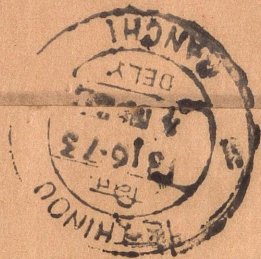


BIRD MIGRATION



Mrs. Jamal Ara,
North Office Para,
Doranda, P.O. Hinoo,
Ranchi-2.
BIHAR.



BIRD MIGRATION

The Bombay Natural History Society's bird ringing project under the direction of Dr. Salim Ali has so far ringed 2,70,294 birds belonging to both migratory and non-migratory species. The total number of recoveries to date amount to 3175 and these have been mainly from Russia. One result of these bird migratory studies has been that bird populations from almost all biotopes in the Sub-continent have been sampled. The success of the scheme has been due largely to the cooperation between the Scientists of three countries: India, United States and Russia. The Bird Banding Scheme has also played a significant part in arousing an interest in our Avifauna in both official and non-official circles.

It will be recalled that at the last Annual General Meeting it was decided that whenever non-members of the Society were also present an appeal should be made to them to join the Society. The procedure occasionally leads to embarrassment particularly when small discussion meetings are held. The Committee therefore decided to have a board placed outside the auditorium with the message 'We need more members, please pick up an application form'. Apart from this, whenever appropriate, a personal appeal continues to be made.

GRANTS & DONATION

The Society acknowledges with gratitude the following grants received for specific purposes:

BOMBAY NATURAL HISTORY SOCIETY
Hornbill House, Apollo Street, Bombay-1.

Tel: 257277

Date: 3rd August 1967.

Dear Member,

Bird Banding Camps at Bharatpur and Eastern India

For the past several years the Society has conducted Bird Migration Study Camps in various parts of India. As you must have seen from reports circulated, camps have been held at Bharatpur, Rajasthan, Chilka Lake, Orissa, Kutch and Kerala. So far, about 80,000 birds have been ringed and valuable information on their migration pattern ascertained from the hundred odd recoveries of these ringed birds. It is now proposed to have a camp in continuous session at Bharatpur from 1st Sept. to the end of April. Much work has to be done in these camps. Nets have to be put up and removed, birds have to be carefully extricated from the nets, identified, ringed, weighed, measured, and examined for ectoparasites and released, and data appropriately recorded.

For people who have some knowledge and interest in birds this is a fine opportunity to increase their knowledge and at the same time assist with the activity mentioned above. While in camp, boarding and lodging would not be charged for, but the cost of travel to camp site and return would have to be met by participants.

Will those who are in a position to join the camp at Bharatpur for periods of at least a month write to the Hon. Secretary as soon as possible.

Fk.

ZAFAR FUTEHALLY
HONORARY SECRETARY.

owl - 28 skin 28

REPORT NO. 23

BOMBAY NATURAL HISTORY SOCIETY'S BIRD MIGRATION STUDY PROJECT

27TH SEPTEMBER 1971 TO 30TH MARCH 1972.

Station: BHARATPUR, Rajasthan, India (27°13'N., 77°32'E.)

Principal Investigator: Dr. Salim Ali, D.Sc., F.N.I.

Team Members : Jamshed Panday
Jose Mathias
Justus P. Selvin

The 1971-72 camp at Bharatpur was conducted on the same lines as 4 previous Bharatpur camps. The aim was to study the movements of banded individuals of both allegedly resident and migrant species of birds, and to collect blood slides and ectoparasites from these. Though M.A.P.S. (Migratory Animal Pathological Survey our former sponsors) have lost interest in these, the Virus Research Centre, Poona has examined and identified some of the parasite. The blood slides have been collected on the offchance that some other party may have use for them.

The usual number and types of professional shikaris were employed four of the Sahani Caste using Duck catching mist nets and 2 Mirshikaris with throwing nets, both groups operating in the dark. The areas worked were within the sanctuary, two nearby jheels, Chiksana on the U.P. border and Baretha Jheel near Ban Baretha both about 12 miles from the sanctuary, and Darapur and Ajan Bund adjacent to the sanctuary. The Dorapur area proved very profitable in October. Duck catching was always restricted to the sanctuary but waders were caught in the other areas mentioned till December and in the refuge thereafter. (for details of Habitat see previous reports).

The winter was mild this year with some exceptionally warm spells, Ducks in the sanctuary were fewer in the early months perhaps due to the presence of widespread flood water in nearby U.P. and east Rajasthan.

The party also used mist nets to catch land birds, the catches of which were poor this year partly due to the nets being of unsuitable mesh size for Phylloscopi and the smaller birds. Two large Sparrow Roosts (of migrant races and species) were discovered and thoroughly worked. One was at Manderia Forest enclosure and the other inside the sanctuary. A total of 29,028 birds of 190 species were banded and 838 slides taken from 170 species. Ectoparasites were collected from 102 species.

J.D. Panday

SYSTEMATIC LIST OF BIRDS BANDED AT BHARATPUR, RAJASTHAN FROM OCTOBER
1971 TO MARCH 1972

Sl. No.	Name of species	Number banded	Number bled	Number depara.	Remarks
1.	<u>Podiceps cristatus</u>	1	1	-	
2.	<u>Podiceps ruficollis</u>	4	3	-	
3.	<u>Phalacrocorax carbo</u>	-	1	1	
4.	<u>Phalacrocorax fuscicollis</u>	13	5	-	
5.	<u>Phalacrocorax niger</u>	16	3	-	
6.	<u>Anhinga rufa</u>	8	2	-	
7.	<u>Ardea purpurea</u>	5	3	2	
8.	<u>Ardeola grayii</u>	10	6	3	
9.	<u>Egretta alba</u>	1	1	-	
10.	<u>Egretta intermedia</u>	1	-	-	
11.	<u>Egretta garzetta</u>	2	2	-	
12.	<u>Nycticorax nycticorax</u>	9	6	1	
13.	<u>Dupetor flavicollis</u>	1	1	-	
14.	<u>Ibis leucocephalus</u>	1	2	2	
15.	<u>Anastomus oscitans</u>	2	2	1	
16.	<u>Threskiornis melanocephala</u>	3	3	-	
17.	<u>Plegadis falcinellus</u>	1	1	-	
18.	<u>Platalea leucorodia</u>	2	2	-	
19.	<u>Anser anser</u>	58	1	2	
20.	<u>Anser indicus</u>	8	3	-	
21.	<u>Tadorna ferruginea</u>	3	2	1	
22.	<u>Dendrocygna javanica</u>	1	-	-	
23.	<u>Anas acuta</u>	1337	11	4	
24.	<u>Anas crecca</u>	2098	12	7	
25.	<u>Anas poecilorhyncha</u>	122	1	-	
26.	<u>Anas strepera</u>	556	10	8	
27.	<u>Anas penelope</u>	226	9	4	
28.	<u>Anas querquedula</u>	458	10	4	
29.	<u>Anas clypeata</u>	1132	10	10	
30.	<u>Netta rufina</u>	33	5	2	
31.	<u>Aythya ferina</u>	1119	11	7	
32.	<u>Aythya nyroca</u>	76	1	1	
33.	<u>Aythya fuligula</u>	315	10	2	
34.	<u>Nettapus coromandelianus</u>	199	8	2	
35.	<u>Sarkidiornis melanotus</u>	532	11	-	
36.	<u>Accipiter badius</u>	10	3	-	
37.	<u>Accipiter nisus</u>	7	2	2	
38.	<u>Accipiter virgatus</u>	1	1	1	
39.	<u>Gyps bengalensis</u>	5	2	-	
40.	<u>Circus aeruginosus</u>	2	2	1	

Sl. No.	Name of Species	Number banded	Number bled	Number depa.-	Remarks
41.	<u>Francolinus pondicerianus</u>	24	7	1	
42.	<u>Pavo cristatus</u>	1	1	-	
43.	<u>Turnix suscitator</u>	2	1	1	
44.	<u>Grus antigone</u>	1	1	-	
45.	<u>Rallus aquaticus</u>	1	1	-	
46.	<u>Porzana pusilla</u>	4	3	-	
47.	<u>Porzana porzana</u>	1	1	1	
48.	<u>Amaurornis phoenicurus</u>	10	5	-	
49.	<u>Gallinula chloropus</u>	14	5	1	
50.	<u>Porphyrio porphyrio</u>	76	11	6	
51.	<u>Fulica atra</u>	1394	5	9	
52.	<u>Hydrophasianus chirurgus</u>	38	10	1	
53.	<u>Metopidius indicus</u>	3	1	-	
54.	<u>Vanellus leucurus</u>	57	10	5	
55.	<u>Vanellus indicus</u>	41	5	-	
56.	<u>Vanellus malabaricus</u>	1	1	-	
57.	<u>Pluvialis squatarola</u>	1	1	-	
58.	<u>Charadrius dubius</u>	48	74	4	
59.	<u>Charadrius alexandrinus</u>	83	13	2	
60.	<u>Charadrius mongolus</u>	1	-	-	
61.	<u>Numenius arquata</u>	7	3	-	
62.	<u>Limosa limosa</u>	15	7	4	
63.	<u>Tringa erythropus</u>	116	12	1	
64.	<u>Tringa totanus</u>	102	2	-	
65.	<u>Tringa stagnatilis</u>	255	10	3	
66.	<u>Tringa nebularia</u>	35	8	4	
67.	<u>Tringa ochropus</u>	177	11	11	
68.	<u>Tringa glareola</u>	1671	10	12	
69.	<u>Arenaria interpres</u>	1	-	-	
70.	<u>Capella stenura</u>	5	1	-	
71.	<u>Capella gallinago</u>	691	11	11	
72.	<u>Capella minima</u>	202	12	4	
73.	<u>Calidris minutus</u>	265	11	11	
74.	<u>Calidris temminckii</u>	425	11	10	
75.	<u>Calidris alpinus</u>	19	3	3	
76.	<u>Calidris testaceus</u>	1	-	-	
77.	<u>Philomachus pugnax</u>	3893	9	4	
78.	<u>Phalaropus lobatus</u>	1	-	-	
79.	<u>Rostratula benghalensis</u>	47	7	2	
80.	<u>Himantopus himantopus</u>	179	3	2	
81.	<u>Burhinus oecdinemus</u>	1	1	-	
82.	<u>Cursorius coromandelicus</u>	2	2	-	
83.	<u>Glareola pratincola</u>	1	-	-	

Sl. No.	Name of Species	Number banded	Number bled	Number depar.	Remarks
84.	<u>Glareola lactea</u>	2	2	-	
85.	<u>Pterocles exustus</u>	3	3	-	
86.	<u>Treron phoenicoptera</u>	4	4	-	
87.	<u>Streptopelia decaocto</u>	68	1	-	
88.	<u>Streptopelia tranquebarica</u>	3	2	-	
89.	<u>Streptopelia senegalensis</u>	89	4	4	
90.	<u>Psittacula krameri</u>	132	17	7	
91.	<u>Cuculus varius</u>	2	-	-	
92.	<u>Centropus sinensis</u>	13	6	1	
93.	<u>Otus scops</u>	1	-	-	
94.	<u>Otus bakkamoena</u>	2	1	-	
95.	<u>Athene brama</u>	5	1	1	
96.	<u>Apus affinis</u>	5	3	-	
97.	<u>Ceryle rudis</u>	1	1	-	
98.	<u>Alcedo atthis</u>	10	5	3	
99.	<u>Halcyon smyrnensis</u>	38	11	8	
100.	<u>Merops philippinus</u>	1	-	-	
101.	<u>Merops orientalis</u>	55	6	7	
102.	<u>Coracias benghalensis</u>	7	4	1	
103.	<u>Upupa epops</u>	47	11	12	
104.	<u>Megalaima haemacephala</u>	1	1	-	
105.	<u>Jynx torquilla</u>	19	8	4	
106.	<u>Dinopium benghalense</u>	20	7	1	
107.	<u>Dendrocopos mahrattensis</u>	16	4	2	
108.	<u>Mirafra erythroptera</u>	1	-	-	
109.	<u>Eremopterix grisea</u>	3	3	-	
110.	<u>Amomanes phoenicurus</u>	33	3	2	
111.	<u>Calandrella cinerea</u>	16	6	-	
112.	<u>Galerida cristata</u>	6	-	-	
113.	<u>Alauda gulgula</u>	19	3	3	
114.	<u>Riparia paludicola</u>	8	-	-	
115.	<u>Hirundo rustica</u>	28	1	-	
116.	<u>Hirundo smithii</u>	4	-	-	
117.	<u>Lanius excubitor</u>	4	2	2	
118.	<u>Lanius vittatus</u>	63	9	2	
119.	<u>Lanius schach</u>	46	12	6	
120.	<u>Lanius cristatus</u>	4	2	-	
121.	<u>Dicrurus adsimilis</u>	5	1	-	
122.	<u>Sturnus pagodarum</u>	135	8	13	
123.	<u>Sturnus roseus</u>	10	4	-	
124.	<u>Sturnus vulgaris</u>	9	5	4	
125.	<u>Sturnus contra</u>	433	10	12	

Sl. No.	Name of Species	Number banded	Number bled	Number depara.	Remarks
126.	<u>Acridotheres tristis</u>	23	2	-	
127.	<u>Acridotheres ginginianus</u>	28	1	1	
128.	<u>Dendrocitta vagabunda</u>	13	1	-	
129.	<u>Corvus splendens</u>	2	1	-	
130.	<u>Corvus macrorhynchos</u>	1	1	-	
131.	<u>Tephrodornis pondicerianus</u>	46	11	1	
132.	<u>Coracina melanoptera</u>	1	1	-	
133.	<u>Pericrocotus cinnamomeus</u>	2	1	-	
134.	<u>Aegithina nigrolutea</u>	2	1	-	
135.	<u>Pycnonotus leucogenys</u>	128	11	5	
136.	<u>Pycnonotus cafer</u>	465	11	15	
137.	<u>Chrysomma sinensis</u>	10	5	1	
138.	<u>Turdoides caudatus</u>	143	6	5	
139.	<u>Turdoides malcolmi</u>	19	5	1	
140.	<u>Turdoides striatus</u>	148	12	13	
141.	<u>Muscicapa parva</u>	45	8	5	
142.	<u>Culicicapa ceylonensis</u>	1	1	-	
143.	<u>Rhipidura aureola</u>	4	3	3	
144.	<u>Terpsiphone paradisi</u>	4	-	-	
145.	<u>Prinia subflava</u>	44	10	3	
146.	<u>Prinia socialis</u>	5	3	1	
147.	<u>Orthotomus sutorius</u>	26	5	-	
148.	<u>Locustella lanceolata</u>	1	1	-	
149.	<u>Hippolais caligata</u>	20	-	-	
150.	<u>Acrocephalus stentoreus</u>	5	5	5	
151.	<u>Acrocephalus dumetorum</u>	110	10	5	
152.	<u>Acrocephalus agricola</u>	3	-	-	
153.	<u>Sylvia hortensis</u>	5	2	-	
154.	<u>Sylvia curruca</u>	239	11	12	
155.	<u>Phylloscopus sp ?</u>	1	-	-	
156.	<u>Phylloscopus collybita</u>	178	13	8	
157.	<u>Phylloscopus tytleri</u>	2	-	-	
158.	<u>Phylloscopus affinis</u>	2	1	-	
159.	<u>Phylloscopus griseolus</u>	7	1	1	
160.	<u>Phylloscopus inornatus</u>	7	1	-	
161.	<u>Phylloscopus trochiloides</u>	1	-	-	
162.	<u>Phylloscopus schwarzi ?</u>	2	1	-	
163.	<u>Erithacus calliope</u>	3	2	-	
164.	<u>Erithacus svecicus</u>	377	11	16	
165.	<u>Copsychus saularis</u>	55	11	6	

Sl. No.	Name of Species	Number banded	Number bled	Number depara.	Remarks
166.	<u>Phoenicurus ochruros</u>	58	8	5	
167.	<u>Saxicola torquata</u>	3	-	-	
168.	<u>Saxicola caprata</u>	11	1	1	
169.	<u>Saxicoloides fulicata</u>	51	1	1	
170.	<u>Zoothera citrina citrina</u>	6	2	1	
171.	<u>Turdus unicolor</u>	1	-	-	
172.	<u>Turdus ruficollis</u>	1	1	1	
173.	<u>Sitta castanea</u>	3	1	1	
174.	<u>Anthus hodgsoni</u>	43	6	5	
175.	<u>Anthus trivialis</u>	3	3	1	
176.	<u>Anthus novaeseelandiae</u>	1	-	-	
177.	<u>Anthus campestris</u>	32	10	-	
178.	<u>Anthus pelopus</u>	10	3	-	
179.	<u>Motacilla flava</u>	157	-	-	
180.	<u>Motacilla citreola</u>	198	10	10	
181.	<u>Motacilla caspica</u>	11	4	4	
182.	<u>Motacilla alba</u>	21	5	3	
183.	<u>Dicaeum agile</u>	-	1	1	
184.	<u>Nectarinia asiatica</u>	74	10	7	
185.	<u>Zosterops palpebrosa</u>	46	2	-	
186.	<u>Passer domesticus</u>	5004	10	3	
187.	<u>Passer hispaniolensis</u>	544	-	-	
188.	<u>Petronia xanthocollis</u>	113	9	5	
189.	<u>Ploceus philippinus</u>	412	11	4	
190.	<u>Ploceus benghalensis</u>	65	1	1	
191.	<u>Lonchura malabarica</u>	17	4	-	
192.	<u>Carpodacus erythrinus</u>	3	1	1	
193.	<u>Emberiza stewarti</u>	3	1	1	
	Total:	<u>29028</u>	<u>838</u>	<u>427</u>	

Total No. of Species : 190
 Total No. of Banded : 29028
 Total No. of Bled : 838
 Total No. of Deparasited: 427

REPORT NO. 24

BOMBAY NATURAL HISTORY SOCIETY'S BIRD MIGRATION STUDY PROJECT
FROM 1ST FEBRUARY TO 11TH FEBRUARY 1972

Station: Gajner, Bikaner

Principal Investigator: Dr. Salim Ali, D.Sc., F.N.I.

Team Members : J.D. Panday
Justus P. Selvin

We had been informed that the Imperial Sandgrouse were to be seen in thousands at Gajner, Bikaner. To check this information Dr. Salim Ali and I accompanied by Mr. Panney Singh, Game Warden, Bharatpur made a preliminary survey of the area. The prospects were promising and a short banding camp was arranged between 30 January and 18 February. We failed to catch them in any numbers, but the experience acquired should help to achieve better results during future attempts.

Gajner is a private game sanctuary of Dr. Karni Singh M.P. and former ruler of Bikaner. It is a desert of extensive hard undulating compacted sand, and low stony outcroppings and sandy grassland with some dense patches of Thorn Forest in the beds of seasonally inundated artificial reservoirs.

Adjoining Gajner Palace is a lake about 6 acres in extent but which in good rainfall years is twice as large. The Imperial Sandgrouse have traditionally used the adjacent outcroppings known as the high grounds and Gajner Lake for their social gatherings and morning drink a feature peculiar to these birds.

The birds start arriving at about 8 A.M. in singles, pairs and parties of upto 50 and congregate in flocks of several hundred scattered across a square mile or so of the high grounds. Here they stand around or occasionally walk over to join a nearby larger group or pack close together, but they do not feed except for half hearted attempts by a few birds. After 9 A.M. they start coming down to water. A small party arrives first circles the lake for a while selects a place and settles, the birds have several quick sips and within a few seconds of landing are off; other parties then flight in till there is a regular stream of arriving and departing birds with at times as many as a thousand birds circling over head as a preliminary to selecting a drinking site. There were four of these sites on the bank where we were working all within a hundred yards of each other, and two more on the opposite banks. The other two banks did not hold any likely places. Each site was approximately about 10 sq.m. in extent. Most of the birds landed directly in the shallows to drink, but many alighted on the ground and walked down to the margin to drink.

There is a peak period lasting about 16 mins. soon after commencement of the **flighting** when approximately 80% of the estimated 7000 or so come down to drink with groups of over hundred at each of the sites, as the later arrivals hang around for several minutes after drinking, after which they split up into parties and scatter.

We used 3 clap nets placed at drinking points to capture the birds arranging them so that the wires which operate the nets when pulled were all brought to one place to aid coordination. The nets were initially set in shallow water but later fixed on dry margins and concealed with a powdered encrustation of dry water weeds found there. The nets when folded and set ready for catching fit into an oval trench 5 cm. broad and deep the oval being about 3 m. long and

1.5 m. wide. When the wire is pulled it claps shut in the form of a tent with the birds sitting inside the oval.

The first snag to appear was that birds caught in nets placed in water and mud got wet and lost their power of flight for a full day afterwards. Unlike other birds they seem unable to preen and set their feathers. So we had to set the nets on dry land and conceal them as described but concealment was necessarily incomplete and after a few days the birds began to avoid the nets.

The other lesson we learnt was that the trappers tended to pull the nets when the birds were sitting adjacent to the net and not in it, as they were unable to see clearly from their position at the end of the wire, and on a level with the nets. Also overeager trappers tended to pull before other nets were full frightening the birds off. Finally a person had to sit in a commanding position with binoculars and give the order to pull when there were birds in all nets.

Last and most crucial was the question of when to give the signal to pull. Before we realized that there was a peak period a little after the commencement of flighting we pulled prematurely after realization there was always a tendency to wait in the hope of getting more birds in the net till the peak period was over and as happened once the chance of catching any was completely missed. It became evident from this that we did not have enough nets, as there were days when we never had more than ten or twelve birds in the nets and in a position to be caught at any time.

Attempts at catching by night with throw nets failed partly due to the difficulties of spotting birds by torchlight and partly due to the fact that it takes several days of extensive wandering around the likely terrain by night before one gets to know it well enough to move around confidently in the dark and spot the places where they habitually roost.

In future we should have many more nets atleast 12 to 15 instead of the present three and set them so that they can all be pulled from the same place. We should also have more trappers. Those catching at night should not be employed to function the pulling nets, so that they can receive the area during the day, and should have atleast a 30 days catching spell.

The following is the daywise break up of the catches:

<u>Date</u>	<u>Total</u>	<u>Remarks</u>
Feb. 1	22	
" 2	16	
" 3	3	
" 4		Spent in Recon.
" 5		Spent in Recon.
" 6	6	
" 7	5	
" 8	25	
" 9	2	
" 10	2	Night catch
" 11	-	
Total:	<u>81</u>	Totally missed opportunity by waiting too long.

Before closing it should be mentioned that almost everyday some birds land clumsily in the water wet themselves and lose the power

of flight temporarily (some of the birds ringed were such), and if somebody at Gajner were to ring them by seasons and he would have a fairly sizable total. Only Imperials come in any numbers and the staff their can easily differentiate the two species that some keeping records too at the rate of 2 or 3 day is no problem and they do have a permanent clerk there.

Our sincerest thanks to Dr. Karni Singh for permission to stay and work at Gajner and avail ourselves of the help of his staff.

J.D. Panday

88	8	2.10
20	5	5
<u>00</u>	2	
	10	10.50

176		2.75
<u>17.60</u>		

10.66	1.	95.
<u>28.60</u>		38

17.60		2.25
10.50		75
<u>27.90</u>		

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2.25 Sw

39.50



BOMBAY NATURAL HISTORY SOCIETY

Honorary Secretary's Report for the year ended
31st December, 1972

MEMBERSHIP

During the year 127 new members were enrolled as against 40 resignations and deaths. The slight increase in membership is welcome but we have a long way to go. On the date of the report the membership is 1143. You may recall that in our last report we had shown that arrears of subscription were to be received from 110 members. Among these 7 paid during the year.

Comparative figures for three years are given below:

	<u>1970</u>	<u>1971</u>	<u>1972</u>
Life members	174	181	187
Ordinary Members	703	780	801
Forest Department Nominees	78	80	89
Student Members	5	5	9
Hon. Members	3	3	3
	<u>963</u>	<u>1049</u>	<u>1089</u>

ACTIVITIES

Journal

Three issues of the Journal were published during the year. Vol.67, No.3 and Nos.1 & 2 of Volume 69.

The articles covered a wide range of subjects with special emphasis on ecology, behaviour and taxonomy of Indian fauna and taxonomy and regional lists of the flora. Special mention needs to be made of the report by Mr. Krishnan on the Mammals of Peninsular India which started as a serial in Vol.68(3) and will be completed in Vol.69(3). As we reported last year the financial assistance received from the Seth Purushottamas Diwaliba Trust enabled us to print all the excellent photographs submitted by Mr. Krishnan.

The editors regret that inspite of their best efforts it has not been possible to publish the Journal issue within the stipulated publication dates. This is largely due to delay in printing. The Journal has been printed by the Licoesan Press at Madras since 1926, and at rates much lower than those obtained at Bombay. We will continue our efforts to publish in time.

Books

During the year the following sales were made:

BOOK OF INDIAN BIRDS (8th & 9th Editions)	...	943	copies
BOOK OF INDIAN ANIMALS (3rd Edition)	...	407	"
PICTURE POST CARDS	...	127	"
SNAKE CHARTS	...	122	"

The 9th edition of the Bird Book appeared during the year. The text and plates have been re-arranged to bring the book in step with recent classification. We are indebted to Lady Peng McNice for guaranteeing overdraft facilities for the publication of the book.

Conservation

The Society continued to take a leading part in the Conservation movement in the country through its representatives on the State and Central Wild Life Boards, the International Union for Conservation of Nature and Natural Resources and the World Wildlife Fund.

The Maharashtra State Forest Department has been persuaded to establish a floral sanctuary at Khandala to perpetuate the memory of the late Fr. H. Santapau a former Vice-President of the Society and one of India's foremost botanists.

Efforts are being made to have a bird sanctuary in Mahim Creek within Bombay City, a haunt of waders during the migratory season. This proposal has received considerable support from many quarters and we hope that the various departments concerned will take the necessary steps to save the area from further degradation.

The Central Government has been approached by the IUCN to request the Tamil Nadu Government to declare the Kalakkadu forest in South Tirunelveli Dist. a wilderness area. The area had been earlier surveyed by the Society's staff and the action taken by the IUCN is the result of the Society's recommendations. The Society has been in touch with other organisations at Bombay who are concerned with the deteriorating environment and some meetings were held to stimulate officials and others to make an attempt to improve the situation.

Field Surveys

Two field collection trips were arranged during the year, one to Narcondam Island under the overall supervision of Mr. H. Abdulali. The field party spent a month on the Island and brought back an interesting collection of various forms including two live specimens of the rare Narcondam Hornbill.

The Goa area was surveyed by a field party led by Mr. Salim Ali. A representative collection of birds was made but more were caught in mist nets, examined and released after recording data.

Research Studies

Gir Project. Field work under the project ended in August when the Researchers returned to Bombay with the project equipment. Further field activity was curtailed by the lack of funds. A symposium on the achievements of the Gir Project was held in November at New Delhi.

The Society continued to receive offers for collaborative studies on Indian Fauna. Some on which the Society plans to collaborate or has offered assistance are listed below:

- (1) Studies on the Langurs and Macaques on the Peninsula by a research team from Kyoto University, Japan.
- (2) A study of the Lion-tailed Macaque by the Rockefeller University, New York.
- (3) The Population of Crocodiles in India - New York Zoological Society.
- (4) The ecology of the Wild Dog.
- (5) The biology of Whistling Teals of the genus Dendrocygna.

Advice and assistance was given to the Government of India in the preparation of a plan for an ecological station at Bharatpur Sanctuary. Members assistance was made available to Dr. Sibley of Yale University for the collection of egg yolk of birds.

University Department. During the year, the first thesis for Ph.D. in Field Ornithology was completed and submitted for examination.

BIRD MIGRATION ✓

The Bombay Natural History Society's bird ringing project under the direction of Dr. Salim Ali has so far ringed 2,70,294 birds belonging to both migratory and non-migratory species. The total number of recoveries to date amount to 3175 and these have been mainly from Russia. One result of these bird migratory studies has been that bird populations from almost all biotopes in the Sub-continent have been sampled. The success of the scheme has been due largely to the cooperation between the Scientists of three countries India, United States and Russia. The Bird Banding Scheme has also played a significant part in arousing an interest in our Avi Fauna in both official and non-official circles.

LOCAL ACTIVITIES

During the year members resident in Bombay had the opportunity of taking part in field activities, lectures and exhibitions organised by the Society.

Leopard Study efforts were made by a small group of members to obtain information and to draw to baits, leopards living in the Borivli National Park near Bombay. Baits were taken twice and leopards seen on several occasions. The study group is supported by funds received from World Wildlife - India and Fauna Preservation Society, U.K. and is continuing its activities.

Nature Walks were organised at Borivli National Park for bird watching and study of the vegetation at different times of the year.

Other Activities. An attempt was made to census the population of crows in Bombay City and some interesting data was obtained.

MEETINGS/EXHIBITIONS

- | | |
|-----------|---|
| January | Dr. James Karr spoke on 'Studies of Tropical Forest Bird Communities' |
| February | Mr. M. Krishnan spoke on 'Wild Life Photography' |
| March | Dr. C.V. Kulkarni spoke on 'Fishes and Fisheries' |
| April | Mr. Christian Zuber spoke and showed his film on 'Galapagos Wildlife Paradise'.

An exhibition of Sea Shells from the collection of Mr. A.R. Bhagat. |
| May | Prof. Carl Gans spoke on 'Locomotion in Snakes' |
| July | An exhibition of Snakes from the collection of Mr. Romulus Whitaker. |
| August | Mr. S.A. Hussain spoke on the Natural History of Narcondam

Mr. P.D. Stracey spoke on 'Wildlife Conservation in Africa'

Mr. S.P. Shahi spoke on 'Wildlife Photography' |
| September | Mr. Dillon Ripley spoke on 'Ecological studies in India.' |
| October | Discussion on 'Some Aspects of the Bombay Environment'. |

November Mr. Zafar Futehally spoke on 'National Parks'
Mr. D.R. Smith spoke on 'Rangeland and Wildlife Resources'
The Orchid Club held a show of exotic orchids
Discussion on 'Some Aspects of the Bombay Environment'

GRANTS & DONATION

The Society acknowledges with gratitude the following grants received for specific purposes:

- Rs. 40,000 from the Government of India for manufacture of Cabinets to house the collection.
- Rs. 10,000 from Mr. S.D. Ripley for field work.
- Rs. 3,000 from Mr. Salim Ali towards expenses of the Goa Field Survey.
- Rs. 3,500 from Mr. Salim Ali as donation to the Salim Ali Loke Ornithological Research Fund.
- Rs. 500 from Mr. Miss Hamida Saiduzaffar

RESEARCH & FIELD WORK FUNDS

Salim Ali Loke Ornithological Research Fund.

The Corpus of the fund amounts to Rs. 1,65,636.52. Expenses during the year were Rs. 6,666.33 and Rs. 7822.86 is available for distribution. Two awards were made during the year.

Charles McCann Field Work Fund.

The assets of the fund totalled Rs. 11,936.10 at the end of the year. Payments were made from the fund towards the cost of the Narcondam Survey trip (2,462.45).

Col. Burton Field Work Fund.

From the interest accrued, Rs. 503.39 was used towards expenses connected with Nature Walks at Borivli National Park.

Fauna Preservation Society Membership Funds.

At the end of the year the assets of the fund amounted to Rs. 2771.05 after payment of grants made by the Fauna Preservation Society for field work in India. The following grants were made:

- Rs. 1,000/- to the Leopard Study Group of the Society
- Rs. 1,000/- to Mr. E.R.C. Davidar, a member of South India for a survey of the Nilgiri Tahr.

SALIM ALI 75TH BIRTHDAY FUND

To honour Mr. Salim Ali on his 75th Birthday a Committee of members was formed on the initiative of Yuvraj Shri Shivrajkumar and Mr. R.E. Hawkins and an appeal sent out for contributions so that a purse could be present to Mr. Salim Ali. The contributions received from members in India amounted to Rs. 12,990.76 and from

well wishers abroad 662.00 dollars was realised. The money collected will be utilised for printing a festschrift issue of the Journal and this volume will contain contributions from some of the leading Ornithologists of the World.

NATURE EDUCATION SCHEME ✓

The activities under the Scheme such as field-trips for children and teachers, talks and guided tours at the Museum, Zoo and the Aquarium, talks at schools for children and teachers were organised throughout the year. Seasonal field-trips to study aquatic life and monsoon plants during monsoon term and migratory birds and flowering trees during winter-summer terms were organised in Bombay and Poona.

LIBRARY

During the year 140 books were added to the Library, of which 32 were purchased, 80 were donated and 28 received as review copies for the Journal.

REFERENCE COLLECTIONS

During the year 339 specimens were added to the Collections.

Mammals	43
Birds	184
Reptiles	96
Amphibians	16

REVENUE AND ACCOUNTS

The financial situation of the Society continues to be difficult. The years operation showed a deficit Rs.5,000/- inspite of stringent economys.

STAFF

The Committee wishes to record its appreciation at the willing cooperation of the staff in the entire activities of the Society.

ACKNOWLEDGEMENTS

Committee's thanks are due to Mr. M.J. Lickins who looked after the Society's affairs in the U.K., and to the members and others who gave help in its field projects and other activities.

Bird Migration

REPORT NO. 26

BOMBAY NATURAL HISTORY SOCIETY'S BIRD MIGRATION STUDY PROJECT

10 FEBRUARY - 21 APRIL 1973

Station: Bharatpur, Rajasthan (27°13'N; 77°32'E.)

Principal Investigator : Dr. Salim Ali, D.Sc., F.N.A.

Team Members : Jamshed Panday
M.U. Mahadik

Due to the delayed availability of funds the 1972-73 Winter Banding Session at Bharatpur commenced as late as 15th February and ended on April 15th, 1973, when the disappearance of communally roosting migrant passerines such as starlings and sparrows and the simultaneous commencement of the waxing moon period, which interferes with our methods of trapping waterfowl, put an end to large scale banding of land birds and ducks and waders. Banding of aquatic birds could have recommenced on the 20th of April, but with only the fag end of the season left it would not have been worthwhile. In exactly sixty working days 10778 birds of 141 species were banded equalling half the average of a full season of six months.

There was a fantastic number of ducks and geese present in February and early March, inspite of the low water level and limited water spread available which perhaps actually increased the concentration and the catches. The catches of land birds too were unexpectedly good due to the profuse fruiting of Salvadora persica which are attractive to both insectivorous and grain-eating birds for their water content and sweetish flavour.

Grey Lag Geese started leaving in late February and were all gone by March 5th. Concentrations of duck too decreased very markedly during the same period, though the catches continued good till the beginning of April. Two large sparrow roosts inside the Ghana had completely disappeared by 7 April. One roost site, worked successfully on 24 March, was found deserted on the 4 April; the other seen occupied on the 4 April was found deserted on the 6th, two days later.

Table I shows that for the period 15 February to 15 April Anas crecca predominated, forming 43.6% of the nine commoner forms of the family Anatidae, while Anas clypeata constituted 26.7%, and the remaining 7 forms 29.7%. It also shows that all species registered a tendency to decline numerically with the advance of the season except Anas querquedula which increased markedly.

Table II gives the numbers and ratios of male to female in the catches of 8 species of duck. Where the numbers are large enough to make it meaningful these are presented separately for each of the two halves of the season. It shows that Anas strepera, Anas penelope and Anas clypeata in the catches for both period maintained a more or less constant sex ratio of 1 : 1. In Anas acuta there are 2 males to every female present. In Anas querquedula the males predominate slightly, but whereas the first period shows a nearly equal proportion of males to females, the second period shows 2 males to every female present. This, coupled with the fact that the number of birds was augmented during the second period by the returning migrants, suggests that the males begin their spring migration earlier than the females. The increase in males over females was apparently due to the arrivals of larger male populations on outward passage.

The catches of Anas crecca for the full working period show a ratio of 1♂ : 4♀♀ but the first half shows one male to every female

whereas in the second half only one male was present to as many as nine females. This decrease in the proportion of males, coupled with the very marked decrease in the size of the catch during the second half, suggests that the local population was leaving, and indicates that the males of Anas crecca too begin their spring migration earlier than the females.

Jamshed Panday

SYSTEMATIC LIST OF BIRDS BANNED AT BHARATPUR FROM 15 FEB '73 TO 15 APR. '73.

Sl. No.	Species	Feb. (15-28)		Mar. (1-15)		Mar. (16-31)		Apr. (1-18)		Total	
		Cap.	Rec.	Cap.	Rec.	Cap.	Rec.	Cap.	Rec.	Cap.	Rec.
1.	<u>Podiceps ruficollis</u>	1	-	1	-	-	-	1	-	3	-
2.	<u>Pelecanus philippensis</u>	-	-	1	-	-	-	-	-	1	-
3.	<u>Pelecanus onocrotalus</u>	-	-	-	-	-	-	1	-	1	-
4.	<u>Phalacrocorax fuscicollis</u>	-	-	-	-	9	-	-	-	9	-
5.	<u>Phalacrocorax niger</u>	-	-	-	-	26	-	-	-	26	-
6.	<u>Anhinga rufa</u>	-	-	-	-	-	-	2	-	2	-
7.	<u>Egretta intermedia</u>	-	-	-	-	2	-	-	-	2	-
8.	<u>Egretta garzetta</u>	-	-	1	-	1	-	-	-	2	-
9.	<u>Ibis leucocephalus</u>	-	-	-	-	1	-	-	-	1	-
10.	<u>Plegadis falcinellus</u>	-	-	-	-	-	-	1	-	1	-
11.	<u>Phoenicopterus roseus</u>	-	-	-	-	-	-	1	-	1	-
12.	<u>Phoeniconaias minor</u>	-	-	1	-	-	-	-	-	1	-
13.	<u>Anser anser</u>	-	-	2	-	-	-	-	-	2	-
14.	<u>Anser indicus</u>	-	-	7	-	9	1	1	-	17	1
15.	<u>Tadorna ferruginea</u>	-	-	4	1	3	-	-	-	7	1
16.	<u>Anas acuta</u>	93	6	83	4	12	-	7	2	195	12
17.	<u>Anas crecca</u>	869	28	436	73	332	58	160	33	1797	192
18.	<u>Anas poecilorhyncha</u>	2	-	2	-	12	-	7	-	23	-
19.	<u>Anas strepera</u>	115	5	67	8	21	2	8	1	211	16
20.	<u>Anas penelope</u>	47	1	30	5	27	5	49	20	153	31
21.	<u>Anas querquedula</u>	43	3	67	6	142	9	140	10	392	28
22.	<u>Anas clypeata</u>	352	16	356	26	345	6	219	82	1272	130
23.	<u>Aythya ferina</u>	149	13	16	5	1	-	-	-	166	18
24.	<u>Aythya nyroca</u>	5	-	3	1	-	-	-	-	8	1
25.	<u>Aythya fuligula</u>	194	14	92	26	14	3	4	2	304	45
26.	<u>Nettapus cromandelianus</u>	3	1	8	2	6	2	4	1	21	6
27.	<u>Sarkidiornis melanotos</u>	-	-	2	-	-	-	3	-	5	-
28.	<u>Milvus migrans</u>	-	-	1	-	-	-	-	-	1	-
29.	<u>Accipiter badius</u>	-	-	-	-	1	-	-	-	6	-
30.	<u>Accipiter nisus</u>	-	-	-	-	1	-	-	-	1	-
31.	<u>Francolinus pondicerianus</u>	1	-	-	-	-	-	-	-	1	-
32.	<u>Grus antigone</u>	-	-	-	-	1	-	-	-	1	-
33.	<u>Amaurornis phoenicurus</u>	-	-	-	-	1	-	-	-	1	-
34.	<u>Gallinula chloropus</u>	-	-	-	-	-	-	1	-	1	-
35.	<u>Porphyrio porphyrio</u>	2	-	1	-	1	-	-	-	4	-
36.	<u>Fulica atra</u>	53	-	123	3	37	-	11	1	224	4
37.	<u>Hydrophasianus chirurgus</u>	1	-	-	-	1	-	2	-	4	-
38.	<u>Vanellus leucurus</u>	-	-	1	-	1	-	-	-	2	-
39.	<u>Vanellus indicus</u>	-	-	-	-	2	-	1	-	3	-
40.	<u>Charadrius hiaticula</u>	-	-	1	-	-	-	-	-	1	-
41.	<u>Charadrius dubius</u>	1	-	6	-	18	-	15	-	40	1
42.	<u>Charadrius alexandrinus</u>	-	-	5	-	8	-	2	-	15	-
43.	<u>Limosa limosa</u>	-	-	-	-	3	-	-	-	3	-
44.	<u>Tringa erythropus</u>	6	-	4	-	-	-	2	-	12	-
45.	<u>Tringa totanus</u>	1	-	3	-	1	-	1	-	6	-
46.	<u>Tringa nebularia</u>	1	-	2	-	-	-	3	-	6	-
47.	<u>Tringa stagnatilis</u>	4	1	63	1	54	2	13	3	134	7
48.	<u>Tringa ochropus</u>	12	1	8	-	5	1	11	3	36	5
49.	<u>Tringa glareola</u>	158	24	356	124	494	95	185	48	1193	291
50.	<u>Capella gallinago</u>	88	3	71	12	39	20	23	8	221	43
51.	<u>Capella minima</u>	9	-	16	11	5	5	-	5	30	21
52.	<u>Calicris minutus</u>	28	-	144	3	483	23	172	6	827	32
53.	<u>Calicris temminckii</u>	9	-	34	1	153	3	114	13	310	17
54.	<u>Calicris alpinus</u>	-	-	2	1	5	1	-	-	7	2
55.	<u>Philomachus pugnax</u>	97	2	74	6	111	8	11	3	293	19
56.	<u>Rostratula benghalensis</u>	1	-	-	-	-	-	2	-	3	-
57.	<u>Himantopus himantopus</u>	-	-	1	-	7	1	28	2	36	3
58.	<u>Burhinus oedicephalus</u>	2	-	-	-	1	-	-	-	3	-
59.	<u>Chlidonias hybrida</u>	-	-	-	-	1	-	4	-	5	-
60.	<u>Columba livia</u>	2	-	-	-	-	-	-	-	2	-
61.	<u>Streptopelia decaocto</u>	1	-	6	-	7	-	3	-	17	-
62.	<u>Streptopelia tranquebarica</u>	-	-	-	-	7	-	1	-	8	-
63.	<u>Streptopelia senegalensis</u>	2	2	4	-	15	-	4	-	25	2

Sl. No.	Species	Feb. (15-28)		Mar. (1-15)		Mar. (16-31)		Apr. (1-15)		Total	
		Cap.	Rec.	Cap.	Rec.	Cap.	Rec.	Cap.	Rec.	Cap.	Rec.
64.	<u>Psittacula krameri</u>	5	-	10	-	19	-	6	-	40	-
65.	<u>Cuculus varius</u>	-	-	-	-	1	-	-	-	1	-
66.	<u>Centropus sinensis</u>	-	-	-	-	-	-	1	-	1	-
67.	<u>Otus brucei</u>	-	-	-	-	1	-	-	-	1	-
68.	<u>Ceryle rudis</u>	-	-	-	-	4	-	4	-	8	-
69.	<u>Halcyon smyrnensis</u>	1	-	-	-	5	1	3	-	9	1
70.	<u>Merops orientalis</u>	-	-	28	4	10	5	4	-	42	7
71.	<u>Upupa epops</u>	3	1	2	4	2	4	1	-	8	9
72.	<u>Jynx torquilla</u>	1	-	-	-	1	-	-	1	2	1
73.	<u>Linopium benghalense</u>	-	1	3	-	-	-	-	-	3	-
74.	<u>Dendrocopos mahrattensis</u>	1	-	-	1	-	-	-	-	1	1
75.	<u>Dendrocopos nanus</u>	-	-	-	-	-	-	1	2	1	2
76.	<u>Amnomanes phoenicurus</u>	-	-	-	-	1	-	-	-	1	-
77.	<u>Riparia paludicola</u>	-	-	-	-	-	-	2	-	2	-
78.	<u>Hirundo rustica</u>	-	-	-	-	-	-	27	-	27	-
79.	<u>Hirundo fluvicola</u>	-	-	-	-	-	-	103	-	103	-
80.	<u>Lanius vittatus</u>	1	1	5	-	4	-	4	-	14	1
81.	<u>Lanius schach</u>	-	-	-	-	3	-	-	-	3	-
82.	<u>Dicrurus adsimilis</u>	-	-	-	-	1	-	-	-	1	-
83.	<u>Sturnus pagodarum</u>	4	1	11	1	31	1	15	4	61	7
84.	<u>Sturnus roseus</u>	-	-	5	-	12	-	-	-	17	-
85.	<u>Sturnus contra</u>	10	3	10	2	71	9	16	4	107	18
86.	<u>Acridotheres tristis</u>	-	-	2	-	11	-	-	-	13	-
87.	<u>Acridotheres ginginianus</u>	-	-	2	-	-	-	-	-	2	-
88.	<u>Dehaerocitta vagabunda</u>	1	1	1	-	-	-	1	-	3	1
89.	<u>Tephrodornis pondicerianus</u>	3	1	5	2	3	-	2	-	13	3
90.	<u>Pericrocotus cinnamomeus</u>	-	-	1	-	-	-	1	-	2	-
91.	<u>Aegithina nigrolutea</u>	1	-	3	1	1	-	1	-	6	1
92.	<u>Pycnonotus leucogenys</u>	15	4	9	2	11	4	1	-	36	10
93.	<u>Pycnonotus cafer</u>	11	6	2	-	15	-	4	-	32	6
94.	<u>Chrysomma sinensis</u>	1	1	1	-	2	-	-	-	4	1
95.	<u>Turdoides caudatus</u>	7	2	16	4	3	3	-	-	26	9
96.	<u>Turdoides malcolmi</u>	-	-	1	-	1	-	-	-	2	-
97.	<u>Turdoides striatus</u>	8	3	11	-	16	4	6	-	41	7
98.	<u>Muscicapa parva</u>	1	1	4	-	10	1	11	3	26	5
99.	<u>Culicicapa ceylonensis</u>	1	-	-	-	-	-	-	-	1	-
100.	<u>Rhipidura aureola</u>	-	-	2	-	-	-	-	-	2	-
101.	<u>Terpsiphone paradisi</u>	-	-	-	-	-	-	4	-	4	-
102.	<u>Prinia subflava</u>	1	-	3	-	3	-	1	-	8	-
103.	<u>Prinia socialis</u>	1	-	1	-	1	-	-	-	3	-
104.	<u>Orthotomus sutorius</u>	1	-	1	-	9	-	5	-	16	1
105.	<u>Acrocephalus stentoreus</u>	-	-	-	-	2	-	12	-	14	-
106.	<u>Acrocephalus dumetorum</u>	-	1	-	-	1	-	13	1	14	2
107.	<u>Acrocephalus agricola</u>	1	-	2	-	-	-	-	-	3	-
108.	<u>Hippolais caligata</u>	-	-	-	-	-	-	2	-	2	-
109.	<u>Sylvia curruca</u>	36	4	65	-	94	11	23	1	208	16
110.	<u>Phylloscopus collybita</u>	21	1	13	-	25	-	3	1	62	2
111.	<u>Phylloscopus tytleri</u>	1	-	-	-	-	-	-	-	1	-
112.	<u>Phylloscopus griseolus</u>	-	-	-	-	1	-	8	-	9	-
113.	<u>Phylloscopus fuscatus</u>	-	-	-	-	-	-	1	1	1	1
114.	<u>Phylloscopus inornatus</u>	1	-	-	-	1	-	-	-	2	-
115.	<u>Phylloscopus borealis</u>	-	-	-	-	-	-	1	-	1	-
116.	<u>Erithacus calliope</u>	1	-	-	-	-	-	-	-	1	-
117.	<u>Erithacus svecicus</u>	19	9	-	-	15	1	6	1	40	11
118.	<u>Copsychus saularis</u>	1	2	2	-	3	4	3	-	9	6
119.	<u>Phoenicurus ochruros</u>	2	1	3	1	4	1	4	1	13	4
120.	<u>Saxicola torquata</u>	-	-	-	-	3	-	-	-	3	-
121.	<u>Saxicola caprata</u>	2	-	2	-	7	-	-	-	11	-
122.	<u>Saxicoloides fulvicata</u>	8	-	7	3	3	2	-	-	18	5
123.	<u>Zoothera citrina</u>	1	-	-	-	-	-	2	-	3	-
124.	<u>Sitta castanea</u>	-	-	2	-	1	-	4	3	7	3
125.	<u>Anthus hodgsoni</u>	-	3	-	-	7	1	14	2	21	6
126.	<u>Anthus trivialis</u>	-	-	-	-	-	-	1	-	1	-

Sl. No.	Species	Feb. (15-28)		Mar. (1-15)		Mar. (16-31)		Apr. (1-15)		Total	
		Cap	Rec	Cap	Rec	Cap	Rec	Cap	Rec	Cap	Rec
127.	<u>Anthus novaeseelandiae</u>	-	-	-	-	1	-	-	-	1	-
128.	<u>Motacilla flava</u>	-	-	-	-	1	-	2	-	3	-
129.	<u>Motacilla citreola</u>	-	-	-	-	1	-	3	-	4	-
130.	<u>Motacilla caspica</u>	-	-	-	-	-	-	3	-	3	-
131.	<u>Motacilla alba</u>	-	-	-	-	-	-	1	-	1	-
132.	<u>Nectarinia asiatica</u>	4	-	6	1	2	-	1	1	13	2
133.	<u>Zosterops palpebrosa</u>	-	2	6	1	3	-	12	5	21	8
134.	<u>Passer domesticus</u>	186	13	617	62	238	-	55	1	1096	76
135.	<u>Passer hispaniolensis</u>	3	-	5	-	24	-	1	-	33	-
136.	<u>Petronia xanthocollis</u>	50	3	110	7	94	9	16	8	270	7
137.	<u>Ploceus philippinus</u>	32	2	36	4	-	-	-	-	68	6
138.	<u>Ploceus benghalensis</u>	-	-	-	-	1	-	18	-	19	-
139.	<u>Lonchura malabarica</u>	1	-	-	-	-	-	-	-	1	-
140.	<u>Carpodacus erythrinus</u>	-	-	1	-	16	1	10	-	27	1
141.	<u>Emberiza stewarti</u>	-	-	-	-	2	-	-	-	2	-
		2800 167		3111 346		3227 297		1640 269		10778 1079	

Table - II. Giving the numbers of males and females separately in each of eight different species of ducks; for each half of the session, and for the whole.

Species		15 Feb. - 14 Mar.			15 Mar. - 15 Apr.			15 Feb. - 15 April		
		♂	?	♀	♂	?	♀	♂	?	♀
<u>Anas acuta</u>	Number	-	-	-	-	-	-	113	-	60
	Ratio	-	-	-	-	-	-	2	-	1
<u>Anas crecca</u>	Number	425	3	1243	53	2	548	483	-	1796
	Ratio	1	-	3	1	0	10	1	-	4
<u>Anas strepera</u>	Number	100	2	97	14	-	18	114	-	115
	Ratio	1	0	1	2	-	3	1	-	1
<u>Anas penelope</u>	Number	47	-	41	51	-	51	98	-	92
	Ratio	1	-	1	1	-	1	1	-	1
<u>Anas querquedula</u>	Number	52	-	51	202	3	113	254	-	164
	Ratio	1	-	1	2	-	1	3	-	2
<u>Anas clypeata</u>	Number	345	-	300	378	4	364	723	-	664
	Ratio	1	-	1	1	-	1	1	-	1
<u>Aythya ferina</u>	Number	-	-	-	-	-	-	54	-	128
	Ratio	-	-	-	-	-	-	1	-	2
<u>Aythya fuligula</u>	Number	-	-	-	-	-	-	38	-	259
	Ratio	-	-	-	-	-	-	1	-	3
<u>Nettapus coromandelianus</u>	Number	-	-	-	-	-	-	18	-	9
	Ratio	-	-	-	-	-	-	2	-	1