

STATUS AND DISTRIBUTION OF FAUNA IN NATIONAL CHAMBAL SANCTUARY, MADHYA PRADESH

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Introduction

India is a country experiencing extremes of climatic conditions. Temperature which has been stated to be the determining factor for the seasonal distribution of fauna and flora (Allen, 1920), ranges from sub-zero degree celsius to more than 45°C in the Indian subcontinent. Similarly, the rain water is also unequally distributed over the country. Such varying climatic conditions encourage habitation of numerous faunal species. In the yester years, there was plentiful habitat and various number of faunal species thrived successfully over the years. But today, in order to meet the human needs there has been indiscriminate destruction of habitats resulting in the disappearance of many species. Over the past several decades of destruction of habitat, hundreds of species have become extinct. This had led to the day, when the conservation strategies are being planned so as to conserve the biological wealth and protect the ecosystem.

Thus, the need for the day is the conservation of biodiversity which is defined as the sum total of species richness, i.e., the number of species of plants, animals and micro-organisms living in a community or

an ecosystem. In order to maintain the biodiversity, regular census survey of inhabiting species is needed. The annual census of the species are best suited for assessing the role of environmental changes in the distribution of species. Over the last ten years (since 1984), regular census of Gharial population is being conducted in the National Chambal Sanctuary in Madhya Pradesh (Singh, 1985; Sharma, 1985; 1993). The present article reports on the status and distribution of reptilian, mammalian, avian and insect fauna in the National Chambal Sanctuary.

Methodology

During Jan./Feb. 1994 a stretch of 425 km on river Chambal falling under the National Chambal Gharial Sanctuary was surveyed for recording reptilian, mammalian, avian and insects fauna. The entire stretch was divided into eleven sub-stretches and the field survey was made between 25th Jan. and 12th Feb. using a motor boat and field binoculars. The aquatic insects were collected using a long handle insect net and were identified using standard texts as reported earlier (Sharma *et al.*, 1990).

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Results and Discussion

The number of reptilian and mammalian forms sighted during the present study are shown in Table 1. The various species of birds sighted on the river Chambal are shown in Table 2. Table 3 reveals the dominance of various insect species. The surveyed stretch of river Chambal is mainly sandy banks except from Rameshwar to Sarsani. The flow of river water is fast in this stretch whereas in the rest of the river the water flow is considerably low. The water condition in the entire surveyed stretch was good except at Pali

where there was slight colour change in the water. The sandy banks of the river are used by the Gharial, Mugger and Turtles for basking and nesting.

During the survey the reptilian was observed in higher numbers as compared to the mammalian forms. During the survey Turtles dominated over other reptilian forms. Their number was maximum (2348) followed by the number of Gharial (1108) and Muggers (105). The stretch from Rajghat to Barhi was observed to be densely inhabited by the reptilian forms (Table 1). As regards the number of Dolphins, their

Table 1

Census of reptilian and mammalian fauna in National Chambal Sanctuary during 1994

Area Covered (stretch)	Approx Distance (km)	No. of animals sighted				
		Gharial	Muggers	Turtels	Dolphins	Otters
Pali to Rameshwar (25.1.94)	0-22	4	5	134	-	-
Rameshwar to Rampura (26.1.94)	22-45	68	27	86	-	-
Rampura to Rahukagaon (27.1.94)	45-110	106	28	138	-	-
Rahukagaon to Kharoti temple (28.1.94)	110-162	70	15	98	4	2
Kharoti to Sarsani (29.1.94)	162-170	2	-	34	1	-
Sarsani to Rajghat (30.1.94)	170-205	54	3	254	2	7
Rajghat to Baboo Singh Ghare (2.2.94)	205-235	133	6	362	2	-
Baboo Singh Ghare to Sahaspura (3.2.94)	235-300	303	17	374	4	-
Sahaspura to Barhi (4.2.94)	300-360	233	2	386	16	-
Barhi to Chakarnagar (5.2.94)	360-395	53	-	278	22	-
Chakarnagar to Bhare (12.2.94)	395-425	82	2	204	24	-
		1108	105	2348	75	9

Table 2
Census of avifauna along the banks of river Chambal during 1994.

Species	1	2	3	4	5	6	7	8	9	10	11
Grey Pelican	-	-	-	-	-	-	-	-	-	-	53
Darter	-	5	3	-	-	-	-	-	-	-	-
Grey Heron	-	26	31	14	-	17	8	16	7	36	32
White Necked Stork	-	-	3	4	-	-	-	3	1	-	-
Black Necked Stork	-	-	-	-	-	-	1	1	1	2	-
Painted Stork	-	-	4	-	-	12	2	5	-	-	3
Openbill Stork	-	8	14	1	-	-	-	-	1	1	1
Black Ibis	-	2	9	6	-	12	15	28	16	2	7
White Ibis	-	1	3	-	-	-	-	-	-	-	-
Spoonbill	-	12	10	-	-	87	67	110	76	121	358
Whistling Duck	-	-	-	-	-	-	14	8	-	-	-
Brahmini Duck	31	42	154	160	4	104	180	440	332	264	70
Spotbill Duck	6	8	4	16	18	4	8	72	102	44	88
Nakta	12	-	18	4	56	24	3	98	34	24	12
Barheaded Goose	307	70	334	98	24	391	361	790	340	102	72
Greyleg Goose	-	-	-	-	-	-	20	-	-	8	214
Redcrested Pochard	1594	172	452	226	18	130	546	484	1217	602	942
Saras Crane	-	-	1	4	-	-	-	-	4	-	-
Common Crane	-	4	-	-	3	-	-	2	-	-	-
Pintail	73	46	430	36	-	43	52	656	704	844	64
Shoveller	-	-	-	-	-	-	-	108	-	8	-
Common Teal	-	-	42	-	-	-	16	80	30	467	104
Stone Plover	-	8	3	14	-	2	6	16	58	9	39
King Vulture	-	-	-	-	-	-	-	2	-	-	-
Indian Skimmer	-	30	120	4	-	36	78	141	106	36	4
Brown Headed Gull	-	4	34	4	-	2	8	14	6	2	48
Carmorant (Little & Large)	4	53	362	48	-	330	98	415	121	306	1335

1 = Pali to Rameshwar; 2 = Rameshwar to Rampura; 3 = Rampura to Rahukagaon; 4 = Rahukagaon to Kharoti; 5 = Kharoti to Sarsani; 6 = Sarsani to Rajghat; 7 = Rajghat to Baboo Singh Ghare; 8 = Baboo Singh Ghare to Sahaspura; 9 = Sahaspura to Barhi; 10 = Barhi to Chakarnagar; 11 = Chakarnagar to Bhare.

Table 3

Entomofauna records in various stretches of river Chambal during 1994.

Entomofauna	1	2	3	4	5	6	7	8	9	10	11
Odonata											
<i>Orthetrum pruinosum neglectum</i>	+	-	-	-	+	++	+	-	+	+	-
<i>O. taeniolatum</i>	+	-	-	+	-	-	+	-	+	+	+
<i>Trithemis festiva</i>	-	+	+	+	-	-	+	++	+	+	++
<i>Anax immaculifrons</i>	+	-	+	+	+	-	-	-	+	-	+
<i>Pseudagrion rubriceps</i>	+	++	+	+	+	+	+	-	-	-	-
<i>Copera marginipes</i>	-	+	-	-	+	+	+	++	-	++	++
Diptera											
<i>Culex quinquefasciatus</i>	+++	+	-	+	++	+++	++	+	++++	++++	+++
<i>Chironomus</i>	++	-	+	-	-	++	-	+	++	+++	+++
<i>Polypedilum</i>	++	+	+	-	++	+	++	+	+	++	+
Hemiptera											
<i>Anisops nivea</i>	-	+	+	-	+	++	+	++	++	+	++
<i>A. exigera</i>	+	+	+	+	+	+	++	+	+	+++	+
<i>A. extendofrons</i>	++	+	-	-	+	+++	+++	+	+	+	+
<i>Micronecta siva</i>	-	++	-	++	+	++	++	+++	++	++	+
<i>M. flavens</i>	-	-	+	+	++	++	++	+	+	-	+
<i>Plea</i>	++	-	+	+	++	++	+	+	+	-	+
<i>Sphaerodena annulatum</i>	+++	+	-	-	+	++	+	++	++	+	-
<i>Laccotrephes</i>	++	-	-	+	-	+	++	+	+	-	-
<i>Ranatra varipes</i>	++	-	-	-	-	+	++	-	+	++	-
Coleoptera											
<i>Laccophilus chinensis inefficiens</i>	+	-	+	++	+	+++	++	++	++	-	+
<i>Hydrophilus olivaceus</i>	+	+	-	+	+	+	+	++	-	+	-
<i>Regimbartia attenuata</i>	+	-	-	-	+	-	+	-	-	+	+
<i>Cybister</i> sp.	-	++	+	-	-	+	-	-	+	-	-
<i>Enochrus</i> sp.	+	-	+	-	++	-	-	+	-	-	-
Ephemeroptera											
<i>Caenis</i> sp.	-	-	-	-	+	-	-	+	++	+	+

Where : - Absence; + Rare; ++ Common; +++ Dominant; ++++ Abundant. 1 = Pali to Rameshwar; 2 = Rameshwar to Rampura; 3 = Rampura to Rahukagaon; 4 = Rahukagaon to Kharoti; 5 = Kharoti to Sarsani; 6 = Sarsani to Rajghat; 7 = Rajghat to Baboo Singh Ghare; 8 = Baboo Singh Ghare to Sahaspura; 9 = Sahaspur to Barhi; 10 = Barhi to Chakarnagar; 11 = Chakarnagar to Bhare.

number was maximum in the last stretch i.e., Chakarnagar to Bhare (24). The lowest population recorded was of otters (9).

During the survey of wetland avifauna the rarest sighting recorded was of King vulture followed by black necked stork, white ibis and darter. The maximum number of bird species was recorded of redcrested pochard followed by bareheaded goose.

The survey of entomofauna revealed that the hemipteran species dominated over the rest of the insect fauna. This was followed by odonatan species, coleopterans, dipterans and ephemeropterans species respectively. As regards the density of insect group is concerned, the hemipterans dominated followed by dipterans, coleopterans, odonatan and ephemeropterans respectively.

SUMMARY

The paper reports the annual census record of some reptilian, mammalian, insect and avifauna in the river Chambal falling under National Chambal Sanctuary in Madhya Pradesh. An area of 425 km from Pali to Bhare was surveyed between 25.1.94 to 12.2.94. The complete stretch was divided into eleven sub-stretches and the number of sightings of Gharial, Muggers, Turtles, Dolphins, Otters and Birds were recorded. The survey revealed that in the sanctuary area the number of Gharial and Turtles is plenty followed by Muggers, Dolphins and Otters. The insect fauna was collected from different stretches and were groupwise identified. The hemipteran species dominated in the insect fauna followed by odonates, coleopterans, dipterans and ephemeropterans respectively.

राष्ट्रीय चम्बल अभयारण्य, मध्य प्रदेश में जीव-जन्तुओं की स्थिति और वितरण

आर०के० शर्मा, आर० माथुर व संजय शर्मा

सारांश

इस अभिपत्र में राष्ट्रीय चम्बल अभयारण्य, मध्यप्रदेश में चम्बल नदी के कुछ सरीसृप, स्तनि, कीटों और पक्षियों की वार्षिक गणना के आंकड़े प्रस्तुत हुए हैं। 25-1-94 से 12-2-94 तक पाली से भारे के बीच 425 किमी० क्षेत्र का सर्वेक्षण किया गया। पूरे क्षेत्र को ग्यारह उपक्षेत्रों में बाँटा गया तथा घड़ियाल, मगर, कछुओं, शिंशुमार, उदर और पक्षियों की संख्या को देख-देखकर आलेखित किया गया। सर्वेक्षण से पता चला कि इस अभयारण्य क्षेत्र में घड़ियाल और कछुओं की संख्या सबसे ज्यादा है जिसके बाद संख्या में मगर, शिंशुमार और उदर आते हैं। कीड़े विभिन्न भागों से इकट्ठे किए गए और समूहवार उनकी पहचान की गई। कीड़ों में मत्कुण गण जातियों की अधिकता थी जिसके बाद क्रमशः व्याधपतंग गण, कंचुक पक्ष गण और द्विपक्ष गण और अचिरपक्ष गणों के कीड़े आते हैं।

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