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Abstract: A critical summary of diverse tiger estimations in different parts of India.

The Tiger in India: An enquiry— 1968-69

BY

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The status of the tiger in India is a cause for anxiety to conservationists. Though definite data are not available that the population has gone down in numbers, the progressive deforestation of most of the tiger habitats and available information of uncontrolled and unethical shooting and other methods of killing justify this anxiety. No information is available on the status of the species in the various states of the Union. Estimates of the total population based on conjecture, for example the estimate of 4000 tigers made by the late Mr. E. P. Gee, are undesirable as they are likely to be interpreted as the actual position. The tiger has adapted itself to live in all but the extreme life zones in the country and the population in the various zones would vary according to the environmental conditions; knowledge of the situation in one or two life zones cannot be used as a basis for estimating the position in other areas and such statements on the tiger population become meaningless.

A census is very necessary but beyond the capacity of a single individual to undertake considering the vastness of the tiger habitat in the country. However, it was felt, that information on the position of the tiger in the various states could be immediately obtained through a questionnaire circulated among the field staff of the Forest Departments at the level of foresters, who are the most likely to see tigers or their tracks. The Chief Conservators of Forests of the various states were approached and those of the States of Maharashtra, Gujarat, Mysore, Andhra Pradesh, Rajasthan, Madhya Pradesh, Assam, Madras, and W. Bengal very kindly agreed to circulate among their field staff, a questionnaire seeking information on the tiger/tigers in their range or beat and whether their information is based on sighting or tracks, whether resident or visitor, if visitor cause for migration, and information on when a tiger was last seen and when a tiger was last shot in the area. Completed questionnaires covering either the whole or part of the States of Maharashtra, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal and Assam were received and the data obtained are discussed below : -

Maharashtra

Out of the 26 Civil districts in Maharashtra completed questionnaires were received from 12 districts only covering 18 forest divisions (Table 1). Tigers probably occur in the Ghat areas of Kolhapur, Satara, and Poona districts and in the 4 Vidarbha districts of Buldana, Amaravati, Nagpur, and Yeotmal. How far the data obtained represent the true position is discussed in the concluding part of this note. Where it was once well known the tiger has now become almost extinct or has disappeared.

TABLE 1

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS OF MAHARASHTRA

Civil District	Forest Division	Number of tigers reported
Ratnagiri	Sawantwadi	5
Kolaba	Kolaba	15
Thana	Thana	6
Nasik	East Nasik	1
	West Nasik	13
Dhulia	North Dhulia	4
	West Dhulia	0
Jalgaon	East Khandesh	4
	Yawal	4
Aurangabad	Aurangabad	0
Nanded	Nanded	12
Akola	Akola	9
Wardha	Wardha	9
Chandrapur	East Chanda	32
	Bhamragad	53
	West Chanda	75
	South Chanda	8
Bhandara	Gondia	17
Total		267

Madhya Pradesh

The information obtained is not complete coming from only 5 out of 43 Civil districts and covering six forest divisions (Table 2). This is unfortunate as Madhya Pradesh still has some of the best tiger habitats in the country and a report covering the whole state is essential for precise estimates of the total population.

TABLE 2

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN MADHYA PRADESH

Civil District	Forest Division	Number of tigers reported
Betul	West Betul	14
Raigarh	Jashpur	9
Schore	West Bhopal	17
Mandla	North Mandla	3
	South Mandla	78
Seoni	South Seoni	18
Total		139

Rajasthan

The reports from five forest divisions of Rajasthan cover five out of the 26 Civil districts and represent probably all the available tiger habitat in the State (Table 3). The tigers of Rajasthan represent the western limits of the population in the Gangetic Plain at the present time.

TABLE 3

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN RAJASTHAN

Civil District	Forest Division	Number of tigers reported
Ajmer	Ajmer	0
Bharatpur	Bharatpur	4
Jhalawar	Jhalawar	3
Bundi	Bundi	6
Tonk	Sawaimadhopur	7
Total		20

Uttar Pradesh

The reports received cover 16 out of the 54 Civil districts and 31 forest divisions and appear to represent almost all areas in the State holding the tiger (Table 4). It is noteworthy that the tiger is restricted to the districts bordering the Himalayas and districts in the south and east

bordering tiger habitats in Madhya Pradesh and Bihar. The districts adjoining Nepal appear to have the largest population.

TABLE 4

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN UTTAR PRADESH

Civil District	Forest Division	Number of tigers reported
Varanasi	Varanasi	10
Jhansi	Bundelkhand	2
	Banda	6
Lakhimpur Kheri	North Kheri	52
	South Kheri	39
Pilibhit	Pilibhit	50
Gorakhpur	Gorakhpur	15
Gonda	North Gonda	74
	South Gonda	0
Bahraich	Bahraich	28
Garhwal	Landsdowne	23
	Kalagarh	18
	Corbett Nat. Park	50
Bijnor	Landsdowne	7
	Bijnor Plantation	5
	Jaspur (W)	6
Pauri Garhwal	Landsdowne	6
	Kalagarh	4
Nainital	Ramnagar	39
	Tarai & Bhubar	16
	Haldwani	20
	Pilibhit	8
Rampur	Rohilkhand	3
Dehradun	Dehradun (East)	12
	Dehradun (West)	10
Sahraunpur	Siwalik	13
Allahabad	Allahabad	0
Mirzapur	North Mirzapur	4
	Varanasi	2
	Dudhi	4
	Son	2
Total		528

West Bengal

The three civil districts of North Bengal appear to hold the majority of the tigers in West Bengal (Table 5). There are probably a few in the Midnapur and 24-Parganas districts.

TABLE 5

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN WEST BENGAL.

Civil District	Forest Division	Number of Tigers reported
Jalpaiguri	Cooch Behar	17
	Jalpaiguri	1
Darjeeling	Kalimpong	12
Cooch Behar	Cooch Behar	23
Total		53

Assam

The reports from the 18 forest divisions of 10 civil districts cover all the major tiger habitats in the State (Table 6). Districts on the north bank of the Brahmaputra appear to hold the majority of tigers.

TABLE 6

POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN ASSAM

Civil District	Forest Division	Number of Tigers reported
Mizo Hills	Mizo Hills	4
Kamrup	Wild Life	6
	South Kamrup	15
Sibsagar	Kaziranga	30
	Sibsagar	170
Garo Hills	Garo Hills	1
Darrang	Darrang	158
	North Kamrup	32
Goalpara	North Kamrup	5
	Goalpara West	0
	Kachugaon	3
	Goalpara East	5
Cachar	Hathigaon	5
	Cachar	1
United Khasi and Jaintia Hills	United Khasi and Jaintia Hills	5
	Lakhimpur District	Dibrugarh
Nowgong	Digboi	42
	Nowgong	15
Total		516

Other States

Some isolated responses were received from other states. In Himachal Pradesh, the Nahan Forest Division of Sirmur District reports a tiger (Table 7). This is apparently the limit of the western distribution of the species in India.

The Secretary of the High Range Game Associations (Kerala) lists 4 tigers as occurring in the Kanan Devan Tea Concession area of the Anaimalai Hills. A member of the Society in Adilabad District, Andhra Pradesh, feels that there are perhaps 12 tigers in the Nirmal Forest Division of the district.

TABLE 7
POPULATION ESTIMATES OF TIGERS IN FOREST DIVISIONS IN OTHER STATES

States	Civil District	Forest Division	Number of tigers reported
HIMACHAL PRADESH	Sirmur	Nahan	1
KERALA	Anaimalai		4
ANDHRA PRADESH	Adilabad	Nirmal	12
Total			17

TABLE 8
TOTAL POPULATION ON THE BASIS OF THE QUESTIONNAIRE

Maharashtra	267
Madhya Pradesh	139
Rajasthan	20
Uttar Pradesh	528
West Bengal	53
Assam	516
Himachal Pradesh, Kerala and Andhra Pradesh	17
Total	1540

DISCUSSION

The main difficulty in assessing the data obtained through the questionnaire is that unless the person evaluating the information has personal knowledge of the areas covered by the reports it is impossible to have an accurate assessment. For instance, in a Forest having four beats one tiger may be reported by each of the four beat officers and it would be

impossible without personal knowledge to determine whether one or more than one tiger is involved. However, the study of the reports shows that in the majority of cases the officials concerned have reported conservatively and avoided exaggeration. It is difficult to accept the large numbers reported from one area on the basis of tracks, as it is extremely unlikely that the person reporting has the knowledge to separate tracks with that amount of accuracy. I am also unable to accept the figures of 50 tigers for Kaziranga and 50 for Corbett National Park. Similarly, I view with considerable scepticism the estimate from the Western range of Darrang Division, Assam, which reports 100 tigers, all non-resident visitors! The estimates for Darrang and Sibsagar districts require very cautious interpretation. The majority of the replies received speak of visits during particular months of the year and reports of resident tigers are few.

This note was circulated in draft form among persons with experience of conditions in various parts of Maharashtra State. Opinions expressed suggest that it is very unlikely that 15 tigers occur in Kolaba District and possibly leopards are meant. It was also suggested that resident tigers are unlikely in the districts of Thana, Kolaba, Nasik, Ahmednagar, Poona, Satara and Kolhapur. According to Mr. G. V. Bedekar of the Society's Executive Committee a census on 1961-62 showed a total of 467 tigers in the State. It is quite likely that the data obtained from the various states may need considerable revision when examined by knowledgeable persons in those states.

In view of the difficulties in assessing the data the information obtained can only be considered as giving a clue to the total population of the tiger in India. The number of tigers in the States of Maharashtra, Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal and Assam totals 1523 in the areas covered by the completed questionnaires; the excess listed is perhaps countered by the animals existing in areas from which information was not obtained. Tigers do not occur in Punjab, Haryana and Kashmir and even if half the number for the six states for which data are available, are added to the total to cover tigers in the States of Gujarat, Mysore, Kerala, Tamil Nadu, Andhra Pradesh, Orissa, N.E.F.A., Nagaland, and Manipur, the total still remains below 2500. This is by no means a conservative figure.

The tiger should be considered a species in danger of extinction and should be protected against both shooting and the poisoning of its kills with zinc phosphide, endrin, folidol, and other insecticides, which along with deforestation were given in the completed questionnaires as the main reasons for their decline. The trend is for the population of tigers in different parts of the country to become isolated. Shooting of tigers is banned in some states but without a ban on the shooting of its food