

BOMBAY NATURAL



HISTORY SOCIETY

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CONSERVATION OF INDIAN WILDLIFE
RECOMMENDATIONS AND RESOLUTIONS

Preamble

The crux of India's conservation problems is its human population. Demands on natural resources for human needs and the needs of domestic livestock are so great that very little is left for any other forms of life. These effects are most heavily felt by all wildlife species.

A brief review of some basic environmental parameters and stress they presently bear will help introduce the problem. India, although having hardly one-fortieth of the world's land surface, supports more than one-half of the world's water buffalo and more than one-seventh of its cattle and goats. The effect of the constantly increasing pressure of these domestics on the land (particularly grasslands and forests) has been disastrous. In India, land urgently in need of rehabilitation because of wind and water erosion, salinity, and alkalinity now exceeds an area of 100×10^6 hectares. The Chambal Valley, with 4×10^6 hectares ruined by erosion ravines, demonstrates what can happen elsewhere. Another continuing pressure on land resources is urbanization. The urban Indian population is the fourth largest in the world, and it will continue to grow while agriculture on impoverished land, fragmented by inheritance distributions among members of a family, fails to support the increasing rural population. At the same time, more agricultural land is taken up to meet the demands of urbanization. Approximately 1.5×10^6 hectares of arable land have been lost in this manner since 1950. These losses are borne in the final assessment by the forest and grassland habitat of India's wildlife (Rodgers and Panwar 1988).

The second most important factor is water conservation. In historic times, rainfall was stored in ponds and tanks and this water was apparently sufficient to meet the requirements of the human population. These storage reservoirs neither have been maintained nor have increased in number to conserve water while meeting the needs of an expanding population. India still uses only one-tenth of the rainfall that it receives. Floods wreak havoc each year, but India still lacks an effective policy of flood control and water conservation. Groundwater reserves, which

were once 10 times as great as the annual rainfall, have been so overused that in many areas the water-table has fallen far below economically retrievable levels. Aridity is now threatening many areas which were once fertile.

The third major consideration is energy. Firewood remains the main source of energy for cooking in India and particularly in villages where it may be the only source. Urban India alone uses more than 20×10^6 tons of firewood, worth over 5000 million rupees (US \$350 million), more than was spent on afforestation between 1950 and 1980. The effect of this endless demand on resources is evident considering the area under forest cover. Satellite data indicate that India is losing 1.3×10^6 hectares of forests a year, more than eight times the figure given by the forest departments of the various states (Agarwal and Narain 1985).

In spite of these grave constraints, India still has a variety of habitats, albeit considerably reduced in extent, in its forests, grasslands, marshes, rivers and lakes to support its wealth of wildlife. Habitat loss is the main cause for declining wildlife.

These figures relate to condition over a decade ago and the situation has not improved.

Forest Protection:

The major source of forest degradation is timber removal for commercial use or as firewood. Protected forests areas are unlikely to be saved unless alternate arrangement such as fuel wood forests are raised. Fuel wood forests must be a part of Panchayat functions and funded for establishment. Such fuel wood forests must be self sustaining after the critical funding.

Water Conservation: requires legal protection of our remaining wetlands so that they are not diverted for other uses. There should be blanket Central legislation to protect wetlands from the size of village ponds to Ramsar sites such as Chilka and Keoladeo Ghana at Bharatpur. Water Resources will be the main source of conflict in the coming century unless timely efforts are made for their conservation.

We have apart from the two major resolutions on habitat conservation two species specific resolutions, one on the tiger.

Tiger conservations

The main cause for concern is protection. It is therefore suggested that protection measures be comprehensively strengthened.

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Two options are available.

1. Police powers be extended to designated Forest Officials including the power to use firearms if necessary.
2. A protection force be organized for each tiger reserve, from local tribal or other communities.

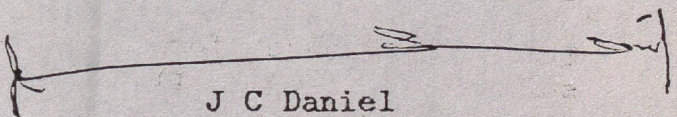
or

A Central Protection force be organized similar to Railway Protections Force, Central Industrial Protection force first for tiger reserves and later enlarged to cover other protected areas.

3. Tiger reserves should be ringed by a wireless communication network and forest staff provided with field communication units.
4. For mobility of Protection staff vehicles (both four and two Wheelers) should be immediately made available.
5. Tiger populations must be continuously monitored. Occurrence of tiger in a particular area is usually well known to tribals and forest staff. Signs of these continuance in an area must be reported and recorded.
6. Movement of people within tiger reserve should be monitored and recorded.
7. It is necessary to organise an intelligence network for each tiger reserve.

Elephant Conservation:

An excellent action plan for Conservation of elephants and Elephant Ranges has been prepared by the Ministry. It is likely that more elephants may have to be taken into captivity to control numbers of wild population. It is therefore essential to start a school for the capture, care, and management of elephants where both elephant and elephant handlers can be trained, the latter in the humane handling of captive elephants. Presently management especially of privately held elephants leaves much to be desired.


J C Daniel
Honorary Secretary

J/sa.

NOTE ON DILUTION OF THE FOREST CONSERVATION ACT, 1980

The Forest Conservation Act, 1980 (F.C. Act) was enacted by the Parliament with a view to check indiscriminate diversion of precious forest land for non-forest use. The Act with its Rules and guidelines framed for implementation of the Act stipulated that:

(a) forest land could be used for development projects ONLY in such cases when non-forest land is not available or cannot be used;

(b) the use of forest land shall be bare minimum possible;

(c) if conditions (a) and (b) are fulfilled than an equivalent non-forest must be available for undertaking compensatory afforestation to set off the loss of the forest land.

Condition (c) ensures that the use of forest land is not the easiest option available but should be only as a last resort.

The F. C. Act has been of a great help in drastically reducing the diversion forest land for non-forest use which came down from 1.42 lakh hectares per year prior to 1980 to 0.25 lakh hectares per year in the subsequent year(s).

Unfortunately in FEB, 1997 the matter after being discussed in the Committee of Secretaries

the Ministry of Environment and Forests modified the guidelines which has substantially diluted the conditions prescribed for undertaking compensatory afforestation.

As per these revised guidelines, now for Public Sector Projects of the Central Government the need for undertaking compensatory afforestation has been dispensed away with as there is will be no need for providing non-forest land for compensatory afforestation. Only money for afforestation should be provided. This has rendered the F. C. Act totally ineffective as the basic principle of taking non-forest land for compensatory afforestation which was the main factor responsible for checking the diversion of forest land for non-forest use has been dispensed away with.

Though for the time being the watering down guidelines is restricted to Central Governments Public Sector Projects only but it is bound to automatically become applicable to other projects also in due course time as the discrimination of development projects between the public sector and private or Central or State Governments cannot be justified.

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PALAMAU CORE AREA

I visited Palamau core area in January 1995 very briefly for only one day. I had been to Palamau three times earlier and the last time was there was sometime in 1979. Naturally this visit after 15 years was extremely interesting and quite revealing, as I found out, and may be a good idea to put on record.

1. Palamau is known to be in the drought prone region of the state of Bihar. The National Park, as I had seen earlier, becomes dry during December to May when most of the smaller streams and nullas become dry, the undergrowth dries up and many of the tree species become leafless. But during the recent trip I found the undergrowth quite green and thick most of the nullas and all the streams are still flowing. Hardly any tree was found leafless though leaf shedding had started. The ground apparently held good quantity of moisture still even though there had been no rain recently.

We were told that monsoon had been 'unusually' good during the last season, even though the previous year had seen a bad drought. Compared to what I had seen during my earlier visits and the last one, I felt quite certain that the 'moisture retention' capacity of the soil had considerably improved during the intervening period, even considering the current good monsoon, the area had experienced.

2. I have also noticed profuse pole crop, almost everywhere, that we went during the whole day of our movement. These young crops of various species seemed clearly of 'recruitment' of the last two decades or so. It also indicates rigid protection of the area. But this has resulted in clear diminishing of animal sighting possibilities. While cover condition has improved significantly, animal sighting may have gone down correspondingly.

3. It appeared that the open grassland patches that used to attract a good number of chital and other prey species of the tiger and leopard, have considerably shrunk, mainly due to the colonisation by various tree species. This could be a result of very rigid fire control in the past.

4. It has also been observed that in extensive areas profuse regeneration of teak in various stages of growth has come up. In some areas this regeneration in the first year very nearly forms a carpet covering the ground. Palamau is not in the natural teak belt and the species had been planted as a normal forestry practice. The invasion of teak in this National Park may be welcomed by many but the possible fall out on wild animal communities may not be positive. The effect has to be carefully evaluated as early as possible.

5. As mentioned, the animal sightings during this short visit was rather poor, particularly compared to my earlier visits. But in such a short visit no comment is warranted. All the same I strongly feel that due to spectacular improvement in the cover conditions (particularly ground cover) and because of the availability of water extensively, wild animals are well dispersed in a wide area which would result in lowering of animal viewing and should not be mistaken as any true indication of the status of the animals.

But in any case shrinking of open grassy glades, profuse regeneration of teak in many areas and developing of thick understory cover may ultimately result in the lowering of herbivore communities. Talking to the Field Director and also to some NGOs, it was felt that the status of the gaur may not be quite satisfactory. The number of elephants, I was told, is on a steady rise. This may cause some

management problems not too long from now, especially if and when the submergence commences due to Kutku dam. This will result in the loss of a large area especially for the elephants.

But it is rather strange that the Director, Project Tiger felt that this dam could be very good in the interest of the Park and he would pay for the shifting of some dozen villages which could come under submergence. It is not understood how shrinkage of good habitat in any wildlife area may help wildlife communities.

6. From discussion with the local NGOs and also with some local wildlife officers, it was learnt that tigers are regularly breeding in the core area. On maturity the cubs are often moving out of the core area. But these areas are under tremendous biotic influence in the shape of human use of resources and heavy grazing by domestic stock. Tigers in these areas are seriously vulnerable to poaching. Besides, the prey base in these areas is badly depleted and the predators have to depend almost entirely on domestic cattle, which exposes the predators to even more serious threat because of man/animal conflict. Compensation for cattle lifting in these areas remains unpaid for the last 3/4 years due to paucity of funds.

7. Some pilferage of timber and occasional poaching of animals for meat does take place, but may not be of any major consequence. Poaching of tiger within the Park is not reported but according to NGO information several tigers, which had dispersed out, disappeared, though some others are still being traced.

8. Palamau N.P. has still some contiguous forest belt up to Netarhat and Latehar. The continuity extends even beyond. But unfortunately there is just no wildlife management prevalent in these areas. The prey base is negligible, which cannot support any viable predator population without the predators taking to large scale cattle lifting. The cover condition is also reported to be poor in accessible areas with very heavy grazing and lopping. But the potential for tigers does still exist, if due care is taken.

SAVE THE TIGER

THE LAST DITCH



Billy Arjan Singh

Tiger Haven
Palia Kalan, District Kheri
Uttar Pradesh, India

TARA



PHOTO COURTESY : D. PLAGÉ



PHOTO COURTESY : ROLAND DE PREMORÉL

SAVE THE TIGER – THE LAST DITCH

Billy Arjan Singh

INTRODUCTION

The IUCN General Assembly met in Delhi in Nov 1969. Alerted by the presentation of a paper by KS Sankhala postulating an alarming fall in the numbers of tigers surviving, due to the operations of 26 Hunting Outfitter Companies in India, who, claimed to be earning valuable Foreign Exchange by killing the tiger. And persuaded by my resolution proposing a ban on tiger shooting in India. A resolution by the General Assembly was unanimously passed suggesting a moratorium on tiger hunting and its replacement by the Tourist Potential of the Tiger.

The Government of India, influenced by the overwhelming interest of Mrs. Gandhi, and the offer of a million dollar donation made by Guy Mountfort on behalf of the World wildlife Fund, initiated Project Tiger in 1972/73. Later on Guy visited Bangladesh, the newly created country, carved out of Pakistan, with the assistance of the Indian Army. He was greeted with enormous enthusiasm by Sheikh Mujibur Rahman the dynamic Prime Minister, Soon to fall to an assassins bullet.

The Project was inaugurated in 1973, at the Corbett National Park, with great euphoria. Nine Project Areas were initially selected, though a certain trepidation; and the unwholesome influence of the Forest Department was evident when the original manifesto laid down that the Project areas were merely selective for a period of six years, and would actually benefit the forestry aspect, as the commercial value of timber would appreciate, with the temporary suspension of tree felling. Other aspects of vested interest also became manifest with the recommendation of the purchase of a helicopter and one aircraft apiece for each Project, out of the money donated by the WWF, while it was made evident

that their representative was unwelcome at the Inaugural Meeting, and that Project Tiger was basically an Indian Initiative.

Initially a Species oriented Project generated a tremendous enthusiasm; The Conservation of the worlds largest and most glamorous predator, became the Warhead for the Preservation of its Ecosystem. The realization that the use of sophistication which was capable of eliminating a status symbol, was on principle incorrect. For my suggestion of adopting the tiger as our National Animal had been accepted by the Indian Board for Wildlife. It was that perfection of evolution capable of producing animals of a weight of 855 lbs. as a Siberian Tiger shot in the Sikhote Alin mountains of Russia; of 705 lbs. by the Maharajah of Nepal in Chitwan; and an Indian tiger 4ft. at the shoulder by Tootoo Imam in Assam, should not be consigned to limbo before its time by force of weaponry. Sankhala who had played a prominent part in the origination of Project Tiger became its first Director, but unfortunately consigned Jimmy, a tiger cub he had adopted to the Delhi Zoo. Jimmy became the much photographed tiger who made it a habit of leaping into the zoo moat, but missed out on an ideal opportunity towards a reintroduction into the wilderness. The Field Director of Simlipal Tiger Reserve in Orissa, also adopted a tigress called Khairi, but through an unfortunate process of restraint in zoo conditions, and probable administration of anti oestrogen constraints, she was denied a natural association with wild tigers. He categorically stated that he had no intention of returning the tigress to freeliving conditions.

Once Project Tiger had been accepted as an attempt to preserve the tiger in the wild, The International Union for the Conservation of Nature which is the international scientific Union gave its opinion that a population of 300 in a contiguous habitat area of 2000 to 3000 sq mls was a minimal density required for preserving the species in perpetuity. It was immediately realised that such an area was possible in none of the Projects selected, especially in view of the opposition by the Forest Department to

relinquish forestry areas for the conservation of wildlife. It was therefore necessary to explore other avenues for the introduction of a genetic diversity, to ensure a survival of the tiger for all time.

PLAN DETAILS

In September 1971, I was presented with a male leopard cub with a mandate to return it to nature. Two years later Prince opted for a wild existence, and returned to the forest next to my habitation at Tiger Haven, soon to be designated as the Dudhwa National Park in 1977. However the North Kheri Forest Division as it was then known was not a good habitat area for leopards, and moreover the abundance of tigers, of which a supply was maintained from the Churia foothills in Nepal, exercised a depressive effect on the presence of the lesser predator.

I therefore wrote to the Prime Minister, Mrs. Indira Gandhi to whose dedicated interest, Indian wildlife owes so much, suggesting that she give a female leopard from a pair which had been recently presented to her. She graciously gifted both females to me. Soon however it became evident that such experimentation was handicapped by excessive human presence, and one of the leopardesses was poisoned by the Forest Department. The other leopardess however survived to breed twice, sired by Prince-An account of these events is given in my book 'Prince of Cats' By Jonathan Cape.

I addressed another letter to the Prime Minister on the 8th Oct 1975 suggesting that she accord me permission to try to introduce a tigress to free living conditions. On the 24/25 of the month I received a letter from Salman Haider, the present Foreign Secretary, who was then working on her staff, that the project had the approval of the Prime Minister, and the search was in progress for a young tiger. However Indian zoos were not able to produce a cub, but fortuitously Survival Anglia, the British Wildlife TV Film Producers happened to show Mrs Gandhi one of their films, and when Salman told Dieter Plage the German Cameraman of the

inability to find a cub, Dieter who knew Dr Grzimek of the Frankfurt zoo arranged for 3 cubs to be collected at Bristol. The prospect was too daunting, even for me, in spite of my enthusiasm, but a subsequent rearrangement found me at the Twycross zoo to collect Tara, or Jane as she was then known.

However the mills of prejudice were already at work, and I received a peremptory call at Brooke House, Park Lane the London headquarters of Survival Anglia, from the Joint Secretary, Wildlife to say that I was not to bring the cub tigress to India, as she was reputed to be a hybrid, of other species, which would pollute the purity of the Indian blood line. Such a command was difficult to ignore, considering the eminence of its source, and the fact that if I treated my return with a cub as a *fait accompli*, I stood the chance of being isolated at the Airport with a starving infant, at odds with a deliberate infringement of orders by government. I was also in an awkward position as airline bookings had been made, and my hosts found it difficult to advise me to take the bit between my teeth, which is what they wished I would do, and what I did. It struck me as an absurd quibble that scientific dogma should wish to preserve the blood line of a subspecies from the same genetic stock, while perpetrating an inbreeding leading to degeneration. Of course the *bona fides* of the Delhi Zoo Director were already besmirched, when he permitted the inbreeding of white tigers in order to capitalize on the sale value to foreign zoos. But it soon became obvious that in spite of these irritants from minor officials. I had the Prime Ministers Office batting on my side.

I was met by John Wakefield and the Head clerk of the Delhi Zoo at three in the morning, and later served a Customs Duty Demand for Rs 16,000/- which I also managed to sidestep. Mrs Gandhi once again put the stamp of approval on my efforts to work for the Great cats by declaring the North Kheri Forest Division as a National Park.

The holding battle now began. The Project Director who had been in an ideal position to attempt the introduction of genetic diversity in Project Areas, had given the sub adult, who he was unable to handle, to the Delhi Zoo. He pontificated that a zoo bred tiger could not be returned to free ranging conditions. The Field Director of Simlipal made his tigress into a house pet, and said it was not possible to introduce a super predator to free living conditions. It was therefore obvious that I would have to contend with the hostility of Project officials, who ostensibly had the same objectives as I had, but differed in methodology, and when I recorded a spectacular achievement, which in their complacency and half baked knowledge, they had termed as impossible, a jealousy and a foresters association with sport killing, which placed animal welfare out of context, impelled them to try and divest me of the aura of an animal deity which I had unconsciously assumed, and impose the ignominy of incarceration on a symbol of freedom.

A Mid Term appraisal by the Chairman of the Cat Group, and representatives from the Survival Services Commission, and the UNEP, which was critical of the conduct of the Project appeared to upset the organisation and the Steering Committee guiding the policy adopted an integration process with humans designated Multiple Use Areas. The Director changed the direction of the entire Project, going on record by saying that it was the saving of the Ecosystem, and not merely saving the tiger, which was the real objective of the Project. By this pontification he sacrificed the age old edict, that Godhead is the guiding force of religion. For the tiger can Never share space with the human.

On the 5th of October 1981 I received a letter from the Director of Project Tiger which I quote in its entirety as it illustrates the genesis of the problems which bedevil Tiger Conservation:" I have received a Volley of correspondence, mostly from persons connected with zoos in Europe. They have alleged that Tara, which was given to you from Twycross Zoo, was not a pedigree Indian tigress, and that because of her uncertain and mixed origin she

was not listed in the Indian tigers in the International Tiger Stud Book. You have claimed that Tara has been successfully rehabilitated into the Dudhwa National Park. Notwithstanding the converse views of the Director, it will be a catastrophe of the highest order genetically if our breed of tigers are contaminated by one of impure lineage. Nobody should be more concerned about this than you, whose whole body and soul have gone into the making of Dudhwa.

The information of Tara being not pure, is authentic, and in such an event we must consider her elimination before she breeds-I understand that you hold that she has not bred yet.....Needless to say our image as conservationists is coming to be maligned in the correspondence that is ensuing among Universities, Zoos and IUCN in Europe".

In addition I received a letter from Sir Peter Scott to say" I am writing this at the request of the Survival Services Commission, Steering Committee which has expressed concern regarding a tigress which was sent to you from Twycross zoo with a view we were told to carrying out a reintroduction experiment....IUCN are most concerned that subspecies are kept pure. We understand that the tigress in question is already a hybrid between two races, and if she breeds it will make a further genetic cocktail and from a scientific and conservationist point of view, would be most deplorable.

Could you confirm that this will not be allowed to happen, so that I may report back to the commission at its meeting in Florida at the end of the month.

By this time the Director of the Dudhwa National Park also came into the act, claiming that he had shot Tara as a maneater on the 9th Nov., 1981, but her two cubs were still alive. I immediately received another salvo fired by the Director Project Tiger dated the 12th Nov., saying that as you claim that Tara is still alive, we will have to consider her elimination, as well as her cocktail progeny; to

which I replied with some belligerence, that "if you contemplate the destruction of an unconnected tigress, and her two cubs, you will assuredly have to get by my physical presence". Subsequently, perhaps overwhelmed by the enormity of the genocidal crime he was contemplating, he solved the entire problem of hybridization by saying that Tara had been eliminated by conspecific interaction, and that my claim of a successful rehabilitation was bogus. Peter Scott who I met in London, and with whom I discussed the subject matter of his letter, told me that it was written on the advice of the Chairman, Cat Specialist Group, and he did not necessarily agree with its contents. The Chairman had recently published a book which had illustrated experimentation with the mating of lion and leopard, as well as that of different cat species, and had acquired a British wife. So the storm in the gene cup, ended in a burlesque!

The notion that preservation of the genes in a subspecies is a "Pious onus upon conservationists" at the expense of the ravages of inbreeding is a crime against natural species and their well being, and in this particular case, of a successful reintroduction, dictated by an insensate desire to denigrate a consummation which Project officials had declared impossible.

Tara passed from the Tiger Haven Range in 1992, and her whereabouts, as with most terminal disappearances in the forest, remained a mystery. She had attained her expected life span in a world where a wild carnivore must pass from the scene when they can no longer subdue prey. Perhaps her mortal remains rested for a while in some arcane thicket, until they disappeared for ever in the soil where she was nurtured, and far from the places of her mixed origins, which was maintained to be Siberian. May be her aged bones lay pulverized in some gutter in Beijing, for China had already applied to CITES at the Kyoto Meeting in 1992 for permission to import tiger derivatives to supplement the supply of bones from the Tiger Farm at Hengdaohezi, for the preparation of medication supplied to the factories at Beijing, for purposes of export to expatriotes in other parts of the world.

THE PROBLEM

I realised that the exhausted genes of the local community had been revitalised, though it was problematical how many of Tara's offspring survived the onslaught of the bone trade. The Indo Nepal border was an ideal haven for the criminal elements of either country. I converted my farm at Tiger Haven to a grain and sugarcane farm to be shared by ungulates, humans and elephants alike, and attract prey species to secure the presence of Tara's progeny.

I taped a tiger call in 1995, and found that one particular male would answer these calls at night. Tigers use calls mainly as a means of communication, whether it be spacing calls chiefly at kills, mating calls, or contact calls within families. As the taped call was that of a male, it seemed that the range male was seeking to establish territory, and though there were two tigresses in the vicinity, he appeared not to associate with the females, which could indicate that he was a subadult, though his pugs were those of a well grown tiger.

One day during March some buffaloes were being grazed along the bank of the river in the buffer area of the Park to the east of Tiger Haven. Among them was a pregnant black cow. A tiger appeared from some tall grass at midday and killed the cow, and started to drag it across the river. Alarmed by the yells of the graziers, he abandoned the kill in the shallow river, where I saw it, as I passed on my way into town. On my return a couple of hours later, he had returned and tried to drag the carcass across the river, but one leg caught in a sapling, and he was unable to take it up the river bank under cover. He had a meal and then spent the afternoon sitting in the river upstream. That night he dragged the kill along the river for about fifty metres, and the third night he repeated the manoeuvre for another hundred metres. By this time the corpse was smelling considerably, but a tigress who happened to pass by, did not pause to investigate, and the tiger pulled the remains up the bank and finished it on his own.

A few days later he was seen sitting in the water at the Croc Pool bend further upstream, beside what appeared to be the rumen sac of an animal. Which we later discovered was that of a large wild boar. I drove along the river bank in my Gypsy playing the roar, and saw the tiger appear to contest what to him must have been a challenge to the possession of his kill. We were all surprised, for the pale pelage, the wide stripes, the large head and white complexion had the characteristics of Siberian stock. Was this a recessive mutant out of Tara for she supposedly had Siberian genes ? If so at this advanced stage when the species was faced with extinction, what lessons, if any, did it hold for the future ? And what answer to the furore that the pure breed of the Indian tiger was being contaminated by foreign genes ? For this was a young tiger, as was evident by the whiteness of his canines, and possibly the handsomest tiger I had seen. Many questions had to be answered by the scientist keepers of the Stud Book. Was there a case for the appraisal for the eight subspecies of tiger, four of whom were extinct? The tiger had been in existence for six million years, when habitat areas were contiguous, and obviously subspecies only came into existence with a fragmentation of habitat which is comparatively very recent, and there is still possibly an overlap on the Asian mainland. The compartmentalisation of subspecies is possibly too dogmatic ? It should be for consideration that generic tigers which are recommended for extinction should redeem their unfortunate existence by repopulating selected habitat areas of erstwhile Balinese, Javan and Caspian occupation ? for these tigers are already in a process of a genetic transition.

The Chinese application to CITES at Kyoto in Japan in 1992 for permission to abandon the import restriction on tiger derivatives as Endangered Species sounded the alarm in earnest. Hitherto the tiger had been treated as an agricultural pest, highlighted during the regime of Mao Tse Tung. No doubt their clandestine destruction of the tiger population did not receive world publicity,

but now with the dwindling numbers of the four subspecies, which the Chinese claim to have had at one time, and of whom they defiantly told CITES, that what they did with local populations was their internal concern. The application for the legalisation of trade was not only to augment the supply to medicine factories, but would also control smuggling activities, they said.

Their attitudes shocked the world, and the Pelly Amendment, which empowers the President of the United States to impose Sanctions on countries who trade in Endangered Species, applied restrictions on Taiwan, but compromised their stance by bestowing. "Most Favoured Nation trade status" on China. However the Chinese desire to modify the international understanding of a maverick Nation, their desire to stage the 2004 Olympics, and possibly pressure from the Global Tiger Forum, may have influenced them to sign a Protocol with India. Though there is some suspicion of their Clause IV which says "Encourage on a experimental basis, captive breeding activities, with a view to release of the species into the wild." (sic).

The Chairman of the Cat Specialist Group of the IUCN gave a press conference at Delhi on 30 March 1995. He stated "The tiger will virtually be extinct in the wild by 1999, unless India, and other Range States declare open war on poachers and illegal traders, and throw all the resources required into the battle. Some scattered individuals will remain and produce young for a decade or so, but in fact we will have seen the end of the tiger. "The Director Project Tiger however writes" we have come a long way since a thrust was given to conservation in India by the launch of Project Tiger, and the enactment of the wildlife Protection Act. The fact that population of tiger has gone up considerably since the early seventies is attributable to the basic soundness of our policy.

HISTORICAL

Legend relates that tigers originated in the Chigar Caves of Northern Siberia. There after driven by the Ice Ages, and possibly

due to expansion of population, and the search for prey species they migrated south and southwest to colonise China, Indo China, Sumatra, Bali, Java, Burma, India and the area of the Caspian. Ultimately eight subspecies emerged, modified in colouring, pelage and size from the light coloured and furry giants of the Russian Taiga-with a maximum weight of an animal shot in the Sikhote Alin Mountains of 855 lbs-to dark specimens of the equatorial forests of Java and Bali, weighing in the region of 200 lbs.: Later research seeks to establish the origin of the tiger in South China. In any case animals modified over the millenia in conformity with environmental conditions, and economy in dealing with prey varieties, are *basically the same animal*.

Of these subspecies the Balinese, Javan, and Caspian are extinct, and the South China almost so. Dwindling relict populations of other subspecies still exist, their numbers depressed by destroyed habitat, poached prey species, and the nefarious bone trade. India was the country selected to save the tiger in the wild, as it was considered the only viable population; but the landslide has caught up with us too. Though ostensibly the only country with a vaunted census enumeration the figures have been distorted out of all proportion by the Forest Department who inspite of changed values in Government thinking, still have a stranglehold of the methodology in conducting censuses, which are unfortunately still accepted by international wildlife forums.

It is a fact that tigers have a common ancestry, and this theoretically predicates that an outsize Siberian could evolve into a undersized Balinese. Yet though the subspecies are disappearing one after the other, scientific dogma insists that racial purity must be preserved, and that generic tigers in zoos should be earmarked for extinction, in accordance with a carefully maintained stud Book. It does not require much imagination to forecast what the eventual result will be. Hitlers Doctrine of Herrenvolk would have lead to ultimate extinction, whereas hybrid strains among plant and

humans have triggered a 'Green Revolutions' and East has met West in perfection of face and form.

It should be the endeavour of the various countries who have lost their tiger subspecies to recolonise these vacant habitats. This might be done by the introduction of generic tigers and their progeny which are earmarked for destruction, and hopefully their modified morphology would at some stage in the evolution to Nirvana, 'reestablish the Balinese, Javan, and Caspian, subspecies. Generic tigers are genetic transients, who can reclaim an inheritance. And not pariahs bred for extinction.

THE SOLUTION

In conclusion we must work on the basis of presumptions made by the IUCN which is the scientific branch of the two associations which direct international wildlife conservation. It is their computation that a population of three hundred, in a contiguous area of 2000 to 3000 Sq miles is necessary for preservation of the tiger in perpetuity. Assessed by this parameter there is no such area available in India, though the India/Bangladesh Sunderban could qualify areawise, the wildlife estimates are outrageously uncertain. Failing these qualifications it is evident that some process of gene pool augmentation is essential, and though the Chinese onslaught may hasten the end, the restricted populations of Tiger Reserves are all fated to see the extinction of the tiger due to inbreeding at some stage. Therefore the solution of "Captive Breeding" should not be rejected out of hand and can well be one of the options for the creation of a dynamic gene bank.

Once the ultimate remedy is accepted by the creation of a gene bank, the search for means of implementation remains. There are three options :

1. The introduction of a captive bred cub. This is a costly and time consuming process requiring expertise and dedication in

procedures, but can be successfully accomplished as I have proved.

2. Translocation from areas of abundance to those of scarcity : The process is a one time operation of comparatively low cost, but will have to contend with possible conspecific strife, associated with territoriality, especially with males.
3. Artificial insemination of receptive tigresses : Such an operation requires a selective gene bank, expertise, and cost effective procedures to be successful. It must be accepted that the skin and bone trade is not the only instrument for extinction, and constricted Project areas, and lack of breeding diversity will hasten the end. We should not allow our wilderness policies to be dominated or dictated by Zoo procedures functioning from restricted and artificially controlled conditions.

Desperate situations require desperate solutions, and the U.S. Fish and Wildlife service should be invited to provide guidance and assistance. Their Specialist Service have identified genetic degeneration in the Florida Panther, of whom there are less than fifty, and they are suffering from sterility, deformities, heart murmurs etc. Of the 30 sub species in North and South America, the Texas Cougar has been introduced in an attempt to invigorate their reproduction in South Florida and the Everglades National Park.

Russia has accepted United States assistance in monitoring their dwindling tiger population. Though because of political fragmentation and uncertainty the future of the tiger remains in doubt. We should have the initiative and courage to seek their assistance, for the forest Department are technically not equipped to undertake specialist wildlife Procedures.

I will suggest that a D.N.A. test, if feasible, should be carried out on the tiger with the supposed foreign genes in the Dudhwa National Park. This would not only confirm my confident assertion that a zoo born tiger can be successfully introduced to free living

conditions, but indicate the possibility of a fresh infusion of genes into a constricted population, which I insist is now the only method of SAVING THE TIGER FOR POSTERITY.

THE LAST HURRAH

As the time approaches for final extinction, for me as an individual, and for the tiger as a race, I feel that I should share my thoughts with my countrymen, many of whom do care, for the demoralising extinction of processes of Evolution of animate creations, by the rapacity of the human race.

We have ravaged habitat of underground dwellers by the plunder of fossil fuels built up over the millenia, and by strip mining. We have razed great timber stands, and unleashed floods and siltation for short term political motives. We continue to rob the oceans in international bickerings, of their sustainable wealth. We have upset the rhythm of life by the unrestrained proliferation of the human race, and savage experimentation with other life forms, to preserve our own species. We continue to grab the habitats of vulnerable entities. We have transformed the tolerance of religions, into religious bigotry to subserve political ends, and the 'Human Bomb' is the final manifestation of divine approval. The civilising processes over the ages has projected itself in the spurious claim of the use of wildlife Derivatives for medicinal functions : And thermonuclear research which could solve many human problems is stockpiled for destruction.

The final extinction of the tiger, in all its eight subspecies, has been widely, and sympathetically written about internationally, but sympathy alone cannot stem the rot. Basic measures are required to halt the lure of enormous profits of the skin and bone trade. This effort must be an international one, To obliterate the final destination of these derivatives, and a Indo-Nepal one to abolish the incentives of the internal trade.

There have been failures on both counts : By the Pelly Amendment, the USA could impose trade sanctions on recalcitrant nations, yet its concern has become farcical when it has imposed Sanctions on tiny Taiwan, and granted Most Favoured Nation Trade status to mighty China. India continues to outline the causes of the depletion of tigers, but no one, but no one has offered an alternative solution as a means of replacing what is a complete failure in administration.

Project Tiger was initially a success while it was a Species oriented Project, but progressively registered failure when the academics of preserving the Ecosystem, replaced the symbolic value of the tiger. Even the temporary increases in populations was caused by immigrations due to destruction and degradation of habitat in Nepal, and NOT to the widely acclaimed success in directional policy in India.

The basic assumption that wildlife should be administered by the Forest Department is absurd. The Department is concerned with trees, and a 'Clean' forest floor is the dream of a forester. It is the nightmare of the wildlifer, as in the commercialized tree dwelt nesting birds, in its shade mammals bred, in the trunk reptiles sought refuge, and in the bark insects proliferated. Moreover States compounded their failure to have a separate facility for the administration of wildlife by a venomous dichotomy which allows a liberal transfer from wildlife to Forestry functions in the interests of an integration into the Foresters monopoly.

Project Tiger is now a complete failure. Originally the Minister for Environment expressed great concern at rampant poaching, but the Tiger Crisis Cell which he formulated to meet once a month, does not meet, or is presided over by a minor functionary. The Project Steering Committee has not met in a year. Project Tiger though funded by the Central Government, is administered by State Governments with their separate political affiliations and pressures, and the Hindu dominated Rajasthan Government are

on record as saying, that if they have to save an animal they will do so for the cow(sic). Yet the Director of Project Tiger in Delhi claims considerable increases in populations.

The point of no Return is in sight, and if we are to save the tiger, we can no longer Pussyfoot with the Forest Department. Protection of wildlife is enjoined in the Indian Constitution, and concerned NGO Affiliations should go in Writ Petition to the Apex Court outlining an administrative failure to protect wildlife. The symbolic protection of our National Animal as a means of saving the Ecosystem should be written into the constitution : For without Godhead, religion is a semantic exercise.

The EMERGENCY with all its concomitant evils enabled Mrs Gandhi, under the perusasion of Dr Salim Ali and myself, to bring wildlife onto the Concurrent List, and this fact may enable the Supreme Court to take urgent action. Else all is lost.





PREMOREL