Karimnagar, Adilabad and Khammam districts were mostly with good forests and with promulgation of an Act, the Hyderabad Forest Act of 1337 Fasli, the then Government of the Nizam, protected the forests of these districts by creating "Shikargahs" or hunting grounds or sanctuar.es. The Kawal sanctuary in Adilabad, Pakhal Sanctuary and Eturunagaram sanctuary in Warangal and Farahbad shikargah in Mahbubnagar district formed the major attraction for shikars by the members of the King's family.

I was lucky to have worked in various capacities in which I could visit wild life conserved areas, the most fascinating one being the Farhabad sikargah comprising the Amrabad reserve forests and also touching this lies the Kollapur ex-jagir forests.

During my posting as DFO Anti poaching squad, with Achampet headquarters in Mahbubnagar district, I could perambulate these two reserves to protect the most endangered species, namely, the Tiger (Panthera tigris) over a period of five years four months between 20th November, 1977 to 4th April, 1983.

In this period, I could locate very many serene and beautiful natural landscapes. These are narrated below and can as well attract tourism.

To start with is the famous 1905 built Forest Rest House at Mannanur Village at the elevation of about 2038 feet above MSL.after a first Ghat road climb from Achampet. It is located about 130 kilometers along Hyderabad – Srisailam highway. This forest rest house is the oldest eco friendly construction in the entire Amrabad plateau, with two suits under

a mangalore tiled roof. This forest rest house could oversee from it the historical fort called Prataprudra kota, just seven kilometers on north west. The Kota is built by the Ishwaku kings dynasty and oversees the plains below. I could see no building inside the fort except that it can be reached by walk through a stone monolith gate and on climbing up the hill, a massive Fort wall round the hill top still exists. Inside, lies a water source in a clean rock, but there is not any building for stay. Perhaps it was only created for protection against enemy entrance from north.

Monolith carving of a Guard

Even the present State highway was natural earthen road before 1967, when the Srisailam Hydel project construction was begun. This land mark Fort and a small temple down below (photo here) shows the protection measures taken by the Ishwaku kings, who are responsible for the construction., Eeven of the fort like Srisailam temple on the south bank of the Krishna river about 80 kilometer from Mannanur or from Prataprudra kota fort.



I did climb up ~~to~~ the Fort several times all alone as I saw a tiger moving along the huge fort wall, clearly visible from below road now a fully tarred highway. There is a water hole just touching a sheet granite rock inside the protection wall of the fort. From atop this wall I could enjoy seeing langoor monkeys on various trees below in the valley. Heard several times the growls of tiger and the quick shrieky calls of the sambars from the valley below. An old constructed tank also exists by the side of the small ishwaku temple built by the side of water flow. This water flow crosses the main road

and rolls down rocks and makes small pools. These pools are beautifully located overseeing the valley all along with trees on all sides. Many a times, the giant squirrel could be seen all along this flow, so also Macaca radiata monkeys.

Starting from Achampet, the road diverts to the hill climb to the big natural arch of the escarpment about 300 feet above the so called North entrance 'dwar' with the temple of uma maheshwar as the deity. All down the vertical side of this escarpment thick forest cover exists and includes big Ficus trees, and climbers and lianes clutching deep into groves of the horizontal bedding rocks of sand stones. Not only this, the green cover gets perennial water oozing from almost no where. This creates the most enchanting greenery by the long Ferns trailing down and percolating the water drops. This latter is a big attraction for the rock bees (apis dorsata) in plenty. The tree groves attract the langoors and macaca monkeys in groups. I spent several hours here, often, busy to try photographing these wild animals and also did lot of bird watching round the temple of Uma Maheshwar deity, of course many a times going there with guests mainly. All I missed was that the department did not provide me a good camera to snap such beautiful spots and wild life.

Next is the Chandrasagar tank just below the hill system which has the prataprudra kota. Along the base of the hill I have done panchanama of cattle kills by tiger just near the tank. The animal husbandry department has a nursery of fish supply below the chandrasagar. As there is no immediate village round the tank, the tigers made several kills involving cattle here.

The Forest Department have a plants supply nursery in the valley before reaching the Ghat road climb from Achampet side which gets joined by the highway leading from Dindi Reservoir about 8 kilometers.

The Dindi Reservoir project has a vast spread of water upstream even up to Nagarkurnool. Large flocks of Flamingo birds are often seen bending their long necks under shallow waters of the edges of the spread of water. The Flamingos have a special food for them in this Dindi Reservoir. It is the moluscan big population. They break open the hard calcareous body of the Mollusc and eat away the fleshy part. However, I could see heaps of the mollusc shells collected for export, may be to Hyderabad for converting it into lime of special requirement. I am told that the lime plaster for the great Charminar Marvel in Hyderabad city, was made from calcinations of Mollusc shells mainly and that plaster has a smooth finish to last over there 500 years now.

On the sight of Mollusc shells heaps, I had a passing thought as to why not create a breeding centre for pearls in the Dindi Reservoir as the habitat breeds naturally these Mollusc shells and the Flamingos do the job of breaking open these shells.

On one heavy rains period I was leaving for Hyderabad in Jeep officially. No sooner I reached down from Mannanur to this Dindi Reservoir Dam, I found that the river was overflowing over the crest gates of the Dam and the road to cross over was too overflowing with about 1 ½ to 2 feet flood water with great speed.

As I was the driver, I just thought I could use the four wheel drive and move and cross the flow to Hyderabad side.

I dared it and the stretch was about 600 feet long. But because of the flow of water for a week or so there was enough mushroom growth and it was slippery. In fact one private bus had fallen down while crossing this current of floods. I saw the bus upside down, this sight brought in me great fear. There was enough weight of luggage and of my relations in the vehicle. I continued the risky journey and even felt that my jeep was swerving at one fast flow of over two feet. I held the steering strongly with wheel direction at an angle along the slippery road with some pot holes newly scurried out by the flood waters. Finally, I could reach the other end across the flood waters. I thanked heavens for the safe cross-over. Now I doubt if any one dares such a misadventure in life. To my surprise, I noticed at the other bank, that the jeeps steering rod had cracked and only a small width was still holding it. There upon, the balance journey was made very careful till I reached Hyderabad and straight away gave the jeep for repairs. I was twice saved in this journey, a miracle only and a great will power in me, indeed in following this route.

From Mannanur outskirts start the Amrabad reserve forests on the south. These are the "southern tropical dry mixed deciduous forests" as per H.G.Champion's and Seth's classification of forest types.

Sporadic bamboo (dendrocalamus strictus) and occasional teak (tectona grandis) with the other miscellenous species abound all over and it is a paradise for M.F.P. and honey..

As we drive along the winding road, the ghat road with a number of hair pin bends has to be carefully manned. After about six kilometer drive an extraction road descends on the left. Often I used to leave the jeep and walk along this road to find fresh moves of the tiger coming up from valley below. In the valley there is an opening on the right and on the left is the famous naturally tapped water hole Dhara vagu. It appears from nowhere and the villagers have put a scooped out bamboo to this spring to make it easy for drinking the clear water. This spot is calm ideal location for all animals including the tiger. Birds like the Golden Orcole, Green Pigeon, the sparrow hawk sun birds can be seen dipping their beaks to quench thirst as also to cool down by splashing water in the puddles below the nozzle.

In fact I created a pond like dug out for these birds and was often sitting nearby to watch birds using my 10 x 50 binoculars. Occasionally even white backed vultures, the crested hawk eagle and the Osprey, made their presence felt by attacks on other birds and also drank the clear water here.

About half a kilometer inside along this road one could locate visits of packs of wild dogs (cuon species) and the series of pug marks of the tiger on the open paths.

One day I was shocked to see on the ground the foot marks of six wild dogs and those of a tiger cub side by side all embedded in wet soil earlier. The dogs too, dropped their faeces nearby this spot. A closer examination of the droppings revealed the undigested hair of the tiger. The six dogs had evidently killed the lone young cub and made a full meal also here.

I was sorry to see the unexpected death of one tiger lost in this attack by the wild dogs pack.

I then returned to the main road and began jeep journey up the winding road. It was sheer luck that I saw a tigress cut across the road just after a hair pin bend and vanished downside in thick bush. The tigress had come down from the upper plateau opening. On a close study on the left side opening I did come across fresh pug marks in the slushy puddle of an opening there. On another visit along this road I had stopped my jeep to look happily a tigress with one cub in the small pond in this spot.

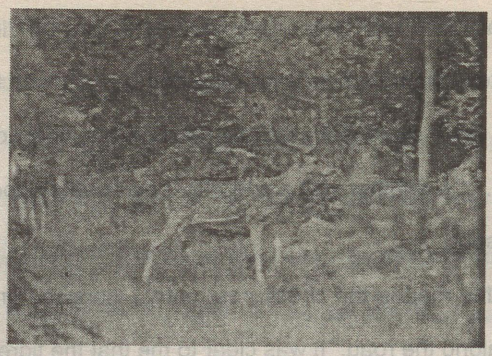
On 17th kilometer along this road is the check post entry. Here the eroded road has an opening. One day a tigress with two cubs had walked along the road. It was clear to me that the tigress moved in front as the cubs made one side to other side of hers from back. The cubs could be just three months old. It was a happy moment for me to gather that tigresses are breeding fast in this locality due to constant protection by me.

Just after about half a kilometer further lay the Gundam wagu flowing into a natural fall of about 15 feet into a natural tank like formation of basaltic rocks. This further leads down into a valley with a depth of more than 500 feet as nearest estimate. I did perambulate deeper on the edge and was damn lucky to locate this wonderful eco point. My shout there echoed in the valley of two ranges of hills. Indeed, this was never known to any forest officer and I was the sole discoverer of this now.

However, soon I walked away from this eco valley only to come across a very shabby looking plains man wearing a lungi with his face and body having knotty bulges all over. On threatening him he disclosed he was taking a bottle of medicine to an interior village for trials as injection. I then realized that the bottle contained some dangerous liquid to be tried on poor tribals for its effect studies. I thrashed that person and broke the bottle and asked him to go away or a case of trespass in the forest would be booked against him. He ran away. Further investigation could not be done as I was alone and the culprit bolted away.

This eco valley point has been marked by me on SI sheet for it is discovered for the first time in the history of this Achampet division. It can be a tourist point in the future wild life management plan of this tiger reserve but this needs control on the number of tourists.

Next in line is the Budireddipalli bavi cum tank just at 21st km.from Mannanur. The surrounds of this tank are the ideal habitat for sambhar, spotted deer, the neelgais and the tiger. A watch tower is created on the bund side for bird watching as also sightings of the wild fauna visiting the tank along the fringes. Soars of wild boar are a common sight from this watch tower. It is just within 200 yards off the main road.



Spotted Deer by night

A bifurcated metal road having a check post bar across, from near the turn leads to the most famous and scenic view point across the small Farahbad village down the ghat road. Spotted deer and sambars can be seen while moving down to the tribal village of the chenchus, across a running rivulet. The entire forest road is the usual haunt of local tigers.

Enroute is the most famous old dilapidated forest rest house of massive walls in deep forests. Even a shed of good height still exists showing that it was for the elephant's rest shed. The Forest Rest House also built in 1905 was meant for camping for shikars by the VVIPs guests of the Nizam of Hyderabad.

It was incidental every year from 1978 that this camping site gets alive with the camp of census personnel in tents in the open foreground. The Farhabad view point is near from here and so the site was best suited for camp. It reminds one of a similar building complex that abounds the Ranthambor Tiger Reserve near Delhi. The latter has three tanks in its surrounds covering about 4000 sq.km. for the Reserve. Tigers were being hunted by the Maharaja of Sawai Madhavpur in this reserve. The usual procedure used to be to tie baits to see the tiger attack them. With this habit the local tigers dare enough in the presence of tourists now visiting there.

But, I hold that tigers in Amrabad shy away from disturbance of Man and hence they are rarely seen in these vast jungles of good habitat for their survival.

As we reach the view point Neelagiri on the edge of the 4-5 kilometers long escarpment of natural hills system, we become suddenly excited to see the vast plains forest 500 to 600 feet below the cut edge at this view point. The air is by far the freshest ever as there are no habitations anywhere nearby. This view point is now included in the Tourism zone of the Tiger Reserve. The approach to the view point has forests on either side with all bushes cut down to make possible the sightings of spotted deer and even tiger. The Farahabad escarpment view point oversees the great natural tank called Rhishila Cheruvu waters, while standing on the rock edge of this view point.

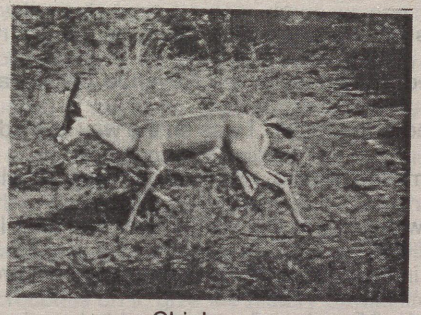
Very often I visited Rasool cheru from Achampęt to study tigers movement round it. The canals pass through thick jungle and the tigers find these as cooling down water hole in summer. An entire family of tigers could be spotted here inspite of disturbance from the local villagers and carts moving round here from rangapur village. The forests are rich for minor forest produce like gums, belphal, kaweet etc. and of course for stealthy removals of bamboo.

In the canal bed once in 1982 while we were conducting tiger census in April, I while bathing in the canals have encountered, alone, a visiting tigress and studied its psychology allowing it as near as just 7 feet in front of me on the bank of canal late nearing sunset that evening. The fact was narrated before the census team of student trainees of the Institute for Crocodile Management at Hyderabad, headed by their guide Dr. AB Sale, an FAO expert on wild life and

advisor to Andhra Pradesh. Dr.Sale coined out a simple joke after I had narrated the encounter story. He simply said a person can see a tiger when he moves naked in jungle. He was evidently unfortunate to see a tiger so far.

After Buddireddipalli bavi, one can continue in jeep towards vatvallapalli village enclosure of the rehabilitated villages under the Nagarjunsagar submersion. The village is about 300 acres of good black cotton soil selected by these incumbents.

Adjoining, before the village is reached, there is jeepable path leading to almost embarrassing flood of water source. A big fall just emerges from nowhere under a huge mango tree. This water source is very powerful flow down the slopes and is a top haunt for a tiger family. I did carry out atleast two inspections of tiger kills involving cattle of the village round here. A couple of other kills were right on the road dividing VV palli village, at the far end of the enclosure. Chinkaras and Sambhars do invade the open enclosure and so also tigers lurk for a kill or two. As I moved crossing the enclosure a sour of 64 wild boar just crossed the road infront, giving me enough time to count them even. These invade the cultivations of VV palli liberally.



Chinkara

The next journey passes via a vast grassland opening called paturbailu. No surprise a male Nilgai is oft come across in these openings. I noticed tiger movement along a cart track leading to the village sarlopalli about 4 km. inside having bambusa arundinacea clumps in plenty along a rivulet. In fact study of tigers led me to all interiors and this village a no exception. The road leads to further such openings in forest all invaded by the obnoxious weed called American grass, a non endemic species. There is a rumour that this weed causes an allergy to humans. From near Tapasipenta opening one could move left side to reach an edge of this hilly region from where there is a fine view of river Krishna down below over 500 feet. The gorge is at the bend of the river turning a second length eastwards in its flow.

The entire ghat road after VV palli enclosure is worth a million for lovers of nature. The severaled hair pin bends about 32 are views of the down below hills clad with the best greenery and valleys of enchanting landscape.

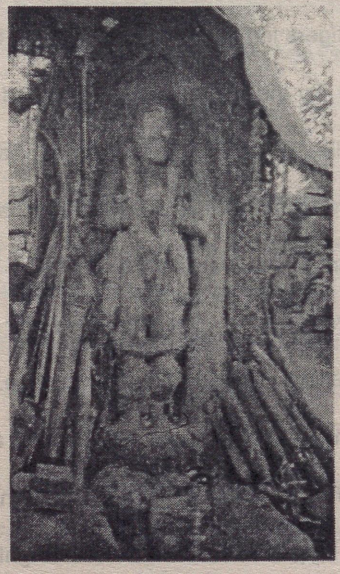
On receipt of a petition that a tiger is killed and its hide tied down and hung from a high cut up edge of a hill, I did drop down from a bus travel in a valley bend of the road. It was a December chill day and I singly moved down hills after locating the cut up edge of the valley at about 3 pm on that day. I had put on long boots with hob nails alright. But the inquisitive walk was through high grass of man height and all boulders below. After a most fearful treading this region, I

reached the cut edge of the hill. It was having the alleged rope hung from top, reaching down a depth of about 200 feet. But nothing was found tied at the lowest point.

I sweated horribly all along due to the fear of treading into a phython or even a cobra's attack in the high grass march. I returned after that inspection up hills now to reach the ghat road. I stepped on to the road only at about 8.30 in the night. The open starry sky above was the visible thing guiding me. But as I had not traveled by jeep, I simply looked around for any possible lift. I was wet all due to fear psychosis, sweating and the chill winds gave me a very horrible feeling. I walked about a kilometer up hill along the ghat to reach a plainer patch. Here on seeing a lighted fire and some men around these, I reached the spot and infact removed my wet shirt and even banyan and dried it over the fire side. After waiting for another h0ur or so, I could catch a night out bus to reach Mannanur forest rest house. I felt as if I have returned from hell.

On the north east of Mannanur lies the best habitat for tiger it is locally called Maddimadugu. It lies beyond Udmilla enclosure which itself is the strong hold of the chinkaras and chowsinghas. In this enclosure, I detected a case of poaching of chinkara by the mearefresh jeep tracks of the jeep in which the local Tahsildar a muslim did the shikar and got it cooked in the village (Photos of jeep track were taken by me) I made out a case, after a statement from the villagers was recorded and supplied the details to the Revenue Divisional Officer, Achampet, for necessary action. I learn that the Tahsildar was punished in the result. I was on the way to Maddimadugu then. The Madgu reverberates the growls of tigers, so also often their mating hissing, meoing and sharp scowls of male tiger. The process goes on for over an hour along local nallah beds. I was lucky in this visit of over one hour late evening that day.

Nearby lies a temple quite in the open with a standing figure of Lord Sri Hanuman very reverently worshipped by the lambadas annually. They call him "deva bapu" and assemble here in a jatra covering long distances by walk. The offerings are quite different. I took darshan as also a photograph of the deity in its splendor of offerings which included an umbrella over the head.



Hanuman – worshipped by Lambadas



Carving of goddess Kali

I made a conclusion that this deity is installed during good olden past when the deccan mining company operated here for diamonds from a natural deposit of veins of sand full with felspar. The Nizam of Hyderabad got most of famous

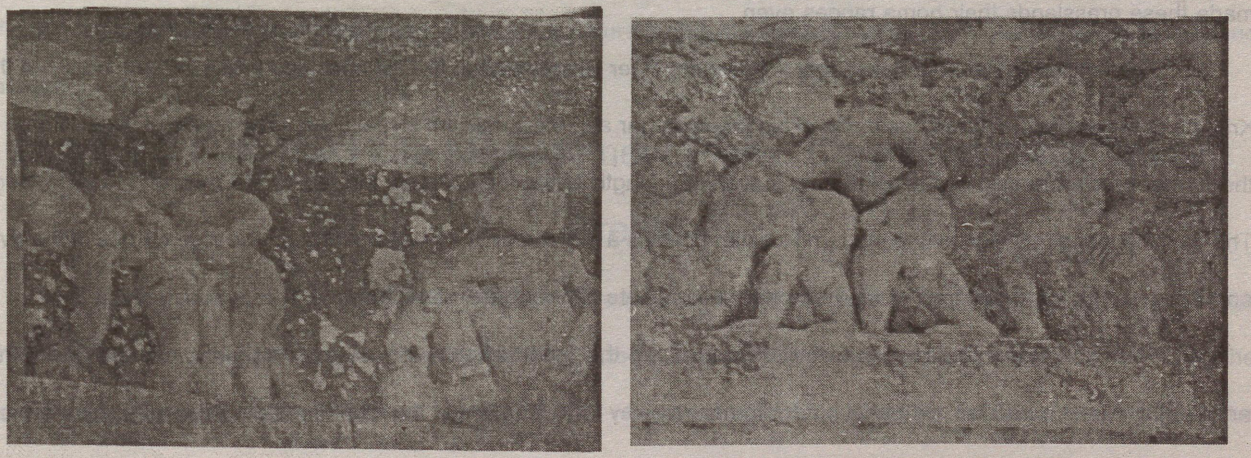
diamonds recovered. The process of recovery seemed to be that the ore would be put into small cistern formed of stone slabs and perhaps acids were poured on to the ore to separate the shining diamonds. I have spent atleast three hours on these sand dunes and infact collected a handful of pebbles of sand which reflected in the sun's rays. I thought I was full with luck and brought these pebbles to my home in my next trip. Not only this I conducted tests by using nitric acid purchased specially for it. Alas! All this turned out to be only the pebbles of Felspar.

Carving of goddess Kali

Dejectedly, I continued my stay at Mannanur on a couple of times I made journeys to Srisailam either with bosses from Hyderabad or once with my own parents and wife. The Sunnipenta forest rest house is what one should camp, just located on descending ghat road with risky hair pin bends' to the Srisailam dam. It has the best view of the valley and is a nice location to see the river.

As one goes ahead to the dam in heavy rainy season, one stops at the cascades of water fall and the misty rise of the droplets which cause multiple glimpses of rain bows and at one point on the hairpin bend it is enjoyable to have a shower bath under this sight even.

Soon we reach the actual river below the falls from the dam. Here we see a number of circular leather dingis of fishermen paddling by hand palms in the swollen waters, for fish catch in the laid up nets. Then we have to cross on old bridge constructed before the start of construction of the dam. This connects the Kurnool district wherein lies the master piece of stone carvings in the form of outer massive compound wall for the famous Srisailam temple. The main deity inside is that of Sri Mallikarjun swamy and further up lies the much worshipped Sri Bhramaramba devi inside the fort. The Jataka stories in carvings of big sand stone slabs reveal the sanctity of this great fort like temple. The portrayed elephants, the tiger and bison on the walls with a stray crocodile on it, give the history of wild life once existed in these forests. It is learnt that the great maratha king sri Shivaji of Bhosle family did visit this temple and paid obeisance to Devi Sri Bhramarambha, who in his dream gave a sword to the king as per legend here. He donated huge sum and got constructed the north dwar gate of the temple. This temple has forest lands on long lease alround it. The main Linga is worn out from its top portions but is preserved and also worshipped – A beautiful nandi in black stone is simply marvelously in front of the deity.



Carvings on Srisailem Temple walls

As we came out of the temple in the Kurnool region, a very serene valley with high forests and dense cover is shown to the tourists. It is called pancha dhara and it is here that the great sage Sri Adi Shankaracharya of Kanchi did penance.

The trees and the dense lians spread give a very serene and calm atmosphere in this valley. Wild birds and animals like Langoors, Macaca radiata cause the much entertainment here. The giant squirrel and paradise fly catcher are the great attraction for a wild life enthusiast. *(photo here)*

On the Kurnool side in the Nandikotkur reserve is the famous Pedda cheruvu tank in the dense bamboo brakes round it. It is here there used to be a forest school for the tribals, now abandoned one. The moist surrounds are the home of the tigers and huge sambhars around peddacheruvu.

A jeepable risky road from here leads to Rollapenta to join main road which traversed we reach the famous Bairluti forest rest house in deep forests. This was constructed by britishers when the area was under Madras Presidency and is quite eco friendly with its Mangalore tiled roofs.

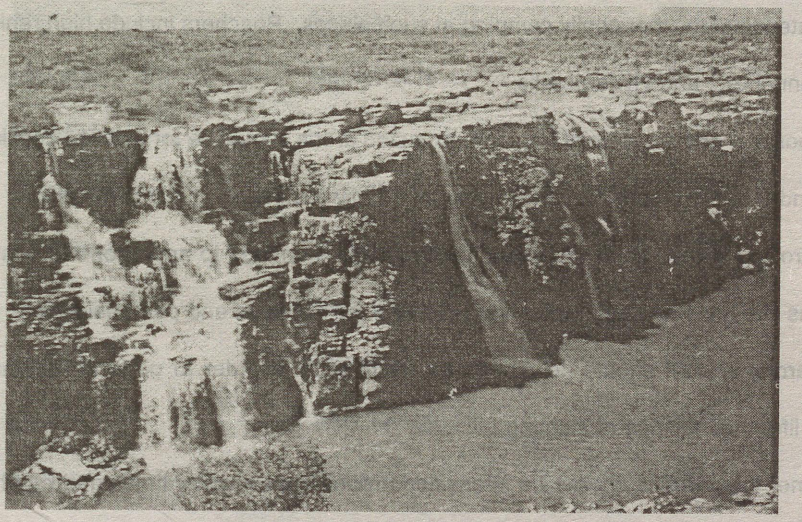
The main ghat road from Srisailam to Dornal in plains in Prakasam district has many a exciting views of forests and valleys with shikharam view point at 1750 meters above m.s.l being the best.

Just, during census in 1982, I was to cover southern forests of the Krishna in the Prakasham, Guntur and Kurnool districts. As I finished the tiger census in April d1982, and was ascending the ghat road from Dornal, luck has it, that I saw the lonely three Great Indian Bustards. To me they were new birds, so I noted down their flight, their foot marks of three toes and a back one toe their height etc. Surprisingly, the new incumbent posted as incharge Director, Project Tiger made the announcement of the finding of these three Greant Indian Bustards, the most endangered birds. Police had detained a person possessing one. The same were duly released in the open grasslands of Rollapadu. Now, this area has been notified as a National Park and they have rightly multiplied to over fifty now. Spotted deer, Chinkaras made these grasslands their home ranges even.

The notification of Nagarjunasagar – Srisailam Tiger Reserve done in 1982 included areas on both banks of the Krishna between the world famous dams of Nagarjunasagar and the Srisailam Hydel Dam. The levels of water stored in the former touch the base of Srisailam dam, covering a length of the longest lake formed by the river of 110 kilometers. The cruising along this lake by the modern Russian boats is a major tourist adventure through the high gorges of the river and the greenery on the slopes of the hills offers a complete different feel of ecstasy.

Now, the Nagarjunasagar can be crossed along the created road above the crest gates. There is another enchanting tourist attraction point at about 8 kilometers away from the Dam in the Guntur district Forest Reserve. This is a 100 feet waterfall called the Ettipothala falls, a spot more for photography and cinema shots here. The Tourism department endevours more lighting effects of the waterfalls. The deep water pond below the fall is now full of breeding

crocodiles as the releases were done officially there on 23.12.1978. Similar but more beautiful is one irrigation Deparrment's rest house called the River valley view on the right bank of the releases from the Nagarjunasagar Dam. Equally well managed VIP guest house is on the left flank of the Dam in the Nalgonda district. This is aptly named "Vijay Vihar" complex. It has the additional attraction of a crocodile rearing pond created by me in 1976-77 when I was posted as DFO Nalgonda, a barren district mainly similar to parts of Mahbubnagar which one is on the list of desertification areas.



Waterfalls

From Nagarjunasagar Dam a tourist launch will take tourists to an island over an hour's journey. This island has the famous relics of art and culture of the times of the great Buddhist Saint Nagarjuna, worth seeing after the same relics were lifted from submergence in the waters of the Nagarjunasagar Dam constructed in 1964-67 period. Now from here a wild life enthusiast can take a country boat to go to another smaller sandy island called Chakalagattu Island. This is a natural sanctuary for birds like partridges and quails and sand grouses as also the roll back animal called the pangolin or the scaly ant eater. To reach the top, from lowest level of the water in the Sagar, I did construct a flight of steps in 1976-77 itself. One should visit both these islands and enjoy nature in situ, the disturbance being nil on the Chakaligattu island sanctuary.

Chapter XXVII: Wild Life Management Plans, Core Areas And Tourism Areas

I, having worked in Achampet division for over 5 years 4 months in the capacity for Anti poaching duties, though all the way without the squad necessarily attached, conducted a solo selfless devotional work in the cause of saving the most endangered species, the TIGER, in this region from fear of extinction and did bring out fascinating results. The Tiger numbers reached 45 in 1981 census against 5 or 6 as in 1975-76. Later they became 93 in 1986 in this region.

In such duties performance in the absence of any technical advice from the top echelons of the department, I derive my own assessments in the job of protection.

Firstly, the officer should have freedom of movement with a vehicle with a devoted driver to ply the same at any odd hours.

Secondly perambulation of forests along villages on borders is a must for the needed publicity of the penal clauses under Wild Life (Protection) Act, 1972.

Thirdly surprise checks need be done at the several rest houses for showing the presence of the officer at any moment to any intending poacher coolly camping at such places. Poachers include high ranking Collectors, SPs, Animal husbandry personnel etc. and Hyderabadis.

Check posts at entry and exist from the protected areas should be for detailed check for arms and no movement be allowed beyond 6 pm and up to 6 am following as a daily routine.

The patrolling should be in the evenings and early mornings to apprehend any intending poacher, the squad should carry arms like rifles and self protecting revolvers for the raids and personal safety.

Local territorial staff should be taken into confidence in order to get any information in protection matters, sightings of wild life, their timings of sighting etc.

In summer the surprise checks be intensified around known water holes and rest houses.

Binoculars and glass tracers and other equipment like plaster of Paris and water bottles should form the basic norms to be carried by each protection staff in their routine movements in the forest.

Camera with tele lens and loaded with film should be with the officers patrolling in jeep. This will help in taking snaps of wild animals seen, so also that of important scenes of aesthetic value, the trails on the ground, the spoor marks of carnivores as also herbivores, any water falls or tanks with background of wild life and forests, all be shot and recorded with dates and places mention. These help in mapping them for future improvements to the sanctuary and management.

Now that tourism is planned in some such important wild life habitats, it is necessary that all vehicles used are freely checked unfailingly including the tourists baggage for hidden arms.

Only tourist zone be allowed for the tourist.

While viewing wild life, observer should maintain silence and with no movement. Camera or binoculars can be lifted to the level of the eyes, only when the wild animal is looking away. Even the finger clicking should also be done stealthily and unnoticingly.

Salt ticks should not be pampered or disturbed.

Extract from Biodiversity conservation in West Bengal 2000 by Wild life Wing Directorate of Forests, Government of West Bengal as on September, 2002.

Tiger Reserves in India are:

Sl.No.	Tiger Reserve	State	Area in sq.km.
1.	Bandipur	Karntaka	866
2.	Nagarhole	Karnataka	643
3.	Corbett	Uttar Pradesh	1316
4.	Kanha	Madhya Pradesh	1945
5.	Manas	Assam	2840
6.	Melghat	Maharastra	1677
7.	Palaman	Bihar	1026
8.	Ranthambore	Rajasthan	1334
9.	Simplipal	Orissa	2750
10.	Sunderbans	West Bengal	2585
11.	Sariska	Rajasthan	866
12.	Buxa	West Bengal	759
13.	Periyar	Kerala	777
14.	Indravathi	Madhya Pradesh	758
15.	Damdapha	Arunachal Pradesh	1985
16.	Dudhwa Katarmighat	Uttar Pradesh	811551
17.	Kalakad Mundanthurai	Tamilnadu	800
18.	Valmiki	Bihar	840
19.	Pench	Maharastra	257
20.	Pench	Madhya Pradesh	758
21.	Tadoba-Andheri	Maharastra	620
22.	Bandhavagadh	Madhya Pradesh	1162
23.	Panna	Madhya Pradesh	542
24.	Dampha	Mizoram	500
25.	Bhadra	Karnataka	492
26.	Pakui-nameri	Assam Arunachal	1206
27.	Bori Satpura Panchamurhi	Madhya Pradesh	1486
28.	Nagarjunasagar	Andhra Pradesh	3568

It can be seen that the largest of the Tiger Reserves is the Nagarjunasagar Srisailam Tiger Reserve of Andhra Pradesh. Madhya Pradesh has the maximum number being totally six. I was lucky to visit Tadoba Reserve in Maharastra in 1967

from my stay at Kagaznagar. The natural scene in Tadoba was simply exciting as I saw that Tiger was just relaxing in the company of most of the deers in this Reserve. This happens when the tiger has had full meals from a kill earlier made. The tiger cannot be compared to other animals like Panther, or wild dogs who do killings of prey animals just erratically, even after they ate to their satisfaction. The wild dogs can be seen almost always on the move in packs and are voracious eaters amongst the carnivores.

The peace with which tigers co-habit in the habitat as seen by me in the TAdoba reserve speaks of sanctity of maintaining tiger protection areas in the country. The habitat gets a promotion like situation in as much that the other wild fauna gets a boost in population and they breed faster in order to cope up survival from local carnivores including tiger.

After having seen this picture in the Tadoba reserve in the year 1967 I am of the opinion that no other tiger reserve has come upto the mark of a perfect habitat in the management of Project Tiger Reserves in India. I do predict a better and bright future for our Nagarjunasagar Srisailam Project Tiger Reserve being the largest in area having sober climatical, geophysical and environmental conditions for a natural existence, inspite of the fact that presently the tiger mostly depends on cattle as its main prey food. This is mainly due to a large number of villages in the border surrounds of the Reserve. This Reserve has a typical topography of mountains and valleys in large number of natural springs and water sources including that of the major two rivers of Dindi and the Krishna and their watershed are of a permanent nature. So also the roads inside the Reserves can afford full control against poacher activity or disturbance. Once the left canal from Sisailam dam gets completed, the present disturbance gets reduced to a bare minimum, affording the natural multiplication of all wild life in this Reserve- This reserve is also quite safe from pollution causing industries within or even in the bordering areas. Further there is very much scope for research and planning for this reserve. As even the fact remains that there are not any airports or railways either inside or just on the borders and as such least disturbance exists as of now. Material needs are the least and as such the much troublesome traffic of vehicles by road gets minimized.

There is also a definite and most natural advantage in having a contiguous forest belt touching the reserve, which can harbour fast breeding center for the tiger. This one is the Kollapur extension reserve on the south of Amrabad reserve, once managed entirely for shikars by the then Raja of Jatraphole operating from Kollapur palace. This forest is typically different and has thick bamboo forests which are open for silvicultural extraction by annual leases sold by department. Here too there are good many water sources including a perennial river. No wonder this ideal habitat allowed the Raja of Jatrapole to hunt down 108 tigers upto 1924 as per records found in his palace at Kollapur, which place is also in Mahbubnagar district. I have a theory on the migration of a number of tigers from Amrabad to this Kollapur ex jagir forests. The ideal habitat allows the free movement of tigers from Banal and Farahbad escarpment regions to the Kollapur reserve adjoining and it is this reason that the Raja could hunt down 108 tigers in his jagir forests.

Though Andhra Pradesh has left out this Kollapur extension forests from the notified tiger reserve, it speaks volumes that the ideal locality can help more breeding of tigers in the tiger reserves subject to stricter protection against any poaching in this area. However, since bamboo forests working is one of states necessities, Kollapur forest need to be strictly protected against poaching by all means.

No wonder, the tiger once it feels safe as it did during my sincere protection work in 1977 to 1983 in the Amrabad and Kollapur reserves of /Achampet division bringing their numbers from mere 5-6 in 1976 to 45 in 1981 census which too showed further a big number of 93 in 1988 census, the wild life management of this tiger reserve can expect to raise a 'gene pool' of 300 tigers overall in the very near future. And then the tiger servives permanently for eve.

Of course, the present mismanagement of this Tiger reserve to some extent is mainly due to the constraints, namely:

1. The naxalite activity of the peoples war group in Andhra Pradesh, which causes fears for the staff to enter deeper areas of forests.
2. secondly, the continued construction works of the Irrigation department in the laying of left canal from Srisailam reservoir to Nalgonda and Hyderabad city. This initially needed forming a 35 kilometer tunnel excavation and then laying open canal system.
3. There is, thirdly, the increased burden of territorial works of raising plantations, extraction and management of establishment on the wild life management circle at its headquarters at Srisailam, with divisions at Achampet, Kurnool and Atmakur as also Prakasham.
4. Mobility of protection staff gets limited due to paucity of all weather roads and also due to the hills and deep valleys terrain mostly being inaccessible less vehicles count for this.
5. The further problems could be from the Joint Forest Management schemes involving local village committees of the border villages.
6. Satisfactory working and management by the Girijan Cooperative Corporation, stationed at Mannanur and Srisailam, regarding tribals exploiting minor forest produce in the reserve. At least nine cases of mauling attacks by bears were investigated by me over 5 years' work in this Amrabad reserve alone.
7. Hardwickia binata (ippa). Serves as a good fodder for sheep. So also the cut and dry leaf of (sarkari babul).....serves as better feeding to the sheep. However the thorns from this tree are poisonous to man.
8. The gum from Anduk (Boswellia serrata) is edible but inferior to that of Tapsi gum (sterculia urens).
9. The profuse flowering of acacia intsia (korinta) smells very aphrodisiac and very special insects akin to smallest bird in the world, all hover round on such flowering impenetrable groves in jungle. Specially so this flowering also attracts the two species of fire fly in the night. And this is a sight worth photography by a video camera.

10.With first rains the drones of giant wood eating ants swarm up and fly out of the ant hills. These drones are a special food for the monitor lizard. The Lizard can be easily photographed in this action right on the ant hill.

11.My studies on Fungii, declare that all fungi are produced only when eggs of various ants and also that of snakes including cobras and also that of various lizards, get damaged due to water from rains. The Fungii from poisonous dead eggs of poisonous snakes like cobras or Russells' viper or craits, when get damaged due to water result in production of very poisonous gas yielding fungi. The caution note is for those who like mushroom fungi as catered food in posh hotels served as special dishes.

12.About droppings of Deers: Almost each species of deers move along regular trails and defecate in few selected heaps formed by the droppings. The chinkara's droppings are small pellets like resembling almost like the channa dal's original form. Spotted deer's droppings are longish cylindrical and may be found along its trails or also on dung heaps of other species.

The droppings of Nilgai and sambhar are in the shape of round flat or moulded ones in continuous chains like and the fresh ones may have even the sticking placenta like fluids to the sides. They too shit on to heaps of other deers also. All deers thus move along defecated heaps located along their routine trails. However, no tiger is seen to follow these trails or go near the dung heaps of deers or follow these to catch its prey.

These trails with the heaps of dung of old or fresh droppings and the approach paths are easily located in jungles and these deers can be enumerated from fresh droppings on such dung heaps. I hold that deers need not be spotted for census counts. However, during nights most of the deers like Sambhars or spotted deer assemble in herds round water holes for safety as individuals movement is full of risk of attack by predators like Tiger, Panther or wild dongs.

Other prey animals like soars of wild pigs are safe when they move in big numbers led by a senior most or eldest female, which keeps a top watch to allow the entire members to pass on to safety and then only the leader moves behind them.

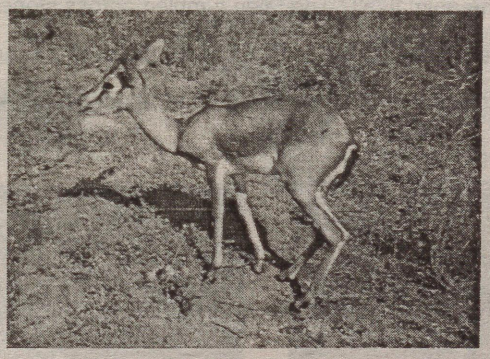
Very often the leader wild boar faces any adversary like man or other animal and maintains the attacking posture with snarls and thumping the ground by forelegs.

13. After making a kill, the prey is dragged over distances in thickets by the tiger. After consuming about 4-6 kilograms of mutton from one of the hinds, the kill would be dragged to a new place. When hinds of the kill are eaten away the tiger would gore open the chest cavity to eat liver, heart etc. but it severs away the stomach bag of the prey along with length of intestines and leaves this along the drag. At times the drags continue three or four times to finish the prey. And this drag once measured over 300 meters in the first attempt only after killing the cattle head in an open grassy area. This was mainly to safe placing from any disturbance.

14. Tigresses with young cubs, kill a soft target like a cow and eat some mutton of its hinds and after a small time gap, the tigress would eat a few slips of grass in order to regurgitate the mutton already eaten and vomit out the partly digested or softened mutton. Bears are found to have climbed up Mohwa trees, even if with straight grown stems upto 6 meters above ground and fall down this height just because they cannot retrace their hold down the tree stem, especially even when the bark of this tree is thick and grooved one. The nail markings of the climb are clear on the stem all through the climbed height. One can hide to watch this great fall and photograph it.

The liquor prepared by the tribals is highly intoxicating one. The fleshy calyxes of the flowers are also used in cooking vegetables or boiled with daal. I tried to taste one and found it too acrid and sour and highly pugnacious and offensive smelling one. The tribals like the Koyas of Bhadrachalam agency in Khammam district and Madhya Pradesh, the chenchus of Amrabad and Nallamalis and to some extent the gonds of Adilabad and the Lambadis of Telangana love the liquor made from the florals of Mohwa and also of Ficus glomerata fruit found in the forests. Incidentally man gets into high spirits after a drink of this. Bears (sloth bear) too after devouring mohwa flower parts, gets intoxicated. It is just this reason that shikaris locate a stray bear in deep slumber under a Mohwa tree and even a bear in playful moods jumping up to reach branches of the flowering of this tree.

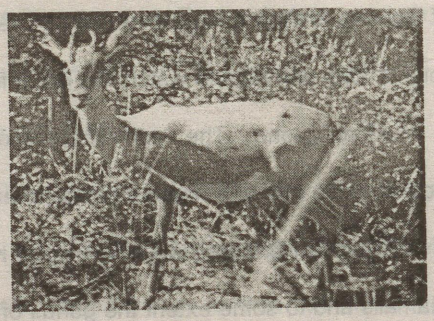
I gather that MOHINI astra used in the legendary epic involving the kaurav – pandava wars was made out of Mohwa flowers only. The fine powder of dried flower of mohwa has a special property of absorbing moisture or water from heavy clouds and rains occur and thus if drunk by man it makes them go into deep slumber. This was perhaps the tactic employed by the pandavas of the epic mahabarata. The pandavas caused rains of MOHINI astra by their mantra power or they have used air vehicles (vahanas) to drop the powder on heavy clouds during the war with the 100 kauravas. The result was in favor of pandavas only.



Chinkara

Since I worked in natural forests I learnt much of the language of the nature in Amrabad reserve. This reserve was a recreational resort for the then Nizam of Hyderabad, his kith and kin and visiting friendly kings and officials. The camps used to be at Farahbad rest house built in 1905 and also at Mannanur located at elevations ranging from 2000' msl to 2500' msl, the Reserve being on a high plateau with deep rugged forested valleys , ideal for the carnivores and herbivores like the Tiger, Panther, the wild dogs (cuon albinus), jackals, wolves, foxes and sloth bear,

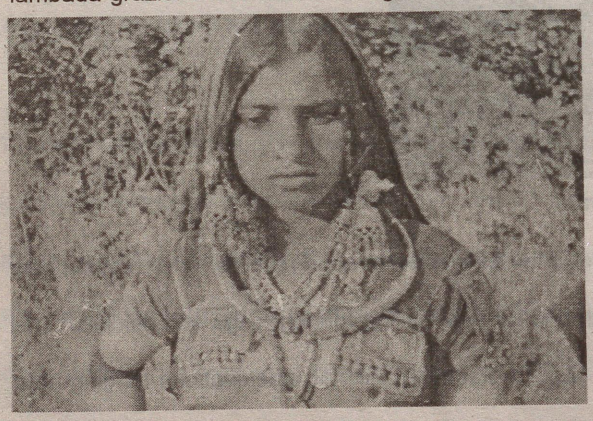
Nilgai, black buck, spotted deer, the chinkara, the chowsinga, the sambar and also for the slippery animals like the python, cobra, russels viper, rat snakes and green snakes too. The Krishna River is known for the mugger and the water dogs (south Indian otter). The other animals like wild cats, the tree shrew, the giant squirrel and the badger and rhesus and langoor monkeys add to the multitude of species. Birds of beauty like the pea fowl, the grey hornbill, the green pigeon, the emerald pigeon, the Indian pitta, the tree pie, the golden orioles add the colour of life to these jungles.



Chowsingha Deer

A sudden darting dash by a porcupine or rolled in pangolin threatens one's movement shockingly along thick bush and jungles of Amrabad. Birds of prey with the domination of fishing eagle, the crested hawk eagle, spotted owlets, the big white vulture, black winged kites, the kestrels etc.dominate for their food mainly rats, eggs, small bird nests and snakes which all are fairly frequent all over the jungles. The wild dogs are seen in packs of six to thirty, even – and they move along rivulets and ravines. These dogs (cuan alpinus) hardly give any bark but their call is only a fluting long cooing yell, heard only small distances to the members of the pack. They move in files along nallah beds and often cool down by a quick dip upto midway deep of their body while they are on the hot chase of a prey across the jungle. They are not afraid of man nor attack man as I often encountered their movement. Their kills are live animals like the young sambhar, cheetal, chinkara etc. and also frequently young calves and cows which come for grazing in the midst of forests and in open patches too.

I was lucky to have seen how a small pack of four wild dogs attacked a smabhar fawn chasing it all along. The attack was multi pronged as one bit it across the eyes to blind the fawn, one chewed over at the hinds and one held the tail part and one ran parallel to make the animal fall. The fawn tumbled across stones as it became blind and finally fell on to the ground. The wild dogs ate it while the blood was hot and finished it in an hour. I missed this opportunity to photograph the hunt. In another incident, eleven wild dogs had attacked and killed five young calves of cows of lambada graziers near Barnal village interiors.





Lambada Women

But the herdsmen drove them out and rescued the dead bodies and heaped them and the owners reached me for inspection in order to get cash compensation, telling a lie that tiger has killed the five calves. On inspection late evening nearing sunset, I saw the pile of the five dead calves, and nearby stood the silent eleven wild dogs pack. I dissuaded the owners as to not to interfere and to wait standstill by my side for a close watch to see the actions of the pack. We saw that one of the pack elders led first and grabbed one calf and dragged it across a distance as if it was a carpet spread held by four of them at the corners and started tearing out mutton from it and devoured most of it to their satisfaction in about an hour.

Lambada Woman

The remains were then allowed to be eaten by the younger pups and other middle aged lot. Here too I had not carried my camera and missed a whole film exposure on these cannines. However, all I had to report was that it was not tiger killing the calves. The poor lambadas did not receive the cash compensation even when I had recommended it out of the way in this case specially as a sympathetic gesture. The lacuna was in the GO on cash compensation. It mentioned compensation only for tiger kills. I do not know why our chief Wild Life Warden felt no pity on the owners and failed to pass favorable orders even though out of the way.



Centenarian lady

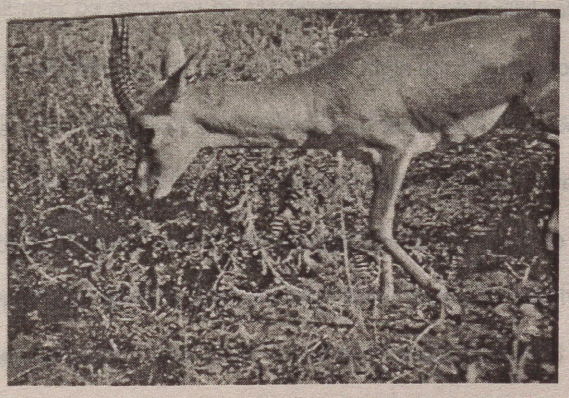
Initially during 1977-78 itself I had reported two cases of Tiger kills involving domestic cattle, for cash compensation and luckily they were sanctioned and paid for by me. This practice had to be continued in order to save the Tiger from wanton poisoning as the tigers were in very small number as reported in 1976 census, being only about 5 or 6 in Achampet division. The second year of my sincere operation to save tiger resulted in more than fifty cases of personally inspected cattle kills by the Tiger. The Chief Wild Life Warden sanctioned the recommended cash compensation at the close of financial year 1978-79. The victims were given a patient wait. This approach of mine was a rewarding method.

In that, the cattle owner unfailingly used to reach me in camp or at headquarters, requesting me for panchanama by inspection. I never missed these opportunities and used to drive my jeep to the nearest possible approach for the inspection. Lambadas have a typical behavior to move their cause and would often give a lie that the kill is just near (ikkadane ayya). But being interested in study of the home ranges of different tigers in Amrabad forests, I used to seriously walk with them any distance to reach the kill, at times it was even 3 to 5 kilometers, in deep jungles, sometimes during late evenings, even. This brought confidence in the graziers that the officer will always oblige for inspection to draw the panchanama. Here I have to point out that the Chief Wild Life Warden's instructions were that I should take with me a local Animal Husbandry Doctor to evaluate the cattle involved. This was practically an impossible approach to get his assistance for all the kills. I stood steadfast in reporting my own valuation, and it used to be agreed to. I remember that the higher ups, including the Chief Wild Live Warden who is the final authority, had started doubting my integrity in such reports after a couple of years and at one juncture the boss made a passing remark that I would thus empty the government treasury. Even a colleague officer who was posted as Deputy Director at Srisailam Project Tiger in 1982 made a direct attack of false cases in my reports, in the presence of my immediate boss. This angered me to the full and I retorted instantly and this officer had to take back his words in apology. It was due to my efforts singly executed for the strict protection of Tigers – in fact saved these denizens and their number increased to 45 by 1982 and five found dead or killed otherwise. The publicity of protection given by me among high ranking officials like the Collectors, IGPs and secretaries visiting Srisailam temple resulted in the news spreading to the Central Government which had already launched the "Project Tiger" scheme elsewhere in other States from 1973 onwards. Sri H.S.Panwar the Director at New Delhi a class mate of mine at IFC Dehradun visited officially to assess the increase in tigers in order to cover the area under the "Project Tiger" scheme of Govt.of India. He was very much pleased to have seen pug marks of tigers and panthers all over in Amrabad reserve. In particular, he was joyous at the site of the valley view point on the Farhabad escarpment. The geology of this escarpment area is such that a horizontal bedding of sand stone and granite is seen which naturally saves erosion. The view point along this escarpment is in length of 2- 4 kilometers. The lower flat area with thick forests with the Rasool cheruvu lake and the rain ridden clouds hanging up with last embers of sun rays to form beams of different hues is a frequent natural scene during rainy season, enchanting at this view point. There are such other view points south of the Krishna river touching the sacred temple of Srisailam deities, Sri Bhramarabha and Sri Mallikarjuna. The temple itself is at 3038 feet above msl. And highest view point nearby is 4500 feet. The view is of the full landscape of valleys and hills., the Krishna River eastern bend and the new dam and thick green forest all over. The forest cover is about 40 kilometers width on either bank all along the 110 km.stretch of the river Krishna between the Two famous dams namely the Nagarjunasagar and Srisailam hydro electricity dam whose crest gates are at the highest in the world. One enjoys the ghat road windings and rising all along the 80 kilometers stretch of state highway between Mannanur and Srisailam and also 40 kms. Ghat road down in the Kurnool district reaching Dornal village.

There are plenty of naturally running water sources in these forests. Since it was notified as Reserve Forests under the then Hyderabad Forest Act 1337 fasli, the forest cover quite naturally grew with the least disturbances having been protected as a "shikargah" for the Nizam. Further there is only one road linking Srisailam temple, centrally running north south for over 80 kilometers and this is the most enjoyable track all through as it runs windingly along the midst of forests. The ghats at higher elevations gives one the glimpses of varying forests in deep valleys and on gently sloping hill sides.

There will be occasions when a panther just leaps across the several hair pin bends along the ghat road. A motor cyclist was injured by the paws of a panther which shot up over his body to cut across the road, one such hair pin bend. The injured cyclist was moved to Srisailam hospital later. In my travels in jeep I too had occasions to see peacocks suddenly fly over head to move to opposite tree line across the road. The bluish green trail of the majestic bird and the flapping of wings gave an altogether enjoyable event, many a times.

Mannanur which was on the edge of the north end of the road at 2028 feet elevation was my frequent camping site at the forest rest house built in 1905. The village is an enclosure with a tank on south western edge touching the highway. Further up about 21 kilometers there is one enclosure of about 300 acres for the settlement village Vatvallpalli and this latter open fields is very much visited by wild animals like the wild boar, the spotted deer, peafowls and chinkaras and the watchful tiger too. A few kills of cattle by the Tiger, were investigated by me near the end of the cultivations of this. A soar of wild boars numbering about 64 once crossed the road inside the forest touching the enclosure. Another enclosure further up perhaps only an open grassland with Palas trees where cattle penning used to be and now wild animals of deer family are seen occasionally here. Along cart tracks at edges one can come across tigers pug marks all along. Further up is an old well made by a contractor of the Road during ixties when the Srisailam dam was under construction. This too is a tiger's haunt and chinakaras could be seen downside the bund. There is a grand view of river Krishna further up of the road, a high top view point indeed, where from one sees the winding course of the Krishna behind the Dam itself. Foreigners who accompanied me, being Advisors in Wild Life, in fact liked the place very much for stay for couple of days and actually pitched a tent also.



Chinkara browsing shrubs

However, moving further towards Srisailam, there are two such views of the meandering a river on the right side of road and the river is easily accessible in a few minutes down the steep hill. Forest check posts stop up at Sunnipenta enclosure and at Mannanur on north end of the road and again as we move south of river after crossing it over an old bridge and a run of 40 kilometers of ghat road one is at Dornal in Kurnool district. The Srisailam temple is situated in Kurnool district. The pilgrim paths were laid and paved by natural stones in good olden past from the shrine to north and south entry points which formed the only approaches, and are the best trekking lines with water holes, right from unknown or from below a mango tree, a retreat indeed created by the then engineers is very much laudable. Such water points had shelters of stone roofing for rest for pilgrims. Even the path is pebbled throughout with big flat sand stones. Here at one such water hole the image of Sri Rama can be seen unfortunately the idols got cracked due to fall of roof stone during a major earthquake of 1979. It is known that Sri Ram in his quest of search for Sri Seeta, his wife walked along this pilgrim path and reached Srisailam deity and prayed there to the maha shiva linga. The legend can be true on seeing the stone images (though now broken) of Sri Rama and laxmana at a water hole along this path. Half way between Srisailam to Bairluty FRH in Kurnool district, is one enclosure where a tribal school was being run by Forest Department till the project tiger was notified for these forests. A tank by its side is very calm and water birds especially migratory ones are seen there. The pheasant tailed Jakana attracted my attention in the moist soils of the periphery in the bamboo brakes round the lake. I often heard growls of tiger in this lake with surrounds of bamboo brakes and thick forests here. The southern forests across Krishna were the frequent penning grounds of very healthy cattle breeds especially cows and bulls. Herds of 500 to 700 were being penned in small open patches. Here was the challenge to tigers to operate in order to steal a head or two during nights. A couple of kills investigated by me at such pens revealed the truth as to the tricks employed by Tiger. A Tiger couple would follow the herd in day time and locate the penned animals. The male would then during night of silence, make a move near the penned animals. The frightened ones would jump out only to be killed by the Tigress attacking from opposite side. Only the next morning the cow herdsmen would come to know of the kill from the drag and other signs. Then they would report to me for inspection. This instinctive approach shows that Tigers can plan strategies for killing their prey animal.

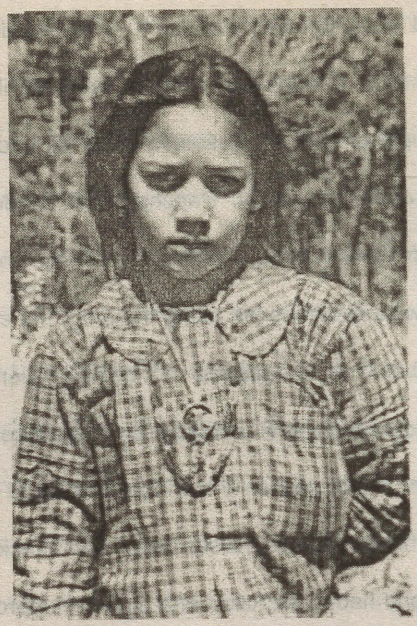
Who says tigers move only in the night time? Unpteen times I have been approached by lambada cow herdsmen that their cattle was attacked in the day time. In one such kills I could se pug marks reaching the cattle killed. I am and was surprised that the distance between each landing of foot of the Tiger was 110 inches i.e., over 9 feet and after two such landings the third was on the cattle, physically downing it to the ground, the deep cannines on the throat of the cattle were the only marks of injuries on the prey. The Tiger is a neat killer, famous for his art of killing by his canine hold of the throat of cattle includes for that matter even deer family members. All the over two hundred cattle kills of the Tiger that were inspected by me over a period of 5 years and five months in this region showed only the canine hold as first attack

point and which floored the cattle and finally throttled it to death. The long drawn out tongue of the Bovine indicated this. No other post mortem needed at all. Even a tough huge ongole bull was killed by the strong canine hold of the Tiger or tigress as inspected by me in a couple of cases. I used to enjoy all such inspections by walking down to the kills, whenever the owner of cattle used to come and report. Panchanamas conducted by me would show details such as first drag, the first part of the prey wherefrom the first pound of flesh eaten, the position of tail of cattle left out, the position and distance and nature of stomach bag with intestines left along the drag, the chest cavity parts eaten and last but one, the head skull broke open, then the legs below knees opened with hooves fallen naturally. In a kill the tigress was breaking down even the hip girdle in a water hole touching Rasool cheruvu nallah bed as the last item to be eaten.

It was also found that perhaps out of necessity the Tiger or for that matter a Tigress would resort to killing even two or three buffaloes at one place. This was to avoid disturbance and attack by the second or third buffalo after first was held by Tigers canine hold. The second had to be killed in a different approach. The Tiger actually mounted on to the second buffalo which made a round or two in circles to escape but weight of the Tiger brought it down and finally was held by the cannines at the throat resulting in two kills at the same spot. Here also first come first served. This finishing first buffalo as the modus operandi is not found in panther killing a prey involving the cattle. Panthers rarely kill a buffalo but cows and young calves are usually attacked by the canine hold of the throat. After killing the cattle, the panther opens up the stomach side after devouring the udders or genitals and hurriedly eats away a part of the stomach and leave the place and vanish and it does not return to the kill again. The Tiger is very patient and makes revisits to the kill each day for three to five days even. At each eating of about five to six kilogram of mutton from it, the carcass left over is dragged to some distance to hide it under bushes. The Tiger then leaves for drinking water from nearby source and returns to rest nearby the carcass to protect it form intruders like jackals etc. Once the carcass becomes lighter, the tiger will carry it off the ground as the markings of drag are not seen on the ground. I have not come across any of the carcass of kills being covered by leaves or brushwood or soil or stones from nearby. Perhaps this is a true natural case study than that studied elsewhere by different authors especially in Uttar Pradesh, where frequent visits by travelers into the sanctuaries, cast a shadow of fear in the animal that its kill may be removed by Man even and as such it should be hidden by any means available close by, leaves, rubble and even soil.

Many a times I found cattle kills just left by tiger after killing by its canine hold of throat of the animal. This may be due to disturbance by cow herdsmen. Otherwise tiger is seen to eat first come first served meat from the cattle first killed. This safeguard is perhaps to keep the second kill in tact for some time.

Once I saw a she buffalo killed by the local Tigress in the forests near Mannanur as led to it by the affected owner. To my surprise and shock I found that the she buffalo was carrying a calf in its womb and the tigress, which killed the buffalo, carefully carried out a caesarian operation to remove placenta covered fetus from the womb of the kill.



The faetus was complete and intact and was perhaps taken out for weathering in the open. I learn that the placenta is poisonous and this knowledge was brought out by the tigress that successfully carried out the caesarian operation on the she buffalo. This happened in two such cases and shows the skills of the tigress and her attitude on the juvenile unborn in its prey. It may be pointed out that the Tiger or Tigress show no concern for the bad foul smell emanating from the preyed animals involving the cattle dragged every time . I and for that matter the lambadas and villagers who reported the kills for inspection could not stand the offensive rotten smell at the sites with moving swings of jungle flies all hovering and making meal and spreading the fungus arising from putrid meat. It is really very much awfully stinking at such kills and the feel is that the nostrils continue to breathe in this smell even after leaving the site. Birds like the Tree pie and the Indian Robin are the first visitors on such carcasses. Tree pie makes its typical chuckling calls before and after directly pouncing on the carcass. The foul smell goes to the air and if winds are stronger and drifting upwards, the same smell is caught up by high hovering vultures far away, especially the white backed vulture and they follow the winds back wards to detect and locate the place wherefrom the foul smell is emanating. They then make the final assault of landing like sea hawks in groups directly perching on nearby trees firstly as a safety measure against jackals etc. and then land on the carcass itself. One can see them pulling and tearing off the mutton pieces by their curved beaks and some making squeaking noise all the melee at the carcass. Only high winds carry the smell for the knowledge of the vultures and as they have this good smelling power and also the eye sight too, they hover in circles all the back route of the air currents carrying the rotten smell of dead animals. Whereas a kite attacks a prey by its highly evolved eyesight even when at good heights above the ground. Their steep head on dives at prey in such attacks is worth seeing. Typically a black winged kite remains almost stationery at particular height range except that its wings flap for maintaining this position for a time till it makes up that it can pounce and catch its prey, usually a rat or bird and then

it plummets like a dart and dives and picks up the prey in its talons and goes on notching it with its sharp beak right in mid air then it perches on a tree and makes a meal out of it. I have often seen this process even in Kingfishers like the spotted king fisher, which dive for a fish as it is seen on surface of water. But here the beak is used directly for catching the fish. The fishing eagle and the fishing owl both show this same operation, while a serpent eagle just dives on to a located snake or a bird nest and or a mouse or a rabbit and grabs the animals by its claws and starts tearing it in mid air or after perching on a tree it tethers it and finishes the hot meal.

Chapter XXVIII Of encounters and other studies

I am a retired officer of the Indian Forest Service A.P.Chapter of 1957-60 IFC batch. I served for about 36 years in Andhra Pradesh working almost in all the districts as DFO of divisions except Karimnagar, Nellore and Medak. I was very happy in my posting as DFO Anti poaching squad Achampet in Mahbubnagar district also that at Vizag to cover three coastal districts of Andhra Pradesh. I was lucky to be in the company of nature for over seven and a half years in the places covering the famous reserves of the State. The squad portion of my division as never allotted during the stay there and the job of anti poaching was done all by me alone including driving of jeep for over two years of stay at Vizag. Perhaps it was destined that I should wander all alone to enjoy the serene nature in the wild forests of AP. The Achampet division was known as a 'poacher's paradise' and even officials like the Special Collector, Srisailam Hydro electric project, police officials including high ranking Inspector Generals and some regular tiger skin smugglers and agents sponsoring shikar used to have a go at the shikar of tiger and other animals. I had come across a party of Muslims who had contacts with Saudi rich families and who would stay in Amrabad forests after big preparations for a month's shikar program. A Ford jeep with all new tyres and extra two new tyres, two new batteries, powerful spot search light and full kitchen paraphernalia were the full preparations. The jeep would be brought in a top good condition. Of course the shooting equipment too would be of accuracy in order to shoot tiger or panther from 100 to 300 yards distance even. This party was accosted once by me at Mannanur to change their attitude of poaching to shooting with a camera rather than a gun. My omnipresent tours to forest rest house at Mannanur and Farhabad built during the rule of the Nizam of Hyderabad for shikar camps of the royal family of the Nizam of Hyderabad and forest rest house at Chintapalli in Kollapur taluq by the Raja of Jatrapole and his shikaris brought in a major change and the shikaris had to drop the idea of poaching for fear of getting caught and get prosecuted by me. I accosted one IGP involved in one such encounter. On learning about his program I stopped them in the Srisailam Hyderabad road in Amrabad reserve forest right at mid night nearing. He was with his brother in law who it was learnt was a regular poacher and the party was assisted by police Sub Inspector of Srisailam who handled the search light from top of the jeep. They carried a 0.22 rifle and a.12 bore double barrel gun. An ambassador car behind the jeep was carrying their ladies too after having visited Srisailam temple. When

I threatened that I would book a case, the IGP was seen shivering with his rifle in the right hand. He just managed to say a few words in a quiver that they were looking for naxalites who had a couple of weeks back stopped one Secretary to Government and robbed his wrist watch and camera. This party's feeble spot light had no effect along the lone tar road linking the forests, on both sides over 60 km. of river Krishna. I had to deal with a top police official with his subordinate staff, I coined a new approach as I knew his name and post held. I was all alone to deal with them on that mid night in ghat road. My driver of jeep Ch.Chinnaiah remained with jeep at some distance after stopping. As I introduced myself after banging them against breaking the rules of Forest Act and Wild Life Act, the old gentleman showed recollection and remembered that I was DFO at Chittoor when he was SP there long back in 1964. Later I told the IGP that this area was a notified sanctuary and is a reserve forest and that tiger which was on the brink of extinction, was being protected by me all alone then. The census of 1975 – 76 indicated only 5 or 6 tigers here and that they were now protected by me against poaching and that their number was on the increase was all narrated to the IGP. Later the episode went on calmly and we reached the forest rest house at Mannanur self also in his jeep. The IGP invited me for the arranged dinner. But I told him that my food is with me in a carriage and as such to excuse me. To watch out that they leave for Hyderabad soon, I kept myself nearby Mannanur FRH as they finished dinner, met the officer again and just requested him to excuse me for my harsh deal with him done earlier as I could not control myself then. He simply patted me on my back and said 'you have done excellent job' and he then left for Hyderabad north check post Mannanur. I continued my wild tirade publicity against such high officials' part taking in poaching activity. I remember well that in my stay at Achampet not even a single case was ever booked by me under the Wild Life (Protection) Act 1972 but protection was strict due to my omni presence to counter any visit of poachers or even locals dared not go for poaching. The tiger population increased from dwindled out figure of 5 or 6 of 1976 to 45 tigers in 1981 census due to strict protection done all singly with no staff. However, this included five dead due to poison. One was with injuries of a bullet on his hind knee joint but I have preserved one full skeleton of the eight and half feet long male tiger which died due to wound poisoning on his left hind knee. This was a fully grown male and I could not go near till fear was over come. Two cubs between 3 to 6 months died due to eating poisoned meat of a kill by mother tigress. The one died on the spot and the second died after treading about four kilometers along the forest path. This latter was seen by a tribal who just ran for life and climbed a tree only to discover after a long one hour on tree top that the cub was no more alive. Then he climbed down and even stoned it and found dead. He reported the matter to me at Amrabad. The cubs' bodies were recovered by me all intact and skins retained after initial tanning. It was rather shocking that the mother tigress went on revisiting the site of the kill from where the cubs had left in panic of poisoning effect. Here it sits to the spot of a winding rivulet bank bend on over a month or so and the painful calls of the mother tigress could be heard by me around the eroded banks of the bend of the rivulet.

"The Hindu
11-10-1985

Andhra Pradesh.

Two more hyenas shot dead

ANANTAPUR, Oct. 10.

Two hyenas were shot dead on Wednesday night—one at Mustikovila village and another at Kurubawandlapalli village in Penukonda Revenue Mandal by forest shikari teams, according to Mr. P. Sina Shankara Reddi, District Forest Officer.

This takes the number of hyenas killed to four since "Operation Hyenas" was started in the district last week.

A 10-member team of specially trained hunters belonging to the Andhra Pradesh Special Police Force has arrived here to carry out "Operation Hyenas" under the supervision of Mr. D. S. Ganga Khedkar, Deputy Chief Conservator of Forests (Wildlife).—Our Correspondent



Child killed by a pair of Hyenas by tearing off into two halves in Hindupur Tq. of Ananthpur Dist : 1985



Goared-Through leftovers of child lifted and killed by a pair of Hyenas in Hindupur Tq. Ananthapur Dist : 1985

"The Hindu"
7-10-1985

Hyena shot dead: all out effort to end menace

From Our Correspondent

ANANTAPUR, Oct. 6.

One hyena was shot dead on Saturday evening near Venkatapuram village in Samandepalli revenue mandal, about 70 km from here by a shikari party consisting of four hunters engaged by the Forest Department, according to Mr. S. Ramachandra Reddi, Minister for Small Scale Industries.

He told newsmen here on Sunday that the Forest Department had formed four teams of shikaris to end the hyena menace in this district which had taken a toll of 14 children and injuring five others this year between April and September. Each shikari team had been provided with two rifles, necessary ammunition and two search lights for combing the area and hunt down the animals.

The Minister announced an award of Rs. 1,116 for the shikari team which shot dead the man-eater.

Mr. K. P. Munuswami, Conservator of Forests, told newsmen that the animal was killed on Saturday night after 48 hours of hectic effort and chase. The Forest Department had so far paid compensation of Rs. 5,000 each to the four families which lost their children in hyena attacks. Arrangements were being made to pay the compensation to other victims' families. Those seriously injured would get a compensation of Rs. 3,500 each.

Mr. Ganga Khedkar, Deputy Chief Conservator of Forests (Wildlife), is monitoring 'Operation Hyena' in Anantapur district.

Mr. Munuswami said there were about six hyenas, two old, two young and two cubs



Childlifter Hyena Trophy



Childlifter Hyena Trophy

Brief Review of Book " Srisailam Tigers Roar Again" written by Sri D.S.Gangakhedkar, IFS, Retd (Andhra Chapter), a veteran in Forestry of Andhra Pradesh, India

Mr. Gangakhedkar, who is trained at the Indian Forest College, Dehradun, U.P. (1957-60 Batch) has shown great passion in his duties, particularly in Nature Studies and Wildlife Management. His rich experience during eight years as District Forest Officer, Anti-poaching Squad showed in depth studies on Tiger, its habitat, psychology and the needed protection approach, extended to even Blackbuck and coastal sea animals, olive Ridleys.

The factual encounters with the carnivore and his new finds of Blackbuck in Makhtal and Narayanpet Taluqs with his arduous long patrols and their saving all go to speak volumes in their conservation of most endangered wildlife in Andhra Pradesh. His patrolling was alone without the squad all through eight years.

The Book "Srisailam Tigers Roar Again" provides an excellent source for wildlifers in the country and it feeds confidence, and The Know how in the management of natural resources, especially useful to officers manning the twenty eight tiger reserves of the country in order to tackle problems like child lifting by Hyenas, the false propaganda about man-eaters and poaching.

The country can be proud of his sincere devotion to the cause of wildlife conservation as the author predicts that a whole sum "Gene Pool" number of Tigers may exist in this most enchanting and wonderful beautiful Tiger Reserve of India.

Wish therefore a wide publicity of his Book.

From: D. S. Gangakhedkar IFS Retd. 3-9-13 Ramanthapur Hyd. 500013

Hyderabad 11-1-2008

My dear friend Binod,

I am very glad to hear that you have risen to the rank of Deputy Director, WL. Institute Dehra Dun.

I am also glad to inform you that even after 15 years of Retirement I could manage to write and get printed my first ever Book "Srisailam Tigers Roar Again" (2007).

A copy of this is sent to you herewith for much needed publicity at Dehra Dun and Delhi too & FRI.. Priced Rs. 210/-

Since I am not conversant with arranging Sales of this book after my big investment done in October 2007 + NOV. '07, I have my doubts whether sales can catch up to the printed number (Presently 500 only)

I hope you will go through it and also undertake some wide publicity so that on demand I can send you a parcel of needed number very soon. Cost is not much as seen in the current sales of other books. I could not invest for Color printing of about 50 photos in it due to high demand of about 1,50,000/- so only B/w editions are out.

Due to the earnest interest in Wildlife and Bird watching during my stay at Hyderabad 1985-'88 as WL warden Investigation, much publicity done resulted in forming of a Bird Watchers Society of A.P. Add to this my earlier 8 years as DFO Anti poaching Squad (without any Squad at all) at Achampet and at Vizag, the whole time protection brought in the declaration of "Nagarjuna-Srisailam Tiger Reserve" ~~and~~ Railways stopped transport of Live Sea Turtles all over. Olive Ridley Saved. So also the Black Bucks at Mudmal in Makhtal and Narayanpet Taluqs multiplied from mere 64 in 1977 to over 3000 now.

Thus New Leaf is turned in the pages of WL. Management by a single soul in A.P. I had filled in the Form calling for such works done by individuals, NGOs etc and had submitted the same. But T Ramkrishna did not forward it to Govt. wantonly in 1990 or so. This wanton action deprived me Award by Rajiv Gandhi Trust (Rs 1.0 Lakh). Anyway I am glad to have created this book for use by WLifers including Tiger Project officers of 28 Tiger Reserves where at this will be sold. Hope you in full gear in family life. Best wishes. Happy New Year. Yours sincerely

11/1/2008



SRISAILAM TIGERS ROAR AGAIN

Rs. 210-00

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