

## WILD LIFE RESERVES IN INDIA: BIHAR PROVINCE

BY

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(With a map and two tables)

Active wild life protection is a policy of recent origin in Bihar. There is no sanctuary which has been in existence for 30 years, and hence the only animals in whose case protection has helped multiplication are wild elephants. These have received adequate protection for the last 40 years in the Singhbhum forests where they have now become so numerous that some amount of control (either by trapping for sale or by transferring to other forests where elephants are not found) has become locally necessary.

At present there are 5 sanctuaries in the Bihar forests, occupying an aggregate area of 272 square miles. This aggregate figure represents 10 per cent of the total Government-owned Reserved and Protected Forests. The total forest area in Bihar, however, is over 10,000 square miles, and the sanctuary area is therefore reduced to 2.5 per cent of the total forest area. That is a fractional figure and does not contribute to wild life protection to any appreciable extent. Since the first sanctuary was created only in 1932 and two others have been notified as such only during the last two years, noticeable multiplication of wild life cannot be expected. Any assessment on this account is premature.

Shooting control has existed in the 2,000 square miles of Government-owned forests for a number of years and this has of course prevented the extinction of many animals, particularly deer. As all the Government-owned forests have been located in Chota Nagpur (i.e. southern districts of Bihar), animals in northern districts have not profited from shooting control protection. Private owners of forests have not exercised any systematic control of shooting; in fact till all the private-owned forests were taken over by the Provincial Government by legislation last year, owners and others used to resort to massacres of animals by shooting by spot-light at night from automobiles. The position has, however, changed for the better. Since the Government took over 8,000 square miles of privately-owned forests under their own management by the enactment of the Bihar Private Forests Act, 1946, shooting control has been extended to all those forests now constituted as Private Protected Forests under that Act. As demarcation of 8,000 square miles of scattered private forests has not been easy, the enforcement of the shooting rules has not been possible so far. The existence of the rules, however, is a great improvement, and their enforcement can be expected in due course when demarcation is completed and proper forest administration established. It is expected that it will take another two to three years before such conditions would obtain and

then about 13 per cent of the total area of the province (the entire forested area) will have the benefit of some measure of wild life protection.

The present Minister for Forests in the Government of Bihar, Mr. Krishnaballabh Sahny, is very keen on a progressive forest policy, and he has publicly declared his intention to afforest another 5,000 square miles of tree-denuded wastes to give to the province a forest acreage about one-fifth its total area. Shooting control is expected to be extended to that entire forest area and within a decade an appreciable amount of tree cover and shooting protection for the wild life of Bihar can be expected.

While the future is one of promise, the present conditions are only better than what they were in the past, yet very unsatisfactory. As was stated earlier very little wild life has survived, and just ordinary shooting rules cannot be expected to yield results. There must be an increase in the area in which all kind of shooting, trapping and destruction of wild animals is totally prohibited. That is, there must be more sanctuaries, and bigger ones. A desirable target figure would be to put 10 per cent of the present forest area (both state-owned and Private Protected) under permanent sanctuaries. Another practical means to secure protection of wild life would be to declare each Forest Division (about 250 square miles) a sanctuary for ten years in rotation. Areas like Champaran, Hazaribagh, Palamau, Moughry and Ranchi which have been much shot over in the past may be the first forest areas put under such notified prohibition of shooting.

Poaching is, of course, a problem that will have to be contended with. In the absence of a Game Department the tackling of this problem is difficult. The ordinary Forest Department staff is too small to deal with sylvicultural as well as wild life protection duties. The number of persons exempted from obtaining a licence for shooting even in Reserved Forests is legion. Almost all officials are so exempt, and so are the numerous owners of private forests now under protection. If exemption was abolished sufficient revenue could be raised to maintain a small Game staff, by converting all the present temporary and seasonal Fire Patrol staff into permanent employees charged with reporting both fire occurrences and offences against the shooting rules. As the fire patrols have no sylvicultural duties such an arrangement would be feasible.

The main problem that will confront those undertaking conservation of wild life in Bihar will be of game management or multiplication of the severely reduced stocks. Some species are very near to extinction. The rhinoceros of Champaran, the wild buffalo of Purnea, and the black buck of Shahabad are the species in the most precarious condition. Even now a lone animal of these three species can be met, but unless sanctuaries are created in their habitat areas immediately any measure of protection might be too late.

So far the sanctuaries have not given any definite indication of the animals responding to protection, except in the case of elephants. Other animals have not multiplied nor is it possible to

report that they have become less shy than what they were before the sanctuaries were created. Forest Officers are subject to frequent transfers and are not able to observe the animals as well as they might like to. The position in the sanctuaries would improve if for each sanctuary a Game Forester could be appointed and trained to look after the wild life. Such an incumbent could also be trained into elementary management to secure the optimum conditions for the multiplication of the animals under special protection.

However, the value of sanctuaries is great. While the rhinoceros has received protection for about the same period as the wild elephant it has not multiplied in Bihar on account of the absence of any sanctuary in its habitat. On the other hand in Assam, where the Kaziranga sanctuary was established in 1906, the rhinoceros is claimed to have multiplied from a dozen to over 400. In the Durga of North Bengal also, the Jaldapara sanctuary was established in 1932 to give protection to about 80 rhino which have now increased to over 60. The last rhino definitely seen in Bihar was shot in Champaran in 1939 by a man who obtained permission on the plea that the animal had been already wounded by a poacher. Occasional rhinos do wander into Champaran and Purnea from the Nepal Terai where they are still in some number (under a protection law similar to that existing in Bihar but more effective on account of the smaller number of fire-arms in that country) and a sanctuary might start a process of multiplication. It might be mentioned in this regard that wild elephants in Singhbhum had become very scarce and multiplication began again when the sanctuaries were started by a pair straggling in from the adjoining Orissa States.

The shooting rules also need amendment. The exemption provisions must be abolished, and the Forest Officer in charge of an area must alone be considered competent to declare an animal dangerous and fit for destruction. At present there is much abuse of the District Civil Officer's powers in this regard to bye-pass shooting restrictions and licence fees. Tigers have suffered most from this lacuna in the shooting rules, and many animals innocent even of the blood of any cattle have been shot on trumped-up charges in the Reserves. During the thirties two tiger censuses were held by the Bihar Forest Department in the district of Palamau (considered best populated with tigers) and each time the number was less than 40. From the actual count of that single district it can be calculated that there are less than a hundred tigers in the entire province, and unless better protection is afforded to them in a few decades the species might be locally exterminated.

The shooting licence generally does not put a limit on the number of birds shot. Ground birds like pea-fowl, spur fowl, partridges, quails and the red jungle fowl which are found all over the Bihar forests have suffered very badly on account of the absence of any limit. Birds with arboreal habits have not suffered so badly, but the Purple Wood Pigeon (*Alsecomus pumilus*) believed to have become extinct in this area was re-discovered by Mooney in the Singhbhum forests in 1934, and has been frequently observed since then obviously benefiting from the creation of the Baniaburu

and Sasangdaburu sanctuaries. The birds of the plains regions do not get any protection, and are trapped and shot in vast numbers every year. There is a definite necessity for converting one of the jheels of North Bihar into a bird sanctuary. Similarly there is urgent necessity for creation of sanctuaries in Champaran, Purnea and Shahabad districts for the protection of rhinoceros, wild buffalo, and black buck respectively. As forest Divisions are in process of creation in Champaran and Shahabad, the creation of sanctuaries in these districts can be expected at an early date, but in Purnea special measures would be necessary. There are still 4 patches of forest in that district aggregating a little over 100 square miles. These have not been notified yet under the Bihar Private Forests Act. If they are notified some protection to the wild buffalo might accrue, as two of the patches border Nepal Terai and the Bengal Duars.

No special measures have been taken in any of the sanctuaries for the benefit of the animals inhabiting them, except the impounding of the waters of a stream in the Sasangdaburu sanctuary in 1938 to provide water for the rapidly expanding population of elephants and sambar. In the Barasbari sanctuary a fish pond and a swimming pool were constructed close to two major salt licks. The history of the creation of these sanctuaries is obscure; generally they were the work of individual forest officers rather than the carrying out of any settled Government policy. In the absence of a definite policy the progress has been patchy. Even now the Santal Parganas, one of the oldest Reserves area, has no sanctuary, and till 1946 in the Barasand block restrictions were placed only on driving and beating of game. One of the administrative difficulties in the creation of sanctuaries has been the rights of hunting (including an annual religious hunt) enjoyed by the aboriginal tribes, in which killing of animals is done each spring (month of Magh by the Hindu calendar) without any discrimination as to species, sex, age, size or gestative state of the game. This religious right has prevented the functioning of Purnanath Hill as a sanctuary. This is a well-forested tract of over 200 square miles, reaching a height of 4,480 feet and one of the rainiest areas of the Province with more than 86 inches of annual precipitation. The hill being a holy spot of the Jain community, the latter obtained over 40 years ago a judicial decision that no killing of animals should be permitted. That decision has been respected generally except by the aboriginal tribes and the poachers, and in regard to the latter the management of the Jain temple had no adequate staff to prevent poaching. Now that these forests are being managed according to a scientific system prepared by the Forest Department, there should be adequate staff to prevent poaching. But at the same time declaration of the area as a sanctuary would further help protection of wild life.

Religious sentiment has also so far secured the survival in some numbers of the *silgai*, which live mostly in the cultivated plains region of the Ganges valley. It is, however, doubtful how long such protection would continue considering that the animals do a certain amount of damage to crops and that the religious feeling

is entirely based upon the local nomenclature of this antelope which mistakenly classes it as a 'cow'. A sanctuary in the plains region for this graceful animal would soon be necessary, though some measure of protection may be available to it should the reserves for the rhinoceros, black buck and wild buffalo be formed at an early date.

The funds for sanctuary development have so far been very small. In the past a few forest Divisions used to get a budgetted amount of Rs. 100 per year for expenditure on 'Game Improvement'. Since this year the amount in a few Divisions has been raised to Rs. 500 per year, but still the total budget provision under this head for the entire province is less than Rs. 8,500 in spite of the fact that the total Forest Revenue exceeds 50 lakhs of rupees.

TABLE I

AVERAGE NUMBER OF ANIMALS SHOT PER YEAR DURING THE PERIOD 1935-1942  
IN THE 2,000 SQ. MILES STATE-OWNED FOREST OF BIHAR

Tiger	...	...	...	...	5
Tigress	...	...	...	...	14
Leopard or Panther	...	...	...	...	46
Wolf	...	...	...	...	19
Wild cats	...	...	...	...	19
Hyena	...	...	...	...	10
Wild dog	...	...	...	...	17
Wild elephant	...	...	...	...	09
Nilgai	...	...	...	...	14
Bison	...	...	...	...	12
Barking deer	...	...	...	...	46
Sambar	...	...	...	...	129
Chital	...	...	...	...	54
Wild pig	...	...	...	...	46
Hare	...	...	...	...	69
Jackal	...	...	...	...	07
Wild buffalo	...	...	...	...	04

Average annual revenue from shooting fees Rs. 603 } Period 1935-  
 .. .. expenditure on game preservation Rs. 624 } 1942.

*N.B.*—The average number shot is only for the State-owned forests. More animals per year were shot in the private forests, but the figures give an idea how poor the Bihar forests have become in wild livestock.

TABLE II  
PARTICULARS OF WILD LIFE SANCTUARIES IN BIHAR

Name of Sanctuary	Established in the year	Forest Division	District	Area	Cover conditions	Animals	Animals benefiting most from protection
1	2	3	4	5	6	7	8
1. Baniaburu	1932	Koehan	Singbhum.	50 sq. miles; elevation 1,200-1,600 feet, above sea level. Rain 60".	Crop mostly <i>asf.</i> poor in places with evergreen patches along streams. Well-watered in places only; this 1 per cent. streams. A fish pond and a swimming pool built by the Forest Department provide water throughout the year.	Elephant, tiger, bear, leopard, sambar, spotted deer, barking deer. Spotted deer are very rare and elephant few.	Sambar.
2. Songra	1935	Pornahat	Singbhum.	55 sq. miles; elevation 1,200-1,800 feet above sea level. Rain 55"	Crop mostly this and <i>asf.</i> along a very busy road. There is only one perennial stream.	Elephant, bison, sambar, spotted deer, barking deer, mouse deer, four-horned antelope, tiger, leopard, bear, and wild dog.	.....

3. Sasanglabaru, 1936	Sarnou - Singribam.	36 sq. miles; elevation 2,000 feet above sea level. Rain 10".	Crop mostly good quality soil with evergreen patches in moist valleys. Very well watered with a number of perennial streams. A diomed stream provides ample water supply.	Elephant, tiger, leopard, bear, sambar, barking deer, wild dog.	Elephant and sambar. Animals very fine; it is not unusual to find sambar grazing in the compound of the F.R.H. at Kamdi.
4. Barwand 1916	Palasat - Polasat	10 sq. miles; elevation 1,000-1,500 ft. above sea level. Rain 80".	Crop soil and bamboo; at places very thin and open like parklands. Very hot and dry in summer. One large stream goes through it.	Tiger, bear, leopard, bison, sambar, spotted deer, barking deer and wild dog.	The bison alone seems to have profited from protection and can be frequently seen on the adjoining Natarhat plateau; still very shy.
5. Kodarna 1917	Hassibagh, Hanribagh.	80 sq. miles; elevation 1,000-1,500 feet above sea level. Rain 50".	Crop mostly soil and open with many mica mines and labour camps. Water supply is poor.	Tiger, leopard, hyena, foxes, deer (sambar, chital and bhar) pleisthail.	.....

*Abstract of Table 11*

Total number of sanctuaries	=	5
Total area of sanctuaries	=	273 square miles.
Percentage of sanctuary area in relation to forest area	=	2.5
Percentage of sanctuary area in relation to total area of Province	=	0.4%
Longest period for which sanctuary has been in existence	=	16 years.