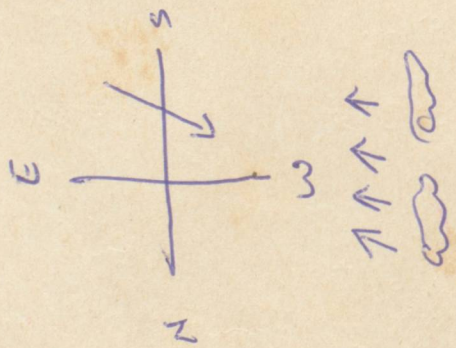
Meteorology

Rain fall

~~taken at 8.45 a.m~~

1·7·86	24·5 mm	c. 11·45 a.m (Rained in night only)
2·7·86	4·5 mm	c. 5·00 p.m (Rained lightly night & most at noon
6/7/86	12·0 mm	night & morning. sunny) 1 p.m
7/7/86	34 mm	
~~13/7/86~~		
14/7/86	64·5	Rained night 13/14 no rain thro 14 day
15/7/86	3·1	In night 15/16 raining through day (9.30 am)
~~17/7/86~~		
16/7/86	44 m.m	upto c. 10 a.m - morning
17/7/86	3·2 m.m	upto 9·00 a.m
18/7/86	10·2 mm	upto c. 8·30 a.m.
19/7/86	0·7 m.m	in night and morning
22/7/86	34·7	c. 3·30 p.m
23/7/86	98·4	c 7.00 p.m nonstop since night.
24/7/86	342·2	c 5.30 p.m nonstop since last reading
25/7/86	96·3 + 14·3	c 8.30 a.m nonstop since c. 5.30 p.m
26/7/86	44·6 + 58	m. sho c 7.00 p.m
27/7	46·1 +	m c. 9.30
28/7	43·3	m. c. 7.30 a.m
29/7	34·6	only in the night of 28/29
30/7	6·7	
31/7	11·7	Evening c. 8.00 p.m.
3/8	11	morning
5/8/8	48·8	7th evening rained through both day
8/8	4·8	brief drizzles
9/8	3·5	m. 7.00 a.m.

11/8	4·1 mm	c. 5·30 a.m.
13/8	3·9	8 a.m.
14/8	110·6	9 a.m.
15/8	124·7 +75·3	10 a.m. c. 7 p.m.
16/8/	78·8	c. 9 a.m.
17/8	17·7	c. 9 a.m.
19/8	12·7	c. 8 a.m.
18/9	6·5	(evening) raised
19/9	3·4	(evening)
26/9	6·7	(night c. 8.00 p.m.)
2/10	9·4	evening & night.



Date	Max	Min	Rain
11/8			
12/8			↑
13/8	29	21	31.4
14/8			
15/8	29	22	
16/8	30	21	
17/8			
18/8			
19/8			
20/8			
21/8			}
22/8	32	21	116.5
23/8	27	21	18.5
24/8	27	20	18.2
25/8	29	22	11.5
26/8	29	21	
27/8	27	22	
29/8	31	22	
30/8	32	23	
31/8	34	22	
1/9	33	22	
2/9	34	22	
3/9	34	23	
4/9	35	22	
5/9	31	22	
6/9			
7/9			
8/9			
10/9	35	20	45.2
11/9			
12/9	32	25	
13/9	33	22	
14/9	34	22	
15/9			11.5
16/9	37	20	12.4
17/9	35	21	
18/9	36	22	
19/9	35	21	
20/9	34	22	
21/9	36	23	
22/9	33	22	15.1
23/9	31	22	47.8
24/9	31	22	39.2
25/9			
26/9	33	21	
27/9	33	22	

Date	Max	Min	Rain
28/9	33	21	
29/9	33	20	54.3
30/9	35	22	
1/10	36	21	
2/10	33	21	15.8
3/10			
4/10			166

Sailana 1988

Date	Max	Min	Rain mm	weather. Ma Mi
26/6/88	38	25	5.4	(25/7 - 37 26
27/6	37	23		
28/6	29	21	13.3	
29/6	24	22	4.1	
30/6	27	23		
1/7	34	23		
2/7	36	24		
3/7	35	23	1	
4/7	33	23	1.2	
5/7	33	21		
6/7	30	22	31.2	
7/7	26	22	38.4	
8/7	—	24		
9/7	34	23		
10/7	34	23		
11/7	—	—		
12/7	—	—		
13/7	—	—		
14/7	33	21	61.5	
15/7	30	22	5.2	
16/7	31	23	5.9	
17/7	33	22		
18/7	—	—		
19/7	—	—		
20/7	—	—		
21/7	—	—		
22/7	33	21	188.5	
23/7	28	21	2.7	
24/7			46	
25/7	30	22	2.4	
26/7	27	19	70	
27/7	—	—		
28/7	—	—		
29/7	—	—		
30/7	—	—		
31/7	26	19	38.4	
1/8	26	22	10.7	
2/8	29	22	6.2	
3/8	28	23	15.2	
4/8	22	20	187.5	
5/8	25	20	219.0	
6/8	28	19	5.2	
7/8	29	21	14.2	
8/8	—	—		
9/8	—	—		
10/8	—	—		

SAILANA [illegible]
From Ratlam

	Max	Min	Rain
1/6	39·4		
2/6	43		
3/6	41		
4/6	41		
5/6	40·2		
6/6	42·0		
7/6	38·4		
8/6	40·6		28·8
9/6	37·4		
10/6	37·2		
11/6	37·4		
12/6	37·0		
13/6	36·4		14·6
14/6	35·2		
15/6	36·2		
16/6	37·0		0·8
17/6	31·4		2·8
18/6	31·6		
19/6	35·2		
20/6	35·2		
21/6	36·6		
22/6	37·4		
23/6	37·2		
24/6	35·8	28·2	4·4
25/6	36·4	29·8	18·4
26/6	36·2		16·4
27/6	35·4		
28/6	36·4		
29/6	34·0		22·4
30/6	30·2		2·2.
5/7	33·4		
17/7	32·0		
18/7	31·4		
19/7	33·4		
20/7	33·4		
21/7	33·6		
22/7	33·4		
23/7	33·6		
24/7	33·4		
25/7	33·2		
26/7	33·0		
27/7	42·0		
28/7	33·0		
29/7	33·0		
4/8	34·4		
12/8	33·6		
31/8	23·2		
11/9			
15/9			

Maximum temperatures 1985

June

1	8	15	22	29	July 6
37·4	35·6	38·6	36·0	34·6	34·2
35·6	36·6	37·0	35·4	35·0	34·2
35·6	35·6	37·0	37·2	35·2	34·2
36·6	36·2	37·6	39·2	35·0	34·6
36·6	36·6	36·2	37·0	35·2	34·6
37·0	37·2	35·6	39·6	35·2	34·6
36·2	38·0	36·0	34·0	35·4	34·6
254·0					
Total 254·0	255·8	258	258·4	245·6	241
Av. 36·285	36·54	36·86	36·9	35·1	34·43

August

13	20	27	3	10	17
34·6	31·4	28·4	28·4	23·0	27·6
35·4	31·4	29·4	27·4	24·6	25·4
31·6	30·2	29·2	28·6	23·4	28·6
27·0	33·0	26·6	25·6	25·0	29·4
28·6	33·0	26·2	28·6	29·0	29·2
26·2	30·2	23·8	28·0	29·6	24·4
29·0	30·0	31·0	24·4	29·6	29·4
Total 212	219·2	194·6	191	187·8	199
av. 30·34	31·31	27·8	27·28	26·8	28·4

24	31	7	14	21	28
28·4	31·2	30·2	33·6	35·4	34·0
30·0	31·0	31·6	33·2	33·4	34·2
29·2	29·6	31·6	33·6	30·0	35·0
29·6	31·0	33·0	34·2	26·4	
29·8	30·0	33·6	33·2	30·0	
30·6	29·6	34·0	33·0	32·0	
30·8	29·4	34·6	35·2	33·2	
208·4	211·8	229·2	236	220·4	1042
29·77	30·26	32·74	33·71	31·48	34·4

Rain fall in m.m. 1985.

June 1	8	15	22	29	July 6
			2.4 3.0		
Total.			5.4		

August

13	20	27	3	10	17	24
2.4 1.6 5.2 22.6 3.4	.4 15.8 3.4 2.4	7.2 .4 27.4 17.4 41.8 42.6 1.8	11.8 89.8 9.0 5.4 8.2 3.6 37.8	18.6 7.4 17.4 24.6 .8 17.4 6.6	.8 .8 1.6 .6 2.0 1.6	
35.2	22	158.6	165.6	92.8	7.4.	

24	31	7	14	21	28
1.8	.8 1.0 .6	.8	.6	23.4 2.4 37.8 1.4.	
1.8	2.4	.8	.6	65	

1985 537.6

October – 85

28	5	12	19	26	2nd Nov.
34·0	32·0	28·2	31·6	31·6	
34·2	29·6	27·0	31·8	32·0	
35·0	29·2	29·0	32·0	32·6	
35·2	29·0	31·6	3.2·0	32·0	
36·4	23·2	32·6	29·6	33·0	
36·0	26·2	31·6	32·6	33·2	
36·4	30·4	31·6	31·2	33·4.	
247·2	199·6	211·6	220·8	227·8	
35·3	28·5	30·2	31·5	32·5	

1984

June 1	8	15	22	29	July 6	13	20	27
40·0	41·0	35·4	33·4	35·0	31·6	32·0	30·4	30·4
38·4	39·6	35·6	31·2	35·8	30·6	33·0	30·2	28·4
39·0	37·0	36·0	34·2	37·0	31·0	33·2	29·6	28·6
38·6	37·4	36·0	34·4	33·8	29·0	33·0	30·0	30·0
40·0	35·0	33·2	34·6	32·0	29·4	33·2	31·0	31·0
39·0	36·6	34·0	34·4	35·4	30·4	31·2	30·0	30·0
39·2	35·0	34·2	34·4	31·4	30·8	31·2	28·6	33·0
274·2	261·6	244·4	230·6	240·4	212·8	226·8	209·8	211·4
39·2	37·4	34·9	33·8	34·3	30·4	32·4	30	30·2

Aug 3	10	17	24	31	Sept. 7	14	21	28
33	25·4	26·2	27·6	26·4	25·2	31	30·6	35
23·2	24·0	26	26·6	27·2	27·6	29·4	32·2	35
23·2	23·4	24·4	28·0	28	28·2	28	32·6	35
27·0	27·6	23	26·0	27·6	28·6	25	33·2	35·2
29·2	28·4	27·2	27·2	27·0	31·6	28·2	33	35·2
29·4	28·4	28·4	27·8	24·0	32·2	29	32·2	33·2
29·6	28·4	28·8	27·8	23·4	31·6	29	34·2	35·4
194·6	185·6	184	191	183·6	205	202·6	228	246
27·8	26·5	26·3	27·3	26·2	29·3	28·9	32·6	35·1

Oct. 5	12	19	26
35·4	33·0	33·2	33·6
35·2	33·2	33·4	33·4
35·4	33·2	33·6	33·2
34·4	33·4	33·2	33·4
30·4	33·6	33·4	33·0
30·4	33·2	34·6	33·4
31·0	33·4	35·4	32·2
232·4	233	236·8	232·2
33·2	33·3	35·6	33·2

October results

0	28·6
13	31·2
5	28·8
12	31·2
19	28·8
26	31·5
2nd Nov.	32·5
	21 wks

Rainfall in m.m. 1984

June 1	8	15	22	29	July 6
	7·6			2·6	54·8
	17·4			11·8	3·0
	4·2			5·8	4·6
					5·6
					1·4
	29·2			72·4	69·4

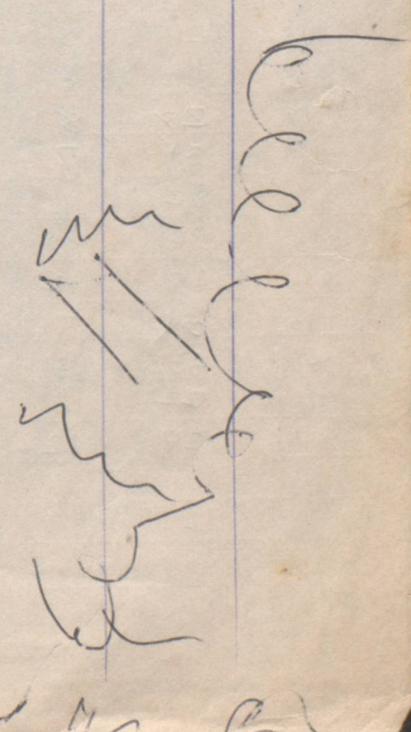
13	20	27	August 3	10	17
7·4	28·6	2·6	90·6	79·0	2·0
63·6	1·0	1·0	[illegible]	153·0	10·2
	5·0		180·2	41·6	191·2
	10·2		115·6	7·4	37·6
	11·0		1·6	4·4	1·0
	·8		4·6	2·0	
			45·6		
71	56·6	3·6	438·2	287·4	242

24	31	September 7	14	21	28
4·2	1·0	4·6	1·0		1·2
3·2	1·4	2·6	1·2		10·4
4·0	6·0	5·2	2·6		
6·6	8·6				
2·6	[illegible]				
3·2	[illegible]				
1·6					
84·8	17	12·4	4·8		11·6

1984 = 1400.4

	Max	Min	Rain	
6/5	38	17		
7/5	38	21		
8/5	38	17	11.2	
9/5	39	14		
10/5	42	20		
11/5	42	16		
12/5	42	16		
13/5	42	19		
14/5	42	20		
15/5	38	20		
16/5	39	24		
17/5	34	18	19.1	
18/5	38	23		
19/5	39	24		
20/5	41	21		
21/5	41	24		
22/5	38	16	7.8	
23/5				
24/5				
25/5	~~44~~	~~18~~		
26/5	44	~~24~~ 18		
27/5	44	24		
28/5	45	23		
29/5	46	23		
30/5	~~41~~	24		
31/5	41	22	4.2	
1/6	36	21		cloudy
2/6	39	22		cloudy
3/6	42	~~24~~		
4/6	39	19	16.2	
5/6	39	21		
6/6	39	18		
7/6	42	20		
8/6	44	23		
9/6	43	23		
10/6	43	24		
11/6	41	25		
12/6	42	25		
13/6			5.6	
14/6	39	23	~~5.6~~	
15/6	38	241	7.4	
16/6				

Max	Min	Rain	Date
37	19	21.7	17/6
57	23		18/6
36	27		19/6
36	24	2.9	20/6
			21/6



Date	Max	Min	Rain		Date	Max	Min	Rain	
26/1	24	0		sunny	16/3	31	13		sunny
27/1	24	1		foggy sunny	17/3	35	14		sunny
28/1	24	0		foggy sunny	18/3	32	12		sunny / cloudy / brief drizzle
29/1	25	0		foggy sunny	19/3	24	9	20.6	Rain / hail / overcast / sunny
30/1	25.5	2		foggy sunny	20/3	28	9		sunny
31/1	25	2		foggy sunny	21/3	31	9		sunny
1/2	25	3		foggy sunny	22/3				sunny
2/2	25	2		foggy sunny	23/3				sunny
3/2	26	4		sunny	24/3	35	11		sunny
4/2	27	5		sunny	25/3	36	16		sunny
5/2	27	7		sunny	26/3	36	16		sunny
6/2	28	6		sunny	27/3				sunny
7/2	29	6		sunny	28/3	33	9		sunny
8/2	-	-		sunny	29/3	34	9		sunny
9/2	29	6		sunny	30/3	35	7		sunny
10/2	-	-		sunny	31/3	35	7		sunny
11/2	28	9		sunny	1/4	36	8		sunny
12/2	-	-		cloudy sunny	2/4				
13/2	-	-		sunny	3/4	40	9		sunny / slight loo
14/2	24	4	6.8	overcast	4/4	41	13		sunny
15/2	26	6		cloudy	5/4	42	13		sunny
16/2	24	5		foggy sunny	6/4	42	12		sunny
17/2	28	6		foggy sunny	7/4	43	13		sunny
18/2	28	6		foggy sunny	8/4	43	13		sunny
19/2	29	7		sunny cloudy	9/4	-	-		
20/2	29	10		sunny	10/4	-	-		
21/2	25	9		cloudy brief drizzle	11/4	-	-		
22/2	-	-		sunny	12/4	43	13		
23/2	29	7		sunny	13/4				
24/2	28	5		sunny	14/4	42	12		
25/2	27	4		sunny	15/4	-	-		
26/2	27	9		sunny / cloudy	16/4	43	13		
27/2	-	-		sunny	17/4	43	13		
28/2	29	9	2.5	cloudy	18/4	-	-		drizzled morning
29/2	27	8		sunny / cloudy	19/4	35	6	36	heavy rain in the night
1/3	31	5		sunny / cloudy drizzled	20/4	35	9		sunny
2/3	29	5		sunny	21/4				
3/3	31	6		sunny	22/4	41	11		
4/3	28	8		sunny	23/4	39	16		
5/3	31	7		sunny	24/4	37	19		sunny day / cloudy evening
6/3	32	7		sunny / cloudy	25/4	38	15		sunny
7/3	34	5	0.5	sunny / cloudy	26/4	38	16		
8/3	28	12	4.5	overcast	27/4	39	16		wind storm in the night
9/3	31	7		sunny	28/4	39	17		
10/3	33	13		sunny	29/4	41	20		sunny
11/3	22	14	22	rainy / cloudy	30/4	40	23		
12/3	29	12	6.2	drizzle / cloudy	31/4	39	24		
13/3				cloudy / sunny	1/5	39	24		cloudy / sunny
14/3	27	7		sunny	2/5	39	28		sunny rain in the night
15/3	30	12			3/5	37	16	27.5	
					4/5	-	-		
					5/5	-	-	14.0	Brief thunder shower in the afternoon.
					6/5				

Dahod Rainfall 1988

Week	
1	64
2	0
3	25
4	68
5	137
6	47
7	68
8	185
9	17
10	35
11	10
12	0
13	0
14	0
15	75
16	61
Total	792

Nos of Rainy days. 37

Rainy days.

month	1984	1985	1986	1987	1988.
1					
2					
3					
4					
5					

WOS	1985 No R. days.	1986	1987	1988
1	0	7	2	—
2	2	6	5	2
3	0	2	0	3
4	0	2	2	3
5	5	6	3	5
6	5	5	1	7
7	7	5	0	3
8	7	5	4	5
9	7	5	0	2
10	6	4	4	4
11	2	1	5	2
12	3	0	2	0
13	1	0	0	1
14	1	0	0	2
15	4	0	1	3
16	0	1	0	2
total	50	49	29	44

TS

6-7am - 1

7-8 - 2

8-9 - 3

9-10 - 4

10-11 5

11-12 6

12-13 - 7

13 - 14 - 8

14 - 15 - 9

15 - 16 - 10

16 - 17 - 11

17 - 18 - 12

18 - 19 - 13

19 - 20 - 14

~~SD~~ TD. SD FD.

~~SD~~ FD

Date

location.

Timespan.)

Time dis.

~~weather~~

weather

1 = sun = 0%

2 = sn/cloud 25%

3 = clod/sn 50%

4 = ~~Overcas~~ cloudy 75%

5 = overcast 100%

Rain

slt

1 = ~~slt~~ drizzle

2 drizzle

3 = rain.

4 = no rain

Wind

1 = light

2 = med.

3 = ~~Leg~~ strong.

4 = no wind.

6-7 = 1a, 1b.

16040132

16 40 32

8

OBSTART 16:30:1650

OBSEND 16:50

OBSDURA

Papers (under preparation)

1. Herd size, herd composition and habitat utilization in Hog Deer (*Axis porcinus*).
   By Lima Rosalind

2. Flock composition of the Indian Peafowl (*Pavo cristatus*).
   By Lima Rosalind

3. Nesting behaviour of the Pied Harrier (*Circus melanoleucos*).
   By Goutam Narayan and Lima Rosalind

4. Birds of Manas grasslands.
   By Goutam Narayan and Lima Rosalind

5. Birds of some protected wildlife habitats in Assam.
   By Goutam Narayan and Lima Rosalind

6. Flock composition in Red Junglefowl (*Gallus gallus*) in Dudwa National Park.
   By Ravi Sankaran

7. Hog deer (*Axis porcinus*) at Dudwa National Park.
   By Ravi Sankaran and Qamar Qureshi

8. Skull of Hispid Hare (*Caprolagus hispidus*) collected from Dudwa National Park.
   By Ravi Sankaran and Manoj Muni

9. Status survey of the Greater Adjutant *Leptoptilos dubius* in India: Preliminary results.
   By Asad R. Rahmani, Goutam Narayan and Lima Rosalind
   Communicated to 'Colonial Waterbirds'

Theses (under preparation)

1. Ecology of the Bengal Florican *Houbaropsis bengalensis*.
   by Goutam Narayan

2. Ecology of the Lesser Florican *Sypheotides indica*.
   by Ravi Sankaran

Immigration chronology
1985.

week		No of Birds.		Rainfall in mm.
16/7	- 22/7	— 0	—	50.8
23/7	- 29/7	— 1	—	40.6
30/7	- 5/8	— 3	—	214.2
6/8	- 12/8	— 1	—	43.4
13/8	- 19/8	— 2	—	51.0
20/8	- 26/8	— 3	—	13.0
27/8	- 2/9	— 4	—	0.8
3/9	- 9/9	— 4	—	1.6
10/9	- 16/9	— 4	—	1.4
17/9	- 23/9	— 2	—	63.6
24/9	- 30/10	— 2	—	1.4
1/10	- 7/10.	— 1	—	213.0
				694.8

1985 - 48 rainy days.

1984 - 54 rainy days.

Year	Month	Total Rain	%	Max males.	
1985.	1	0	0	0	
	2	349	50·2	3	(4)
	3	67·8	9·8	4	
	4	278	40	2	
1986	1	220·8	12·04	4	
	2	1281·7	83·24	9	(11)
	3	109·2	3·02	11	
	4	26	1·67	7	
1987	1	197·6	16·7	1	
	2	36·1	3·1	2	
	3	939·76	79·5	2	(2)
	4	7·2	0·6	1	
1988	1	161·3	12·6	1	
	2	678·5	53·18	4	(4)
	3	251·4	19·7	2	
	4	184·6	14·5	3	

Year.	Month	Rain	%	Max mala.	
1985	1	9·4		0	
	2	446·8		3	
	3	25		4	
	4	278		2	(4)
1986	1	220·8		4	
	2	1275·7		9	
	3	109·2		11	
	4	26		7	(11)
1987	1	197·6		1	
	2	39·1		2	
	3	939·7		2	
	4	7·2		1	(2)
1988	1	161·3		1	
	2	673·3		4	
	3	251·4		2	
	4	184·6		3	(4)
1984	1	149·2			
	2	847·4			
	3	298·8			(15)
	4	16·4			
1989	1	158·6			
	2	196·2			
	3	181			
	4	98			

Total

1985 = 759·2

1986 = 1631·7

1987 = 1237·6

1988 = ~~706~~ 1270·6

1984 = 1318·8

1886.

June.		Temp. June	
rainfall	Date.		
2·00	1/6	39·4	26·0
4·8	16/6	39·4	27·4
0·2	17/6	41·4	29·2
4·5	18/6	40·6	29·2
11·8	19/6	38·4	29·2
10·9	20/6	39·6	31·4.
13·8	21/6	41·2	July.
34·4	22/6	41·4	32·4
8·4	23/6	41·4	32·6
20·2	24/6	50·0	32·8
0·6	25/6	44·2	33.
3·0	26/6	39·2	33
1·6	27/6	39·6	33
4·6	28/6	40·6	29·6
—	29/6	41·4	30·0
—	30/6	40·2	30·6
		40·0	28 11th July
		40·6	32·2.
		35·6	
		28·	
		30·2	
		29·0	
		26·4	

From Ratlam 1720 kim away.

1955.

Rainfall m.m.	Date.	Rainfall m.m.	Date	Rainfall	Date
2.4	26/6	18.6	10/8		
3.0	27/6	7.4	11/8	8.6	5/10
		17.4	12/8	4.2	6/10
2.4	14/7	24.6	13/8	8.2	7/10
1.6	15/7	.8	14/8	39.8	8/10
5.2	16/7	17.4	15/8	151.8	9/10
22.6	18/7	6.6	16/8	0.4	10/10.
3.4	19/7				
		.8	17/8		
.4	20/7	.8	19/8		
15.8	21/7	1.6	20/8		
3.4	22/7	.6	21/8		
2.4	23/7	2.0	22/8		
3.2	26/7	1.6	23/8		
7.2	27/7				
.4	28/7	1.8	24/8		
27.4	29/7	5.4	25/8		
17.4	30/7	.8	1/9		
41.8	31/7	1.0	5/9		
42.6	1/8	.6	6/9		
1.8	2/8				
		.8	12/9		
11.8	3/8		9		
89.8	4/8	.6	14/9		
9.0	5/8				
5.4	6/8	23.4	21/9		
8.2	7/8	2.4	22/9		
3.6	8/8	37.8	23/9		
37.8	9/8	1.4	24/9		

	Max	Min	Rain
2/5			
3/5			
4/5			
5/5			
6/5			
7/5			
8/5			
9/5			
10/5			
11/5	42		
12/5	44	19	
13/5	41	24	5.2
14/5	41	19	
15/5	42	23	
16/5	41	23	
17/5	40	25	
18/5			
19/5			
20/5			
21/5			
22/5	45	24	
23/5	44	24	
24/5	35	20	59
25/5			
26/5	39	22	
27/5	37	25	
28/5	40	24	
29/5	37	23	
30/5	33	23	2.5
31/5	36	21	2
1/6	37	19	
2/6	40	23	
3/6	39	23	7.8
4/6	33	19	7.0
5/6	31	19	47.2
6/6	29	19	7.7
7/6	33	20	

	Max	Min	Rain
8/6	37	22	
9/6	34	25	
10/6	39	23	10.2
11/6			
12/6			
13/6			
14/6			67.5
15/6	34	24	
16/6	35	25	
17/6	35	24	
18/6	34	24	
19/6	34	20	41.5
20/6			
21/6	37	22	
22/6	30	21	47.5
23/6	31	21	71.5
24/6	32	22	9.7
25/6	29	23	81.8
26/6	32	23	0.05
27/6	35	24	
28/6	32	25	23.4
29/6	32	23	7mm
30/6	32	23	
1/7	35	24	
2/7	34	23	55.3
3/7	34	21	
4/7	35	23	
5/7	37	23	
6/7			

Dudwa - Meteorology 1989

Date	Max	Min	Rain
21/2	19	2	
22/2	23	3	
23/2	23	4	
24/2	24	6	
25/2			
26/2			
27/2			
28/2			
1/3			
2/3	27	4	
3/3	24	4	
4/3	26	4	
5/3	29	5	
6/3	30	7	
7/3	30	7.	
8/3			
9/3	30	10	
10/3	30	9	
11/3	30	11	
12/3	29	11	
13/3	28	11	
14/3	30	14	
15/3			
16/3	29	10	
17/3	30	10	
18/3	31	12	
19/3	31	12	
20/3	31	10	
21/3	34	12	
22/3	34	13	
23/3	32	12	
24/3	32	10	
25/3	33	8	
26/3	32	12	
27/3	29	11	8.5

Date	Max	Min	Rain	Hum
28/3	27	14	32.5	
29/3	29	9		
30/3				
31/3	29	11		
1/4	33	11		
2/4	31	15		
3/4	31	7		65
4/4	31	7		61
5/4	31	7		
6/4				
7/4				
8/4				
9/4				
10/4	35	12		
11/4	34	12		
12/4	35	10		
13/4	34	9		
14/4	37	9		
15/4	38	10		
16/4	39	14		
17/4	40	14		
18/4	39	14		
19/4	39	12		
20/4	38	12		
21/4	38	11		
22/4	40	13		
23/4	40	16		
24/4		16		
25/4				
26/4				
27/4				
28/4	38	13		
29/4	38	13		
30/4				
1/5				

	Max	Min	Rainfall
1/9	28	22	
2/9	27	22	0.5
3/9	27	22	
4/9	29	22	
5/9	30	22	
6/9	30	23	
7/9	30	23	
8/9	31	23	
9/9	31	23	
10/9	30	23	
11/9			
12/9	32	23	
13/9	32	22	
14/9	32	23	
15/9	~~33~~	~~23~~	
16/9	~~33~~	24	
17/9	33	23	
18/9	31	24	
19/9	34	22	
20/9	36	23	
21/9	34	22	
22/9	33	21	
23/9	36	22	7.0
24/9	33	22	
25/9	37	24	
26/9	36	23	
27/9	34	23	
28/9			
29/9			
30/9			
31/9			
1/10			
2/10			
3/10			

Sailana - Meteorology 1987

Date	Max °C	Min °C	Rain in mm
27/6	42	27	21.5
28/6	39	24	44.5
29/6	38	24	
30/6	35	26	
1/7	35	26	
2/7	35	26	
3/7	34	25	
4/7	34	25	
5/7			
6/7	34	24	3
7/7	31	22	2.5
8/7	35	25	
9/7	35	25	
10/7	35	25	
11/7	36	25	
12/7	36	24	
13/7	30	24	0.5
14/7	34	22	98
15/7	32	23	1.8
16/7	32	25	
17/7			
18/7			
19/7			
20/7			
21/7			
22/7			
23/7			
24/7			1.5
25/7			
26/7			
27/7			
28/7	35	24	
29/7	36	25	
			156.3

Date	Max	Min	Rain mm
30/7	35	24	
31/7	34	25	
1/8	34	25	
2/8	35	25	
3/8	36	25	
4/8			
5/8	36	22	21
6/8	29	18	5
7/8	26	22	6.1
8/8	21	22	
9/8	34	25	2.5
10/8	34	24	
11/8	35	24	
12/8			
13/8	34	23	
14/8	34	23	
15/8	37	25	
16/8	39	24	
17/8	39	25	100.6
18/8	38	21	
19/8	32	23	
20/8	31	22	60.7
21/8	30	23	
22/8	32	24	34
23/8	31	23	90.6
24/8	26	22	206.6
25/8	22	21	211.7
26/8	23	22	86.7
27/8	26	22	
28/8	24	22	
29/8	23	21	65
30/8	22	21	69.8
31/8			13.5
			1130.1

6/11/85 Sailana

(4) Ungrazed = I

S. Hopper = 3

Nymph = 7

lepidoptera = 3

(5) Ungrazed = II

S. hopper :- 11

Nymph = 5

(8) Grazed. - I

lepidoptera = 5

(9) Grazed = II

lepidoptera = 67

Nymph = 1

Total

othoptera. = 27

lepidoptera = 15

Sailana Entomology 14/10/05.

Ungrazed - II

Grasshopper nymph:- 5

Dragonfly = 5

Grasshopper = 9

lepidoptera

Orthoptera = 3

Grazing plot 1

Nymphs = ~~14~~ 15

Ortho

lepidoptera = 4

Grazing plot = 2

Nymph = 2

G. Hopper = 1

lepidoptera = 3

Ungrazed = I

Grasshopper = 16

lepidoptera = 8

Nymph = 5

Dragonfly = 2.

Total.

Orthoptera = 53

lepidoptera = 18

Nest No. 2. nearest Butt ball

21

37

20

39

23

140

2.58 mts.

28
5|140
10
40

Gunshots heard from Satlana. 1989

Date	approximate time	Number
18/3	10 - 12 pm	3
19/3	morning	1
20/3	Night	2
21/3	Night	1
22/3	9.00 pm	1
25/3	8.10 pm	1
26/3	morning	1
28/3	8.10 p.m	1

Plot

Date	Diaaj	Time	DSST	DWOPC	DWCC	Co-S	EXT-F	D-D	NOC	DUR	Remarks
11/3	sati	07.13	Y	Y	N	-	N	Y	-	-	
13/3	sati	0700	Y	Y	N	-	N	Y	-	-	
14/3	chapra sati	0726	Y	Y	N	-	N	Y	-	-	
15/3	sati	1757	N	N	N	-	N	Y	-	-	
16/3	sati	0620	Y	Y	N	-	N	Y	-	-	
16/3	sati	0629	Y	Y	N	-	N	Y	-	-	
20/3	sati	1724	Y	Y	N	-	N	Y	-	-	
20/3	sati	1740	N	N	N	-	N	Y	-	-	
20/3	sati	1743	Y	Y	N	-	N	Y	+	-	
21/3	sati	0638	Y	Y	N	-	N	Y	-	-	
21/3	sati	0752	Y	Y	N	-	N	Y	-	-	
21/3	sati	0836	Y	Y	N	-	N	Y	-	-	
23/3	sati	0610	Y	Y	N	Y	N	Y	-	-	1
23/3	sati	0736	Y	Y	N	Y	N	Y	-	-	
23/3	chapra	0639	-	-	-	-	-	-	-	-	
23/3	chapra	0649	-	-	-	-	-	-	-	-	2
23/3	chapra	0707	-	-	-	-	-	-	-	-	
24/3	Nav	1831	-	-	-	Y	-	-	-	-	
24/3	Nav	1834	-	-	-	Y	-	-	-	-	1
25/3	Nav	1711	N	N	N	Y	-	Y	-	-	
25/3	Nav	1734	Y	Y	-	Y	-	Y	-	-	
25/3	Nav	1746	N	N	N	Y	N	Y	-	-	1
25/3	Nav	1749	Y	Y	N	Y	N	Y	-	-	
27/3	sati	0653	Y	Y	N	Y	N	Y	-	-	
27/3	sati	1735	N	N	N	Y	N	Y	-	-	
27/3	sati	1741	Y	Y	N	Y	N	Y	-	-	
27/3	sati	1749	Y	Y	N	Y	N	Y	-	-	
27/3	sati	1756	Y	Y	N	Y	N	Y	-	-	
30/3	sati	1747	Y	Y	N	Y	N	Y	-	-	
30/3	sati	1756	N	N	N	Y	N	Y	-	-	
30/3	sati	1839	Y	Y	N	Y	N	Y	-	-	
31/3	sati	0553	Y	Y	N	Y	N	Y	-	-	
31/3	sati	0616	Y	Y	N	Y	N	Y	-	-	
31/3	sati	1754	N	N	N	Y	N	Y	-	-	
31/3	sati	1805	Y	Y	N	Y	N	Y	-	6	
31/3	sati	1813	Y	Y	N	Y	N	Y	-	-	
1/4	Nav	0802	N	N	N	N	Y	Y	-	11.5	100 m
1/4	Nav	1805	N	N	N	N	N	N	3	-	5-7 m.

Date	Plot	Time	DSST	DWPC	DWCC	W.S	EXT.F	D.D	NOC	DUR	
2/4	Nav	0730	Y	Y	N	Y	N	Y	—	6.5	
4/4	Sati	0607	Y	Y	N	Y	N	Y	—	5.5	
4/4	Sati	1710	Y	Y	N	Y	N	Y	—	—	
4/4	Sati	1725	N	N	N	Y	N	Y	—	—	
4/4	Sati	1738	Y	Y	N	Y	N	Y	—	—	
4/4	Sati	1744	N	N	N	Y	N	Y	—	—	
4/4	Sati	1756	Y	Y	N	Y	N	Y	—	—	
7/4	Nav	0552	Y	Y	N	N	Y	Y	—	—	75-100m
7/4	Nav	0624	N	N	N	Y	N	Y	—	—	
7/4	Nav	0639	N	N	N	Y	N	Y	—	—	
7/4	Nav	0650	N	N	N	Y	N	Y	—	—	
7/4	Nav	0651	N	N	N	N	Y	Y	—	—	9/EXT.F short.
7/4	Nav	0704	N	N	N	—	—	Y	—	—	
7/4	Nav	0706	N	N	N	N	—	Y	—	—	
7/4	Nav	0707	N	N	N	N	—	Y	—	—	
7/4	Nav	0708	N	N	N	Y	Y	N	—	—	75-100m
7/4	Nav	0711	N	N	N	N	N	Y	—	—	
7/4	Nav	0713	N	N	N	N	N	Y	—	—	
7/4	Nav	0738	N	N	N	Y	N	Y	—	—	
7/4	Nav	0738	N	N	N	Y	N	Y	—	—	
7/4	Nav	0849	N	N	N	Y	N	Y	—	—	
7/4	Nav	0851	N	N	N	Y	N	Y	—	—	
7/4	Nav	1750	N	N	N	Y	N	Y	—	—	
7/4	Nav	1752	N	N	N	Y	N	Y	—	—	
7/4	Nav	1758	Y	Y	N	Y	N	Y	—	—	
7/4	Nav	1818	N	N	N	Y	Y	Y	—	—	
7/4	Nav	1841	Y	Y	N	Y	Y	N	—	—	
8/4	Nav	0605	N	N	N	Y	N	Y	—	—	
8/4	Nav	0610	N	N	N	Y	N	Y	—	—	
8/4	Nav	0614	N	N	N	N	Y	N	—	—	c. 200m
8/4	Nav	0630	Y	Y	N	Y	N	Y	—	—	
8/4	Nav	0656	Y	Y	N	Y	N	Y	—	—	
8/4	Nav	0710	N	N	N	Y	N	Y	—	—	
8/4	Nav	0720	N	N	N	Y	N	Y	—	—	
8/4	Sati	0639	Y	Y	N	Y	Y	Y	—	—	50-60m

Date	Plot	Time	DSST	DWPC	DWCC ~~WS~~	WS ~~EXTF~~	EXTF ~~DD~~	DD ~~NOC~~	NOC ~~DUR~~	DUR	
8/4	Sati	0706	Y	Y	N	N	N	Y	–	–	
8/4	Sati	0728	N	N	N	Y	N	Y	–	5.8	
8/4	Sati	0753	N	N	N	Y	N	Y	–	6	
8/4	Sati	0758	N	N	N	Y	N	Y	–	6.5	
8/4	Sati	1714	Y	Y	N	Y	N	Y	–	–	
8/4	Sati	1744	N	N	N	Y	N	Y	–	–	
8/4	Sati	1750	Y	N	Y	Y	N	Y	–	–	
8/4	Sati	1804	N	N	N	Y	N	Y	–	–	
8/4	Sati	1817	Y	Y	N	Y	N	Y	–	–	
8/4	Sati	1828	Y	Y	N	Y	N	Y	–	–	
8/4	Sati	1832	Y	Y	N	Y	N	Y	–	–	
13/4	Sati	1815	Y	Y	N	Y	N	Y	–	–	
16/4	Nav	0649	Y	Y	N	Y	Y	Y	–	–	60-75m
17/4	Nav	0627	Y	Y	N	Y	N	Y	–	–	
17/4	Nav	0631	Y	Y	N	Y	N	Y	–	–	
17/4	Nav	0635	N	N	N	Y	N	Y	–	6.5	
17/4	Nav	0649	N	N	N	N	N	Y	–	–	
17/4	Nav	1721	N	N	N	Y	N	Y	–	–	
17/4	Nav	1751	Y	Y	N	N	N	Y	–	–	
17/4	Nav	1752	N	N	N	N	Y	Y	–	–	
17/4	Nav	1820	N	N	N	Y	N	Y	–	6	
17/4	Nav	1823	Y	Y	N	Y	N	Y	–	7	
17/4	Nav	1824	Y	Y	N	Y	N	Y	–	5.5	
19/4	Sati	0646	Y	Y	N	Y	N	Y	–	–	
19/4	Sati	0743	N	N	N	Y	N	Y	–	–	
19/4	Sati	0747	Y	Y	N	Y	N	Y	–	–	
19/4	Sati	0807	Y	Y	N	Y	N	Y	–	–	
19/4	Sati	0809	Y	Y	N	Y	N	Y	–	6	
19/4	Sati	1801	Y	Y	N	Y	N	Y	–	–	
19/4	Sati	1804	Y	Y	N	Y	N	Y	–	6.7	
19/4	Sati	1835	N	N	N	Y	N	Y	–	6.4	
20/4	Nav	0553	Y	Y	N	Y	N	Y	–	–	
20/4	Nav	0557	Y	Y	N	Y	N	Y	–	–	
20/4	Nav	1754	N	N	N	Y	N	Y	–	6.4	
20/4	Nav	1758	N	N	N	Y	N	Y	–	6.0	
20/4	Nav	1802	N	N	N	Y	Y	Y	–	7.6	
20/4	Nav	1833	N	N	N	Y	Y	N	–	14.8	
20/4	Nav	1836	N	N	N	Y	Y	Y	–	18.5	

Date	Plot	Time	DSST	DPC	DCC	WS	EATF	DD	No.C	DUR	
~~22~~/4	Sati	0539	Y	Y	N	Y	N	Y	–	–	
22/4	Sati	0638	Y	Y	N	Y	N	Y	–	6	
22/4	Sati	0648	Y	Y	N	Y	N	Y	–	8·1	
22/4	Sati	0703	Y	Y	N	Y	N	Y	–	5·5	
22/4	Sati	1724	N	N	N	Y	N	Y	–	5·5	
22/4	Sati	1743	Y	Y	N	Y	N	Y	–	–	
22/4	Sati	1750	Y	Y	N	Y	N	Y	–	–	
22/4	Sati	1757	Y	Y	N	Y	N	Y	–	–	
22/4	Sati	1811	Y	Y	N	Y	N	Y	–	–	
22/4	Sati	1832	Y	Y	N	Y	N	Y	6	6·2	
22/4	Sati	1834	Y	Y	N	Y	N	Y	5	–	
22/4	Sati	1838	Y	Y	N	Y	N	Y	6	6·1	
22/4	Sati	1844	Y	Y	N	Y	N	Y	4	5·5	
25/4	Sati	1733	N	N	N	Y	N	Y	6	5·8	
1/5	Sati	1730	Y	Y	N	Y	N	Y	–	5·5	
1/5	Sati	1742	Y	Y	N	Y	N	Y	5	5·5	
1/5	Sati	1748	Y	Y	N	Y	N	Y	6	6	
1/5	Sati	1829	Y	Y	N	Y	N	Y	6	5·8	
1/5	Sati	1838	Y	Y	N	Y	N	Y	5	5·4	
1/5	Sati	1843	Y	Y	N	Y	N	Y	5	5·5	
3/5	Nav	0610	N	N	N	Y	N	Y	5	5·5	
3/5	Nav	0625	N	N	N	N	N	Y	–	–	
3/5	Nav	0626	N	N	N	~~N~~ Y	N	Y	–	–	
3/5	Nav	0652	Y	Y	N	Y	N	Y	5	5·5	
3/5	Nav	1743	N	N	N	Y	N	Y	5	5·5	E ♂
3/5	Nav	1745	Y	Y	N	Y	N	Y	–	–	〃
3/5	Nav	1753	Y	N	Y	Y	N	Y	5	5·5	〃
3/5	Nav	1814	Y	Y	N	Y	N	Y	6	5·8	〃
3/5	Nav	1822	N	N	N	Y	~~N~~	Y	–	–	〃
3/5	Nav	1827	N	N	N	Y	N	Y	–	–	~~E~~ W ♂
3/5	Nav	1831	N	N	N	Y	N	Y	~~5~~ 6	~~6·5~~ 5·5	E ♂
3/5	Nav	1835	Y	Y	N	Y	N	Y	6	6·2	〃
3/5	Nav	1845	N	N	N	Y	N	Y	5	5·~~4~~	〃
7/5	Sati	1820	Y	Y	N	Y	N	Y	–	–	
7/5	Sati	1655	N	N	N	Y	N	Y	5	6·5	

Date	Plot	time	DST	DWQC	DWCC	W.S ~~ESE~~	EXTF ~~DD~~	DD ~~DOC~~	HOC	DUR
7/5	Sati	1712	Y	N	Y	Y	N	Y	6	6.4
~~16~~/5	Sati	0534	Y	Y	N	Y	N	Y	–	–
11/5	Sati	0550	N	N	N	Y	N	Y	–	–
11/5	Sati	0604	Y	Y	N	Y	N	Y	5	5.5
11/5	Sati	0614	Y	N	Y	Y	N	Y	5	6.1
11/5	Sati	0700	Y	Y	N	Y	N	Y	6	6.5
11/5	Sati	1717	N	N	N	Y	N	Y	6	6.2
11/5	Sati	1758	N	N	N	Y	N	Y	6	6.5
12/5	Nav	0616	Y	Y	N	N	N	Y	–	–
12/5	Nav	0626	N	N	N	Y	N	Y	–	–
12/5	Nav	0628	Y	N	Y	Y	N	Y	–	–
12/5	Nav	1841	N	N	N	Y	N	Y	–	–
15/5	~~Nav~~ Sati	0611	Y	N	Y	Y	N	Y	5	5.4
15/5	Sati	1724	N	N	N	Y	N	Y	–	–
15/5	Sati	1827	Y	N	Y	Y	N	Y	6	6.2
.	~~Nav~~ ~~Sati~~	~~1823~~								
16/5	Nav	0534	N	N	N	Y	Y	N	–	–
16/5	Nav	0633	Y	Y	N	Y	N	Y	–	–
16/5	Nav	1818	~~Y~~ N	N	N	Y	N	Y	–	–
16/5	Nav	1847	Y	Y	N	Y	N	Y	–	–
16/5	Nav	1900	Y	Y	N	Y	N	Y	6	6.5
18/5	Sati	0528	Y	Y	N	Y	N	Y	–	–
18/5	Sati	0610	Y	Y	N	Y	N	Y	–	–
18/5	Sati	0657	Y	Y	Y	Y	N	Y	–	–
18/5	Sati	0746	Y	Y	N	Y	N	Y	–	–
18/5	Sati	0756	Y	Y	N	Y	N	Y	–	–
18/5	Sati	0807	Y	~~N~~ Y	N	Y	N	Y	–	–
18/5	Sati	0815	Y	Y	N	Y	Y	Y	–	–
18/5	Sati	0832	Y	~~N~~ N	Y ~~N~~ Y	Y	N	Y	~~6~~5	6 ~~.~~
18/5	Sati	1746	Y	Y	N	Y	N	Y	–	–
18/5	Sati	1839	N	N	N	Y	N	Y	5	5.4
18/5	Sati	1845	N	N	N	Y	N	Y	6	6
18/5	Sati	1905	Y	Y	N	Y	N	Y	–	–
20/5	Nav	1759	Y	N	Y	Y	N	Y	6	6
20/5	Nav	1856	Y	Y	N	Y	N	Y	–	–
20/5	Nav	1858	Y	Y	N	Y	N	Y	6	6.5

Date	Plot	Time	DST	DWPC	DWCC	W.J	EXTF	DD	NOC	DUR	
23/5	Sati	0540	Y	Y	N	Y	N	Y	4	—	
23/5	sati	1739	Y	Y	N	Y	N	Y	5	5·2	
23/5	Sati	1759	N	N	N	Y	N	Y	5	5·4	
23/5	Sati	1819	N	N	N	Y	N	Y	6	6·4	
23/5	Sati	1853	N	N	N	Y	N	Y	6	6·2	
24/5	Navel	0651	N Y	Y	N	Y	N	Y	6	—	
24/5	Nav	1720	N	N	N	Y	N	Y	—	—	west of
24/5	Nav	1827	Y	N	Y	Y	N	N	—	—	East of
28/5	Sati	0558 0558	Y	Y	N	Y	-N	Y	—	6	
28/5	Sati	1830	Y	Y	N	Y	-N	Y	5	—	
28/5	Sati	1841	N	N	N	Y	-N	Y	6	6·3	
28/5	Sati	1845	Y	Y	N	Y	N	Y	5	5·6	
28/5	Sati	1857	Y	Y	N	Y	N	Y	5	5·7	
28/5	Sati	1907	Y	Y	N	Y	N	Y	6	6	
29/5	Nav	1753	N	N	N	N	Y	Y	—	—	9 present
29/5	Nav	1809	N	N	N	Y	N	Y	—	—	
29/5	Nav	1811	Y	N	Y	Y	N	Y	—	—	
29/5	Nav	1821	N	N	N	Y	N	Y	—	—	
29/5	Nav	1831	Y	N	Y	Y	N	Y	—	—	
29/5	Nav	1902	Y	N	Y	Y	N	Y	6	6·6	
2/6	Sati	0522	Y	Y	N	Y	N	Y	5	6	
2/6	Sati	0539	Y	Y	N	Y	N	Y	5	5·5	
2/6	Sati	0636	Y	Y	N	Y	N	Y	5	5·5	
2/6	Sati	1811	Y	Y	N	Y	N	Y	—	—	
2/6	Sati	1844	Y	N	Y	Y	N	Y	6	6·1	
2/6	Sati	1857	Y	Y	N	Y	N	Y	—	6	
3/6	Nav	1910	Y	Y	N	Y	N	Y	—	—	
6/6	Sati	1805	Y	Y	N	N	N	Y	—	—	
6/6	Sati	1805	Y	Y	N	N	N	Y	—	—	
6/6	Sati	1813	Y	Y	N	Y	N	Y	6	6	
6/6	Sati	1828	Y	Y	N	Y	N	Y	6	6·5	
10/6	Sati	1850	Y	Y	N	Y	N	Y	5	—	
10/6	Sati	1903	Y	Y	N	Y	N	Y	6	5·5	
10/6	Sati	1912	Y	Y	N	Y	N	Y	5	6	
12/6	Nav	0601	N	N	N	Y	N	Y	—	—	
12/6	Nav	1842	N Y	Y	N	Y	N	Y	—	—	

Date	Plot	time	DST	DUSK	DUSK	CO-2	EXTF	DD	NOC	DUR
12/6	Naw	1849	Y	Y	N	Y	N	Y	6	6·2
12/6	Naw	1907	Y	Y	N	Y	N	Y	-	-
12/6	Naw	1913	Y	Y	N	Y	N	Y	-	-
15/6	Sati	0518	Y	Y	N	Y	N	Y	-	-

1989

(Rate/min) × 100

Date	C_{O_1}	C_{O_2}	C_{O_3}	C_{O_4}	B_1	B_2	B_3	B_4	R_1	R_2	R_3	R_4
11/3/89	0		6·32	9·47		0		0				
14/3/89	0	0	10									
			2·86									
15/3/89	17·5	2·70	10									
17/3/89	1·29			1·11								
19/3	8·65	0	0									
21/3	3											
	1·1											
23/3	7·5											
	0						0					
27/3				8·33	~~5·50~~ 5·39	7·41		15·56	5			
		0	~~2·06~~ 10·59	1·48				7·5				
	2											
3/4	5·26							0				
	0				0							
4/4	11·1				~~1·44~~			11·1				
	0·8				~~0·00~~			0·8				
6/4/89	0							0				
9/4/89	~~3~~	~~4·48~~	1·8					8, ~~48~~				
	~~0~~	0	7·27					0, ~~27~~				
								1·8				
								7·27				
11/4	6·57							8·57				
	6·34					6·34	~~6·34~~					
12/4	3·16							3·16				
	3·23						3·23					
13/4	0·73							0·73				
14/4	3·13~~5~~							3·13				
	0	~~5·71~~		~~0~~								
		5·71		2·9								

Date	S w_1	SC w_2	CS w_3	C w_4	S B_1	M B_2	ST B_3	NO B_4	D R_1	SD R_2	R R_3	NR R_4
16/4/89	4·12							4·12				
	0							0				
20/4/89	9·63							9·63				
22/4/87	3·08	5·45						4·17				
	0	0	5·88				0					
		5				5						
23/4	6·15		1·74					3·3				
		12·5		15·38								
			0·99	0				5·99				
28/4	5·93	7·63		1·82								
29/4	1·29											
	2·38					2·38						
30/4	2·76							2·76				
			17·14					17·4				
	13·3				13·3							
	4·84					4·84						
	4·0							4·0				
	8·49							8·49				
				8								
		8	11·67	8·57	7·5			9·33				
	1·74											
			1·88		1·88							
	0		2·73	5,8					5		0	
		0	0	0			3·64	2·73				
				0				0				
31/5				4·32				4·32				
				0				2·35	4			
3/6/89				2·07			2·07					
				2·33							0	
	5·95							5·95				
9/6/89	2·61											
	1·54			0	0,1·54							

Harrowing / Burning

17/2/89
Most of kowhaghatti ~~tar~~ burt/cut and harrowed.
Remainder of territory harrowed by 25/2/89.
This included about 50% of kowhaghatti west.
Kowhaghatti North part Burnt over 50% improperly
lot of sentas, Bits of standly grass.

Chapra phanta completely burnt. Harrowed area
~~is the~~ Between Rd to Machan and display
high ground.

Navalkad burnt as in 1988 Pat Burnt early,
lot of sentas (though less than last year.)

21/2/89 Remainder of Navalkhad Burnt.
except for western corner which was burnt
on 11/3/89.

Machaiya burnt almost completed. Big area
around Machan nos. 1 harrowed.

26-28/2/89 Saluhapur all florican area burnt
in last 10-12 days.

27/2/89 Sonaripur Railway line phata burnt.
Sonaripur R.H (aa 60) not burnt.

1) 3/69.

& Seetha gaddai and kusumba phata burnt some time previously.

Time lapse Peacock call.

Timelapse	MARCH Chapra	Kowha	Naval	Seetha	April C	K	S	N	MAY C	K	S	N	JUNE C	K	S	N
0s	30		5		13	15	40	8	9	17	5	5	4	1	5	3
1s					1											
2s	1				1		3									
3s							1									
5s										1	1					
9s						1										
10s							1									
15s	1															
26s						1										
40s						1										
43s					1											
1m 3s							1									
1m 7s							1									
1m 13s							2									
1m 20s							1									
1m 24s					1											
1m 37s										1						
1m 48s	1															
1m 50s							1									
2m 7s												1				
2m 26s										1						
2m 34s								1								
3m 12s						1										
3m 40s										1						
3m 41s							1									
4m 15s							1									
5m 22s						1										
6m 54s						1										
6m 2s												1				
9m 26s							1									
10m 13s						1										
10m 23s						1										
12m												1				

Date.	Place	time	SSTM	WS	EXHST	OD	NI	DUR	DIS	
061289	seetha	175752	CC	Y	N	Y	–	–	–	-48
		180020	N	Y	N	Y	–	–	–	-45
		181626	N	Y	N	Y	–	–	–	-29
		182017	N	Y	N	Y	–	–	–	-25
		184002	N	Y	N	Y	–	–	–	-5
		185543	N	Y	N	Y	–	–	–	+10
		191607	N	Y	N	Y	–	–	–	+31
061389	seetha	175721	N	Y	N	Y	–	–	–	-48
061589	chapra	175040	CC	Y	N	Y	FI	0·1	N	-55
		1753	PCM	Y	Y	N	–	–	–	-52
061689	kowha	1859	N	Y	N	Y	FI	0·1	Y	+14
		190825	PCM	–	–	–	FI	0·1	N	+23
061889	Naval	0525	PCF	Y	N	Y	–	–	–	-2
		1803	PCF	Y	N	Y	–	–	–	-42
		182810	N	Y	N	Y	–	–	–	-17
		1829	N	N	Y	Y	–	–	–	-16
		183320	N	Y	N	Y	–	–	–	-12
		1844	N	–	–	–	PI	1·0	N	0-1
		184823	N	Y	N	Y	–	–	–	+3
		185340	N	Y	N	Y	–	–	–	+8
		190215	N	Y	N	Y	–	–	–	+17
		190955	N	Y	N	Y	–	–	–	+24
		191455	PCF	Y	N	Y	–	–	–	+29
062389	kowha	175420	CC	–	–	–	FI	·8	N	-51
		175750	CC	–	–	–	FI	0·5	N	-48
062689	kowha	0713	CC	Y	N	Y	–	–	–	+104
062689										
062689	kowha	183505	CC	Y	N	Y	FI	0·1	Y	-10
062989										

1989 1 = 200.4

2 = 216.3

3 = 210.0

4 = 49.4

Date	Place	Time	Sstm	WS	EARTH	DD	MI	DUR	DIS	
060889	Chapra	064710	PCL	–	–	–	FI	0·2	N	+70
		065220	PCL	–	–	–	FI	0·1	N	+75
		065700	PCL	Y	Y	Y	FI	0·1	Y	+80
		070550	PCL	–	–	–	FI	0·1	N	+88
		071050	PCL	–	–	–	FI	0·4	N	+93
		072210	PCL	Y	N	Y	FI	0·2	Y	+105
		073305	PCL	Y	N	Y	FI	0·1	Y	+116
		183304	N	Y	N	Y	–	–	–	-12
		184900	PCM	Y	N	Y	FI	0·1	Y	+4
		190505	PCM	Y	N	Y	FI	0·1	Y	+20
060989	Kowha	052200	CC	Y	N	Y	FI	0·1	Y	-5
		054905	PCF	Y	N	Y	FI	0·1	Y	+22
		064845	CC	Y	N	Y	FI	0·2	Y	+86
		1656	N	Y	N	Y	–	–	–	-119
		1712	N	N	N	N	–	–	–	-93
		1744	N	Y	N	Y	–	–	–	-61
		1800	N	Y	N	N	–	–	–	-45
061189	seetha	174350	N	Y	N	N	–	–	–	-62
		1821	N	Y	N	N	–	–	–	-24
		185235	N	N	N	Y	–	–	–	+7
		190152	N	Y	N	Y	–	–	–	+16
		190655	PCL	Y	N	Y	–	–	–	+21
061289	seetha	053550	PCM	Y	N	Y	–	–	–	+8
		061217	PCM	Y	N	Y	–	–	–	+45
		070817	N	Y	N	Y	–	–	–	+101
		077820	N	Y	N	N	–	–	–	+121
		074050	PCL	N	N	N	–	–	–	+133
		074050	PCL	Y	N	Y	–	–	–	+133
		170328	CC	Y	N	Y	–	–	–	-102
		172621	CC	N	N	N	–	–	–	-79
		173647	CC	Y	N	Y	–	–	–	-69
		174231	CC	N	N	N	–	–	–	-61
		174231	CC	N	N	N	–	–	–	-61

DATE / Place	PLACE	TIME	SST	WS	EXT-FI.	DD	MI	DUR	DIJ	
052489	Kowha	071131	PCF	Y	N	Y	FI	0·1	Y	+112
		~~083154~~	~~PCM~~	~~Y~~	~~N~~	~~N~~	~~FI~~	~~0·1~~	~~Y~~	
		081650	PCF	Y	N	Y	FI	0·1	Y	+177
		082120	PCM	Y	N	Y	FI	0·1	Y	+182
		083154	PCM	N	N	Y	FI	0·1	Y	+192
		165650	CC	Y	N	Y	FI	0·1	Y	-108
		1710	M	Y	N	Y	—	—	—	-94
		1723	PCF	N	N	N	FI	0·1	N	-81
		1737	PCM	Y	N	Y	FI	0·1	Y	-67
		174558	PCF	N	N	Y	FI	0·2	Y	-59
053189	Kowha	051920	PCM	Y	N	Y	FI	0·1	Y	-2
		053630	CC	—	—	—	FI	8·0	N	+15
		054745	PCM	N	N	Y	FI	0·2	Y	+26
		0551	PCM	Y	N	Y	FI	0·1	Y	+30
		061915	CC	—	—	—	FI	0·5	N	+58
		064205	PCM	Y	N	Y	FI	0·1	Y	+81
		070305	M	—	—	—	FI	0·3	N	+102
		1636	PCF	N	N	Y	—	—	—	-128
		1649	PCM	N	N	Y	—	—	—	-115
		175351	PCF	Y	N	Y	—	—	—	-51
		180635	PCF	Y	N	Y	—	—	—	-38
060189	Kowha	051320	M	N	N	Y	—	—	—	-8
		0523	PCM	N	N	Y	—	—	—	+2
060389	Chapra	081320	CC	Y	N	Y	FI	0·6	Y	-31
		1821	PCM	Y	N	Y	FI	0·1	Y	-23
		085950	PCM	Y	Y	N	FI	0·1	Y	+15
060589	Kowha	054910	CC	N	N	N	FI	0·2	Y	+28
		175030 ~~051689~~	M	Y	N	Y	—	—	—	-54
		0807	M	Y	N	Y	—	—	—	-37
		~~0807~~	M	Y	N	Y	—	—	—	-27
060889	Chapra	~~0824~~ 023443	CC	Y	N	Y	FI	0·1	Y	+26
		062500	CC	Y	N	Y	FI	0·4	Y	+48
		063245	PCC	Y	Y	Y	FI	0·1	Y	+55

Date	Place	Time SSTM	SSTM	[illegible]	[illegible]	DD	NI	DUR	DIS	
052089	seetha	182735	CC	Y	N	Y	–	–	–	-17
		183137	CC	Y	N	Y	–	–	–	-13
		183325	CC	Y	N	Y	–	–	–	-11
		183850	CC	Y	N	Y	–	–	–	-8
		183922	CC	Y	N	Y	–	–	–	-25
		184435	PCM	Y	N	Y	–	–	–	0
		190227	PCL	Y	N	Y	–	–	–	+18
052289	Chopra	055910	CC Rain	–	–	–	PI	0·1	N	+40
		060700	PCF	–	–	–	PI	0·1	N	+48
		060832	PCF	Y	N	Y	FI	0·1	Y	+49
		061740	N	–	–	–	FI	0·2	N	+58
		062050	PCL	–	–	–	FI	0·3	N	+61
		062245	PCF	–	–	–	FI	0·2	N	+63
		063715	PCM	–	–	–	FI	0·1	N	+78
052289	Kowha	1734	CC	Y	N	Y	–	–	–	+70
		1738	N	Y	N	Y	–	–	–	+66
		1744	N	Y	N	Y	–	–	–	-60
		1750	N	Y	N	Y	–	–	–	-54
		1758	N	Y	N	Y	–	–	–	-46
		1804	N	Y	N	Y	–	–	–	-40
		1833	CC	Y	N	Y	–	–	–	-11
052389	Haval	052935	PCF	–	–	–	FI	0·2	N	+10
		053618	N	Y	N	Y	FI	0·1	Y	+17
		182800	N	N	N	Y	–	–	–	-16
		183954	N	N	Y	Y	–	–	–	-5
		1902	N	N	N	Y	–	–	–	+18
052489	Kowha	052410	N	–	–	–	FI	0·3	N	+5
		052505	N	Y	N	N	–	–	–	+6
		052915	N	N	Y	Y	–	–	–	+10
		053405	N	N	Y	Y	–	–	–	+15
		0710	N	–	–	–	PI	0·3	N	+111

Date	Place	Time	ASST	LOS	EXTF	DD	MI	DUR	DIS	
051889	Seetha	172718	CC	N	N	Y	—	—	—	-75
		173954	N	N	N	N	—	—	—	-63
		174200	N	N	N	Y	—	—	—	-60
		174550	N	N	N	Y	—	—	—	-57
		175205	N	N	N	N	—	—	—	-50
		175520	PCL	Y	N	Y	—	—	—	-47
		181314	PCL	N	N	Y	—	—	—	-29
		181641	N	N	N	N	—	—	—	-26
		182458	N	Y	N	Y	—	—	—	-18
		182924	N	Y	N	Y	—	—	—	-13
		183725	N	Y	N	Y	—	—	—	-5
		183838	PCL	N	N	Y	—	—	—	-4
		184352	PCL	N	N	N	—	—	—	+1
052089	Seetha	051510	N	N	N	Y	—	—	—	-6
		052005	PCM	N	N	N	—	—	—	+1
		052212	N	N	N	N	—	—	—	+3
		052948	N	Y	N	Y	—	—	—	+10
		052950	N	N	N	Y	—	—	—	+10
		053850	N	N	N	N	—	—	—	+19
		054005	PCL	N	N	N	—	—	—	+21
		054625	N	Y	N	Y	—	—	—	+27
		054745	PCM	N	N	N	—	—	—	+28
		055454	PCM	N	N	N	—	—	—	+35
		061613	CC	N	N	Y	—	—	—	+57
		065575	N	Y	N	Y	—	—	—	+96
		071653	CC	Y	N	N	—	—	—	+117
		165741	N	N	N	Y	—	—	—	-107
		170511	N	Y	N	Y	—	—	—	-99
		180057	N	N	N	Y	—	—	—	-34
		181150	PCL	N	N	Y	—	—	—	-33
		181932	PCM	N	N	N	—	—	—	-25
		182045	PCM	N	N	Y	—	—	—	-24
		182408	CC	N	N	Y	—	—	—	-20
		182430	CC	~~Y~~ N	N	Y	—	—	—	-20

Date	place	Time	cSTM	LOS	E+HH	D·D	MI	DUR	DIS	
051489	Naval	180605	PCL	Y	N	Y	FI	0·1	Y	-35
		180732	CC	Y	N	Y	FI	0·1	Y	-34
		182600	N	—	—	—	PI, FI	1·0	N	-15
		183525	PCF	Y	N	Y	FI	0·2	Y	-6
		183752	CC	N	N	Y	FI	0·1	Y	-4
		184228	CC	N	N	Y	—	—	—	+1
		184510	PCM	—	—	—	FI	0·3	N	+4
		184615	PCF	—	—	—	FI	0·1	N	+5
		185930	PCM	N	N	Y	FI	0·2	Y	+18
051889	Chgpra	054520	PCL	Y	N	Y	FI	0·1	Y	+26
		054955	PCL	—	—	—	FI	0·1	N	+30
		055435	CC	—	—	—	FI	0·1	N	+35
		055505	PCL	Y	N	Y	FI	0·1	Y	+36
		055755	PCL	—	—	—	FI	0·1	N	+38
		060110	PCL	—	—	—	FI	0·1	N	+42
		061046	PCL	Y	N	Y	FI	0·1	Y	+51
		061750	PCF	Y	N	Y	FI	0·1	Y	+58
		062045	PCF	—	—	—	FI	0·1	N	+61
		062110	PCL	—	—	—	FI	0·1	N	+62
		062115	PCL	Y	N	Y	—	—	—	+62
		062910	PCL	—	—	—	FI	0·1	N	+70
		063345	CC	—	—	—	FI	0·1	Y	+74
		065552	CC	Y	N	Y	—	—	—	+76
		064615	PCF	N	N	Y	—	—	—	+87
		072410	PCM	—	—	—	FI	0·1	N	+125
		072625	PCM	Y	N	Y	FI	0·1	Y	+127
		073325	PCL	Y	N	Y	FI	0·1	Y	+134
		074425	PCL	—	—	—	FI	0·1	Y	+145
		074640	PCL	—	—	—	FI	0·1	N	+147
051889	Seetha	165854	CC	Y	N	Y	—	—	—	-104
		172414	CC	Y	N	Y	—	—	—	-78

DATE	PLACE	Time	SSTM	LOS	EXTTH	DD	MI	DUR	DIS	
051389	kowha	064745	N	~~Y~~	~~N~~	~~Y~~	FI	0·2	Y	+81
		064753	N	Y	N	Y	—	—	—	+81
		065300	N	—	—	—	PI	0·5	N	+87
		065550	PCF	Y	N	Y	FI	0·1	Y	+89
		070320	PCM	—	—	—	FI	0·2	N	+97
		071215	CC	Y	N	Y	FI	0·1	Y	+106
		071750	CC	Y	N	Y	FI	0·1	Y	+111
		072445	CC	—	—	—	FI	0·4	Y	+118
		072505	CC	Y	N	Y	—	—	—	+119
		072820	N	—	—	—	FI	0·1	N	+122
		072900	N	—	—	—	FI	0·4	N	+123
		073115	CC	—	—	—	FI	0·3	N	+125
		073730	CC	—	—	—	FI	0·3	N	+131
		074150	CC	—	—	—	FI	0·5	N	+135
		074900	CC	—	—	—	FI	0·3	N	+143
		170200	CC	—	—	—	FI	2·2	N	-99
		170520	CC	—	—	—	FI	0·5	N	-96
		171750	CC	—	—	—	FI	0·7	N	-84
		171930	N	—	—	—	PI	0·5	N	-82
		172135	N	—	—	—	FI	0·6	Y	-80
		172210	N	Y	N	Y	—	—	—	-79
		174240	N	Y	N	Y	—	—	—	-59
		174800	N	N	Y	Y	—	—	—	-53
051489	Naval	060935	PCM	Y	N	Y	—	—	—	+45
		061445	N	Y	N	Y	—	—	—	+48
		062032	CC	Y	N	Y	—	—	—	+54
		063505	N	Y	Y	Y	—	—	—	+69
		063515	N	N	Y	Y	—	—	—	+69
		065530	N	Y	N	Y	—	—	—	+89
		071700	CC	N	N	Y	—	—	—	+111
		172625	N	Y	N	Y	—	—	—	-75
		173300	N	Y	N	Y	—	—	—	-68
		174245	PCL	Y	N	Y	—	—	—	-59
		175715	N	Y	N	Y	—	—	—	-44

DATE	PLACE	TIME	SSTM	CC?	EXTIT	DD	MI	DUR	DIS	
042989	chapra	183308	PCL	–	–	–	FI	0·1	Y	+5
		184139	PCM	Y	N	Y	FI	0·1	Y	+13
043089	kowha	053715	PCM	–	–	–	FI	0·3	N	-2
		054115	CC	N	N	N	FI	0·3	Y	+2
		054330	CC	Y	N	Y	FI	0·4	Y	+4
		064934	CC	Y	N	Y	–	–	–	-99
		180000	CC	–	–	–	FI	0·1	N	-28
		180008	PCF	Y	N	Y	–	–	–	-28
		180624	CC	Y	N	Y	FI	0·1	Y	-22
		180922	N	Y	N	Y	FI	0·1	Y	-19
		182130	PCF	Y	N	Y	FI	0·1	Y	-7
		184010	N	–	–	–	PI	1·4	N	+12
		184120	PCM	Y	N	Y	–	–	–	+13
		185720	PCL	–	–	–	FI	0·2	N	+19
051389	kowha	053645	N	Y	N	N	–	–	–	+10
		054870	N	–	–	–	FI	0·3	N	+22
		055050	N	–	–	–	FI	1·0	Y	+24
		055100	N	Y	N	Y	–	–	–	+25
		055305	N	Y	N	Y	FI	0·4	Y	+27
		055600	N	–	–	–	PI	0·5	N	+30
		060130	CC	Y	N	Y	FI	0·2	Y	+35
		060715	N	–	–	–	FI	0·3	Y	+41
		060730	CC	Y	N	Y	–	–	–	+41
		060945	PCM	–	–	–	FI	0·2	N	+43
		061456	CC	–	–	–	FI	0·3	Y	+48
		061509	N	Y	N	Y	–	–	–	+49
		062130	N	–	–	–	FI	0·6	Y	+55
		062205	CC	Y	N	Y	–	–	–	+56
		063850	N	–	–	–	FI	0·6	N	+72
		064130	N	–	–	–	FI	0·3	N	+75
		064240	N	Y	N	Y	FI	0·3	Y	+76

DATE	PLACE	Time	SSTM	WS	EXHH	DD	NI	DUR	DIS	
042689	seetha	180205	N	Y	Y	Y	–	–	–	-26
		180307	PCL	Y	N	Y	–	–	–	-25
		181120	PCL	Y	Y	Y	–	–	–	-17
		182252	PCL	Y	N	Y	–	–	–	-6
		182410	PCL	Y	N	Y	–	–	–	-4
		183234	PCL	Y	Y	Y	–	–	–	+4
		183333	PCL	Y	Y	Y	–	–	–	+5
		183921	PCL	Y	N	Y	–	–	–	+11
		184634	PCL	N	N	N	–	–	–	+18
042889	Naval	054935	N	Y	Y	Y	–	–	–	+15
		055338	CC	Y	N	Y	–	–	–	+18
		055452	PCF	Y	N	Y	–	–	–	+19
		060825	CC	–	–	–	FI	0·6	N	+34
		062100	PCL	N	N	Y	–	–	–	+47
		062405	N	N	N	Y	–	–	–	+50
		063249	PCM	Y	N	Y	–	–	–	+58
		064240	CC	Y	N	Y	–	–	–	+68
		070960	PCL	N	Y	Y	–	–	–	+95
		075030	CC	Y	N	Y	–	–	–	+136
		080626	CC	Y	N	Y	–	–	–	-68
		083705	N	Y	N	Y	–	–	–	-51
		084050	CC	Y	N	Y	–	–	–	-48
		092000	CC	–	–	–	PI	0·5	N	-8
		092235	N	N	N	Y	FI	0·4	Y	-6
		092415	PCF	Y	–	–	FI	0·3	N	-4
		092700	N	–	–	–	FI	0·2	N	-1
		184735	PCF	Y	N	Y	FI	0·1	N	+19
042989	Chapra	052635	PCM	Y	N	Y	FI	0·1	Y	-13
		053211	PCL	Y	N	Y	FI	0·1	Y	-7
		182355	PCM	–	–	–	PI	0·3	N	-5
		183135	CC	–	–	–	FI	0·4	N	+3
		183205	CC	–	–	–	PI	0·1	N	+4

DATE	PLACE	TIME	SSTM	WS	EXHIT	DD	MI	DUR	DIS	
042489	Seetha	180954	PCL	N	N	N	—	—	—	-16
		181520	PCL	N	N	N	—	—	—	-10
		182346	PCL	N	N	N	—	—	—	-2
		182705	PCL	N	N	N	—	—	—	+2
		183554	PCL	N	N	N	—	—	—	+10
042589	Seetha	052914	M	N	N	N	—	—	—	-17
		053452	PCL	N	N	N	—	—	—	-12
		060205	PCM	N	N	N	—	—	—	+16
		061302	CC	N	N	N	—	—	—	+27
		063145	CC	N	N	N	—	—	—	+45
		063205	M	N	N	N	—	—	—	+46
		063506	PCL	N	N	N	—	—	—	+49
		063735	PCL	N	N	N	—	—	—	+51
		063735	PCL	N	N	N	—	—	—	+51
		064415	PCL	N	N	N	—	—	—	+58
		071210	PCL	N	N	N	—	—	—	+86
		163655	CC	N	N	N	—	—	—	-109
		164847	CC	N	N	N	—	—	—	-97
		170425	CC	N	N	N	—	—	—	-81
		171950	CC	N	N	N	—	—	—	-66
		172500	PCM	N	N	N	—	—	—	-60
		173347	CC	N	N	N	—	—	—	-52
		174048	CC	N	N	N	—	—	—	-45
		174135	CC	N	N	N	—	—	—	-44
		174300	M	N	N	N	—	—	—	-42
		174350	CC	N	N	N	—	—	—	-42
		175226	CC	N	N	N	—	—	—	-33
		175704	CC	N	N	N	—	—	—	-28
		175712	CC	N	N	N	—	—	—	-28
		180028	CC	N	N	N	—	—	—	-25
		180833	PCF	N	N	N	—	—	—	-17

Date	Place	Time	SSTM	LOS	EXHT	DD	MI	Dur	DIS	
042589	seetha	181408	CC	Y	N	Y	-	-	-	-11
		181741	CC	Y	N	Y	-	-	-	-8
		182806	PCC	Y	N	Y	-	-	-	+3
		183800	PCC	Y	N	Y	-	-	-	+8
		183910	PCC	Y	N	Y	-	-	-	+14
		184304	PCC	Y	N	Y	-	-	-	+18
042689	seetha	052845	CC	Y	N	Y	-	-	-	-14
		053815	PCM	Y	N	Y	-	-	-	-4
		054048	CC	Y	N	Y	-	-	-	-2
		060130	PCM	Y	N	Y	-	-	-	+9
		060800	CC	Y	N	Y	-	-	-	+16
		061216	PCM	Y	N	Y	-	-	-	+20
		061550	PCC	Y	N	Y	-	-	-	+23
		061809	N	Y	N	Y	-	-	-	+26
		062156	PCC	Y	N	Y	-	-	-	+29
		062219	CC	Y	N	Y	-	-	-	+30
		062746	PCC	Y	N	Y	-	-	-	+35
		064324	PCM	Y	N	Y	-	-	-	+41
		064920	PCM	Y	N	Y	-	-	-	+47
		065132	CC	Y	N	Y	-	-	-	+49
		162845	PCM	Y	N	Y	-	-	-	-120
		164114	N	Y	N	Y	-	-	-	-107
		165043	CC	Y	N	Y	-	-	-	-98
		165858	PCM	Y	N	Y	-	-	-	-90
		170552	CC	Y	N	Y	-	-	-	-83
		171218	CC	Y	N	Y	-	-	-	-76
		171219	N	Y	N	Y	-	-	-	-76
		171395	PCC	Y	N	Y	-	-	-	-75
		174354	PCC	Y	N	Y	-	-	-	-45
		174500	N	Y	N	Y	-	-	-	-40
		174945	CC	Y	N	Y	-	-	-	-39
		175525	PCC	Y	N	Y	-	-	-	-33

Date	Place	Time	SSTM	WS	EHL	DD	MI	DUR	DIS	
042289	Chapra	082745	PCM	—	—	—	FI	0·2	N	+161
		083105	CC	—	—	—	FI	0·1	N	+165
		084025	PCL	Y	N	Y	FI	0·1	Y	+174
		085010	PCC	—	—	—	FI	0·1	N	+184
		181415	CC	—	—	—	FI	0·5	N	-11
		184235	PCM	Y	N	Y	FI	0·1	Y	+17
042389	Kocoha	053435	PCL	—	—	—	FI	0·1	N	-12
		053440	PCM	Y	N	Y	FI	0·1	Y	-12
		0556	PCC	Y	N	Y	—	—	—	+10
		062135	PCL	—	—	—	FI	0·5	N	+35
		063300	N	—	—	—	FI	0·5	N	+47
		063720	CC	Y	N	Y	FI	0·1	Y	+51
		1638	PCF	—	—	—	FI	0·2	N	-107
		164240	PCF	—	—	—	FI	0·2	N	-103
		165045	PCF	Y	N	Y	FI	0·1	Y	-95
		170505	PCF	—	—	—	FI	0·2	Y	-80
		170514	N	Y	N	Y	—	—	—	-80
		170900	PCF	—	—	—	FI	0·1	N	-76
		171430	N	Y	N	Y	FI	0·1	Y	-71
		173640	PCF	Y	N	Y	FI	0·2	Y	-49
		181005	N	Y	N	Y	FI	0·1	Y	-15
		183725	PCM	Y	N	Y	—	—	—	+12
042489	Seetha	164850	N	Y	N	Y	—	—	—	-97
		171942	N	Y	N	Y	—	—	—	-66
		178116	CC	Y	N	Y	—	—	—	-64
		173346	CC	Y	N	Y	—	—	—	-52
		174030	N	Y	N	Y	—	—	—	-45
		174417	PCM	Y	N	Y	—	—	—	-41
		175610	CC	Y	N	Y	—	—	—	-39
		175055	PCL (PCC)	Y	N	Y	—	—	—	-35
		175205	PCC	Y	N	Y	—	—	—	-33
		175319	PCL	Y	N	Y	—	—	—	-32
		175608	PCL	Y	N	Y	—	—	—	-29
		180700	N	Y	N	Y	—	—	—	-18

DATE	PCACE	TIME	SSTM	WS	EXHFLT	DD.	MI	DUR	DIS	
041489	Lowha	174955	PCF	—	—	—	FI	0.5	N	-33
		175250	CC	—	—	—	FI	0.3	N	-30
		180550	N	N	N	Y	FI	0.1	Y	-17
		181107	N	Y	N	N	—	—	—	-11
041689	Chapra	054925	CC	—	—	—	FI	0.5	N	-6
		061315	Pied Hornbill	N	N	Y	—	—	—	+18
		062230	N	Y	N	Y	FI	0.1	Y	+27
		063850	PCM	—	—	—	FI	0.4	N	+43
		064220	PCL	Y	N	N	FI	0.1	Y	+47
		065300	PCF	Y	N	N	FI	0.1	Y	+58
		073250	CC	Y	N	Y	FI	0.1	Y	+97
042089	Naval	053052	N	N	N	Y	—	—	—	-12
		053314	N	N	Y	Y	—	—	—	-9
		055135	N	Y	N	N	—	—	—	+9
		060005	N	Y	N	Y	—	—	—	+18
		060630	CC	Y	N	N	—	—	—	+24
		062110	N	N	Y	N	—	—	—	+39
		062350	CC	—	—	—	FI	0.4	N	+41
		063130	N	—	—	—	FI	0.4	N	+44
		063201	CC	N	N	Y	—	—	—	+50
		064200	CC	—	—	—	FI	1.0	N	+60
		064845	CC	—	—	—	FI	0.5	N	+62
		064700	N	—	—	—	FI	1.0	N	+65
		064925	CC	Y	N	Y	FI	0.1	Y	+67
042209	Chapra	053130	CC	—	—	—	FI	0.3	N	+75
		054330	PCL	Y	N	Y	FI	0.1	Y	-3
		054445	CC	—	—	—	FI	0.5	N	-2
		062235	PCL	N	N	Y	FI	0.1	Y	+36
		075210	CC	Y	N	N	FI	0.1	Y	+126
		081440	N	N	N	Y	—	—	—	+148

DATE	PLACE	TIME	SSTM	GOS	Earth	DD	MI	DUR	DU	
040989	seetha	173230	PCM	Y	N	Y	—	—	—	-46
		174150	M	Y	N	Y	—	—	—	-37
		174220	M	Y	N	Y	—	—	—	-36
		174753	CC	Y	N	Y	—	—	—	-37
		180033	CC	Y	N	Y	—	—	—	-18
041189	Kocoka	055113	M	Y	N	Y	—	—	—	-7
		060652	M	Y	N	Y	FI	0·1	Y	+9
		061030	CC	—	—	—	FI	0·3	N	+9
04		175136	PCF	Y	N	Y	FI	0·1	Y	-27
		175700	PCF	—	—	—	FI	1·3	N	-21
		180720	M	—	—	—	FI	0·8	N	-11
		180930	M	Y	N	Y	FI	0·3	Y	-9
		181330	Gunshot	Y	N	Y	FI	0·5	Y	-5
		182200	CC	Y	N	Y	FI	0·1	Y	+4
		183800	PCF	N	N	Y	FI	0·1	Y	+20
		184800	PCM	N	N	Y	FI	0·1	Y	+30
041289	chopra	055025	PCM	—	—	—	FI	0·1	N	-6
		055335	CC	—	—	—	FI	0·4	N	-3
		062115	PCM	—	—	—	FI	0·2	N	+25
		070840	CC	N	N	Y	FI	0·1	Y	+72
		071745	CC	—	—	—	FI	0·2	N	+81
		182420	PCM	—	—	—	FI	0·2	N	+5
		182432	CC	Y	N	Y	—	—	—	+5
		182555	CC	—	—	—	FI	0·2	N	+7
		184355	PCL	—	—	—	FI	0·2	N	+24
		184700	PCL	—	—	—	FI	0·1	N	+28
041389	Naval	184505	PCM	Y	N	Y	FI	0·1	Y	+26
041489	kocoka	054900	CC	Y	N	Y	FI	0·1	Y	-6
		062050	PCF	Y	N	Y	FI	0·1	Y	+25
		064545	PCL	Y	N	Y	—	—	—	+50
		070630	PCM	—	—	—	FI	0·7	N	+71
		072115	PCM	Y	N	Y	FI	0·1	Y	+86
		073850	PCF	—	—	—	FI	0·3	N	+103
		074052	PCM	Y	N	Y	FI	0·1	Y	105

DATE	PLACE	TIME	SSTM	WS	EXFILT	DD.	MI	DUR	DIS	
040389	Chapra	074830	CC	–	–	–	FI	0·3	N	+100
040489	Haval	062320	PCF	Y	N	Y	–	–	–	+22
040		040064300	PCM	–	–	–	FI	0·1	N	+42
		064820	PCF	Y	N	Y	FI	0·1	Y	+47
		172130	CC	Y	N	Y	FI	0·1	Y	-56
040789	SEETHA	0821	CC	Y	N	Y	–	–	–	-57
		0827	CC	Y	N	Y	–	–	–	-51
		0840	PCL	Y	N	Y	–	–	–	-38
		0858	PCL	N	N	Y	–	–	–	-20
		0908	N	Y	Y	Y	–	–	–	-10
		0916	N	Y	N	Y	–	–	–	-2
040889	SEEtha	165045	PCM	Y	N	Y	–	–	–	-88
		171210	N	Y	N	Y	–	–	–	-66
		171500	N	Y	N	Y	–	–	–	-63
		173052	N	Y	N	Y	–	–	–	-48
		175815	N	Y	Y	Y	–	–	–	-40
		174047	N	Y	N	Y	–	–	–	-38
		174222	PCL	Y	N	Y	–	–	–	-36
		175500	CC	Y	N	Y	–	–	–	-23
		175521	PCM	Y	N	Y	–	–	–	-23
		180110	PCL	Y	N	Y	–	–	–	-17
		180110	PCL	Y	Y	N	–	–	–	-17
		180527	PCM	Y	N	Y	–	–	–	-13
		180527	PCM	Y	N	Y	–	–	–	-13
		181258	CC	Y	N	Y	–	–	–	-6
		182000	CC	Y	N	Y	–	–	–	+2
		182419	PCM	Y	N	Y	–	–	–	+6
040989	seetha	164641 04	PCL	Y	N	Y	–	–	–	-92
		165237	PCM	Y	N	Y	–	–	–	-86
		165703	PCM	Y	N	Y	–	–	–	-81

Date	Plot	Time	SSTM	ω	EXTPH	D·D	N·I	DUR	DIJ	± SS,SF	Temp
032989	chopra	082845	~~Y~~	–	–	–	FI	0·3	N	+138	
		083205	N	–	–	–	FI	0·1	~~Y~~ Y	+142	
		083210	PCL	Y	N	Y	–	–	–	+142 ~~+138~~	
		083740	PCF	–	–	–	FI	0·3	N	+147	
		083800	PCF	Y	N	Y	FI	0·1	Y	+148	
		085240	PCM	–	–	–	FI	0·2	N	+156	
		172345	N	–	–	–	FI	0·1	N	-50	
		172445	N	–	–	–	FI	0·3	N	-49	
		172740	N	–	–	–	FI	0·3	N	-46	
		172918	PCF	Y	N	Y	–	–	–	-44	
		174130	PCF	–	–	–	FI	0·3	N	-32	
		174910	CC	–	–	–	FI	0·3	N	-24	
		175020	N	–	–	–	FI	0·4	N	-23 ~~-22~~	
		175130	CC	~~Y~~	N	Y	FI	0·1	Y	~~-22~~ -22	
		180825	PCM	~~Y~~ –	–	–	FI	0·1	N	-5	
032989	Naval	0616	PCF	Y	N	Y	–	–	–	+6	
		070508	N	Y	Y	Y	–	–	–	+55	
033189	Naval	064140	PCM	Y	N	Y	FI	0·1	Y	+37	
		074000	PCM	Y	N	Y	FI	0·1	Y	+96	
		080310	CC	Y	N	Y	FI	0·1	Y	+119	
040389	chopra	055320	PCM	Y	N	Y	FI	0·1	Y	-15	
		060025	PCM	–	–	–	FI	0·3	N	-8	
		060735	CC	–	–	–	FI	0·3	N	-1	
		060815	CC	–	–	–	FI	0·1	N	0	
		061500	PCM	Y	N	Y	FI	0·1	Y	+7 ~~+6~~	
		062635	PCF	–	–	–	FI	0·1	N	+18	
		064240	PCM	–	–	–	FI	0·2	N	+32	
		070135	PCL	–	–	–	FI	0·2	N	+53	
		072710	CC	–	–	–	FI	0·2	~~Y~~ Y	+79	
		072720 ~~072720~~	PCC	Y	N	Y	~~Y~~ –	–	–	+79	

DATE	PLOT	TIME	SSTM	WS	EXTFCT	D.D	N.I	DUR	DIS	
03.1989	Chopra	075550	PCL	–	–	–	F1	0·2	N	+89
		0825	CC	–	–	–	F1,P1	0·5	N	+119
		083430	PCL	–	–	–	F1	0·1	N	+128
032189	Haveli	062420	PCM	Y	N	Y	F1	0·1	Y	+8
		064905	PCC	Y	N	Y	F1	0·1	Y	+33
		065950	PCM	–	–	–	F1	0·5	N	+43
		182930	CC	–	–	–	F1	0·2	N	+21
032389	Chop	071120	PCL	Y	N	N	F1	0·1	Y	+55
		071530	PCL	–	–	–	F1	0·5	N	+59
		071845	PCL	Y	N	Y	F1	0·1	Y	145 +62
		072020	PCF	Y	N	Y	F1	0·1	Y	+64
		072345	PCL	–	–	–	F1	0·1	N	+67
		072610	PCM	–	–	–	F1	0·3	N	+70
		072900	PCM	–	–	–	P1	0·1	N	+73
		073005	PCL	Y	N	Y	–	–	–	6 +74
		073620	PCM	+	–	–	F1	0·3	N	+80
		073950	PCF	–	–	–	F1	0·2	N	+84
		074410	PCF	+	–	–	F1	0·4	Y	+88
		074430	N	Y	N	N	–	–	–	+88
032789	Chopra	055820	PCL	–	–	–	F1	0·2	N	-12
		055930	PCL	+	–	–	F1	0·2	N	-11
		060640	N	Y	N	Y	F1	0·2	Y	-4
		060830	PCL	–	–	–	P1	0·2	N	-2
		061010	PCL	+	–	–	F1	0·2	N	0
		061635	PCL	Y	N	Y	F1	0·1	Y	6 +6
		062430	PCL	Y	N	Y	F1	0·1	Y	+14
		0802	PCL	–	–	–	F1	0·3	N	+112
		0808	PCF	Y	N	Y	F1	0·1	Y	+118
		081745	PCL	Y	N	Y	F1	0·1	Y	125 +127
		0822	PCL	–	–	–	F1	0·2	N	+132

DATE	PCOT	TIME	SSTM	WS	EXTFLT	D.D	N.I	DUR	DIV		Temp.
031589	Chgra	062440	PCL	Y	N	Y	FI	0·2	Y	-3	12·8 ~~24·8~~
		062805	PCM	–	–	–	PI	0·2	N	+1	12·8
		063710	PCL	–	–	–	FI	0·3	N	+10	13·9
		063750	PCL	–	–	–	FI	0·5	N	+11	13·9
		064055	PCL	–	–	–	FI	0·1	N	+14	13·9
		064600	PCL	Y	Y	Y	–	–	–	+19	13·9
		0650	~~N~~	–	–	–	PI	0·3	N	+23	13·9
		065335	~~N~~	–	–	–	PI	0·4	N	+26	13·9
		065700	PCL	Y	Y	Y	FI	0·5	Y	+30	13·9
		0706	PCM	~~N~~	–	–	FI	0·5	N	+39	15·6
		071830	PCL	–	–	–	FI	0·1	N	+51	15·6
		071915	PCF	Y	Y	Y	FI	0·2	Y	+52	15·6
		074800	PCL	–	–	–	FI	0·2	~~N~~ N	+81	16·7
		081155	PCM	Y	N	Y	–	–	–	+104	19·4
		082645	PCL	–	–	–	PI	0·2	N	+119	19·4
031789	Nav	080130	CC	Y	N	Y	FI	0·3	Y	+94	
		1745	N	Y	Y	Y	–	–	–	-23	
031989	Chgra	061855	PCL	Y	N	Y	–	–	–	-9	
		0620	PCL	Y	Y	Y	–	–	–	-7	
		0627	PCL	Y	Y	Y	–	–	–	0	
		0638	PCL	Y	~~N~~	Y	–	–	–	+11	
		0644	PCM	–	–	–	FI	0·2	N	+17	
		064845	PCL	–	–	–	FI	0·5	N	+21	
		065100	CC	–	–	–	FI	0·3	N	+24	
		065145	PCL	~~Y~~	~~N~~	~~Y~~	–	–	–	+24 ~~+25~~	
		065735	PCL	–	–	–	FI	0·2	N	+30	
		070815	PCM	Y	N	Y	FI	0·~~2~~	Y	+41	
		072530	PCL	Y	N	Y	–	–	–	+58	
		074220	PCL	Y	N	Y	FI	0·2	N	+75	
		075500	PCL	–	–	–	FI	0·1	N	+88	

DATE	PLOT	TIME	SSTM	W-S	EXPECT	D-D	N-I	DUR (Min)	DIS	DT (s)	Display duration. ↑ Stimulus ↓ Temp reaction.
030989	Chopra	0642	P-CL	Y	N	Y				+9	sunny
		0702	PCL	–	–	–	PI	0.5	N	+29	
		0712	PCL	–	–	–	FI	0.5	N	+39	
		0714	PCL	Y	Y	Y	–	–	–	+41	
		0722	PCL	–	–	–	FI	0.5	N	+49	
		0726	PCL	–	–	–	FI	0.2	N	+51	
031189	Chopra	0626	PCL	Y	N	Y	–	–	–	-7	Cloudy 15.3 / 13.3
		0650	PCM	–	–	–	PI, FI	2.3	Y	+17	13.3 / 15.6
		0656	PCL	Y	Y	Y	–	–	–	+23	15.6
		0700	PCM	Y	Y	Y	FI	0.5	Y	+27	15.6
		072050	PCL	–	–	–	FI	0.1	N	+28	16.7
		0733	PCL	N	Y	Y	–	–	–	+60	16.7
		0738	PCM	–	–	–	FI	0.5	N	+65	16.7
		0755	PCL	Y	N	Y	–	–	–	+82	18.9
		080425	PCL	–	–	–	FI	0.1	N	+91	18.9
		0806	PCL	Y	N	Y	FI	0.2	Y	+93	18.9
		0812	PCL	–	–	–	FI	0.5	N	+99	18.9
		0904	PCL	–	–	–	FI	0.5	N	+151	23.3
		0905	PCL	Y	Y	Y	–	–	–	+152	23.3
031389	Naval	1808 2312	N	–	–	–	PI	0.5	N	0	sunny 23.9
		181155 1814	N	Y	N	Y	FI	0.2	Y	+4	23.9
		181500 1815	N	–	–	–	PI	0.1	N	+7	23.9
		181755 1817	PCL	–	–	–	PI, FI	0.8	N	+10	23.9
		1826 1826	PCL	Y	N	Y	–	–	–	+18	23.9
031489	Chopra	170850 1708	N	–	–	–	FI	0.3	N	-59	23.9 / 27.8
		1711	N	–	–	–	FI	0.3	N	-57	27.8
		173030	PCL	Y	N	Y	FI	0.2	Y	-38	24.4
		175640	PCL	–	–	–	FI	0.3	N	-12	24.4
031589	Chopra	062140	PCL	–	–	–	FI, PI	0.7	N	-6	12.8
		062345	PCL	–	–	–	PI	0.3	N	-4	12.8

↑ ↓ interaction Royal Florican. 1988

Date	location	time	Nos of	T/F/AC	DUR	Remarks
6/3/88	Kowha	1754	2	AC/T/F	30	
7/3/88	Kowha	0630	2	T	6	
7/3/88	chapra	0740	2	T/AC/F	15	
16/3/88	chapra	0550	2	T/F/AC	7	
25/3/88	Nawal	0822	2	AC	17	
23/4	Nawal	0653	2	T	8	
		0700	2	AC	3	
23/4	Nawal	1727	3	AC/T	25	
28/4	Kowha	1735	3	AC/T	7	2 ♂♂ flew AC into territory then retund then flew off.
		1810	3	T/AC		
29/4	Nawal	0534	2	T/AC	1hr 33m	
1/5	Kowha	0546	4	T/AC	10	
8/5	Nawal	0617	2	T	2	
		0728	2	T/AC	3	flew 0.4.1.
12/5	Nawal	1653	2	AC/AC	3	
24/5	Nawal	1827	2	AC	45	
3/6	Nawal	0522	2	AC/T	5	
10/6	Kowha	1919	2	AC/T	3	
		1925	2	AC/T	3	flew 0.4.1.
12/6	Nawal	0700	2	AC	10+	flew 0.4.1.
		1987				
3/5/87	Kowha	1842	2	AC/T	13	
8/5/87	Nawal	0556	3	T/AC/F	21	Kowha ♂ flew from territory to Nawal where fight took place.

Chapra

	NNI	NDIS	ODUR					
1/3/89	0	1	60	1				
2/3/89	0	1	60	1				
6/3/89	2	2	~~185~~	1	3/3	0	0	90
9/3/89	4	2	161	2	4/3	0	0	150
11/3/89	6	7	310	2				
14/3/89	3	1	145	2				
15/3/89	13	4	175	3				
19/3/89	7	7	285	3				
23/3/89	7	5	255	4				
27/3/89	17	9	~~280~~ 210	4				
3/4/89	8	3	300	5				
12/4	8	2	290	7				
16/4	2	4	300	7				
22/4	5	7	385	8				
28/4	4	3	315	9				
18/5	11	9	180	12				
22/5	6	1	~~140~~ 200	12				
3/6	0	3	135	14				
8/6	4	9	315	15				
15/6	1	1	240	16				
			4506					

Kowhaghatti

Date	NMI	NDIS	ODUR	
11/4	3	8	175	6
14/4	4	7	360	7
23/4	8	9	330	8
30/4	4	8	160	9
13/5	24	16	345	11
22/5	–	7	150	12
24/5	2	12	320	13
31/5	3	8	350	14
1/6		2	75	14
5/6		4	290	14
9/6		7	240	15
16/6	1	1	310	16
23/6	2	0	180	17
24/6	0	1	105	17
26/6	0	1	120	17
6/4	0	0	75	6
		Tot	3545	

Nawalkhad

Date	NMI	NDIS	ODUR	
13/3	3	2	86	2
17/3	0	2	245	3
21/3	1	2	190	3
28/3	0	2	180	4
31/3	0	3	125	5
4/4	1	3	235	5
13/4	0	1	120	7
20/4	5	8	135	8
28/4	4	15	315 230	9
14/5	3	17	350	11
23/5	1	4	280	13
18/6	1	10	240	16
			2501	

Date	ad. ♂	with tail imm ♂	♀	Place
14/4	1			Dudhwa road.
16/4		1		Dudhwa road.
17/4	1			& & R.H Nawalhd rd.
21/4			1	R.H Nawalhd Rd.
22/4		2	1	chittal chorahe
22/4	1♂		2	Sathana
23/4	1♂			M.S. Rd
23/4	2♂		1	& Dudhward
23/4	1♂			chittal chorahe.

Date	Plot	Time	SS TM	CO's	EXTM	D·D	N·I	Dur	Dis.
030189	Chopra	054940	PCF	Y	N	Y	—	—	—
030289	Chopra	0725	PCF	Y	N	Y	—	—	—
030089	Chopra	071245	CC	—	—	—	FI	0·3	N
		071915	PCL	—	—	—	FI	0·5	N
		072145	CC	—	—	—	FI	0·3	Y
		072200	N	Y	N	Y	—	—	—
		080600	PCL	N	N	N	FI	0·2	Y
↓	030989								

Chapra – Kawhaghatti = 1·6 k.m.

Kawhaghatti – Mavalkal = 2·25 k.m.

Chapra – Mavalkal = 2·5 k.m.

S.FA

Sonaripur FRH I
" " II } – 0.85

Sonaripur FRH I
" III } – .90

S.Nos.	N.I before display	Display without sound Stimulus	Display with peacock call	Display with crowcall	Time	w/w sound	D. dive	Extended flight	Dates	Navalkul	Sathana.
1	X		✓	✓	—	—	✓	—	11/3	X	✓
2	?		✓		—	—	✓	—	13/3	X	✓
3	✓		✓		—	—	✓	—	14/3	X	X
4	✓	✓			—	—	✓	—	15/3		✓
5	✓		✓		—	—	✓	—	16/3		✓
6	✓		✓		—	—	✓	—	16/3		✓
7	?		✓				✓	—	20/3		✓
8	✓	✓				✓	✓	—	20/3		✓
9	✓		✓			✓	✓	—	20/3		✓
10	✓		✓			✓	✓	—	21/3		✓
11	?		✓			✓	✓	—	21/3		✓
12	✓		✓			✓	✓	—	21/3		✓
13	✓		✓			✓	✓	—	23/3	✓	✓
14			✓			✓	✓	—	23/3	✓	✓
15		✓				✓	✓	—	25/3	✓	
16			✓			✓	✓	—	25/3	✓	
17		✓				✓	✓		25/3	✓	
18			✓			✓	✓		25/3	✓	
19	✓		✓			✓	✓		27/3		✓
20	✓	✓				✓	✓		27/3		✓
21	✓		✓			✓	✓		27/3		✓
22	✓		✓			✓	✓		27/3		✓
23	✓		✓			✓	✓		27/3		—
24	✓		✓			✓	✓		30/3		✓
25	✓	✓				✓	✓		30/3		✓
26	✓		✓			✓	✓		30/3		✓

SOUND STIM

Serial nos	N.I before dog	Display without sound Stl.	Display with P.C	Date Display without Ear	Display with crowcall	Time	seen wingsail	D. clive	Extended flight	Naval.	Saltfarm.
27	✓		✓	31/3			✓	✓			✓
28	✓	✓	✓	31/3			✓	✓			✓
29			✓	31/3		6	✓	✓			✓
30			✓	31/3			✓	✓			✓
31		✓		1/4		11.5	X	✓	✓	✓	
32		✓		1/4			X	X		✓	
33			✓	2/4		6.5	✓	✓		✓	
34			✓	4/4		5.5	✓	✓			✓
35			✓	4/4			✓	✓			✓
36		✓		4/4			✓	✓			✓
37			✓	4/4			✓	✓			✓
38		✓		4/4			✓	✓			✓
39			✓	4/4			9 ✓	✓			
40		.	✓	7/4			X	✓	✓	✓	
41		✓		7/4			✓	✓		✓	
42		✓		7/4			✓	✓		✓	
43		✓		7/4			✓	✓		✓	
44		✓		7/4			X	✓		✓	
45		✓		7/4			✓	✓		✓	
46		✓		7/4			X	✓		✓	
47		✓		7/4			✓	X	✓	✓	
48		✓		7/4			X	X	✓	✓	
49		✓		7/4			X	✓		✓	
50		✓		7/4			X	✓		✓	
51		✓		7/4			✓	✓		✓	
52		✓		7/4			✓	✓		✓	

March.

Os – 2, 5, 1, 4

2m – 20s – 1

2s – 1

783 910

616 679

962

1138

Chapra Navalkhad Kochhaghatti

1256

1322

1364

S = 78.7

1810

29.35

1879

1756

2145

1990

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HORNBILL HOUSE, (MUSEUM COMPOUND),
SHAHEED BHAGAT SINGH ROAD,
BOMBAY 400 023

Ref: 1552/85/ 6th April 1985

Dear

As you are aware, the Bombay Natural History Society has an ongoing project on Endangered Species of Indian fauna financed by the Fish & Wildlife Service of the USA and sponsored by the Wildlife Directorate of the Dept. of Environment, Government of India.

We have been working on the Great Indian Bustard since 1981. We have now started our studies on the Lesser and Bengal Floricans and have been working in the habitats of Lesser Florican in Madhya Pradesh along with surveys in Gujarat, Rajasthan, Andhra Pradesh and Karnataka.

The Bengal Florican has been reported in the terai belt in U P, Bihar, Bengal and Assam. Our field researchers, Dr. A R Rahmani, Galden & Usha Bhutia and Ravi Shankar, will be surveying the known Bengal Florican habitats in your state commencing from April-May. Any information or assistance you can provide to them in this regard will be highly appreciated. They will try contacting you in the course of their field survey and I look forward to receiving your help in this matter.

I am addressing this letter to you at the instance of Dr. Salim Ali who is the Principal Investigator for this project.

Yours faithfully,

J C Daniel
Curator

UB/sa.

Navalkal		Satlasa	
Morning	Evening	Morning	Evening
	27/2	2/3	2/3
			3/3
		4/3	4/3
			6/3
		7/3	7/3
		11/3	11/3
		13/3	
		~~14/3~~	
	14/3		
15/3			15/3
		16/3	16/3
	17/3		
18/3			
			20/3
		21/3	21/3
		23/3	
24/3			
25/3	25/3		
		27/3	27/3
28/3			
29/3	29/3		30/3
	1/4	31/3	31/3
2/4	2/4		
		4/4	4/4
7/4	7/4	8/4	8/4
	16/4	13/4	13/4
17/4	17/4		
		19/4	19/4
20/4	20/4		

% out of 144 displays

	Nos	
Without sound stimulus	= 63	= 43.75%
With peacock call	= 76	= 52.78 %
With Crow call	= 5	= 3.47 %

143
− 7
136
GS 122
Nos 14

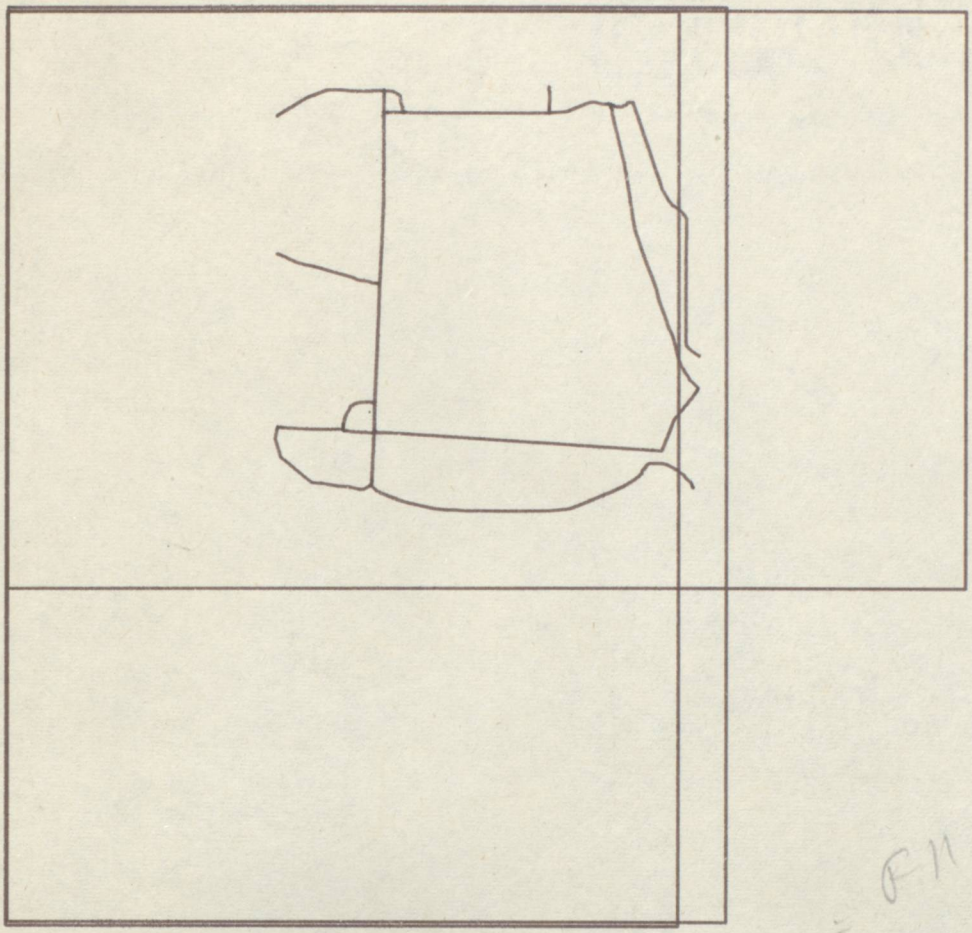
d.d = 4

With sound (out of 136 displays)

With sound clear = 122 = 89.71%
No wily sound = 14 = 10.29 %

Display dive out of (144) = 140 = 97.22 %
No display dive = 4 = 2.77 %

Av. time 46 displays = 324-5 = 7.054$



BA3
F1 = 6·662, 8·123
R2 = 6·176, 8141

F2 = 2·371, 6·773

laquone pens 3 to 6 for
Hewlett-Packard 7470A Plotter

Territory = Navalkhad

Territory = Nawal khad
Radius = Home range of Display sites.
sample size = 55

Methods = Minimum-perimeter polygon (Mohr 1947)
Harmonic-mean-distance home range 75% (Dixon and Chapman 1980)

FA7 — P1
FA9 — P1
PA5 — P1
RA6 — P1

FA9 — P5
PA6 — P5

PA1 — P1
PA2 — P2
PA3 — P3
PA4 — P4
FA17 — P4

RA11
RA8
RA6
RA5
RA2
FA7
RA9
RA1
RA3
RA4
RA10

R1
R2

FA5
FA14
FA15
FA16
RA6

F4.

RA6
FA7
FA6.

F7.

RA11
FA1
RA7

F1

RA4
R10
FA3
FA13

F3

FA19 F12 FA5
FA20 F12-R9
RA11 R6-R4
FA17 F13-R4

PA21 R9-F4.
FA18 R6-F14
RA11. R6-R9.

F2

RA9
RA7
PA2
FA12
RA10

F2
F2
F2
F2

RA4. R7
F3
F4
R7
F16

Road.

R

FA6
F7-F16

RA1-R1-R2.

F4
F16

Forest.

RA3 as Road 1
RA7 as Road.

Territory Nawalkhaed.

Foraging area = 28.01530612 ha.

Max No of ♂s	Naulakha Salient Activity	Hazaring Salient activity	Rampura Salient Activity	Weeks
1 ♂	foraging; no site fidelity; no display Agonostic interaction	—	—	1
4 ♂	foraging, no site fidelity, few display imp seen. Agonostic	2 ♂'s. territorial sustained display.	—	2
3 ♂	foraging, no site fidelity. Sporadic displays. Agonostic interaction	territorial sustained display.	Territorial 5-6 ♂ sustained display.	3
2 ♂	~~Site fidelity~~ Some partial site fidelity. sustaining display 1 ♂ territorial. Agonostic interaction	2 ♂ Territorial sustained display.	11	4
3 ♂	1 ♂ territorial other partial site fidelity, sustained display.	Territorial sustaining display.	11	5
7 ♂	5-6 ♂ territorial sustained display.	Territorial sustained display.	11	6
9 ♂	8 territorial. 1 no site fidelity.	4 ♂s 11	11 15-20 ♂	7

Weeks.	Naulakha. No of ♂s	Salient Activity	Hazariya. Salient Activity	Rampura. Salient Activ.
1				
2				
3				
4				
5				
6				

Weeks.	No of ♂s.	Activities of ♂s. Naulakha Predators	Hazariya Activities.	Rampura.
1				
2				
3				
4				
5				
6				
7				
8				

Home ranges

1) Naval khad ♂5. 10.5 cm = 550 mts ($0.0625 cm^2 = 0.0004095 km^2$)

a) Foraging Homerange – mpp.

= 0.0700245 sq km.

128
43
171 = (0.25^2 sq cms)

b) display homerange – mpp.

= 0.022113 sq km.

28
26
54 =

c) display homerange 75% Harmonic-mean-distance. (38)

0.0
0.015561 sq km.

0.015561

Kowhaghatti male. 6.7 cm = 640 mts.

$0.0625 cm^2 = 0.0005536 km^2$
0.0005702

a) Foraging homerange (mpp) (118)

= ~~0.0653248~~ sq km.
~~0.0672856~~

0.0661092

b) Display homerange. (mpp)

= ~~0.0072504~~
~~0.0074828~~ sq. km.

0.007345

c) Display homerange (HMD) 75%

~~0.0062722~~

0.006215

Chapra male. .0625 cm² = 0.0007884 km²

a) Foraging homerange. mpp. (57)

0.0449388 sq km.

b) Display homerange mpp: (13)

0.01024492 sq km

c) Display homerange hmd 25%

= 0.005188 sq. km.

 2) = 1.25, 1.75 size = 7, 5.5

4.) Territory = Navalkhad.

0.5

~~0.25~~

2) BUS, 3.4

4) 0.15, 0.200

6 = True

B) Area of movement. (n = x7 observation periods)

2) 1.0, & 1.75.

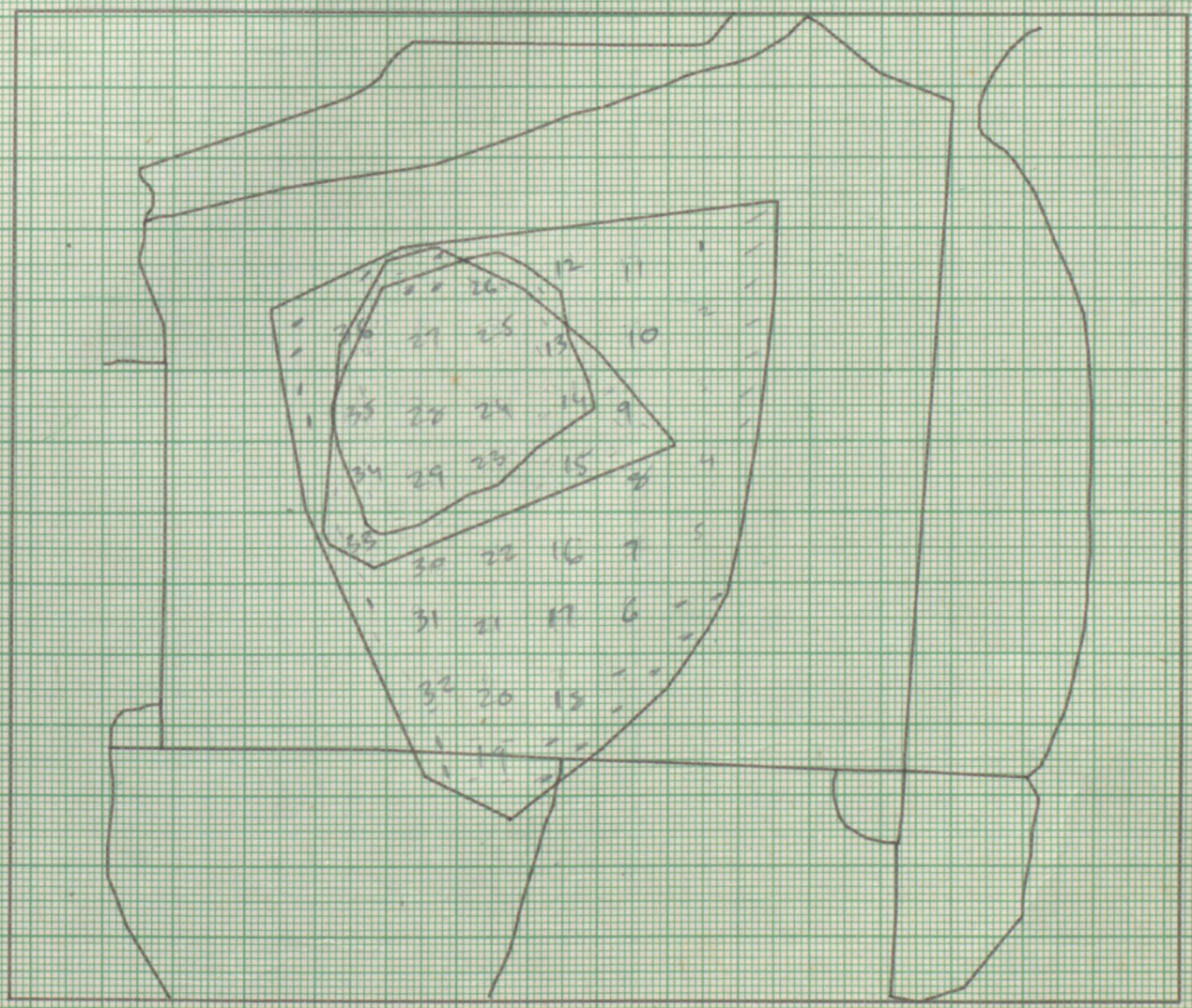
c) Homerange = 7.003 hectares.

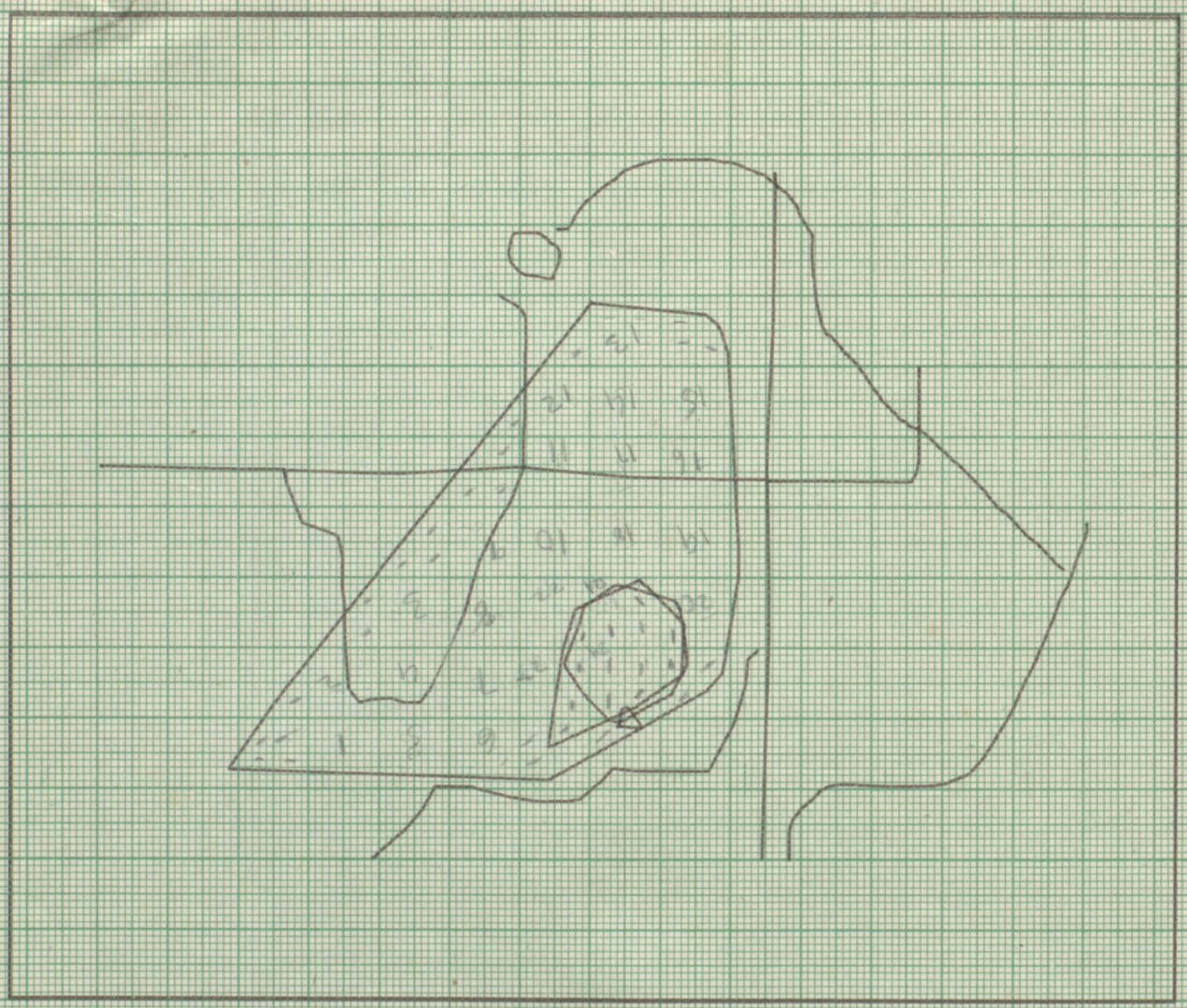
2) = 8.5, 1.75.

scale.

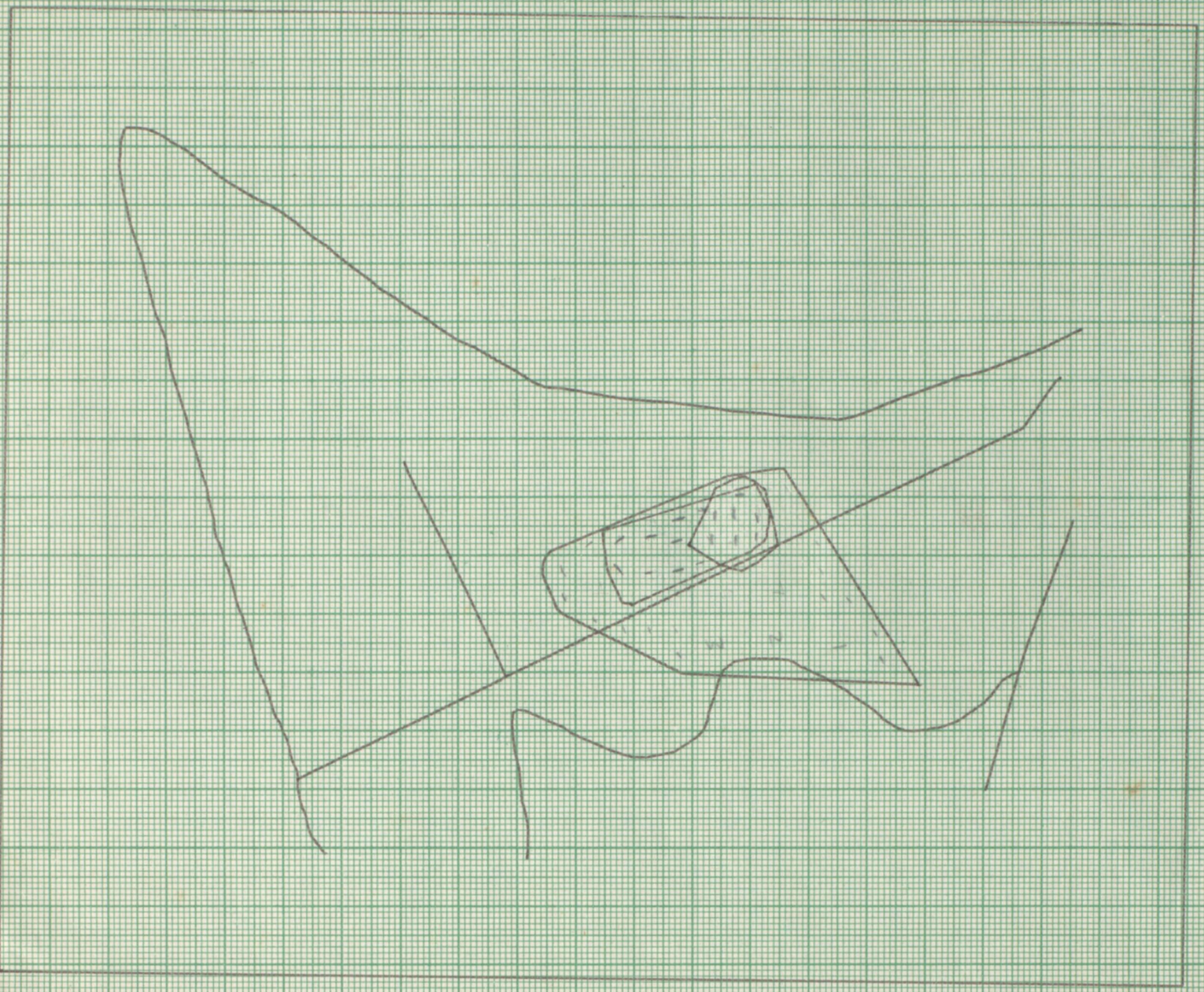
x4 q, 4.5

x





$13^\circ - 15^\circ$



Date	Total nos of calls.	Paused / stopped looked around.	Imitated/mock	displayed	no reaction	Peacock call intensity loud	medium	Faint
7/3	6		4		2	–	–	–
11/3	25	1	8	1	15	–	–	–
12/3	10 ±	–	–	–	10 ±	–	–	–
13/3	48	2	1	1	44	24	13	7
14/3	43	–	3	1	6	1	8	34
15/3	30		5		23	11	16	3
16/3	45		14	2	26	10	31	4
17/3	11				11	2	2	6
18/3	35-40				35-40			
20/3	31		3	2	26			
21/3	22		6	3	13			
23/3	c. 35		2	2	31			
25/3	70 ±		2		68			
27/3	45		5	5	35			
28/3	8				8			
29/3	70				70			
30/3	30		1	2	27			
31/3	50		3	4	43			
1/4	14		2		12			
2/4	40		1	1	38			
4/4	48		3	4				
Total	686		63	28				

	week	mm total rain	°C Avg. Max.	cm g. wt.	P orthoptera	up orthoptera	P lepidoptera	up lepidoptera	
1987	1	3.6	34.9	0	26	13	4	1	
	2	88.2	37.8						
	3	0	34.8		16	14	5	1	
	4	5.5	34.6		10	11	2	0	
	5	100.3	32		11	5	1	3	
	6	1.5	0		20	14	4	0	
	7	0	34.5		[illegible]	[illegible]	[illegible]	[illegible]	
	8	37.6	32		19	17	2	2	
	9	0	35.5						
	10	285.9	33.3						
	11	639.8	23.7						
	12	14	28.5	13.1	14	7	0	1	
	13	0	31	22	36	14	9	6	
	14	0	33.2						
	15	7.2	34.7	34.5	58	16	11	1	
	16	0		44.3	57	19	9	2	
1988	1								
	2	18.7	34.67						
	3	6.3	31.7						
	4	89.6	31	4.4					
	5	112.6	31.8	8.0					
	6	249.6	29.5	11.5					
	7	55.3	27						
	8	271.1	26	21.6					
	9	31.4	29.3	30					
	10	135	29.5						
	11	59.7	29.2	62					
	12	0	33.5	75					
	13	45.2	33.3						
	14	23.9	35.2	97.5					
	15	102.1	32.8						
	16	70.1	34	105					

	Week	Total Rainmm	Avg max °C	Glutem	P ORTHOPTERA	U.P ORTHOPTERA	P LEPIDOPTERA	U.P LEPIDOPTERA
1985	1	0						
	2	5.4						
	3	0						
	4	0						
	5	35.2	30.34		9	10	6	0
	6	22	31.31		4	8	3	0
	7	138.6	27.8					
	8	165.6	27.28	7.5	1	4	3	2
	9	92.8	28.8		1	0	1	4
	10	7.4	28.4		0	0	4	4
	11	1.8	29.8	.20	58	3	5	9
	12	2.4	30.3					
	13	0.8	32.7	26.5	8	2	9	10
	14	0.6	33.7	41	17	7	3	2
	15	65	31.5	56	33	5	7	9
	16	0	34.4					
1986	1	70.4	36.6					
	2	38.4	28.1					
	3	29	31.4	2	26	24	1	1
	4	15.4	30.9	4	32	20	16	6
	5	125.7	29	4.6	27	7	0	1
	6	688.5	25.2	8	49	22	1	4
	7	142.4	27.3	10.6	30	16	3	1
	8	68.1	29.4	12	84	26	8	4
	9	397.4	26.6	15.6	36	20	7	13
	10	30.4	27.3	18.5	51	24	6	6
	11	0	29.5	26	58	32	25	8
	12	0	31.2	35	72	27	13	11
	13	0	31.2					
	14	9.9	33.1	53	63	15	10	8
	15	6.7	35.7	65	78	28	13	11
	16	9.4	34.7	73	78	46	13	14

Satiana

	Date	No of d. Morny	No of d Evenny		Date	No of d Morny	No of d Evenny	
	11/3	1	—	w	14/3	N·O	—	
	12/3	N·O	—		15/3	—	N·O	
w	13/3	1	N·O		17/3	N·O	—	
	15/3	N·O	1	w	18/3	—	N·O	
	16/3	2	—		24/3	N·O	2	
	20/3	N·O	3		25/3	—	4	
w	21/3	3	—		28/3	N·O	—	
	23/3	1	—	w	29/3	—	—	
w	27/3	1	4		1/4	N·O	2?	abnormal
	30/3	NO	3	w	2/4	1	0	
	3/3	2	3		7/4	15	3	M-F prom
w	4/4	1	5	w	8/4	6	N·O	
w	8/4	5	7		16/4	N·O	1	
w	13/4	—	1	w	17/4	4	6	
w	19/4	5	4		20/4	2	6	
w	22/4	4	9	w	23/4	—	—	
	28/4	—	3	w	29/4	—	—	
w	1/5	1	7		3/5	4	8	Dmg off / display(E)
w	7/5	1	2	w	8/5	1	—	
	11/5	5	2		12/5	3	1	
w	15/5	1	2	w	16/5	2	2	
	18/5	7	4	w	20/5	—	3	
w	23/5	1	4		24/5	1	1	Dmg off / display(E)
w	28/5	1	5	w	29/5	—	5	
	2/6	3	3		3/6	—	1	
w	6/6	—	3	w	7/6	—	—	
w	10/6	—	3	w	12/6	1	4	
w	15/6	1	—					

Nawabkhael

Peacock call / Temp.

1989.

Date	Time	Temp °C	PC	Time.	Sunrise/sunset
9/3/89	1640 pm	~~28.9~~	6	1640 – 1730	0633 SR
	~~1717~~	28.9 ~~84°F~~			0603 1803 SS
	1745	~~26.7~~			
	1822	23.3	5	1730 – 1820	
			13	1820 – 1830	
11/3/89	0630	13.3	9	0620 – 0715	
	0715	15.6	7	0715 – 0750	
	0750	16.7	10	0750 – 0813	
	0813	18.9	12	0813 – 0845	
	0845	21.1	12	0845 – 0915	
	0915	23.3			
	0930	25	5	0915 – 0930	
	1615	27.8			
	1645	26.7			
	1715	25.6			
	1800	23.9			
13/3/89					SS @ 1808
14/3/89	1615	27.8	10	1615 – 1645	
	1645	27.8	16	1645 – 1745	
	1745	24.4	6	1745 – 1815	
	1815	22.8			
15/3/89	0615	12.8	15	0610 – 0630	
	0645	13.9	16	0630 – 0645	
	0715	15.6	20	0645 – 0715	
	0745	16.7	15	0715 – 0745	
	0815	19.4	11	0745 – 0815	
	0845	22.2	9	0815 – 0845	
	0915				
17/3/89	0615	8.9	8	0615 – 0645	
	0645	11.7			
	0720	15	10	0645 – 0718	
	0745	17.8	8	0718 – 0745	

Date	Time	Temp °C	Time	PC	sunset/sunrise.
17/3/89	0815	21.1	0745-0814	6	
	0845	23.3	0814-0845	1	
	1700	~~23.3~~ 27.8	1700-1750	0	
	1750	23.9	1750-1820	4	
	1820	22.2	1820-1830	11	
19/3/89	0615	13.9			SR 0627
	0645	15	0615-0645	25	
	0715	17.2	0645-0715	19	
	0745	19.4	0715-0745	18	
	0815	19.4	0745-0815	12	
	0845	22.2	0815-0845	11	
	0915	23.9	0845-0915	5	
	1700	29.4			
	1730	28.3	1700-1730	3	
	1800	26.7	1730-1800	4	
	1830	25	1800-1830	13	
21/3/89	0615	13.3			
	0645	15	0615-0645	17	~~SS~~ SR = 0616
	0715	17.2	0645-0715	12	SS = 0609
	0745	21.1	0715-0745	4	
	1715	32.8			
	1745	31.7	1715-1745	3	
	1815	29.4	1745-1815	1	
	1830	28.9	1815-1830	7	
23/3/89	0600	15			
	0630	15	0600-0630	8	
	0700	17.2	0630-0700	9	
	0730	21.1	0700-0730	25	
	0800	23.9	0730-0800	18	
	0830	26.1	0800-0830	10	
	1630	32.2			
	1700	30.6	1630-1700	1	
	1730	29.4	1700-1730	4	
	1800	27.2	1730-1800	8	
	1830	25.6	1800-1830	8	

Date	Time	°C	Time	Pc	sunset / sunrise
08/4/89	1645	31.7			SS 1817
	1715	30.6	1645 - 1715	2	
	1745	28.9	1715 - 1745	6	
	1815	27.2			
	1840	26.1	1745 - 1840	4	
8/4/89	~~1645~~	32.8	1630 - 1645	4	
	1720	32.8	1645 - 1720	7	
	1745	28.9			
	1815	25.6			
	1830	21.1			
9/4/89	1630	34.4 ~~44~~			
	1720	31.7			
	1815	27.2			
11/4/89	0545	16.7			SR @ 0558
	1645	33.3			SS @ 1818
	1715	32.8			
	1745	31.1	1645 - 1745	0	
	1820	30			
	1850	27.8			
12/4/89	0545	11.7	0537 - 0545	6	
	0615	12.2	0545 - 0615	17	SR @ ~~1819~~ 0556
	0645	15.6	0615 - 0645	11	SS 1819
	0715	17.8	0645 - 0715	10	
	0745	19.4	0715 - 0745	10	
	~~1645~~ 0815	22.2	0745 - 0815	6	
	1645	35.6			
	1716	34.4	1645 - 1716	1	
	1745	33.3	1716 - 1745	7	
	1815	31.1	1745 - 1815	10	
	1845	27.2	1815 - 1845	17	
13/4/89	1645	36.1			
	1735	33.9	1635 - 1735	0	
	1810	30.6	1735 - 1810	1	
	1840	27.8	1810 - 1845	3	

Date	Time	°C	Time	PC	- Sunset / Sunrise.
27/3/89	0545	22.2	5.45-0600	13	
	0630	20.6	0600-0630	15	
	0650	20.6	0630-0650	10	
	0715	21.1	0650-0715	11	
	0750	21.1	0715-0750	12	
	0820	21.7	0750-0820	12	
	0850	22.2	0820-0850	12	
	0905	22.2	0850-0905	6	
	1630	29.4			
	1700	27.8	1630-1700	10	
	1730	26.1	1700-1730	9	
	1800	25	1730-1800	1	
	1825	24.4	1800-1825	13	
28/3/89	0600	17.2			
	0630	16.1		—	
	0700	17.2		—	
31/3/89	0600	13.3			SR 0604
	0630	13.9	0600-0630	11	
	0700	17.8	0800-0730	10	
	0740	22.2		—	
	0800	23.9		—	
	0830	23.9		—	
3/4/89	0545	10			SR 608
	0615	10	5-35-615	16	SS 1818
	0649	15	0615-0649	11	
	0722	16.7	0649-0722	12	
	0744	17.8	0722-0744	7	
	0815	19.4	0744-0815	7	
	0845	21.1	0815-0845	5	
	1645	32.2			
	1715	30.6			
	1800	27.8			
	1840	24.4			
04/4/89	0545	9.5			SR 0601
	0615	8.3	0545-0615	8	
	0645	11.1	0615-0645	11	
	0715	15	0645-0651	5	
	0745	18.9			

Date 1989	Time	°C	Time	PC	SS / SR
26/4	1850	26	1822-1850	17	
28/4/89	0550	16			
	0621	17	0550-0621	8	~~0555~~ 0534 SR
	0650	22.5	0621-0650	5	
	0720	28.5	0650-0720	5	
	0740	30			
	0750	29.5			
	0820	28			
	0835	27.5			
	1706	36.4			
	1805	32.8	1706-1805	0	
	~~0~~1830	31.1	1805-1830	2	
	1850	29.4	1830-1850	4	
29/4/89	0530	16.1			1828 SS
	0600	15.6	0530-0600	9	
	0630	18.9	0600-0630	9	
	~~06~~ 0700	23.9	0630-0700	6	
	0730	27.2	0700-0730	7	
	0745	28.9	0730-0745	3	
	1415	38.3			
	1445	37.8	1415-1445	0	
	1715	38.7	1445-1715	3	
	1745	36.1	1715-1745	2	
	1815	33.6	1745-1815	6	
	1845	31.1	1815-1845	14	
			1845-1855	10	
30/4/89	0535	16.1			0539 SR
	0605	16.1	0535-0605	8	
	0630	17.2	0605-0630	6	
	0700	20.6	0630-0700	7	
	0730	22.8	0700-0730	~~8~~ 3	
	1645 30	38.3			
	1700	36.7	1630-1700	1	
	1730	35	1700-1730	0	
	1800	31.7	1730-1800	2	
	1830	28.9	1800-1830	3	
	1855	27.5	1830-1855	10	

Objectives

The objectives of this paper is to place on record the current status of the swamp deer in the Dudwa National Park, and to discuss factors like floods, poaching and seasonal movement which are relevant to their decline.

Study Area

Dudwa National Park

History, Location, Vegetation, Climate.

The foundations of the National Park were laid in 1958 when 63 sq. km of the North Kheri forest division was declared as the Sonaripur Wildlife Sanctuary. In 1968 this was extended to 212 sq. km, primarily to conserve the swamp deer, and renamed as the Dudwa Wildlife Sanctuary. On 1st February 1977 the Dudwa Sanctuary was upgraded to a National Park, and covered an area of 614 sq. km, with a core area of 490 sq. km and a buffer zone of 120 sq. km (Fig 1). At the end of 1987 Dudwa National Park was brought under Project Tiger. Along with the Kishanpur Wildlife Sanctuary (158 sq. km core area and 43 sq. km buffer) the Project Tiger area covers 815 sq. km. The two forest areas are not contiguous.

The Dudwa National Park is situated between latitude 28o24′ and 28o27′ and longitude 80o31′ and 80o52′ in the northern extremity of Lakhimpur Kheri district of Uttar Pradesh (Fig 1). Elevation above sea level ranges from 182 m in the north to 150 m in the south-east. The Mohana and Suheli rivers form natural boundaries to the north and south respectively. The Park`s water system drains into these two rivers which are tributaries of the Sharda, which in turn is a part of the Ganges river system.

The vegetation is chiefly moist deciduous, dominated by Sal Shorea robusta. Typical of the terai, these forests are interspersed with tracts of low lying grasslands which tend to get flooded during the monsoons. In the 1950s, under plantation schemes, tracts of the grasslands were planted with Sheeshum

Date	Time	°C	Time	PC	SR / SS
13/5/89	0530	26.1			
	0600	26.1	0530-0600	9	
	0630	~~25.6~~	0600-0630	4	
	0700	26.7	0630-0700	2	
	0730	27.8	0700-0730	1	
	0800	28.3	0730-0800	1	
	1620	40			
	1650	40	1620-1650	0	
	1720	38.9	1650-1720	0	
	1750	36.7	1720-1750	0	
	1820	33.9	1750-1820	0	
	1850	31.7	1820-1850	0	
14/5/89	0517	~~27.7~~	~~5.10-SR~~	~~3~~ 0	0526 SR
	~~0604~~ 0550	22.2	5.10-0550	2	1841 SS
	0621	25	0550-0621	3	
	0650	27.8	0621-0650	1	
	0720	31.1	0650-0720	1	
	0750	31.7	0720-0750	0	
	1620	38.9			
	1650	40	1620-1650	0	
	1726	37.2	1650-1726	0	
	1750	36.1	1726-1750	1	
	1820	33.9	1750-1820	1	
	1850	32.2	1820-1850	6	
			1850-1905	6	
18/5/89	0500	27.2			
	0530	27.2	0500-0530	6	
	0600	28.3	0530-0600	8	
	0630	29.4	0600-0630 ~~0630-0700~~	9	
	0700	33.3	~~0630~~ 0700	5	
	0730	31.7	0700-0730	4	
	~~0730~~ 0800	34.4	0730-0800	11	

been a drop in the mean herd size (Table 3). This is more marked when the deer return to the Park and less so once they begin to disperse in the grassland. The biggest herd recorded in 1981 had 237 deer (Singh 1982). In 1988, however, the largest herd seen was of about 150 swamp deer. Herd sizes have been calculated from groups of two or more individuals, and hence is uniform for both studies.

Table 2 :
Population of swamp deer in Dudwa N.P. between 1972 - 88.

S.no	Area	1972 Actual count	1972 Estimate	1977 Act./ Est.		1981 Act./ Est.		1988 Act./ Est.	
1	Satiana	627	1200	950	-	932	-	262	450-500
2	Kakraha	12*	20	276	-	221	-	150	175-225
3	Bankey taal	40*	50	18	-	173	-	64	-
4	Nagra taal	present	20	n.c.	-	40	-	n.c.	-
5	Bhadi taal	12*	30	n.c.	-	35	-	10	30
		691	1320	1344	-	1392	-	422	670-770

n.c. not counted ; * reported (not personally seen)
1972 Holloway; 1977 Schaaf & Singh; 1981 V.P. Singh; 1988 this study

The stag to hind ratio has fluctuated slightly over the years, the findings of this study being closer to Schaller (1967) than Singh (1982) (Table 4). In 1964 - 65 the ratio between hind and stag was 2 : 1, in 1979 - 80 it was 2.5 : 1 (Singh 1982) and during this study it was 1.97 : 1. In Kanha the ratio had remained more or less the same between 1964\65 and 1971\73 at 1.33 : 1 hinds to stags (Schaller 1967, Martin 1977). Martin (op.cit) also found in Kanha that the sex ratio between yearlings are 1 : 1 while in adults it is biased towards the hinds. As in this study, ageing was not done while noting down the sex ratios it is likely that the bias will be even more towards the hinds.

Date	Time	°C	Time	PC	SR/SS
18/5/89	1645	39.4			
	1715	40	1635-1715	13	
	1745	37.2			
	1815	39.4			
	1845	34.4			
20/5/89	0523	22.8			0519 sunrise.
	0555	25			
	0625	28.3			
	0700	29.4			
	0730	31.1			
	0745	32.2			
	1630	42.2			
	1700	41.1	1630-1700	4	
	1730	40	1700-1730	3	
	1800	36.4	1730-1800	6	
	1831	32.8	1800-1831	8	
	1900	31.1	1831-1900	6	
22/5/89	0510	27.2			
	0540	27.8	0510-0540	7	1844 sunset
	0610	28.9	0540-0610	8	
	0640	30	0610-0640	5	
	0710	32.8	0640-0710	3	
23/5/89	0515	30			
	0550	30.6	0515-0550	6	
	0620	31.1	0550-0620	3	
	0650	32.8	0620-0650	0	
	1640	42.2			
	1710	35	1640+1710	1	
	1740	34.4	1710-1740	0	
	1810	33.9	1740-1810	1	
	1840	33.3	1810-1840	3	
	1900	32.2	1840-1900	2	

these two grasslands must be verified, for in the winter of 1988 the maximum number of deer seen was 43, not showing any variation from the summer scores.

In Kakraha block, which is now part of the Rhino enclosure where seven rhinos have been re-introduced, there appears not to be any variation in the swamp deer population. 276 were seen in 1977, 221 were seen in 1981 and during this study an actual count revealed 150 deer and the population was estimated to be at a maximum of 225 to 250. As this area was covered on elephant back, it does seem that this estimate is accurate.

At Bhadi taal, due to poor visibility the swamp deer seen could not be accurately sexed. It did seem that all the 10 deer seen were stags. If the stag to hind to fawn ratio is the same as in Satiana then here too the population would appear to have remained static between 1980 and 1988.

Though the Satiana region still continues to have the maximum numbers of swamp deer found in the Park, it is here that the reduction in swamp deer numbers has been maximum. Data on the numbers of swamp deer present in the Satiana region is available, periodically, between 1973 and 1988. It is alarming to note that there has been a drop by 66.70% of the population during the last 15 years. This loss has been comparatively less between 1973 and 1981 (22.4%), and very severe between 1981 and 1988 (57.1%) (see table 2). In 1981 an actual count tallied 932 swamp deer, but during this study the maximum tallied during one day was 262, and I estimate a population of between 400 and 450 (Table 2).

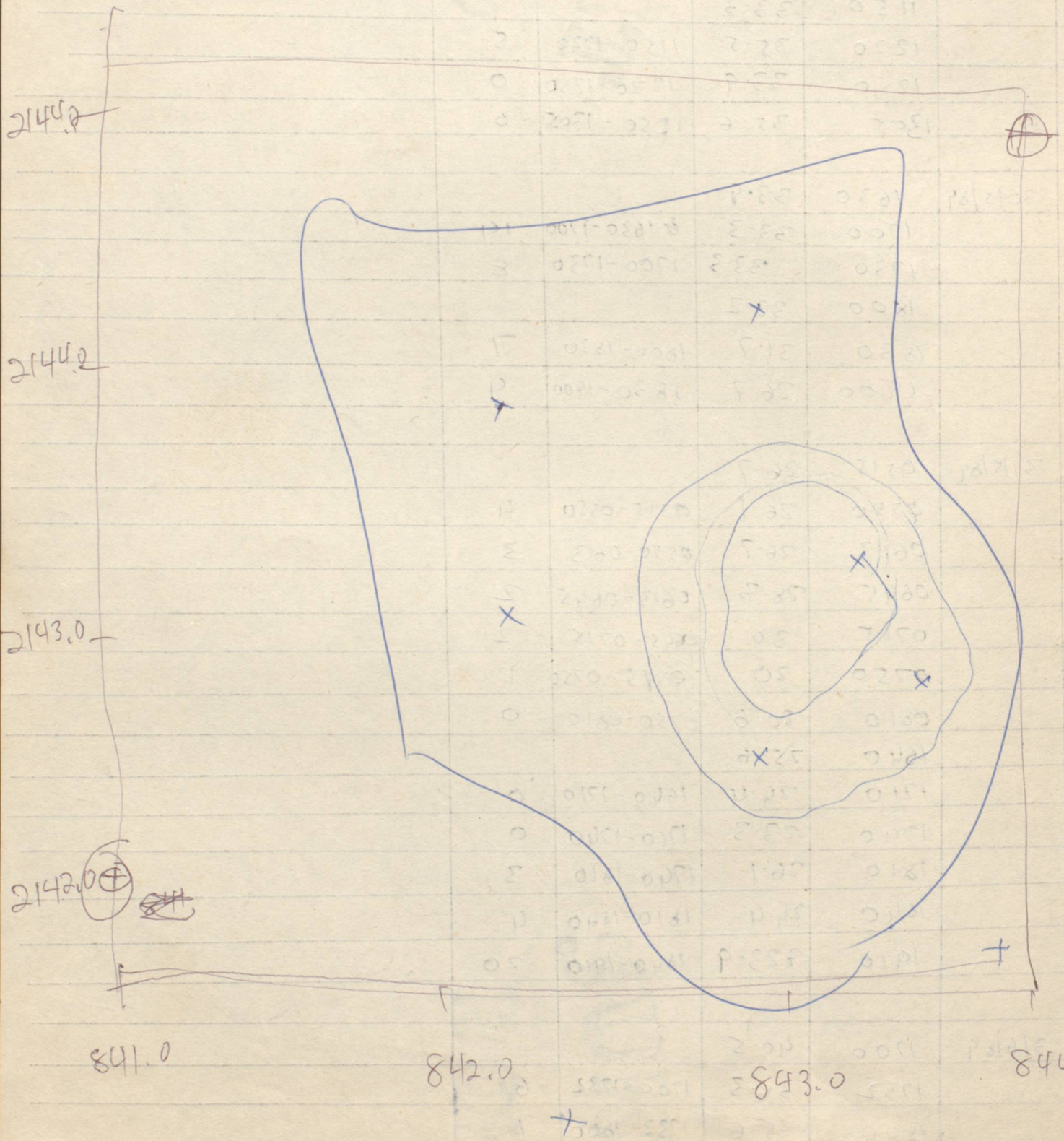
Population structure

As the Satiana grasslands were my main study area, the data given here is from this area only. Calculations are based on those sightings that were recorded between end January and end April during which period visibility was best.

Is the mean herd size reflective of the size of the population in a given area? At Satiana corresponding to the drop in population of swamp deer between 1980 and 1988, there has

Date	Time	°C	Time	PC	SS/SR
24/5/89	0515	28·9			
	0546	28·9	0515-0546	0	
	0615	29·4	0546-0615	0	
	0650	31·1	0615-0650	2	
	0650 0715		0650-0715	1	
	0745	26·7	0715-0745	0	
	0815	25·6	0745-0815	0	
	0940	25			
	1010	22·8	0940-1010	0	
	1150	33·3			
	1220	35·5	1150-1220	5	
	1250	33·9	1220-1250	0	
	1305	35·6	1250-1305	0	
30/5/89	1630	33·9			
	1700	33·3	& 1630-1700	14	
	1730	33·3	1700-1730	8	
	1800	32·2			
	1830	31·7	1800-1830	7	
	1900	26·7	1830-1900	4	
31/5/89	0515	26·7			
	0550	26·1	0515-0550	4	
	0613	26·7	0550-0613	3	
	0645	28·3	0613-0645	2	
	0715	30	0645-0715	2	
	0750	30	0715-0750	1	
	0810	30·6	0750-0810	0	
	1640	25·6			
	1710	24·4	1640-1710	0	
	1740	23·3	1710-1740	0	
	1810	26·1	1740-1810	3	
	1840	24·4	1810-1840	4	
	1910	23·9	1840-1910	20	
3/6/89	1700	40·5			
	1732	38·3	1700-1732	6	
	1800	35·6	1732-1800	1	
	1830	34·4	1800-1830	3	
	1905	32·2	1830-1905	4	

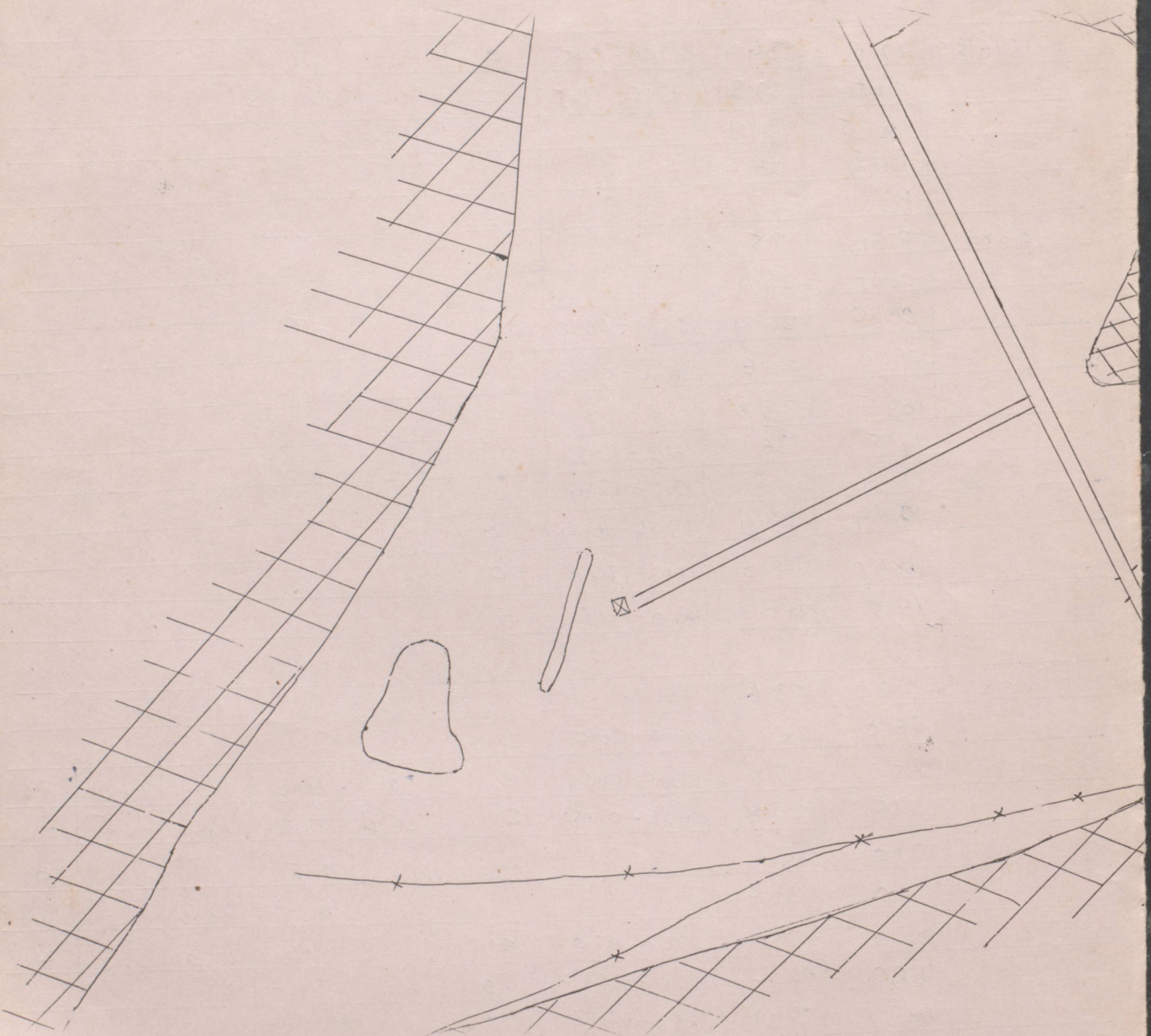
Name
address
Project title
your part of project.
Objectives
(X) Conclusions.



Date	Time	°C	Time	PC	SR / SS.
5/6/89	0530	22.2			
8/6/89	0515	22.8			
	0600	23.3			
	0639	25.6			
	0659	27.8			
	0722	30.6			
	0745	32.8			
	0810	33.9			
	1720	38.9			
	1750	36.1			
	1840	33.9			
	1915	31.1			
9/6/89	0522	21.1			0527 SR
	0544	24.4			
	0610	25.6			
	0640	27.2			
	0700	28.9			
11/6	16 0445	38.3			
	@ 1715	36.7	@ 1645-1715	0	
	1745	34.4			
	1821	33.9			
	1845	31.1			
	1908	30.6	1845-1908	1	
			1908-1920	0	
12/6/89	0515	27.8			
	0545	27.2	0515-0545	3	
	0615	28.3	0545-0615	1	
	0645	28.9	0615-0645	4	
	0715	30	0645-0715	1	
	0745	31.1	0715-0745	3	
	0810	~~33~~ 33.9	0745-0810	0	
	@ 1615	40			
	1645	40	1615-1645	0	
	1715	39.4	1645-1715	0	
	1745	38.9	1715-1745	0	
	1816	35.6	1745-1816	0	
	1845	33.5	1816-1845	0	
	1915	32.8	1845-1915	0	

Date	Time	°C	Time	PC	SR/SS
Fri 13/6	1715	35·6	1700-1715	0	
	1755	36·1			
	1820	35			
	1850	33·9	1820-1850	0	
	1915	33·3	1850-1915	0	
15/6/89	1715	34·4	1700-1715	0	
	1745	33·3	1715-1745	2	1845 SS
	1845	31·1			
	1915	29·4			
16/6/89	0531	25			
	0600	24·4			
	0630	24·4	0530-0630	3	
	0700	25·6	0630-0700	1	
	1645	37·8			
	1715	36·1	1645-1715	0	
	1744	35	1715-1744	0	
	1814	29·4	1744-1814	0	
	1840	28·3	1814-1840	0	
	1915	28·3	1840-1915	5	
18/6/89	0530	25·6			
	0610	26·1	0530-0610	2	
	0655	27·8	0610-0655	0	
	0715	27·8	0655-0715	0	
	1710	34·4			
	1740	33·9			
	1820	33·3	1740-1820	1	
	1850	32·2	1820-1853	0	
	1713	31·1	1853-1713	1	
23/6	1630	29·4			
	1700	30·6	1630-1700	0	
	1730	31·7	1700-1730	0	
	1809	30	1730-1809	0	
	1840	28·9	1809-1840	0	
	1900	28·9			

Date	time	°C	Time	PC
24/6	1745	29·4	1715-1745	0
	1815	29·4	1745-1815	0
	1855	28·3	1815-1855	1
	1912	27·8	1855-1912	2



	Date	Time	1989 Stimulus. other than PC or CC	Reaction
	16/4/89	061315	Pied hornbill (loudest) + PCM + CC	Displayed.
	29/4/89	182355	PCM (KIA)	NDI (5s)
	18/5/89	054955	PCC KIA / KOK KOK	displayed.
	18/5/89	175520	PCL KIA	displayed.
	18/5/89	181314	KA PCC KAIM / KAKOO	displayed
	20/5/89	052005	PCM KAIN	displayed.
	24/5/89	063051	INDIAM Pied hornbill	displayed
?	9/6/89	1712	Redwattled lapwing calling while flying →	displayed
?	18/6/89	183320	cheetal bugling (faint)	displayed.
	11/4/89	181330	Gunshot	NFI / displayed 30s later.

Date	Timespan	No. of PC	No. of M	No. of Do	Tot. react	location	with CC	No. of N
9/3/89	1640-1730	6	0	0		Chopra		
	1730-1820	5	0	0				
	1820-1830	13	0	0				
11/3/89	0620-0715	9	0	4	4	Chopra		
	0715-0750	7	2	2	4			
	0715-0813	10	2	2	4			
	0813-0845	12	0	0	0			
	0845-0915	12	1	1	2			
	0915-0930	5	0	0	0			
14/3/89	1615-1645	10	0	0	0	Chopra		
	1645-1745	16	2	1	3			2
	1745-1815	6	1	0	1			
15/3/89	0610-0630	15	3	1	4	Chopra.		
	0630-0645	16	3	0	3			
	0645-0715	20	3	2	5			2
	0715-0745	15	1	1	2			
	0745-0815	11	1	1	2			
	0815-0845	9	1	0	1			
17/3/89	0615-0645	8	0	0	0	Nau.		
	0645-0718	10	0	0	0			
	0718-0745	8	0	0	0			
	0745-0814	6	0	1	1		1	
	0814-0845	1	0	0	0			
	1700-1750	0	0	1	0			1
	1750-1820	4	0	0	0			
	1820-1830	11	0	0	0			
19/3/89	0615-0645	25	4	1	5	Chopra.		
	0645-0715	19	3	2	5		1	
	0715-0745	18	1	1	2			
	0745-0815	12	2	0	2			
	0815-0845	11	2	0	2		1	
	0845-0915	5	0	0	0			
	1700-1730	3	0	0	0			
	1730-1800	4	0	0	0			
	1800-1830	13	0	0	0			

Date	Timespan	No PC	No NI	NO Dis	Tot R.	loc.	with CC.	No. M.
21/3/89	0615-0645	17	0	1	1	Nav.		
	0645-0715	12	1	1	2			
	0715-0745	4	0	0	0			
	1715-1745	3	0	0	0			
	1745-1815	1	0	0	0			
	1815-1830	7	1	0	1		1	
23/3/89	0600-0630	8	0	0	0	Chopra.		
	0630-0700	9	0	0	0			
	0700-0730	25	4	4	8			
	0730-0800	18	2	2	4			1
	0800-0830	10	0	0	0			
	1630-1700	1	0	0	0			
	1700-1730	4	0	0	0			
	1730-1800	8	0	0	0			
	1800-1830	8	0	0	0			
27/3/89	0545-0600	13	2	0	2	Chopra.		
	0600-0630	15	2	3	5			1
	0630-0650	10	0	0	0			
	0650-0715	11	0	0	0			
	0715-0750	12	0	0	0			
	0750-0820	12	1	2	3			
	0820-0850	12	3	3	6			2
	0850-0905	6	1	0	1			
	1630-1700	10	0	0	0			
	1700-1730	9	3	1	4			3
	1730-1800	1	3	1	4		2	1
	1800-1825	13	1	0	1			
31/3/89	0600-0630	11	0	0	0	Nav.		
	0700-0730	10	0	0	0			
3/4/89	0535-0615	16	3	2	5		2	
	0615-0649	11	2	0	0			
	0649-0722	12	1	0	0			
	0722-0744	7	1	1	2		1	
	0744-0815	7	1	0	0		1	
	0815-0845	5	0	0	0			

Date	Timespan	No PC	No NI	No DS	Tot	Loc.	with CC	M M
4/4/89	0545-0615	8	0	0	0	Mav.		
	0615-0645	11	1	1	2			
	0645-0651	5	0	1	0	.		
	1645-1715	12	0	0	0			
	1715-1745	6	0	1	0			
	1745-1840	4	0	0	0			
8/4/89	1630-1645	4	0	0	0	Seetha		
	1645-1720	7	-	3	3			2
11/4/89	1645-1745	0	0	0	0	Kop Sak		
12/4/89	0537-0545	6	0	0	0	Cha		
	0545-0615	17	2	0	2		1	
	0615-0645	11	1	0	1			
	0645-0715	10	1	0	1		1	
	0715-0745	10	1	0	1		1	
	0745-0815	6	0	0	0			
	1645-1716	1	0	0	0			
	1716-1745	7	0	0	0			
	1745-1815	10	0	0	0			
	1815-1845	17	3	1	4		2	
13/4/89	1635-1735	0	0	0	0	Mav.		
	1735-1810	1	0	0	0			
	1810-1845	3	0	1	0			
14/4/89	0535-0615	0	0	1	1	Kooka	1	
	0615-0645	12	0	2	2			
	0645-0715	9	1	0	1			
	0715-0745	7	1	2	3			
	0745-0815	3	0	0	0		5	2
	1615-1701	0						
	1701-1730	0						
	1730-1800	4	2	0	2		1	1
	1800-1830	3	0	2	2			2
	1830-1850	3	0	0	0			
16/4/89	0530-0600	14	1	0	1	Cha	1	
	0600-0630	15	0	2	2			2
	0630-0700	14	1	2	3			
	0700-0730	7	0	0	0			
	0730-0800	5	0	1	1		1	
	1645-1840	7	0	0	0			

Date	Timespan	Tot Pc	N HI	N DIS	Tot	loc.	NCC	NN
22/4/89	0520-0530	4	0	0	0	cha		
	0530-0550	8	2	1	3		2	
	0550-0630	10	0	1	1			
	0630-0700	9	0	0	0			
	0700-0730	7	0	0	0			
	0730-0800	8	0	1	1		1	
	0800-0830	11	2	0	2			1
	0830-0900	7	3	2	5		2	
	1645-1715	3						
	1715-1745	3	0	0	0		1	
	1745-1815	2	1	0	0			
	1815-1845	8	0	1	1			
23/4/89	0530-0600	10	1	2	3	Kow		
	0600-0700	8	2	1	3		1	1
	0730-0730	10	0	0	0			
	0730-0800	6	0	0	0			
	1610-1645	3	2	0	2			
	1645-1715	5	1	4	5			2
	1715-1745	7	0	1	1			
	1745-1818	4	0	1	1			1
	1818-1845	9	0	1	1			
25/4/89	1615-1648	11	-	2	2	See	2	
	1648-1720	6	-	2	2		2	
	1720-1744	5	-	6	6		4	1
	1744-1814	4	-	6	6		5	
	1814-1845	9	-	5	5		1	
26/4/89	0530-0601	5	-	3	3	See	1	
	0601-0630	7	-	7	7		2	1
	0630-0700	5	-	3	3		1	
	0700-0730	3	-	0	0			
	1620-1650	11	-	3	3		1	1
	1650-1720	7	-	5	5		2	1
	1720-1750	9	-	3	3		1	1
	1750-1822	7	-	4	4			1
	1822-1850	17	-	6	6			

	Date	Timespan	NPC	NNI	NSDis	Tot	Loc	NCC	NN	
	28/4	0550-0621	8	01	54	5	Mau	2	1	
		0621-0650	5	0	3	3		1	1	
		0650-0720	5	0	1	1				
		1706-1805	0	0	3	3		2	1	
		1805-1830	2	3	1	4		1	2	
		1830-1850	4	0	1	1				
	29/4/24	0510-0600	9	0	2	2	Cha			
		0600-0630	9	0	0	0				
		0630-0700	6	0	0	0				
		0700-0730	7	0	0	0				
		0730-0745	3	0	0	0				
		1615-1645	0	0	0	0				
		1645-1715	3	0	0	0				
		1715-1745	2	0	0	0				
		1745-1815	6	0	0	0				
		1815-1845	14	3	2	5		2		
		1845-1858	10	0	0	0		2		
	30/4	0535-0605	8	1	2	3	Kaw	2		
		0605-0630	6	0	0	0				
		0630-0700	7	0	0	0				
		0700-0730	3	0	0	0				
		1630-1700	1	0	0	0				
		1700-1730	0	0	0	0				
		1730-1800	2	0	0	0				
		1800-1830	3	1	4	5		2	1	
		1830-1855	10	2	1	3			1	

Date	Timespan	NPC	NNI	NDII	TOT	loc.	HCC	MM.
13/5/89	0530-0600	9	2	4	6	KOW		6
	0600-0630	4	1	7	8		4	3
	0630-0700	2	3	4	7			6
	0700-0730	1	3	4	7		4	2
	0730-0800	1	4	0	4		4	
	1620-1650	0	0	0	0			
	1650-1720	0	4	0	4		3	1
	1720-1750	0	0	4	4			4
	1750-1820	0	0	0	0			
	1820-1850	0	0	0	0			
14/5/89	510-550	2	0	0	0	NAW.		
	0550-0621	3	0	3	3		1	1
	0621-0650	1	0	2	2			2
	0650-0720	1	0	2	2		1	1
	0720-0750	0	0	0	0			
	1620-1650	0	0	0	0			
	1650-1726	0	0	2	0		1	1
	1126-1750	1	0	2	0			1
	1750-1820	1	1	3	4		1	2
	1820-1850	6	2	3	5		2	
	1850-1905	6	0	1	0			
15/5/89	0500-0530	6	0	0	0	cha	4	
	0530-0600	8	3	2	5		1	
	0600-0630	9	4	3	7		1	
	0630-0700	5	0	3	3		2	
	0700-0730	4	1	1	2			
	0730-0800	11	1	2	3			
	1635-1705	13	-	1	1	see	1	

Date	Timespan	NPC	NNI	NDIS	Tot	loc	NCC	NH
20/5/89	1630-1700	4	-	1	1	see		1
	1700-1730	3	-	1	1			1
	1730-1800	6	-	0	0			
	1800-1831	8	-	57	7		3	1
	1831-1900	6	-	6	46		4	
22/5/89	0510-0540	7	0	0	0	cha		
	540-610	8	2	1	3		1	
	0610-0640	5	4	0	4			1
	0640-0710	3	0	0	0			
23/5/89	0515-0550	6	1	1	2	Nau		1
	0550-0620	3	0	0	0			
	0620-0650	0	0	0	0			
	1640-1710	1	0	0	0			
	1710-1740	0	0	0	0			
	1740-1810	1	0	0	0			
	1810-1840	3	0	2	2			2
	1840-1900	2	0	0	0			
24/5/89	0515-0546	0	1	3	4	Kowha		4
	0546-0615	0	0	0	0			
	0615-0650	2	0	0	0			
	0650-0715	1	1	1	2			1
	0715-0745	0	0	0	0			
	0745-0815	0	0	0	0			
	0940-1010	0	0	0	0			
	1150-1220	5	0	0	0			
	1220-1250	0	0	0	0			
	1250-1305	0	0	0	0			
30/5/89	1630-1700	14	0	0	0			
	1700-1730	8	0	0	0			
	1800-1830	7	0	0	0			
	1830-1900	4	0	0	0			
31/5/89	0515-0550	4	1	2	3	Kow	1	
	0550-0613	3	0	1	1			
	0613-0645	2	1	1	2		1	
	0645-0715	2	1	0	1			1
	0715-0750	1	0	0	0			
	0750-0810	0	0	0	0			

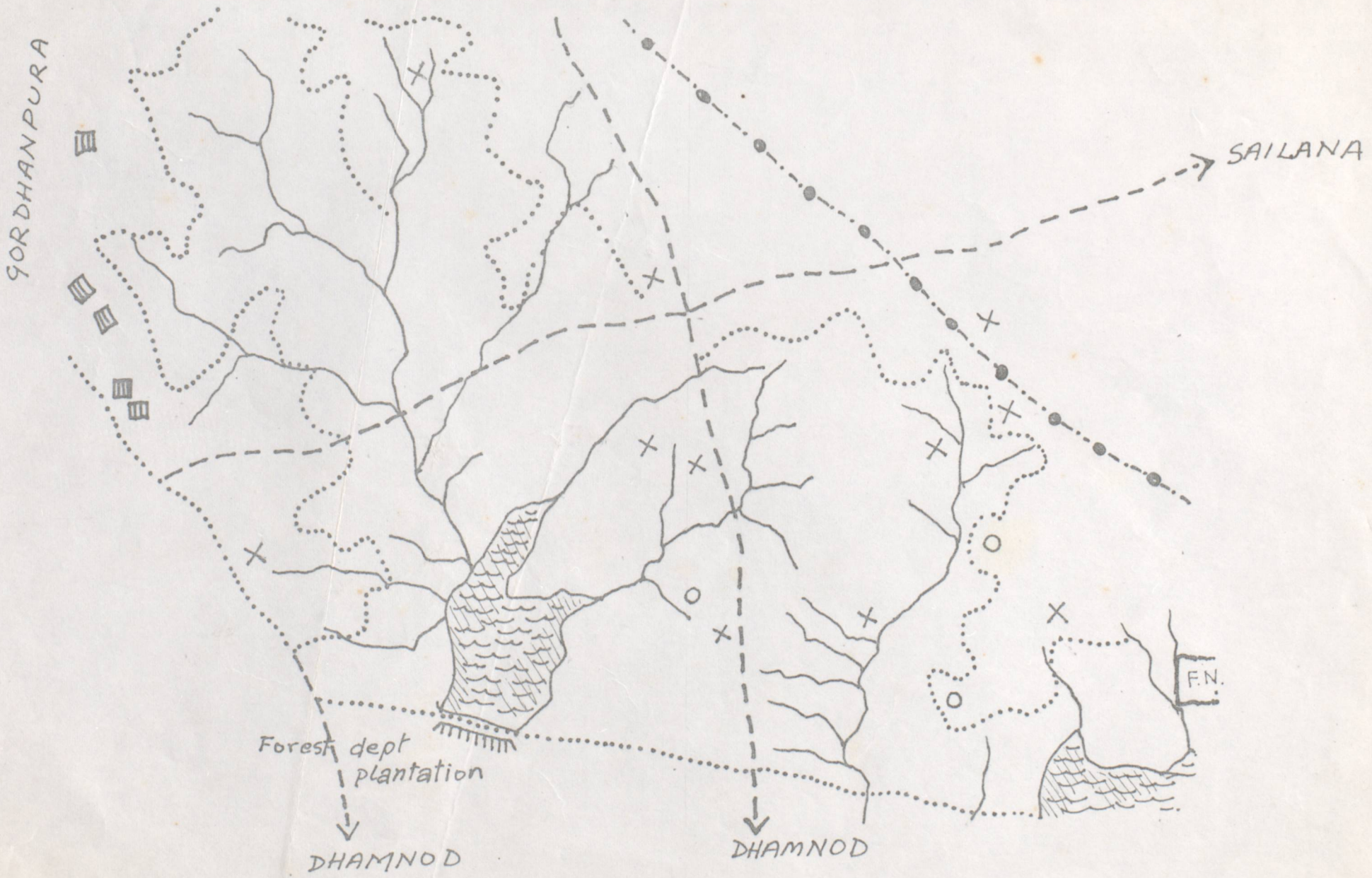
Date	Timespan	NPC	NNI	NDIS	Tot	loc.	NCC	NN	
31/5/89	1640-1710	0	0	1	1	Kow		1	
	1710-1740	0	0	0	0				
	1740-1810	3	0	2	2				
	1810-1840	4	0	0	0				
	1840-1910	20	0	0	0				
3/6/89	1700-1732	6	0	0	0	Cha			
	1732-1800	1	0	0	0				
	1800-1830	3	0	2	2		1		
	1830-1905	4	0	1	1				
11/6/89	1645-1715	0	-	0	0	see			
	1845-1908	1	-	3	3			2	
	1908-1920	0	-	0	0				
12/6/89	0515-0545	3	-	1	1	see			
	0545-0615	1	-	1	1				
	0615-0645	4	-	0	0				
	0645-0715	1	-	1	1			1	
	0715-0745	3	-	3	3			1	
	0745-0810	0	-	0	0				
	1615-1645	0	-	0	0				
	1645-1715	0	-	1	1		1		
	1715-1745	0	-	4	4		4		
	1745-1816	0	-	3	3		1	2	
	1816-1845	0	-	2	2			2	
	1845-1915	0	-	2	2			2	
13/6/89	1700-1715	0	-	0	0	see			
	1820-1815	0	-	0	0				
	1815-1915	0	-	0	0				
15/6/89	1700-1715	0	0	0	0	Cha.			
	1715-1745	2	0	0	0				
16/6/89	0530-0630	3	0	0	0	Kow			
	0630-0700	1	0	0	0				
	1645-1715	0	0	0	0				
	1715-1744	0	0	0	0				
	1744-1814	0	0	0	0				
	1814-1840	0	0	0	0				
	1840-1915	5	1	1				1	

Date	Timespan	MPC	MNI	MDIS	TOT	LOC.	NCC	NM
18/6/89	0530-0610	2	0	1	1	Naw		
	0610-0655	0	0	0	0			
	0655-0715	0	0	0	0			
	1740-1820	1	0	1	1			
	1820-1853	0	1	5	6			6
	1853-1913	1	0	3	3			2
23/6/89	1630-1700	0	0	0	0			
	1700-1730	0	0	0	0			
	1730-1809	0	2	0	2		2	
	1809-1840	0	0	0	0			
24/6/89	1715-1745	0	0	0	0			
	1745-1815	0	0	0	0			
	1815-1855	1	0	0	0			
	1855-1912	2	0	0	0			

Madraiya = M
Chapra = C
Navalkul = N
Satiana = S
Satimat = St
Salukpur = Sr
Baketal = B
Bhadital = BH
Kowaghatti = k
Tiger ----- = T
Sonaripur = So
Chital Chaura = CC
Rhino Enc. = Sr.
R S. Rd = S
Kanaratal = Sr.
Seelagadia = Sg.

SAILANA

DATE:
TIME: _____ TO _____
WEATHER:
TOTAL No. OF BIRDS:



Bengal florican. Dudwa National Park 1989

17/2/89 —> 25/2/89

Covered all grasslands around the Resthouse. Mostly with vehicle and less frequently on foot. No florican.

26/2/89.

flushed one ♀ florican ~~at~~ in the Rhino enclosure, near Bela taal, phanta but close to entrance at ~~gate~~. Salukapur.

26/2/89 ~~visited~~ 28/2/89.

visited grasslands of various males. No luck.

1/3/89

Morning 1 ♂ florican located within territory at Chapra.

Evening.

5.45 ♂ present in territory.

5.49.40 P.C.F. ♂ displayed. Wing sound clear.

2/3/89.

7.10 a.m. located ♂ at Chapra. STCA in sun. Difficult to see due to Sentar.

7.25. P.C.F ♂ displayed w.s.c.

Evening.

Nawalkhad. Nil Floricans seen heard.

3/3/89.

Morning. Chapra ♂ present in territory.

Evening.

4.30 →

5.30 located ♂ stCA.

5.31 foraging.

5.33 foraging.

5.41 1 ♀ flew in from agriculture landed chapra eastern corner.

5.41 ♂ running chicking. Threat display with another ♂ who probably flew in silently or was already present in grassland.
Parallel walk etc. Moved towards Macham.

5.54 Both stopped chicking standing about 2-4 metres apart. Possibly due to passing vehicle.

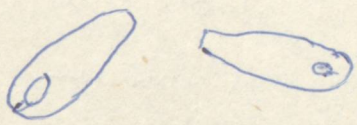
6.00 STCA (both)
(Resident ♂ mostly Black. Intruder plenty of buff).

6·05. Both ♂'s chicked for about 20 seconds. then

St CA.

6·05·15 Black ♂ moved towards butt. when reached about 1m other moved a little. Both chicked while moving.

6·09·00 Both St CA showing backs towards each other.



6·12 30. St CA as earlier.

6·12·50 moved a little chickily.

6·13·30 One ♂ St CA other foraging.

6·14·05 Black ♂ fluffed feather. Neck feathers at front fairly long.

6·15 Both ♂'s walking sort of Parallel. No chicking.

6·16·30 Both St CA.

6·17·15 Black St CA butt foraging.

6·17·45 Both moving or standing. less than 5m apart often stooping to peck.

6·20. Black ♂ sat down on ground. Butt ♂ still St CA 2-3 mts apart.

6·23 Butt ♂ shook out feathers then squatted. Still not totally dark. night jar not yet calling.

4/3/89

6.30 a.m. Machan. Chapra.

Both ♂ standing near each other since left last night. occasionally chiching. Black ♂ slightly coched tail.

6.31.30 Butt ♂ standing head in shoulder. Black ♂ STCA 2-3 mts apart

6.35 sunrise.

6.36 Both ♂ head in shoulder. Standing.

6.40. Both ♂ head in shoulder.

6.41 1 ♀ hog clear passed closeby. No reaction.

6.45 Both ♂ head in shoulder.

6.50 Both ♂ head in shoulder. black ♂ tail slightly coched.

7.15 Both ♂ head in shoulder. black ♂ tail slightly coched.

7.18. Butt ♂ raised head looking around.

7.19.30 brought head back to shoulder Both ♂'s shuffled feet a bit. But Black ♂ did not raise head.

7.23 Both ♂ heads up. Black began chiching. Butt moved slightly away.

7.25 and brought head to shoulders. Black came closer and also stopped head in shoulder. Throughout Black's tail coched Butt's not.

7.27. Blach standing head in shoulder. Butt slowly foraged then stopped standing head in shoulders.

7.32 Blach ♂ raised head.

7.33 Blach ♂ started preening.

7.34 " " stopped standing head in shoulder. Butt head in shoulder

↓

7.47 Butt raised head. Coalled then " " ".

7.52 vehicle passed. Both ♂'s alerted

7.52-40 Blach started chichiy

7.53 stopped callig. head in shoulder.

7.58 Blach ♂ started chichiy Butt ♂ stated movy away.

7.59. Blach ♂ STCA. Butt ♂ foragig then STCA.

8.02 Blach ♂ moved swiftly towards Butt chichiy 3-4 times. Re STCA. Butt ♂ began movig away.

8.04. Both ♂'s foragig slowly about 7-8 mts apart.

8.05 Blach ♂ stated chichiy the rushed towards butt who moved few steps away quichly.

8.07 Blach ♂ sat down then got up Butt ♂ STCA. Then Both head in shoulders.

8.13 Both ♂ movig about. Blach ♂ chichiy ~~stichtly~~. occasionally.

8.15 Blach standing head in shoulders. Butt STCA.

8.21 Butt foragig Blach STCA

8.25 People movig on rd. ♂ started runnig away from rd.

8·29 Both ♂ foraging. Butt appears to follow black

8·30 Black rushed Butt who flew 5-6 mts away Black began chicky then Both foraging.

Appear that Black chased ♀Butt away from food scource for Butt came back and pecky near black.

8·32 Black chased Butt away.

8·33 Butt came back both foraging near each oth.

8·35 Butt foraged a little away. Black stCA.

8·36 Both stCA

8·36·30 Black preening.

8·37 Butt foraging. Black stCA

8·40 Black stCA Butt foraged O.H.S.

8·42. Black foraging towards butt who was stCA.

8·45 Both foraged O.H.S.

9.00 left field.

Evening.

5·34 Both Black and butt ♂'s StA. together at chapra. Ren foraging together. about 5-10 mts apart at furthest.

5·43 Black ♂ chased butt ♂ then both running away Aron rd as vehicle passes.

5·45 Both foraging 10·12 mts apart.

5/3/89

5.20 pm.

1 ♀ florican on chapra machan rd. She squatted 0.4.s in grass when stopped vehicle c. 7-8 mts from her.

Remained hidden for 10-12 minutes until I lost patience and thrust her thinking she had already gone away. Flew off with one 'queech' call.

6/3/89

Thursday

6.00 am → chapra machan.

6.12 heard chichin for c. 1/2 min.

6.15 located both ♂♂s st/A head in shoulder. both about 3-4 mts apart.

6.25 Both standing head in shoulder

6.35 " " sunrise.

6.38 Butt ♂ stretched wings and moved slightly ~~away~~. Black ♂ walked towards it Butt moved away.

6.40 Both st[illegible] head in shoulder.

6.48 Both standing head in shoulder in sun about 6-7 mts apart.

7.03 P.C.L. Black ♂ raised head looked around then brought head back into shoulder.

7.05 Men passing on rd. Both ♂♂ moved away.

7·07 Both ♂s standy head in shoulder c. 10cm apart.

7·11. P.C.C Black ♂ raised head looked and then brought head back to shoulder. Butt ♂ no reaction.

7·12·45 crow called. Black ♂ tilted head inflated neck then

7·13·00 brought head back into shoulder. Butt ♂ standy head in shoulder.

7·15 Both ♂ standy head in shoulder

7·19·15 P.C.I. Black ♂ raised head fully inflated neck

7·20 standy neck partly inflated.

7·21·45 crow called fully inflated neck tuned

7·22·00 displayed only sound clear. no second only sound standy on landing.

Butt ♂ on hearing/seeing display immediately raised head and looked towards black ♂.

7·23 Both moving quite quickly towards each other. Black raised mantle cocked tail and started chicky

7·24 Butt moved up close to back then standy diagonally facing away. Butt did not chick but feathers slightly raised.

7·26·15 Black ♂ stopped chicky

7·27·15 Black stubs chicky

7·27·45 Black stopped chicky. standy mantle raised tail slightly cocked.

7·28·30 Butt ♂ retract head to shoulder. Black ♂ stA. mantle raised tail cocked. Both 1-2 cm apart.

7·30. Black also withdraws head to shoulder.

7·33 vehicle passes both ♂s hide.

7·34. Black chicked 3-4 times. Butt moved away.

7·35 Black rushed Butt who stopped and showed side. Ran butt moved. Black again rushed chicking. Butt stops facing away.

7·36·10 Black stCA. Not chicking

7·37 Both ♂s moved a little.

7·38 People on rd. Both ♂s moving away.

7·43 Both ♂s stCA in taller grass. c. 7-8 mts apart

7·45 Both stCA.

7·50 Both preening

7·54·30 Black preening Butt stops.

7·55·30 Black stretches wings.

7·56 Black ~~stCA~~ stanly head in shoulder. Butt foraging slowly.

7·57. ~~Blac~~ Both stCA.

7·59 Black stCA. Butt Foraging.

8·00 Both stCA.

8·06 P·C·C· Black ♂ fully inflated neck turned around swiftly and made as it to display, then a moment later displayed. Butt ♂, when Black had inflated neck and made as it to display had sort of ducked head or squatted.

Display N·W·S· N·D·D. Sat flew and landed about 10-15 mts away. Black ♂ is in taller grass

8·10. Both moving swiftly towards each other. Black started chicky and Butt stopped and started pecking at something on the ground.

Black stops chicking.

8·12. Butt pecking same place. Black O·U·J.

8·13 Butt begins moving.

8·15 Butt STLA. located Black.

8·17. Both ♂'s preening c. 2-3 mts apart from each other.

8·21 Both ♂'s preening

8·26 Both ♂'s started foraging

8·35 Both O·U·J.

8·40 located Black STLA

8·47 Black STLA.

8·48 ~~STLA~~ O·U·J.

9·00 O·U·J.

left field.

6/3/09 Evening.

(Due to direct sunlight observation uncomfortable)

4:25 chapra →

4:38 located ♂ STCA (black)

4:46 ♂ still foraging more or less same place.

4:54 STCA

5:02 STCA

5:05 preening

5:07 STCA

5:11 STCA some movement but more or less same place

5:18 STCA

5:30 STCA few steps occasionally more or less same place.

5:45 STCA often has head down. probably feeding on vegetation

5:47 foraging

5:55 foraging

6:03 foraging

(♂ unsure if black or butt)

6:05 left field.

9/3/89

Khepra machan

6·33 Sunrise

6·10 → Florican not seen

6·42 Peacock called loud ♂ displayed C.J.C, N.J.W.S. St(A on lardy

6·48 foraging

6·50 St(A as people passed

6·52 foraging

6·55 foraging

6·58 St(A shook out feathers. Stalky head in shelter

6·59 foraging

7·02 P.C.C ♂ stopped NFI (1/2 min) then foraging

7·03 People on rd. ♂ moved into longer old grass

7·04-7·15 P.C.C ♂ displayed C.J.C. N.J.W.S T.E.P.C 0s St(A on lardy

7·05·40 foraging

7·06 ST(A

7·09 St(A head in shelter

7·12 P.C.C ♂ ST(A NFI 1/2 minute. Then shook out feathers.

7·13 ST(A tail cocked

7·14 P.C.C ♂ displayed C.J.C. N.J.W.S exhilique. D.D. T.E.P.C 0sec. Dur 9 secs. St(A on lardy

7·21 ST(A

7·22 PCC ♂ NFI then St(A

7·26 PCC ♂ NFI (10s) then foraging

7·30 STCA in sun tail cocked NPI
↓
7·42 Started foraging

7·44 STCA Tail cocked
7·51 ♂ disturbed by people on road.

Evening.

4·25 →

4·40 84°F
4·47 located ♂ STCA
~~5~~·10 started foraging slowly
5·17 stretched colys. foraging near/with peacock.
84°F.
5·23 Stands looks around.
5·27 ♂ STCA as 3 boar forage close by. No reaction
5·30 resumed foraging

4·40 – 5·30 = 6 P.C.

5·33 ♂ moved away few metres fat as wild boar come too close.
5·35 foraging
5·40 O.U.S.
5·45 located ♂ foraging 80°F
6·03 foraging. Sunset
6·08 STCA
6·10 foraging slowly.

6·11 S+CA

6·12-30 foraging

6·22 Stopped. S+CA.

5·30 – 6·20 = 5 P·C. 74°F

6·25 S+CA

6·29 ♂ roosted by squatting

6·20 → 6·30 = 13 P·C.

11/3/89 little dew, cloudy. Chapra

6·20 a.m. ♂ S+CA in shortgrass (low grad) moved into taller grasses of Right high ground.

6·22 S+CA.

6·26 P·C·C (Meow) ♂ displayed. W.S.C. N.S.W.S.

Tebc OS S+CA on landing.

6·30 S T C A. Almost completely black Only few butt specks left between eye and beak

56°F

6·31 foraging

6·32 S+CA

6·33 foraging back into low ground.

6·39 stopped. S+CA

6·40 People passing on rd. ♂ moved into RhG and hid in taller grasses.

6·46. stood up. S+CA Head tucked in shoulders.

6·50 P·C·M. ♂ looked up NPI

6·51·30 NFI visibly excited.

6·52·15 Displayed. C.S.C. Ext. FI. NSWS DD. TEPC 0s

2 min 20s. Flew right across territory. landed border of Harrowed ground. located pumping courtship display.

6·56·45 P.C.C. ♂ displayed C.S.C. Ext. FI. NSWS D.D. TEPC 0s landed in a low grass shaw grass.

6·57. visibly back NPI.

7·00 PCM ♂ STCA NFI displayed C.S.C. Ext FI. NDD. landed in middle of Harrowed area. TEPC. 0s. STCA NFI then O·U·S.

7·03·30 located pumping C.D.

7·08·10 ♂ in pumping C.D. ♀ flew from ahead of ♂ landed 5-10m away.

7·09·00 ♀ flew and landed 20-30 mts away. ♂ followed and landed 40-50 mts away in slightly different direction. Both O·U·S.

7·11·50 Peahen chased ♀ who took to flight. ♂ followed.

7·12·10 Both land near each other.

7·12·50 ♀ took to flight landed a little away. ♂ followed on ground in pumping C.D.

7·14·45 ♀ flew and landed c. 75 mts away. Both O·U·S in taller grass.

60°F PC=4-5

7·18·15 ♂ flew from near where ♀ had landed
landed in L·H·Q· STLA

7·20·50 P·C·C (Koan) ♂ NFI momentarily.

7·21 foraging then STLA

7·29 STLA

7·33 PCC ♂ displayed N·W·S Ext. FI. D·D
NSWS TEPC 0s laid in low grad. Ren O·H·J

7·38. located. PCM ♂ NFI. vehicle ~~parked~~ stopped.
Deflated STLA.

7·42 STLA

7·44 people passing on rd. ♂ STLA in lower old grass.

7·47 started preening

7·50·30 vehicle passing. ♂ alerted STLA.
62° F PC=4

7 52 30 ♂ foraging towards R·H·4 taller grass.

7 54·30 stopped STLA. sun going through.

7:55 PCC (Meow) ♂ displayed W·S·C· N·S·WS
TEPC 0s STLA on landing

7 59 foraging

8·04 STLA

8·04·25 PCC ♂ NFI momentarily then STLA

8·06 PCC ♂ NFI then displayed. ~~W·S·C·~~ N·S·WS #
TEPC 2s

8·07 foraging

8·12 STLA on rat sandmound. PCC turned and NFI

8:13 foraging

~~66°~~ 66°F PC = 5-6

8:18 foraging appears to be pecky grass shoot/roots

8:25 foraging into RHG.

8:30 STCA in lower grass.

8:32 resumed foraging

8:36 STCA

8:37 foraging

8:39 STCA slowly/shy

8:41 preen

8:45 stopped preen started foraging

70°F PC = 12

8:55 stopped. STCA.

8:57 started foraging

9:04 P.C.L. & NFI then N.D.

9:05 P.C.L. & displayed NWS ekt FI. D.D. N.sws.

landed in depression short grass. TEPC = 0s

STCA where landed.

9:06:45 foraging

9:11 stopped STCA

9:15 STCA

74°F PC = 10-11

9:30 STCA

77°F PC = 4-5

left field.

11/3/89

10.50 located ♂ at Kowkaykatti near rd. Sattana west Big ♂ plenty butt on head and possibly on left as well. appears to be chapra butthead.

Evening

4.00 chapra No cloud
4.15 82°F
4.25 located ♂ foraging R.H.Q.
4.28 St/A
4.32 stated foraging
4.33 St/A moderate cloud
4.45 St/A 80°F
4.49 NPI shook out feathers stated foraging
4.53 stretched coins carried on foraging.
5.05 " " " "
5.10 " " "
5.15 foraging then 0.4's 78°F
5.21 located St/A
5.24 foraging at one spot
5.30 Hog deer fawn curiously (tail up) approach ♂. ♂ moved away. Fawn came closer ♂ St/A then fawn moved away.

5·32 ♂ started foraging

5·34 vehicle passed ♂ St1A

5·48 MF1 shook out feathers started foraging

75°F

5·57 stopped. St1A

5·58 Took to flight landed closer to RH.

Could not relocated.

6·25 located on Nallah. Moving bath to and main

area.

12/3/89.

6·30 Satiam ♂ St1A near display tree head in

shoulders.

7·30 Satiam ♂ foraging

Chyra ♂ St1A on RHq.

13/3/89

Evening.

5·00 → Nawalkot.

6·02 located ♂ foraging. Completed breeding plumage

barring few specks of buff above bill and between

eye. frequently panting

6·08. stopped St1A MP1. Sunset.

6·09. foraging

6·10 St1A

6·11·55 turned NF1 and displayed.

6·12·05 stIA N·D after laying

6·15 stIA.
Took few steps about and looks and. Brain hear bird calling
NB1 once mountainly.

6·17·55 PCL (meow) ♂ turned and NF1

6·18·30 turned NB1 then SN

6·11·40 stIA N·D.

6·19·15 PCL (kok kok kok) no reaction.

6·19·45 PCF (meow) no reaction.

6·20 walked little.

6·20 stCA

6·23 stIA walks little

6·26 PCL (meow) ♂ displayed.

but fold.

14/3/09 Clear sum

4:00 chapra
4:15 82°F
4:45 82°F
5:02 located ♂ stlA
5:04 people passing on rd. ♂ skulked away.
5:05 located stlA
5:06 foraging cloudy.
5:08 foraging
5:08:50 NFI stlA
5:09:05 foraging N.D towards display zone
5:10 stlA
5:11 NFI
5:11:15 N.D stlA
5:12 foraging
5:12:40 stlA
5:16:00 stA 28°F PC=10
5:18:30 Disturbed by vehicle moving away
5:19:10 stlA
5:19:45 foraging
5:20 hid from people on rd.
5:22:45 stlA
5:24:30 stlA
5:30:30 PCC (meow) ♂ ~~AIR~~ NFI and displayed. W.S.C
NSWS D.D ♀ EPC ♂
5:30:45 stlA on landry
5:36 NFI shook out feathers stlA
5:40 stLA sun comes out.

5·42 ·45 cyclist passed & moved away from rd.

5·43 ·30 foraging

5·45 "

5·46·40 St LA

5·47·20 foraging

5·50 St LA

5 52 foraging

5·54 foraging opla

5 55 walked on top of Rat Sail mound St LA

5·56 ·40 PCL & NFI

5·56·55 St LA NID

6·06 ·45 NFI shook out feathers St LA rat sail mound.

6·10·45 moved into grass when cyclist passed.

6·12 foraging onto R·H·4 taller grasses.

6·12·30 St LA

6·12·40 foraging

6·15 foraging

6·19 foraged 0·4's.

6·25 left field.

76° F PC = 15

cloudy

73° F 4-5 B·C

15/3/89

6·05 Chapra macham

♂ st/A head in shoulders.

6·10 " " " 55°F

6·15 " " "

6·21·40 PCC ♂ turned and NF1

6·22 NB1

6·22·30 foraging

6·23·15 st/A

6·23·45 PCC ♂ NB1

6·24·40 P·C·C (meeow) ♂ NF1 & displayed w.s.c (but faint) T·E·P·C ♂s st/A on lady

sunrise.

6·28·05 P·C· ♂ turned NB1 5-10s. then st/A N·D.

6·28·45 shook claw from feather

6·30 ♂ st/A in sun

6·10 - 6·30 PC = 11-12

6·33 st/A NB1 w/ drooped tail cocked.

6·37·10 P·C·C ♂ NF1

6·37·30 walking

6·37·50 PCC ♂ st/A NF1

6·38·15 st/A N·D

6·39·30 st/A mantle slightly raised

6·40·55 PCC ♂ turned NF1 5s st/A.

6·41·00 st/A ~~and~~ tail cocked w/ drooped.

6·47 st/A 57°F PC = 13 cloudy.

6·46·00 P·C·C (meow) ♂ displayed C·O·C· (faint)
NSWS D·D· ext fl. St/A on landy. (flew across to
near harrowed area)

6·48 St/A.

6·50 " NPI

6·50·30 moving slowly similar to C·D. (no rapid walk/pop)

6·52·40 St/A

6·53·20 walked at pupil once.

6·53·35 St/A NPI

6·54·00 moved into Harrow and St/A

6·57 PCC ♂ found NFI

6·57·20 PCC (meow) ♂ NFI ♂ displayed NWS
Ext fl. D·D. St/A when called. flew across and
landed in harrowed area.

6·59·35 ♂ NFI shook out feathers

7·00 foraging back across harrowed area

7·05 PCM ♂ NFI St/A then foraging
60°F PC=16

7·15·30 St/A

7·16·45 St/A

7·18·30 PCC ♂ NFI momentarily

7·19·15 PCF ♂ NFI ♂ displayed C·O·C (very faint)
N·S·W·S Ext fl. D·D. called in long grass St/A. tail cocked. T·E·P·C OS.

7·21·35 ♂ St/A tail cocked wings drooped.

7·35 Tail cocked wings drooped. Started preening

7·41·30 cyclist on rd. Alerted stopped preening

7·42·30 Resumed preening

7:43:15 stats foraging

745 foraging 62°F PC=13

746 STCA tail cocked sun comm through

7:48:00 PCC (meow) ♂ and NFI

7:48:10 STCA N·D | NPI tail cocked wigs droopd

7:49:50 stated preening " "

7:55 started foraging

8:00 Alerted by parsly vehicle

8:02 moved into R·H·Q· as vehicle stops.

8:03 STCA in taller grass.

8:05 stats walky

8:07 STCA when vehicle starts.

8:11 "

8:11:55 PCM (meow) ♂ displayed w·s·c· NSWS STCA on landing TEPC: 05

67°F PC=9

8:15 STCA N·D

8:17:45 ~~STCA~~ PCM ♂ NFI

8:18:05 STCA N·D

8:26:45 PCL ♀ NPI then N·D STCA

8:30 STCA

8:38:15 stated preening

8:38:45 stops "

8:42 stated foraging

8:43:30 STCA as cycle passes.

72°F PC=7

8:44 Foraging

8:59 passed on rd.

9:00 foraging on rd then into Chopra North. left field.

17/3/89 Morning Mawddwl Dew

6.15 48° F

6.21 sunrise

6.30.15 ♂ foraging

6.31.40 STCA

6.36.45 stdd foraging

6.37.30 swiped slightly and picked insect of seuta.

6.41.40 STCA

6.45 STCA head in shoulder.

53° F PC=8

6.49 walkd few mtres then STCA hunchd. neck ruffl

Shook dew off.

6.50 STCA Hunched.

7.05 moved the STCA

7.10 forged O.U.J.

7.17 relocated STCA.

59° F PC=10

725 STCA

7.45 STCA 64° F PC=8

7.48.30 Preen then STCA

7.55 STCA

8.01.30 Cooo called ♂ NFI

8.01.45 Crow cally displayed W.J.C. N.J.W.J

TECC = 0 STCA on landing.

8·04·20 foraging

8·05 St1A

8·07 foraging

8·12 St1A

8·13·45 Foraging

70°F PC=6

8·30 Forged O.U.S.

8·45 O.U.S 74°F PC=1

8·50 left field.

Evening Marathon.

5·00 Cloudy 82°F

5·17 d' flew from middle of east tree zone landed in display dive middle of west to display zone. Ran into taller grass/area of sentar. Neck not inflated calmly C.D. O.U.S.

5·45 Displayed Ext Fl. D.D. C.O.S.C. NISUS from wire had earlier into or beyond western tree line. O.U.S.

5 50 75°F PC=0

6·20 72°F PC=4

6·21 located ♂ St1A southern tree area.

6·25 St1A.

6·30 ST1A PC=11

left field.

(28)

19/3/89 Chapra

6·10 a.m ♂ STCA

6·15 STCA feathers fluffed launched 57°F

6·17·55 PCC ♂ displayed Co·o·c NSWS TEPC Os

6·20 PCC (meow) ♂ displayed Co·o·c NSWS EXTEE
D·D. walks back.

6·21 STCA

6·27 PCC (meow) ♂ displayed Co·o·c. Ext tl.
NSWS D·D STCA on lady Sunrise.
TEPC Os Duration 17s.

6·30 foraging

6·37 STCA in sun

6·38 PCC (meow) ♂ displayed Co·o·c. D·D NSWS
TEPC Os Dur 6s walks back on lady

6·41 foraging

6·44 PCM ♂ NFI

6·44·20 N·D and foraging
59°F PC=20

6·47·45 STCA

6·48·45 PCC (meow) ♂ NFI STCA

6·49·15 STCA N·D.

6·50 preen momentarily

6·51 Crow called. ♂ NFI STCA. turned cocked tail.

6·51·45 PCC meow. Displayed Co·o·c. NSWS.
D·D. TEPC Os Dur. 6·5 s. STCA on lady.

6·56 STCA.

6·57·35 PCL ♂ NFI STCA.

6·58·15 STCA ND. Tail cockd cony drooped NPI.

7·08·15 PCM ♂ NFI ♂ displayed c.o.s.c. NSWS.

D.D. TEPC ♂ foraging back on landy.

7·12 foraging

7·14·30 STCA

63°F 15 Pc.

~~Data~~

7·25·30 PCL (meow) ♂ displayed c.o.s.c. NSWS

D.D. TEPC ♂ foraging on landing

7·26 STCA tail cockd

7·32 stadd foraging

7·33 STCA

7·34 preening

7·37 STCA

7·38 foraging

7·40 STCA

7·41 preening

7·42·20 PCL (meow) ♂ stopped preening and NFI and displayed c.o.s.c. NSWS D.D. TEPC ♂ STCA on landing

~~7·44~~ 7·45 STCA 67°F 16 Pc.

7·47 preening

7·~~48~~ foraging

7·54 STCA

7.55.20 PCC ~~chk~~ (Rain) NFI then N.D.

7.55.50 PCC (Meow) NFI then foraging N.D.

7.59 STCA

8.02 foraging

8.04 STCA then preening

8.07 preen

8.10 STCA

8.11 preening

8.12 NFI shook out feathers started foraging

8.15 foraging at one spot.

67° F 10 P.C.

8.16 STCA

8.22 foraging

8.25 STCA Crow called NFI then NPI

8.26 Foraging N.D

8.28.20 took to flight label in harvard area.

STCA when landed.

8.31.20 foraging

8.33 STCA

8.34.30 PCC & NFI momentarily then foraging

8.45 foraging

72° F PC=10

8.46 STCA

8.47 NFI shook out feathers. started foraging

8.50 foraging

9.10 foraged 0.4.J.

9.15 75° F PC=5 left field.

19/3/89

Evening.

4:50 ♂ St(A RHG.

4:53 White eyed buzzard (?) flew overhead. ♂ ducked in grass but soon raised head.

4:55 St(A

4:58 foraging

5:00 " OBCA 85°F cloudy/sun ↓

5:18 St(A

5:26 pecking on ground.

5:28 St(A

5:32 foraging sun comes out.

83°F PC=3

5:35 St(A.

6:00 St(A

80°F PC=4

6:05 started foraging

6:08:30 St(A

6:09:45 started foraging sunset.

6:12 St(A on rat sand mound.

6:26 started walking

6:28 O.O.S.

6:30 77°F PC=13.

21/3/89

6.05 a.m Nawalkad

6.16 Sunrise 56°F

6.22 located ♂ foraging

6.24.20 PCM ♂ momentarily inflated neck fully. Displayed W.J.C NJWS D.D. ST1A on landing TEPC Os

6.25.00 ST1A

6.27 Started foraging

630 ST1A

6.45 ST1A 59°F PC=16

6.48 Started walking slowly

6.49.05 P.C.L. (meow) ♂ momentarily NF1 & displayed W.J.C N.J.W.S TEPC Os ST1A on landing

6.55 ST1A

6.57 Started foraging

6.59 ST1A

6.59.50 PCM (meow) ♂ NF1

7.00.45 ST1A N.D

7.02 foraging

7.05 ST1A

7.07 preening

7.15 ST1A 63°F PC=10

7.16.30 Stretched ways.

7.17 Started foraging

7.35 foraged 0.4.s Nawalkad ent.

7.45 0.4.s 70°F 3-4 PC

21/3/89
Evening

5·00 Nawalkd
5·15 91°F Not located.
5·45 89°F PC=3
6·06 located ♂ western zone foraging
6·09 sunset
6·15 foraging 85°F PC=1
6·17 STCA
6·21 foraging
6·26 STCA
6·28 foraging
6·29·30 PCC (kok kok) ♂ turned alerted crow called NFI then foraging
6·30 foraging
84°F PC=6

23/3/89 Chapra

5·50 →
6·00 59°F
6·30 59°F PC=8
7·00 63°F PC=9
7·06·30 ♂ flew in from towards Nawalkd. Started Chicking just before reaching display site
STCA R·H·G·

7.09 stated foraging

7.11.20 PCL (meow) ♂ NF1, displayed c.o.c NSCOS Ext Fl. NDD landed middle of CHG. St1A on landing

7.15 St1A

715.30 PCL (meow) ♂ NF1

7.16.20 St1A N.D

7.18.45 PCL (meow) ♂ NF1 displayed c.o.c NSCOS Ext Fl. D.D. TEPC 05 Dur. 14s St1A on landing

7.20.20 PCF (meow) ♂ NF1 and displayed. c.o.c. NSCOS D.D. TEPC 05

7.22 foraging

7.23.45 PCL (meow) ♂ St1A NF1 momtarily.

7.24.30 foraging

7.25.15 St1A

7.26.10 PCM (meow) ♂ turned NF1

7.26.30 N.D walked onto rat sand mound

7.26.50 St1A on rat sand mound

7.29 PCM (meow) ♂ turned NP1 momentarily

7.29.15 St1A N.D

7.30.05 P.C.C (meow) ♂ displayed. c.o.c. NSCOS D.D. Dur 6s TEPC 05 St1A on landing

70°F PC=20

7·32 foraging

7·33 St1A on rat Sand Mound

7·34·45 foraging

736·20 PCM (meow) stopped turned NF1

736·40 foraging N·D

7·37. 15 St1A next to rat Sand mound.

7·39.50 PCF (meow) ♂ turned and NF1

7·40· St1A N·D

7·41 foraging

7·41·45 St1A on rat Sand mound.

7·43 foraging

7·44·10 P·C·F (meow) ♂ NF1

7·44·30 ♂ displayed carried on flying landed in Chapra
east ~~east~~. e.o.s.c. Ext. F1. NSWS NDD St1A on
landing TFPC = ~~05~~ 15s

7·47 O·U·S·

755 located ♂ foraging

7·57 St1A

8·00 St1A 75°F PC=15

8·08 foraging

8·15 St1A

8·19 foraging

8·25 O·U·S·

8·30 O·U·S· 79°F PC=10

left field.

Evenly. Chypra. Sun/clear moderate to strong wind

4·30 90° F

5·00 87° F PC=1

5·03 located ~~of foraging~~ STLA in east corner [illegible] this morning.

5·04·45 foraging

5·05 STLA

5·07 foraging

5·12 foraging

5·15 foraging slowly OPCA

5·17 Stretched coiys. probably shitted. carried on foraging

5·15@ Foraging OPCA sun/cloudy.

5·30 " " 85° F PC=4

5·34 STLA as vehicles pass.

5·38·20 started foraging

5·44 foraged across rd. (hurried across rd into main area)

5·57 Alerted by passing vehicles. 0·4·s in grass.

5·58 people got out of vehicle 0·4·s.

6·00 0·4·s.

81° F PC=8

6·01 located foraging

6·01·30 STLA

6·02 foraging

6·09 STLA sunset

6·10 foraging

6·11 St 19

6·30 St 19 78° F PC= 8

633 Stat'd foraging

6·35.30 HFI shook out feathers squatted to roost.

left field.

24/3/89

8·25 Near / opposite Muthna. Flock 2 flamingos from elephant beach. Both flew and landed together. One behind appeared to be imm ♂ as seemed to have longer black feathers on crest. However wings were not very white and almost undistinguishable from ♀s. Had landed in fairly extensive patch of shortgrass South of Muthna.

Morning.

Kowhaghatti ♂ located between 2 bhojis of Chittal Chorana near Simul tree.

27/3/09 Chapra

No dew Cloudy.

5.45 a.m ♂ St(A.

72° F

~~5.50~~

552 Stretchd wkys.

5.53.45 started foraging

5.54.15 St(A

5.55.30 foraging

5.56.30 St(A

5.58.15 foraging

5.58.20 PC(meow) ♂ walkg NFI

5.58.30 St(A N.D

5.59.30 PC(♂ ~~meow~~ NFI

5.59.40 St(A N.D

5.45 -> 6.00 PC=13

6.02 ♂ St(A

6.04.20 started foraging

6.06.40 ♂ NFI (105) and displayed. Co.o.c. NJWS D.D. foraging back on landing T.E.P.C. 1m 48s

6.07.30 St(A

6.08.30 PC(meow) ♂ found NBI (5-10s) then foraging

6.10 walkd outop of rat sand mound. Ren St(A

6.10.10 PC(meow) ♂ NFI

6.10.30 St(A N.D

6·12·15 foraging

6·12·50 st1A on rat sand mound.

6·14·20 started foraging

6·15·55 St1A

6·16·35 PCL (meow) ♂ NF1 and displayed. c.o.s.c. NSCOS
D.D. TEPC Os st1A on landing. Dur. 65

6·17 foraging path.

6·20·45 st1A on rat sand mound.

6·24·30 PCC (meow) ♂ NF1 and displayed. c.o.s.c. NSCOS
st1A on landing TEPC Os

6·27·25 started foraging

6·28·15 st1A (slight cord stalk)

6·30 st1A 69°F PC=15

6·31 preening

6·33·35 st1A

6·41 disturbed by vehicle. Started coaxing away from rd.

6·45·15 stretched wings

6·45·30 took to flight landed in harrowed area.

6·50 o.u.s.
69°F PC=10
(left machan)

7·00 located ♂ st1A on edge of harrowed area.

7·05 started foraging.
(returned to machan) ♂ o.u.s from machan.

7·15 70°F PC=11

7·25 located ♂ briefly foraging at edge of harrowed area.

7·38 STIA then foraging

7·39·30 started preening

7·46 stopped preen. Status foraging

7·50 foraging 70°F 10-12 pc.

8·00 foraging back towards display zone.

8·02 PCC (meow) ♂ NF1 STIA

8·02·15 STIA N·D

8·03·10 started foraging

8·05 moved from harrow area into grass area.

8·05·40 took to flight. Landed in display zone. STIA on landing.

8·06 P·C·F (meow) ♂ momentarily NF1 and displayed C·S·C N·S·W·S. D·D. TEPC 0s foraging back.

8·12 STIA when displayed from. people passing ♂ disturbed

8·13 STIA

8·17·45 PCC (meow) ♂ NF1 ♂ displayed C·S·C. NSCS D·D. TEPC 0s Dur. 7·5s

8·19 foraging back.

8·20 foraging 71°F PC=12

8·22 PCC (meow) ♂ NF1 STIA 10s then foraging

8·24 STIA at spot where displayed from.

8·26 STIA

8·28·45 STIA NF1

8·29·00 STIA N·D

8·32·05 ♂ NFI

8·32·10 PCL ♂ displayed. C.S.C. NSCOS D.D. TEPC Os

Dur 7·5s O·4·S.

8·36. foraging back

8·37 STIA. PCM/F ♂ NFI 15s then STIA N·D.

8·37·40 foraging

8·38·00 PCF ♂ NFI displayed C.S.C. N.S.C.S

TEPC Os. STIA on landing.

8·39.20 foraging medium/strong wind

8·41 foraging

8·45 O·4·S.

8·50 O·4·S. 72°F PC=12

8·52 located STIA

8·52·40 PCM ♂ NFI

8·52·50 N·D foraging O·4·S.

8·55 glimpses foraging

9·00 O·4·S.

9·05 O·4·S. 72°F 5-6 PC.

[c. 7.00 a.m 1♂ flew from Kochayhatti towards Navalkhad]

Evening.

4·30 85°F sun/cloudy

5·00 82°F PC=10 cloudy.

5·02 located ♂ foraging RHG. O·4·S in tall grass

5·20 located foraging towards display area.

5·21·30 STIA on edge of display L·G.

5·23 foraging

5·23·45 St(A NFI (5s) then moved into shortgrass L·G.

5 24 30 St(A.

5·24·45 walky NFI

5·25·00 " N·D

5·25·30 foraging

5·26·30 St(A

5·27·30 walky

5·27·40 St(A NFI

5·28·00 St(A N·D

5·29·18 P·C·F (meow) ♂ Displayed to J·C. NSWS TEPCOS

foraging back N·D

5·30·30 St(A edge of R·H·G.

79°F PC=9

5·32·35 foraging

5·34 Disturbed by people on rd.

5·37 vehicle passes. still alerted. St(A behind clump of grass.

5·41·30 P·C·F (meow) ♂ NFI

5·41·45 St(A N·D

5·47 foraging

5·48·45 St(A

5·49·10 Crow called NFI.

5·49·30 foraging N·D

5·49·55 St(A

5·50·20 NFI / NPI

5·50·45 N·D.

5·51·30 Crow called. Turned NFI and displayed.

TEPCOS dur 5·7s foray back. to J·C NSWS

5·52 foraging
5·53·45 stCA
5·55·35 foraging
6·00 " 77°F PC=0 cloudy.
6·01 stCA
6·08·25 PCM (meow) ♂ NFI
6·08·30 stCA N'D.
6·08·50 Vehicles passed. ♫ hid.
6·10·50 NFI shook out feathers. fitted wings.
6·11 stCA
6·12 appears to have roosted.
6·15 stCA same place.
6·15·45 NFI shook out feathers squatted to roost.
6·25 O.U.S.
PC=13 76°F
Started drizzly not yet dark.

28/3/09
Hawaii.

6·00 63°F grass wet from rain.
Cloudy/overcast.
6·07 located ♂ foraging
6·12 stCA
6·15 foraging
6·16 PCF (10° displaced not located/use only heard)
Observed ♂ foraging

(44)

6·30 foraging 61°F

6·49 STCA

6·50 started foraging

6·53 STCA

6·59 foraging 63°F overcast

7·05·08 took to flight 2-3 wingbeat soar flew across territory at landed behind South tree zone landed in display alive. STCA on lady.

7·10 STCA.
located other ♂ near Nawalhd west roard.
STCA tail cocked. Presumably come earlier displayed from

7·15 ♂ O·H·S. other ♂ STCA tail cocked.

7·26 2♂ aerial chase from west Nawalhd. flew O·H·S east. Only one ♂ chicky

7·31 landed (saw 1♂) chicky behy tree area east display zone.

732. hear chicky ♂s O·H·S.

7·43 1♂ flew and landed in west zone.

8·00 O·H·S.

8·17 left field.

28/3/89.
HEAVY RAINS

11·00 a.m flushed 2 ♀ from road, one on rd other very close from grass near nallah chapra. One from rd flew and landed in display zone. Other from grass landed close to where took off from

5·30 – 6·10 pm No activity at Navalkal new territory.

31/3/89

Navalkal Sun/clear Heavy dew.

[6·00 56°F
6·04 Sunrise]

5·57 located ♂ STCA

6·00 stated foraging

6·04 STCA head in shoulder

6·30 STCA head in shoulder.

57°F PC=11

6·40 STCA

[heard chirchry of another ♂. not sighted]

6·41·40 PCM (meow) ♂ AFI ♂ displayed. W.J.C.

NSWS TEPC OS O.U.S.

6·50 located STCA

6·51 foraging then O.U.S.

7:00 O.U.S. 64° F PC=10

7:40 P.C.M (meow) ♂ NFI & displayed C.O.S.C. NSCOS TEPC Os. O.U.S.

72° F

8:02 located ♂ foraging

75° F

8:03:10 crow called ♂ NFI & displayed C.O.S.C. NSCOS TEPC Os

8:05 foraging

8:27 foraged O.U.S.

8:30 O.U.S. 75° F left field.

3/4/89 Chapra

Hay dew cold.

5:35 → not located ♂

5:45 located ♂ STLA in roosting area. head in shoulders.

50° F

5:51:15 PCM (meow) ♂ looked up started foraging

5:52:40 STLA in short grass.

5:53:20 PCM (meow) ♂ NFI & displayed C.O.S.C NSCOS TEPC Os STLA on lawn

5:56:35 ♂ started foraging slowly

5:58 StIA head in shoulder

6·00·25 PCM (meoco) NFI StIA

6·00·40 StIA N·D.

6·01·15 StIA head in shoulder.

6·07·35 crow called ♂ NFI

6·07·50 StIA N·D

6·08·15 crow called ♂ NFI sunrise

6·08·20 StIA N·D

6·09·00 StIA head in shoulder.

6·10 StIA

6·12·15 StIA head in shoulders.

6·15 PCM (meow) ♂ NFI ♂ displayed co·o·c·

NISWOS 7EPC Os dur 6s foraging on lawn

PC=12 50°F

6·17 StIA in layer grass

6·19·30 started foraging

6·21·45 StIA on rat sand mound.

6·23·05 started foraging

6·24·25 StIA on rat sand mound.

6·26·35 PCM P·C·F ♂ NFI

6·26·40 StIA N·D

6·28 StIA head in shoulders.

6·33·20 mound to where sunlight patch on ground

StIA head in shoulders.

6·41·25 mound slightly to sun patch. StIA head in shoulder tail cocked

6·42·40 PCM (meow) ♂ NF1

6·42·50 St1A head in shoulders - tail cocked

6·49 St1A tail cocked ears drooped.

11 PC - 59°F

7·01·35 P·C·L· (meow) ♂ NF1

7·01·45 St1A NF1 tail cocked ears drooped.

7·05·15 preening

7·08·40 St1A tail cocked

7·10·40 stretch preening

7·12·00 St1A tail cocked

7·14·10 started preening

7·14·15 St1A tail cocked

7·15·45 Pigs (5) disturb ♂ by rushing up. ♂ moved few steps quickly away. [Alarmed pigs ran up and suddenly startled by ♂ presence of ♂ who moved away quickly. Pigs carried on].

7·16 St1A tail cocked

7·17·15 disturbed by vehicle. walking away from rd.

7·20 walking/foraging away from rd.

7·22·30 St1A

62°F PC = 12

7·24 foraging

7·27 St1A

7·27·10 crow called ♂ NF1

7.27.20 P.C.L (meoco) ♂ displayed c.o.s.c NSCOS
TEPC 0s Dur 6.5s StLA on landy

7.30 StLA

7.34.50 Started preening

7.36.30 preening

~~7.38~~ 7.41.15 stopped preen started foraging

7.44.15 StLA beside long grass.
64°F PC=7

7.48.50 croco called ♂ NFI

7.49.10 foraging

7.49.40 StLA

7.50 foraging

7.51.00 StLA started preen

7.51.30 StLA

7.52.20 foraging

~~7.53.00 to~~

7.53.50 white eyed Buzzard flew past ♂ not bothered.

7.55 foraging

8.15 foraging 67°F PC=7

8.29 StLA

8.31 foraging

8.39 disturbed by vehicle on the rd.
Moving away from rd into taller gras. StLA

8.40 StLA

8.42. foraging

8.45 foraging crossed rd

8.45.45 crossed into chapra east.

70° F PC=5

Evening. chapra

4.45 → Not sighted

90° F

5.15 not sighted.

87° F

6.00 Not sighted.

82° F.

6.07 located ♂ foraging in chapra east. edge of machan tree zone. O.H.S as man passed.

6.18 sunset.

6.40 O.H.S.

76° F.

5.00 → 6.40 kaushaghatti ♂ present in display zone. didnot display.

(51)

4/4/89 Nawalhed.

Bees Dew

5·45 a.m → ♂ STKA heat in shoulder

49°F.

5·49. ♂ moved slightly behind taller vegetation.

O·U·J.

6·01 O·U·J sunrise.

6·15 O·U·J. 47°F PC=8

6·23·20 PCF (meow) - ♂ displayed Co·J·C. NJCOS

D·D. TEPC Os STKA on lady

6·26·50 start foraging then O·U·J.

6·32·30 located STKA (NPI.)

6·35 STKA (NPI)

6·43 P·C·M (meow) ♂ NFI (then NPI)

6·45 STKA.

52°F PC=11

6·48·20 PCF (meow) ♂ NFI ♂ displayed.

Co·J·C NJCOS D·D. TEPC=Os. landed

close earlier displaced from.

6·51 took to flight. landed beyond south

free zone closer to west Nawalhed. O·U·J.

7·00 O·U·J.

7·15 O·U·J 59°F (upto 6·51 PC=5)

7·45 O·U·J 66°F

8·00 left field.

Evening.

4·35 → Xland Mt. Sky / clear.

4·45 69°F. Not sighted.

5·15 Not sighted 87°F PC=2

5·18 ♂ displayed(?) foraging western tree like.

5·20 foraging

5·21·30 Croco called. ♂ NFI ♂ displayed. C.O.C.

foraging path

5·22 O.H.S.

5·45. took to flight. landed in display zone. St.A where landed.

(Chicks faint possibly coly couldn't hear earlier display chicks)

84°F PC=6

5·47 St.A

5·49 foraging

6·15 foraging 81°F

6·17·10 NFI shook out feathers. St.A sunned.

6·20 St.A

6·28·30 started foraging

6·36·35 fitted colys St.A.

6·38 St.A

6·40 79°F PC=4

left field.

5/4/89

4:00 pm – 5:45 pm No florican seen at Kowaghatti.

6/4/89 Kowaghatti

5:45 – X(am) plot located.

6:01. located ♂ foraging. was behind some short grass. (couldn't ~~cota~~ locate.)

6:03 St1A

6:04 St1A head in shoulder.

sunrise.

6:06 started foraging

6:10 foraging on edge of south satian. tree zone

6:18 forged o'y's. in south satian tree zone.

~~7:00~~

6:45 forging towards west satian.

7:00 left field.

Sonaripur.

6/4/89 Seethagaddai phut.

4.50 east ♂ displayed.

5.20 west ♂ flew fro and land in displ zone.

5.50 East ♂ displayed

6.30 ± Ra 1 ♀ in railway crossing short grass patch.

Railway ♂ present in territory.

7/4/89

5.50 → 7.30

Banky taal phuta no florican seen.

R.H – Dulun panta no florican seen.

Evening.

5.00 → seethagaddai

5.21 crow called east ♂ displayed

5.27 Crow called " " "

5.40 P.C " " "

5.58 P.C.L " " "

6.08 East ♂ displayed Ext fl. w.r.c D.D.

6.16 " " "

6.25 left final.

8/4/89

6·00 – 7·00 No florican sighted Sonaipuphuta.

9·30 Seethagaddaia wat ♂ (?) foraging on rd.

c. 7·30 a·m 1 ♂ flew from RH phuta to Railway phuta. (flew over RH).

4·30 pm → Seethagaddaia.

4·45 91° F PC-(4·30 – 4·45 = 4)

4·50·45 PCM (meow) East ♂ displayed w.s.c

TEPC = 10s

5·12·10 east ♂ displayed w.s.c.

5·15·00 west ♂ displayed w.s.c.

5·20 91° F PC=7

5·30·52 NSS No song stimulus. E ♂ displayed w.s.c.

5·38·15 NSS. W east ♂ displayed w.s.c. N.s.(w.s)

EXTH. D.D.

5·40·47 NSS E ♂ displayed w.s.c.

5·42·22 P.C.L (meow) E ♂ displayed w.s.c.

5·45 84° F

5·55·00 Crow called E ♂ displayed w.s.c.

5·55·21 PCM W ♂ displayed. w.s.c.

6·01·10 PCL (meow/one call) Both ♂s simultaneously displayed possibly within 1s of each other. Both w.s.c. E ♂ east fl. circled and landed back at display area.

6·05·27 PCM/F (meow) Both ♂s displayed abut exactly same time. Both w.j.c. Both in air together.

6·12·58 crow called. 1 ♂ displayed w.j.c.

6·15 78° F

6·20 crow called 1 ♂ displayed w.j.c.

6·24·19 PCM (meow) 1 ♂ displayed w.j.c. Ext Fl.

D.D.

6·30 70° F.

left field.

Skylark {From rd. chkboob saw 1 imm ♂ fly and land in grass then foraged onto rd. Soon after landing west ♂ displayed. at about 5·10 west ♂ crossed rd into display area.

III rd ♂ heard display 4-5 rims in southern corner of pasture.

(57)

9/4/89

Morng.

Seethagaddaia phanta

West ♂ displayed 3-4 tim.

distinctly heard 3rd ♂ once. (display)

7.00 on stopping vehicle arreat at, Railway ♂ took to flight and landed in R.H phanta.

Evenin.

4.30 seethagaddaia.

99° F

4.46.41 E ♂ displayed W.J.C. PCL(meow) +EPCOs

4.52.37 PCM (meow) E ♂ displayed. Distance between Peacock and florican atleast 400-500 m TEPCOs

4.57.03 PCM (meow) E ♂ displayed W.J.C TEPC = 2s

5.08.25 West ♂ flew from display zone and landed in east ♂ display site. Chick from grass.

5.09.10 Both physically fighting

5.11.10 " " "

5.12.25 1♂ flew and landed 30-40 mts away

fight started immediately after west ♂ landed and lasted until about 15-20s before ♂ flew off

Both fought viciously. Great use of coys as evidenced by much flashing of white from grass. Body contact several times. Flappy / striking wings clearly heard from machan atleast 250mts away.

5.20 &9°F cloudy.

5.22.25 wot ♂ took to flight. (it was the one that had flown off from kill) and landed between Sal bhoji and machan. stld on lady

5.25 stld roam towards territory.

5.30.30 wo♂ took to flight and landed in display zone.

5.32.30 PCM (meow) F♂ displayed w.s.c. MSWS TEPC Os

5.41.50 wo♂ displayed w.s.c.

5.42.20 wo♂ displayed w.s.c. (4?)

5.45 &4°F cloudy.

5.47.53 crow called wo♂ displayed w.s.c.

TECC Os

6.00.33 crow called wo♂ displayed w.s.c MSWS TECC Os

6.15 &1°F

6.30 left field.

11/4/89 Kowhaghatti

5·40 → ♂ in display zone.

5·45 StlA 62°F

5·48 StlA head in shoulders. Alerted by swamp deer
Alarm call then relaxed.

5·50 StlA head in shoulders

5·51·13 turned and displayed. W.S.C. NSWS. NSS StlA
head in shoulders on landy

5·53·15 foraging

5·54·05 StlA head in shoulders

5·58 " " " sunrise

5·59 foraging

6·00 StlA

6·01·25 foraging

6·03·15 StlA

6·06·52 NFI ♂ displayed. W.S.C. NSWS TEPC 3m12s
foraging back on landy

6·08·10 StlA

6·09·15 foraging

6·10·15 StlA

6·10·30 Croc called ♂ NFI

6·10·45 StlA N·D | N·PI

6·15 Moved into South saltara due to observer
disturbance

11/4/89 Evening Kowhaghatti

4.30 Mod to Strong wind.

4.45 92°F

5.09 located ♂ foraging into display area. Possibly moved in from west Satlana.

5.11 ST1A

5.12.30 foraging

5.15 foraging 91°F

5.36 ♂ Begins courtship display.

Moves slightly haphazardly, not in a particular direction, ♂ performs the 'pumping display' while walking the head is retracted to body, the neck feathers are fully erected (throughout) and it sways like a sort of balloon in front of its legs. Could take stop and Raise head abruptly, neck inflated, before retracting head to shoulders again abruptly and proceed moving - the sequence of erect and retract being a little jerky. Would walk a few metres before the entire sequence is again repeated. Was not covering distance but walking more or less in a limited area haphazardly so to say, but all the while gradually approaching ♀ who was stood some distance away. While walking and nearing her, head in shoulders, began swaying head and body sideways, the erected feather being swung to and fro sideways like a fan. On reaching her (c. 3-5 mts) abruptly stopped, raised head and began jerking head sideways, so that the erected neck feathers, like an open fan before it, was also waved sideways.

A moment later the ♀ took to flight and landed 10-15 mts away and started moving swiftly into

taller vegetation.

♂ followed suit, walking head retracted, stopping raising head, realigning direction and retracting head to shoulders before commencing change.

{Re purging motion, was clearly seen to serve also (head raising)
the purpose of locating ♀ which would not be visible when walking with head in shoulders).

5.45. ♂ NF1 head held on shoulders to walking into display zone.

88° F PC = 0

5.47 Foraging N.D.

5.49 St1A

5.51.36 P.C.U.F. (meow) ♂ NF1 ♂ displayed C.O.C.
N St1A on laulty.

5.57.00 P.C.F. ♂ NF1 ♂ walking.

5.58.00 Walk NP1.

5.58.20 St1A N.D at place where displayed from.

6.07.20 St1A NF1

6.08.30 St1A N.D.

6.09.30 St1A N.F.1

6.09.45 Displayed C.O.C. NJWS D.D.
TEPC = 40s St1A NF1.

6.10.00 foraging N.D.

6.11.00 St1A N.D.

6.12 foraging

6·13· Stld N·D.

6·13·30 Gunshot. walky NFI

6·13·50 Stld NFI

6·14·00 Displayin Co·o·c. NSWS D·D.
TEPC = 26s Stld N·D. on lanly

6·16·10 foraging

6·18 sunset

6·19.25 Stld

6·20·15 foraging 86° F

6·20·45 Stld

6·21·20 foraging

6·22·00 crow called NFI displayed
Co·o·c. TECC os Dur 5·5s
Stld NFI then N·D.

6·22·50 foraging
(All displays so far from same spot in front of tree).

6·24·35 Stld

6·30·15 started C·D. chase.

6·37· C·D. chase ended walky back to display zone.

6·38·00 P·C·F. ♂ NFI ♂ displayed NWS NSWS
D·D. TEPC = 0s

638·45 started C·D chase.

6·45·15 foraging back N·D.

6·47 Stld

6·48 P·C·M (meow) ♂ NFI ♂ displayed N·W·S· N·S·WS
D·D TEP·C· os Stld N·D on lanly

6.50.40 foraging 82°F

6.52 St 1A

left field.

12/4/89 Chapra. Dew.

5.37 located ♂ St 1A head in shoulders.

5.40.20 walkd out of longer grass.

5.40.40 St 1A head in shoulders.

5.42 foraging

5.45 " 53°F PC=6

5.48.30 foraging

5.50.05 St 1A head in shoulders.

5.50.25 P.C.M (meow) ♂ NFI

5.50.50 St 1A N.D.

5.51.20 St 1A head in shoulders.

5.53.35 crow called ♂ St 1A NFI

5.54.00 St 1A

5.54.15 St 1A head in shoulders.

5.56 " " " sunrise.

5.59.05 P.C.M ♂ looked up.

5.59.15 St 1A head in shoulder.

6.02.15 crow called ♂ looked up

6.02.35 St 1A head in shoulder.

6.02.50 foraging

6.03.20 St 1A head in shoulders.

6.02.25 St 1A

6.09.20 St 1A head in shoulders.

6·13·50 walkd into sun patch.
6·14·20 st1-t head in shoulders on rat sand mound.
6·15. st1A " " "

54°F PC= 17.

6·21·15 P·C·M (meow) ♂ NF1 st1A
6·21·25 st1A head in shoulders.
6·22·30 st1A.
6·23·20 st1A head in shoulders.
6·35. " " " " tail cocked.
6·37·30 st1A tail cocked.
6·38·15 " " " wings drooped
6·41·15 " " " " head in shoulders.
6·43·35 " " " "
6·45 " " 60°F PC= 11
6·59 stated preening
7·02·50 st1A
7·04 preening
7·07·30 NF1 shook out feathers resumed preening
7·08·20 st1A N·P·1
7·08·40 Crow called ♂ NF1 ♂ displayed. C.O.S.C. NWS
TECC. Os st1A on landing
7·10 st1A
7·11·05 foraging
7·15 "

64°F PC= 10

7.17 STIA

7.17.45 Croc called ♂ NFI

7.17.55 STIA N.D

7.18.50 foraging

7.33 STIA

7.34 foraging

7.35.20 STIA

7.36 foraging

7.36.15 STIA

7.36.30 foraging

7.45 " PC=10 67°F

7.48 foraging in harrowed area.

7.56 STIA

8.05 STCA / preening

8.07 STCA then foraging

8.15 foraging

72°F PC=6

Evening chapra.

4.45 96°F moderate to strong wind.

4.46 located ♂ foraging where last seen this morning

4.50 foraging under Acacia tree.

4.56 STCA

4.59 foraging

5.03 " O.M.S.

5:05 located St1A

5:16 moved behind gran clump as people passed.

94°F PC=1

5:18:50 coalhd into oper.

5:19 St1A

5:20 foraging

5:24 St1A

5:25:40 resumed foraging

5:40 started foraging in direction of display zone.

5:40:30 St1A

5:41:30 foraging

5:45 St1A 92°F PC=7

5:50 foraging

5:55 " across C.H.Q.

6:00 " into imperata area.

6:12:20 St1A

6:12:55 foraging

6:14:30 St1A 88°F PC=10

6:16:45 foraging

6:17:40 St1A on rat sand mound

6:19 foraging sunset

6:20 St1A

6:21:30 hurrying away from rd St1A in taller grass.

6:24:20 P.C.M (meow) ♂ NF1

6:24:32 C.C. ♂ displayed. W.D.C. NJWS

TFCC = 0s

6·25 foraging back

6·25·45 S+IA

6·25·55 C·C. ♂ NFI

6·26·05 S+IA N·D

6·27·30 foraging

6·27·50 S+IA on rat Sand mound

6·29 S+IA

6·32·15 People passed. ♂ ducked and got out rat sand mound. Mound more slowly into taller grass.

6·33 S+IA

6·36 foraging

6·43·55 P·C·L (meow) ♂ S+IA NFI

6·44·05 S+IA N·D

6·44·30 foraging

6·45 S+IA 81°F PC = 17

6·47 P·C·L meow ♂ NFI

6·47·05 S+IA N·D

6·49·50 foraging

6·50·30 S+IA

6·51 foraging

6·53 S+IA

6·55 foraging ~~then~~

left field.

(67)

13/4/89 Evening. Nawalkul.

4.35 → Not sighted

4.45 " 97°F

5.35 " 93°F PC=0

6.10 " 87°F PC=1

C. 6.20 Sunset.

6.35 ♂ flew in from west Nawalkul landed in Southern corner of display zone. St1A.

6.36.15 St1A NF1 shook out feathers St1A.

6.40 St1A 82°F PC=3

6.45.05 P.C.M (meow) ♂ NF1 ♀ displayed. C.O.C. NSWS TEPC=0s O.U.S on lawn

6.50 O.U.S.

6.52 left field.

14/4/89 Kowhaghatti dew.

5·35 a.m ♂ St1A head in shoulders.

5·45 started foraging as swamp deer came close.

49°F

5·48·15 St1A hunched

5·49 crow called (faint) momentarily NFI ♂ displayed.
Co·J·C. N·S·W·S TECC 0s foraging back on laulay

5·50·40 St1A head in shoulders

5·55 " " " sunrise

5·58·30 walked few steps and squatted. Typical hiding behaviour. No source of danger visible.

6·00 "

6·06·50 got up. St1A head in shoulders.

6·15 " "

51°F PC=0

6·18·45 St1A wings drooped.

6·19·30 St1A head in shoulders wings drooped.

6·20·50 P·C·F (meow) ♂ NFI ♂ displayed Co·J·C. N·S·W·S
TEPC=0s O·H·S on laulay

6·22 foraging

6·37 foraging then view obstructed by tree.

6·45 located St1A 55°F PC=10

6·45·45 P·C·L (meow) ♂ displayed. Co·J·C. N·S·W·S TEPC=0s
O·H·S behind tree

6·52 located ♂ preening

6·54 preen tail slightly cocked. Tail gets increasingly more cocked when bird is preen then gets depressed when bird looks up. Wings slightly drooped

6·58 St1A tail slightly cocked wings drooped NF1

6·59·10 scratched head with foot St1A

6·59·25 resmd preen

7·02·10 St1A

7·03·25 resmd preen

7·06·30 C·C / P·C·M ♂ St1A NF1

7·07.15 St1A N·D / N·P1

7·11·30 St1A

7·14·25 startled preen

65°F PC=9

7·18 St1A

7·19·45 ♂ began C·D walk. (perhaps wings are held slightly raised or apart from body but folded?) (sort of like ♂ C. florican in head scrap but not so much)

7·20·30 St1A

7·21·15 P·C·M (meow) ♂ NF1 & displayed C·D·C NSWS ♀ PC= 0s St1A on landing

7·24 foraging

7·35·10 St1A

7·37 preening

7·37·15 foraging

7·37·50 St1A

7·38·50 P·C·F ♂ NF1

7·39·05 St1A

7·40·52 P·C·M (meow) & NFI & displayed c·o·c.
NSWS TEMP C = 03 St LA on landing

7·42 foraging
7~~43~~·50 St LA
7 45·15 Scratched head with foot 70° F PC = 7
7·46 St LA
7·47 foraging
8·00 foraging found west Sat Lam
8·15 foraging 74° F PC = 3
8·20 St LA
8·28·40 preening
8·32·10 stood foraging
8·32·35 St LA
8·32·40 NFI shook out feathers
8·32·55 foraging
8·33·40 St LA in shade of tree
8·40 stood foraging slowly
8·45 foraging 78° F
8·47 foraging
left field.

Evening. Kowhaghitti slight to moderate wind.

4.15 ⇒ ♂ StIA in shade near restm S. deer.

4.34 stated foraging 99°F

4.54.45 StIA

4.55.50 foraging

4.58 StIA

5.01.30 foraging 97.5°F PC=0

5.10 StIA

5.14.40 foraging

5.18 W.E. Buzzard swooped at flew very close to ♂ coho StIA and watched it pass. Not Alarmed.

5.18.40 foraging

5.25.00 StIA behind streesham bushes.

5.30 StIA 95°F PC=0 cloudy

~~5.35~~ 5.40 StIA

5.40.15 foraging

5.43.30 StIA

5.47.50 foraging

~~5.48~~ 5.48.10 StIA

5.48.30 NFI shook out feathers StIA

5.49.55 P.C.I= (meow) ♂ NFI ~~shook out feathers~~

5.50.25 StIA N.D.

5.52.50 crow called ♂ NFI

5.53.05 StIA N.D

5.55 StIA

5:57 foraging

6:00 foraging 92°F PC=4

6:05:50 Turned NFI & displayed c.o.c. NJCWS

TEPC = 10m 13s stat on landing

6:06:50 foraging

6:11:00 stat NFI

6:11:07 ♂ displayed c.o.c. NJCWS Foraging back

on landing

6:13:15 stat

6:13:35 foraging

6:17 stat

6:22 " sunset

6:28 foraging

6:29 stat

6:30 " 85°F PC=3 (call taint)

6:30:45 foraging

6:31:35 stat

6:32:50 foraging

~~6:35~~ 6:45 " last 2-3 minutes at one spot in two row

of harrowing.

78°F PC=3

6:50 foraging

6:52 "

left field.

16/4/89 Chopra No dew

5·25 →

5·30 60° F

5·34 located ♂ S+LA head in shoulders

5·43 foraging

5·45 S+LA

5·47 S+LA hunched

5·48·15 " "

5·49·25 cc/pc ♂ NFI

5·50·05 S+LA N·D

5·50·10 foraging

5·50·20 S+LA

5·50·50 foraging

5 51·30 S+LA

5·52·00 S+LA head in shoulders.

5 53·45 S+LA

5 55 S+LA sunrise

5 56·20 lifted wings and stretched

5 56·40 started foraging

5·56·50 S+LA

5 57·25 foraging

6·00 foraging 59° F pc = 14

6·03·20 S+LA on rat sand mound.

6·07·10 foraging

6·09 S+LA

6·09·35 foraging

6·13·15 Pied hornbill called (P·C·M and C·C· at about same time though P·H· call loudest). ♂ displayed w·r·t NSWS TESM = 0s

6·14 foraging

6·15 St1A

6·16·45 foraging

6·20 St1A

6·22·30 ♂ NF1 ♂ displayed w.o.c NSWS TEPC= 1m 24s
foraging back on landing

6·26 St1A

6·27 foraging

6·28 St1A tail cocked

6·30 " " " 63°F PC= 15

6·38·50 PCM (meow) ♂ turned NF1 St1A

6·40·15 preening

6·42·20 P.C.C (meow) ♂ NF1 ♂ displayed w.o.c NSWS
TEPC= 2s

6·43·00 St1A tail cocked on rat sand mound.

6·46·20 foraging

6·48 foraging

6·53 P.C.F./C.C ♂ NF1 ♂ displayed w.o.c
NSWS TE SM = 0s

6·59 St1A

7·00 foraging 68°F PC= 14

7·03 foraging towards harrowed area

7·12·50 St1A

7·14·30 stat'd foraging across harrowed area

7·25·50 St1A

7·28 preening

7·29·45 St1A

7·30·10 stat'd foraging 74°F PC=7

7·32 St1A

7·32·50 Crow called NF1 ♂ displayed w.o.c TE <1 0s
St1A on lawn

7.34 foraging
7.38 sit/A
7.38.45 foraging
7.44 foraging undisturbed by passing group of S. Deer.
7.48 sit/A
7.52.40 preening
7.59.10 MFI shook out feathers
7.59.15 foraging
8.00 " 78° F PC=5
8.15 " left tired.

Every chapra.

4.45 → 105° F
5.15 → 101° F
5.45 → 97° F
6.15 93° F
6.22 sunset
6.40 90° F PC=7
♂ not sighted throughout.

20/4/89 Morn Navalkd No dew

5·30·52 ♂ displayed c.o.c.

5·33·14 ♂ took to flight. NWS. Ext fl. D.D.

5·37·05 ♂ took to flight and landed in North Navalkd.

5·42 Sunrise 58°F

5·51·35 ♂ displayed c.o.c.

6·00·05 ♀ flew ♂ ♂ followd. c.o.c. Ext fl. D.D. O.H.S in tall grass.

6·06·30 C.C. ♂ displayed c.o.c NSWS

6·15 60°F

6·21·10 ♂ took to flight and landd in display zone NWS Ext fl. D.D. S+IA on landg

6·23·50 C.C. ♂ NFI

6·24·15 S+IA N.D

6·27 preeng

6·31 S+IA

6·31·30 NFI walkg

6·32·10 C.C ♂ displayed c.o.c NSWS TECC=OS S+IA on landg

6·36·15 foraging back

6·39·00 S+IA from whr displayed from.

6·42·00 C.C. ♂ NFI

6·43 S+IA N.D

6·44·45 C.C. S+IA NFI

6·45·15 S+IA N.D

68°F

6·47 St 1A NPI

6·49·25 C-C. ↗ NIFI + displaced G.J.C. NJSWS

D·D TECC = 0's foraging on lady

6·50·35 St 1A N·D

6·52·10 foraging

6·53·00 St 1A

6·54·15 foraging

6·55·05 St 1A

6·57·10 foraging

6·57·35 St 1A

6·59·30 foraging

7·02 0·4·J in taller grass.

7·15 74°F 0·4·J.

7·30 0·4·J ~~78°A~~

7·45 0·4·J 78°F left field.

22/4/89 chypra little dew.

5.20 →
5.22 located St1A at Roosty spot.
5.26.25 foraging
5.27.15 St1A NF1 shook out feathers
5.27.25 foraging
5.28 St1A hunched
5.29.30 St1A head in shoulder
5.30 ~~St1A~~ " " 58°F PC= 4
5.31.30 C.C. St1A NF1
5.31.50 St1A N.D
5.32.10 Foraging
5.32.25 St1A
5.38.25 St1A head in shoulders
5.40.40 St1A
5.42.15 St1A tail coal
5.43.30 P.C.C (no one call meow) ♂ NF1 ♂ displayed
C.C.C NSWS TEPC=1s St1A on lawn
5.44.30 St1A head in shoulder.
5.44.45 C.C. ♂ NF1
5.45.15 St1A N.D
5.46.10 took to flight. flew off in direction of Mawalkhead.
5.50 PC= 8
5.53 ± Sunrise.
6.00 58°F

6·04 ♂ flew into territory landed in harrowed area.

6·07 foraging

6·22·35 P·C·C (meow) ♂ NFI ♂ displayed C·J·C NJCW3 TEPC = 03 (In harrowed area). landed amongst swamp deer who were startled by display. foraging on laulay

6·30 STLA 69° F PC=10

6·32 foraging

7·00 foraging 66° F PC=9

7·30 foraging sun/cloudy PC=7 71° F

7·35 " sun ♀ (76° F)

7·52·40 C·C· ♂ NFI ♂ displayed. C·J·C. NJCW3 TECC = 03 foraging on laulay. ♀ (sun/cloudy 75° F)

7 55 foraging

8·00 Foraged into C·H·9. 75° F PC=8

8·10 foraging into display zone

8·13 STLA

8·14·30 STLA NFI

8·14·40 Displayed C·J·C. NJCW3 TEPC = 43 foraging on laulay

8·16·15 STLA as vehicles pass

8·16·35 foraging

8·17·30 STLA

8·18 foraging

8·20 STLA

8·21 foraging
8·23 St/A
8·25-35 foraging
8·26·15 St/A
8·27·45 P·C·M (meow) ♂ NF1
8·27·55 St/A N·D
8·28·50 preening
8·30 " 78° F PC=11
8·31·05 C·C. ♂ NF1
8·31·10 St/A N·D
8·31·45 resume preening
8·32·25 St/A
8·32·40 preening
8·32·45 St/A
8·33·02 Scratched head with foot then preen
8·33·45 St/A
8·34·00 NF1 shook out feathers. started foraging sun/cloudy
8·38·00 forage
8·40 St/A
8·40·25 P·C·C (meow) ♂ NF1 ♂ displayed C·J·C NJCW3
TEPC=0s Dur =2s foraging on lady
8·42 foraging
8·50·10 P·C·C (meow) ♂ NF1
8·50·15 foraging N·D
8·xx 9·00 foraging back towards harvard area
83° F PC=7
9·04 formed route harvard area (sun/cloudy
9·05 foraging
9·20 foraging left first PC= 9.

Evening Chapra

4.25 ♂ foraging in shade of tree who last seen this morning. Not visible from machan.

4.35 on machan. O.U.).

4.45 105°F V. strong wind.

4.55 (changed location)

♂ stlA in shade of log grass.

4.58.30 foraging slowly

5.02 foraging onespot.
(perhaps Acacia seeds?)

5.15 foraging slowly
103°F pc=3

5.18 stlA

5.19 foraging in shade of tree

5.23 stlA

5.24.30 foraging

5.28.45 stlA

5.31.30 foraging

5.32.20 stlA

5.32.45 foraging

5.35 foraging towards display zone

5.40 foraging.
(shifted to machan)

5.45 foraging 100°F pc=3 Sun/cloudy/hazy

5.50 foraged onto C.H.G.

6.04 stlA in display zone

6.06 foraging

6.08 stlA

6.08.30 C.C. ♂ NBI

6·08·35 S+CA N·D sny/cloudy/moderate wind.
6·14·15 C·C· ♂ NFI
6·14·45 S+CA N·D
6·14·50 walked outop of Rat sand mound.
92° F PC=2
6·18·30 foraging
6·19 S+CA
624 sunset
625 S+CA
6·25·45 preening
6·25·50 S+A·
632 preening
6·32·10 S+CA
6·33 foraging
6·36 stretched one wing. carried on foraging moved into roosting area
6·42 S+CA
6·42·35 P·C·N (meow) ♂ NFI ♂ displayed w·i·c· N J W S
(Became of wing lift was greater than usual and distance could shorter.) peak much higher
TEPC=0, S+CA color landed
6·45· S+CA· 95°F PC=8
6·47 foraging back
6·49 foraging
6·50 o·u·t·
6·52 left field.

23/4/89 Kowhaghatti No dew

5·20 →
5·25 located ♂ foraging
5·30 foraging 67° F
5·34 foraged across display zone into south Satiana
5·34·35 P.C.C meow ♂ NF1
5·34·40 ♂ NF1 and displayed C.S.C NSWS TEPC=0s landed in display zone. foraging on landing.
5·44 foraged O.U.s in S.W. satiana
5·46 sunrise. ♂ foraging then O.U.s. (hazy / smoke / dust?)
5·56 P.C.C meow ♂ displayed C.S.C. NSWS TEPC=0s O.U.s in layer grass on landing.
6·00 O.U.s. 65° F PC=10
6·12 located ♂ foraging in area where displayed from
6·15 foraging
6·21 St/A
6·21·55 P.C.C (meow) ♂ NF1
6·22·40 St/A N.D
6·24·20 preening
6·29·55 Scratched head with foot.
6·30 preening.
6·32·40 St/A
6·33 St/A NP1
6·35 St/A N.D
6·37·20 Crow called ♂ NF1 ♂ displayed. C.S.C. NSWS TECC. 0s St/A on landing

6·38·25 foraging

6·40 O·4·3 as tree blocks view

7·00 O·4·3 71° F PC=8

located foraging

7·11 foraging then O·4·3.

7·25 located foraging in sheeshum scrub

7·30 foraging " " "

75° F PC = (10 + not taken)

7·38 foraging in sheeshum scrub . O·4·3

7·52 located foraging in sheeshum scrub.

7·56 glimpses foraging

8·00 foraging
81° F PC = 6

8·02 foraging into old display zone.

8·06 foraged back into sheeshum scrub. O·4·3.

8·15 O·4·3.

8·20 O·4·3. left field.

Every. Kowhaghatti hot/No cond/cloudy/hazy

04·05 O·4·3.

4·10 100° F

4·24 ♂ foraging in from South Satiana

4·25·25 STA at edge of display zone

4·30 STA

4·33 foraging

4·34 STA

4.34.40 foraging slowly (sun coming out.)

4.36.25 S+IA

4.37 foraging

4.38 P.C.F ♂ NF1 S+IA

4.38.10 S+IA N.D

4.38.50 foraging

4.39.55 S+IA

4.42.40 P.C.F meow ♂ NF1

4.42.50 S+IA N.D

4.45 S+IA sun/cloudy

102° F PC=3

4.49 S+IA

4.50.45 P.C.F (meow) ♂ NF1 ♂ displayed. C.J.C. NJWS S+IA on landing. TEPC= 0s

451.25 foraging

4.52 S+IA

5.05.05 P.C.F. ♂ NF1

5.05.14 ♂ displayed. C.J.C. NJWS. ♀ TEPC= 9s. S+IA on landing

5.07 foraging

5.08.05 S+IA

5.09.00 P.C.F ♂ NF1

5.09.05 S+IA N.D.

5.11. foraging sun came out.

5.14.30 ♂ NF1 ♂ displayed. C.J.C. NJWS TEPC= 5m 22s foraging on landing

5.15 foraging PC=5 95° F

5.18 S+IA

5.21 foraging

5·27·25 St1A

5·30 preening

5·31·30 St1A

5·32·15 preening

5·34·15 St1A

5·36·40 ↓ P·C·F ♂ NFI

5·36·45 ↓ " (meow) ♂ displayed w.s.c NSWS . TEPC=0s

5·37 foraging beach

5·41 foraging

5·42·40 St1A

5·45 " 92°F PC=7

5·47·30 foraging slowly

5·48 St1A

5·52·40 preening

5·53·20 St1A

5·53·45 preening

5·55·40 St1A

5·56·30 preening

5·57·15 St1A

6·00 preening

6·00·15 St1A

6·02·35 foraging

6·06 St1A

6·08 foraging

6·10·05 ♂ NFI ♂ displayed w.s.c.
NSWS foraging on landy TEPC= 10m23s

6·11 foraging

6·13 ♂ got mobbed by 1 male red wattled lapwing . First time ducked and kitted wings . Second time also but time ducked and kitted wings

not so much

6·14 foraging

6·16 Red wattled lapwing mobbed again 4 times. ♂ each time ~~threatened~~ threatened it (similar to with W.E. buzzard) but wdgs only momentarily and slightly opened. Would move quickly at the same time possibly dodging the angry lapwing.
Not unduly disturbed.

6·18 foraging

57° F PC = 4

6·20 forgeged into sheeshum scrub.

6·23 o.h.s. in sheeshum scrub.

6·32 loafd foraging " "

6·37·25 P.C.M (meow) ♂ displayed W.J.C. NSWs

TEPC = 0s foraging on lawn

6·39 foraging

6·43 foraging at one spot. seem to be gulping fairly large mouthfuls.

6·45 foraging
55° F; PC = 9

6·47 S+VA

6·49 foraging

6·52 foraging ~~left~~

left field.

(89)

24/4/89

Sonaripur.

4.40 Secthagaddaia

4.48.50 ♂ displayed (very faint coiy beat and chicky)

N.J.S.

4.55 ♀ flew and landed within ♂ display zone.

5.02 ♀ flew from ♂ display zone and landed 50± mts closer to rd. ♂ did not change or display copulation?

5.10± located ♀ in display zone.

5.12 ♂ flew over phanta moving towards R.H. coming in from North west.

Not chicky. Chicked only once when midway thro phanta and once while almost crossy. lays ~~display~~.

stretched out behind.

♀ & ♂ no response.

5.19.42 ♀ displayed C.J.C.

NJWS TEPC = 1m 7s

5.21.16 C.C. ♂ displayed C.J.C. NJWS

TECC = 0s

5.33.46 CC ♀ displayed C.J.C NJWS TECC = 0s

5.40.30 ♀ displayed C.J.C NJWS TEPC = 3m 41s

5.44.17 P.C.M ♂ displayed C.J.C NJWS TEPC = 2s

5.45 PC = 12

5.46.10 CC ♀ C.J.C NJWS TEPC = 0s

PCL (now)

5.50.55 R.C.C.(Nudo) ♀ displayed C.J.C NJWS

~~TEPC = 1m 55s~~

~~5·53·19 P·C·C (Meow)~~

5·52·05 ω ♂ displayed ω·ɔ·c ʌIɔωɔ TEPC= 1m 13s

5·53·19 P·C·C (meow) E ♂ displayed ω·ɔ·c TEPC= 0ɔ

~~6·56·18~~ P·C·C (meow) E ♂ displayed ω·ɔ·c TEPC=0ɔ

6·07·00 ω ♂ displayd ω·ɔ·c ʌIɔω TEPC= 1m 3ɔ

6·09·54 P·C·C(meow) E ♂ displayed ω·ɔ·c ʌIɔωɔ TEPC=0ɔ

6·15 PC=11

6·15·20 P·C·C(meow) ~~♂~~ E ♂ displayed ω·ɔ·c· TEPC=0ɔ

6·18 sunset

6·23·46 P·C·M (meow) E ♂ displayed ω·ɔ·c ʌIɔωɔ TEPC=0ɔ

6·27·05 P·C·C (meow) ω ♂ displayed ω·ɔ·c TEPC=0ɔ

6·35·54 P·C·C meow E ♂ displayed ω·ɔ·c· TEPC= 0ɔ

6·45 P·C= 13

left Field.

[All display only clap and chicky very loud and clearly audible.]

~~55~~ 25/4/09 Morn

5.30 seethagaddai'a

5.29.14 heard ♀ ♂ display

5.34.52 P.C.C (meow) ♀ ♂ displayed ♂.♂.C TEPC = 0s

5.40 ± sunrise

6.02.05 P.C.M (meow) ♀ ♂ displayed ♂.♂.C but faint.
TEPC = 3s

6.13.02 C.C. ♀ ♂ displayed (couldn't hear why sounds or chicks.)
TEPC = 0s

6.31.45 C.C. ♂ ♂ displayed TEPC = 0s (Train passed same time)

6.32.05 ♀ ♂ displayed TEPC = 1m 50s

6.35.06 P.C.C (meow) ♀ ♂ displayed ♂.♂.C. TEPC = 0s

6.37.35 P.C.C (meow) ♂ ♂ displayed. C. 1-2s later ♀ ♂ displayed. TEPC for both ♂s 0s. Both in Air together. B.♂.C

QVR 6.44.15 PCC (meow) ♀ ♂ displayed NW SH
TEPC = 0s

7.12.10 P.C.C (meow) ♀ ♂ displayed TEPC = 0s. Couldn't hear why sound but chicky audible.

8.05 ♂ ♂ flew and landed 30-40 mts. Chicky on ground agnostic.

8.06.30 ♂ flew off west from ♂♂ display zone and landed III ♂ territory.

(Throughout ♀ ♂ only faintly audible; sometimes not at all)

Every

4.15 seethagaddaia. 38°C

4.36.55 C.C. ω♂ displayed ω.ɔ.c NSWS TECC=Oɔ
away from main display zone ~~ω.ɔ.c TECC=Oɔ~~

4.48.47 CC ω♂ displayed ωɔ.c TECC=Oɔ

35.5°C PC=11

5.04.25 C.C. E♂ displayed (call faint) TECC=Oɔ

Cloudy/sny

5.19.50 C.C. E♂ displayed

34°C PC=6

5.25.00 P.C.M ω♂ displayed ω.ɔ.c. TEPC=Oɔ

(cloudy)

5.33.47 C.C. ω♂ displayed ω.ɔ.c. TECC=Oɔ

5.40.48 C.C. E♂ displayed TECC=Oɔ

5.41.35 C.C. ω♂ displayed ω.ɔ.c TECC=Oɔ

[E♂ can be heard very faintly only)

5.43 E♂ took to flight from opposite side of tnty in. landed in display dive soon after, and near, & landed. NWS D.D Ext tl.

5.43.50 C.C. ω♂ displayed TECC=Oɔ

ω.ɔ.c NSWS

~~83°F~~ 33°C PC=5

5·52·26 C.C. ω♂ displayed TECC=0; ω·J·C. NJWJ

5·57·04 C.C. E♃ displayed TECC=0; (from display zone)

5·57·12 CC. ω♃ displayed TECC=0; ω·J·C NJWJ

6·00·28 C.C. E♃ displayed TECC=0; ωSNC

6·08·33 P·C·F (meow) E♃ displayed TEPC=0; ωJF

6·14·08 C.C. ω♂ displayed TECC=0; ω·J·C NJWJ

31°C PC=4

6·17·41 C.C. E♃ displayed TECC=0; ωJC NJWJ

6·28·06 P·C·C (meow) E♃ displayed TEPC=0; ω·J·N·C

6·33·00 P·C·C meow E♃ displayed ω·J·N·C @TEPC=0;

6·39·10 P·C·C meow E♃ displayed ω·J·C. NJWJ TEPC=0;

6·43·04 P·C·C meow E♃ displayed ω·J·C NJWJ.

At second peak sort-of banked and glided and landed at an acute angle to line of take off.

6·45· 27·5°C PC=9

6·52 left Machan. (Rayheat display faint or not next of E♃)

IIIrd of Mehboob:- saw display at 5·30·49; 5·48·07; 5·53·00; 6·01·35; 6·05·20 (head) → 6·20·35 and 6·28·06.

26/4/89 Seethaqeddaia.

5.20 am →

5.28.45 C.C ♂ displayed TECC=0s ♂.S.C. NSWS

5.30 19.5° C

5.35 sunrise.

5.38.15 P.C.M E ♂ displayed ♂.S.N.C. TEPC=0s

5.40.48 C.C. ♂ displayed ♂.S.F TECC=0s.

6.01.30 P.C.M (meow) E ♂ displayed ♂.S.C TEPC=0s

16° C PC=5

6.08.00 C.C ♂ displayed TECC=2s

6.12.16 P.CM E ♂ displayed ♂.S.N.C TEPC=0s

6.15.50 P.C.C (meow) E ♂ displayed. NWS. Ext FI. D.D. TEPC=0s

6.18.09 ♂ displayed ♂.S.C. NSWS TEPC=1m 20s

6.21.56 P.C.C/M E ♂ displayed tepc=0s ♂S NC

6.22.19 CC ♂ displayed TECC=0s ♂SC NSWS

6.27.46 P.C.C (meow) E ♂ displayed TEPC=0s ♂.S.N.C.

6.30 20°C PC=7

6.43.24 P.C.M E ♂ displayed ♂.S.N.C TEPC=0s

6.49.20 P.C.M E ♂ displayed ♂.S.C.F. TEPC=2s

6.51.32 C.C. ♂ displayed ♂.S.C Ext FI D.D TEPC=0s

7.00 24°C PC=5

7.30 29°C PC=3

7.45 left field.

III rd ♂

saw heard ↓

5·39·33
5·46·40
6·13·04
6·19·27

Evem Seethagaddaia.

4·15 →

4·20 37° F

4·28·45 P·C·M/C·C. ω♂ displayed ω·S·C. TES M 0s

4·41·14 E♂ displayed ω S N H TEPC= 9m 26s

4·50 36° C PC=11

4·50·43 C·C. ω♂ displayed +ECC=0s ω·S·C

4·58·58 P·C·M (meow) E♂ displayed ω·S·N·H. TEPC=0s

5·05·52 C·C. ω♂ displayed ω·S·C TECC=0s

5·12·18 CC E♂ displayed ω S N H TECC=0s

5·12·19 ω♂ displayed ω·S·C.

5·13·55 P·C·C (meow) E♂ displayed.

5·20 34° C PC=7

5·43·54 P·C·C (meow) E♂ displayed ω·S·N·C. TEPC=0s

5·48·00 ω♂ displayed ω·S·C N S ω S TEPC=4m 15s

5·49·45 C·C E♂ displayed TECC=0s

5·50 32° F PC=9

5:55:25 P.C.L (meow) E ♂ displayed W.J.C.F TEPC=0s

6:02:05 ♀ flew across and landed (not in an entry) E ♂ W.J.C Ext +1. and D.D near where ♀ had landed.

6:03:07 P.C.L (meow) W ♂ displayed. W.J.C. N.W.S TEPC=0s

6:11:20 P.C.L (meow) E ♂ took to flight W.J.C Ext +1. D.D in display zone.

6:15 sunset.

6:22:52 P.C.L (meow) E ♂ displayed. W.J.C TEPC=0s

28°C PC=7

6:24:10 P.C.L (meow) W ♂ displayed. W.J.C TEPC=0s

6:32:34 P.C.L (meow) E ♂ displayed W.J.C Ext +1. circled and landd in display dive near where (C.D/♂/♀/Ruination) had taken place. Dur. C-25s

6:33:33 P.C.L (meow) E ♂ displayed W.J.C Ext +1. circled slightly. D.D in display zone. TEPC=0s Dur 18s

6:39:21 P.C.L (meow) E ♂ displayed W.J.C.F. D.D. TEPC=0s

6:46:34 P.C.L (meow) E ♂ displayed N.W.S just ↘

6:50 26°F PC=17

left field.

III rd Jt

(98)

4-31-30 ↓ Chicky indicating agnostic.

4-49-37 two Its took to flight. Aerial chase.

Not seen / heard returning.

28/4/89 Nawalkhad.

5·30 → No dew.

c. 5·34 sunrise.

5·49·35 ♂ flew c.o.c. Ext fl. D·D in South ~~Eastward~~ tree zone.

TEPC= 6m 23s

16° C ~~P C = 0~~

5·53·38 C·C. ♂ displayed c.o.c. NLWS TECC=0s

5·54·52 P·C·F ♂ displayed c.o.c NLWS TECC= 0s

5·54·52 P·C·F ♂ displayed c.o.c. NLWS TEPC=0s

6·00 located foraging

6·00·30 St1A next to tree.

6·01·00 St1A " " " tail cocked.

6·08·25 C·C ♂ NF1 St1A NF1 walking

6·09·05 0·4·s in longer grass.

6·09·55 glimpses foray N·D.

6·21·00 P·C·C (meow) ♂ displayed NLWS D·D TEPC=0s

17° C PC= 8

6·24·05 ♂ displayed NLWS D·D TEPC= 2m 34s

6·32·49 P·C·M (meow) ♂ displayed c.o.c NLWS TEPC=0s

6·42·40 C·C ♂ displayed c.o.c NLWS TEPC=0s

650 25m 22·5° C PC=5

7·09·50 P·C·C/C·C ♂ took to flight NLWS. flew across territory landed in D·D. Dur 34s forny on landy

7·12 foraging

7·20 " O·H·S in tall grass

28·5°C PC=5

7 40 30°C

7 45 cloudy

7 50 29·5°C cloudy

7 50·30 C·C. ♂ displayed W·S·C NSWS

7·54 foraging cloudy ↓

8·20 foraging
28°C

8·27 foraged O·H·S.

8·35 27·5°C

8·40 O·H·S left field.

28/4/89 Every Hawaiian.

4·35 →

5·06·26 C·C. ♂ displayed W·S·C NSWS TECC= OS

97·5° F

5 30 O·H·S 96·5° F PC=0

5·37·05 NSS ♂ displayed W·S·C. NSWS

5·40·50 C·C. ♂ displayed W·S·C. NSWS TECC=OS

5·42 located St1A

543 foraged O·H·S.

6·05 located foraging 91·5° F PC=0

6·14 St IA

6·15 foraging

6·17 St IA

6·18 foraging

6·20 C.C. coaly NF1

6·20·30 St IA N·D.

6·21 foraging

6·27·30 ♂ St IA

6·22·35 N F1

6·22·50 displayed N1SS CO)C N1SCO) St IA NF1 on Coaly

6·23·20 St CA N·D

6·24·15 P·C·F (meow) ♂ NF1

6·24·30 St CA N·D

6·26·25 foraging

6·26·40 St CA

6·27·00 St IA (then coaly) N F1

6·27·10 St CA N·D

6·27·30 foraging

6·28·45 St CA N·D

6·30 foraging

88° F PC=2

6·34 foraging

6·36 St IA

6·39 foraging

6·39·30 St CA

6·40·10 foraging

6·40·30 St CA

6·44·15 foraging

6·46 St L A

6·47·35 P·C·F meow ♂ NF1 & displayed CO)C N1SCO) TEPC=O3

6·48 foraging back.

6·50 foraging

85° F PC=4.

left field

2/4/09

5·10 → Chapra No dew.

5·24 located ♂ foraging in harrowed area.

5-26·35 P.C.M (meow) ♂ NFI and displayed. W.J.C NJWS TEPC=0s. foraging on landry

5·30 foraging

61° F

5·32·11 P.C.L (meow) ♂ NFI (5s) and displayed. W.J.C NJWS TEPC=0s foraging on landry

5·35 foraging

5 54 foraged o.u.s. Throughout harrowed area.

6·00 PC=9 60° F

foraging near swamp deer.

6·05 o.u.s.

6·12 located foraging

6·20 foraged o.u.s.

6·30 located foraging

66° F PC=9

6·48 vehicle passed. ♂ hid.

6·50 foraging

7·00 foraging

75° F PC=6

7·05 S+LA

7·06 foraging then O.W.J.

7·09 foraging

7·15 St LA

7·16 Stuttd preeng

7·22-30 stutd foraging

7·30 foraging
81°F PC=7

7·40 St LA

7·40·30 foraging

7·45 foraging O.W.J.
84°F PC=3

7 50 O.W.J left Machan.

8·10 saw ♂ foraging.

Evening Chapra.

4·10 →
4·15 101°F Moderate wind.
4·45 100°F PC=0 Mod to strong wind.
5·15 98°F PC=3 slgt to mod. wind.
5·45 97°F PC=2 " " "

5·56 located ♂ foraging in area where last seen this morning.

6·02 St LA
6·03·25 foraging
6·04 St LA
6·05·15 foraging
6·07 6·10·30 took to flight landed in display zone MFI Shook out feathers.
6·11 St LA M.D.

6·15 St1A N·D.
92·5° F PC=6

6·20·40 foraging

6·21·45 St1A

6·23·55 P·C·M (kia) ♂ M1 then N·D.

6·24·05 St1A N·D

6·28 St1A sunset.

6·28·15 M1 shook out feathers.

6·28·30 St1A N·D.

~~6·31·30~~ 6·31·35 CC ♂ M1

6·32 St1A N·D

6·32·05 C-C. M1

6·32·10 St1A N·D

6·33·08 P·C·C (meowkia) ♂ M1 (1-2 s) and displayed. C.C. M1 W5 TEPC=0s St1A N·D on landing.

6·34·15 foraging back.

6·37 St1A

6·41 foraging

6·41·15 St1A

6·41·39 P·C·M/C-C ♂ M1 ♂ displayed. C.C. M1 W5 TESM 0s St1A on landing

6·42·40 foraging.

6·43· St1A.

6·45 " 88° F PC=14

6·45·05 foraging

6·48 STA in roosty area

6·49·00 NFI shook out feathers. squatted.

6·49·20 P·C·((meow) ♂ STA

6·56·30 Scratched head with foot. NFI shook out feathers and squatted.

6·58 left field PC=10.

30/4/89 Kowhaghatti No dew.

5·25 a.m ♂ foraging

5·35 foraging into South Satiana tree zone.

61°F

5·36 Ran and pecked insect from bark of sheeshum tree.

5·37 STA.

5·37.15 P·C·M (meow) ♂ NFI

5·37.30 STA N·D.

5·38 foraging

5·39 sunrise.

5·41. STA.

5·41.45 CC ♂ NFI

5·41.25 ↓ ♂ displayed NWS NDD Sat Hew and landed TECC=0s foraging on landing.

5·43 STA.

5·43.30 CC ♂ NFI

5·43·48 cc ♂ displayed c.w.s.c NJCWS TECC=05 foraging on lawn.

5·45 took to flight- landed in South Saligna.

5·53 ♂ flew back into territory landed in centre of display zone. foraging on lawn.

6·05 foraged o·4·s. 61°F PC=8

6·26 located foraging

6·30 foraging
63°F PC=6

6·35 foraged into sheoknum scrub o·4·s.

7·00 o·4·s.
69°F PC=7

7·22 located foraging in sheoknum scrub then o·4·s.

7·30 o·4·s.
73°F PC=3

7·50 o·4·s left field.

9·15 located ♂ foraging in sheoknum scrub.

Evening

4.15 Kowhaghatti cloudy/hazy

4.30 101°F

4.49.34 CCC ♂ displayed w.s.c [illegible] TECC=0s foraging on laudy.

4.54 St/A beside tree.

4.56.15 foraging

4.57.30 St/A

4.58.25 foraging

4.59. St/A

5.00 sun com out sun

98°F PC=1

5.07.20 foraging

5.10 O.H.S.

5.26 located St/A

5.27 O.H.S then located foraging

5.28 St/A in shade of tree.

5.30 St/A

95°F PC=0

5.32 St/A.

5.51 foraging

5:55 Stia

5:59:15 foraging

6:00 Stia cc ♂ NF1

6:00:08 P.C.F (meow) ♂ displayed w.s.c.
TEPC= 0s foraging on lady 84°F PC=2

6:01 foraging

6:06:24 cc ♂ NF1 ♂ displayed w.s.c NJWS
TECC=0s foraging on lady

6:09:22 NJS NF1 ♂ displayed wsc NJWS
TEPC= 5m 54s. foraging on lady

6:17:30 Stia in front of hide

6:18:15 Stia NP1

6:18:35 foraging

6:19:30 Stia NP1 | Foraging NP1

6:20 foraging N.D.

6:21:30 P.C.F (meow) ♂ NF1 ♂ displayed w.s.c NJW
TEPC= 0s foraging on lady

6:24:00 Stia

6:24:40 foraging

6:25:50 Stia

6:27:15 foraging

6:28:30 Stia

6:29:45 foraging
84°F PC=3

6·32 foraging

6·36 St I A

6·40 St I A NBI

6·41·10 walking NFI

6·41·20 P·C·M (meow) ♂ displayed w·o·c NOWS

TFBC= 03 foraging on lawn

6·43·15 St I A

6·43·45 foraging

6·46 St I A

6·55 St I A

81·5°F PC=10

6·57·20 P·C·C meow ♂ NFI

6·57·30 St I A N·D.

left field.

(110)

12/5/89 Chepra.

5·00 →

5·15 69°F

5·22 located ♀ foraging

5·30 foraging P.C. ♀ no reaction. then O·W·S.

5·38± Sunrise.

5·45 71°F

13/5/89 Kowhaghti

5·30 → cloudy.

5·30 79°F

5 31·45 ♂ flew in from south Satiana. landed in shallow display dive in display zone. foraging on landy

5·36·30 STIA

5·36·45 ♀ flew over territory ♂ displayed ext to D·D. Co·C NSWS. TEPC = 5s

5·37·10 ♂ followed ♀ and landed in display dive in south Satiana.

5·40± Sunrise.

O·W·S.

5·45 foraging back into display zone.

[2 ♀ flew and landed c. 20-30mts each ♀ w hive ♀ ♂ had landed]

5·48·20 St1A NF1

5·48·35 foraging N.D.

5·50 foraging NF1

5·50·30 St1A NF1

5·51·00 displayed w.d.c. NSWS TEPC= 1m 37s

foraging on lawn back

5·53·05 walk NF1

5·53·20 St1A NF1

5·53·30 Displayed w.d.c. NSWS TEPC= 2m 26s

foraging back.

5·55 foraging

5·56 St1A NF1

5·57 St1A N.D.

5·58·15 foraging

5·59 St1A

6·00 79°F PC=9

6·01·30 C.C. ♂ NF1 ♀ displayed w.d.c. NSWS

TECC= 0s

6·02 foraging

6·03·30 ♂ hog deer playfully rubbed towards ♂ Florican who leapt to one side with open wings

St1A. Hog deer carried on running a full circle.

6·05 St1A.

6·07·15 St1A NF1

6·07·30 CC Displayed w.s.c NJWS TECC=0, tommy back on lady.

(All displays same spot)

6·09·30 St1A

6·09·45 p.c.m (meow) ♂ NF1

6·09·55 St1A N1·D

6·14 St1A

6·14·55 C.C ♂ NF1

6·15·09 ♂ displayed w.s.c. NJWS NJJ TECC=5, forgy on lady.

6·21·30 St1A NF1

6·22·05 C.C. ♂ displayed w.s.c TECC=0, forgy on lady.

6·24·45 St1A N1·D.

6·28 preemy

6·30 " 78°F pc=4

clear slight wind.

6·33·45 St1A

6·34·25 preemy

6·75 St1A

6·35·20 preemy

6·35·50 St1A

6·36·00 preemy

6·37·00 St1A

6·38·50 NF1 St1A

6·39·05 walky NFI

6·39·15 St1A NFI

6·39·25 St1A N·D

6·40 St1A

6·41·30 St1A NFI

6·41·45 St1A N·D.

6·42·40 St1A NFI

6·42·55 displayed w.j.c. TEPC= 3m 40s
foraging back on lady

6·47·45 St1A NFI

6·47·53 displayed NJS wjc NSWS tommy back
on lady.

6·52 St1A

6·53 St1A NBI

6·54 St1A

6·55·50 P.C. F (meow) ♂ NFI ♂ displayed co.j.c.
NJWS TEPC=0s
St1A on lady.

6·56. St1A

6·56·30 tommy

6·59 St1A

6·59·30 tommy

7·00·30 St1A.
80°F PC=2

7·02·00 foraging

7.03.20 PC.M ↗ NFI

7.03.30 St1A N.D.

7.05.30 preemy

7.07 St1A

7.09 preemy

7.10 St1A

7.12.15 C.C. ↗ NFI & displayed Co.s.c NJWS
TECC=0S

7.12.45 formy Mach.

7.15 St1A.
(All displys same spot.)

7.17 foramy

7.17.50 C.C. ↗ NFI and displayed Co.s.c. NJWS
TECC=0S

7.19 foramy

7.24 St1A

7.24.45 C.C. ↗ NFI

7.25.05 C.C " " & displayed Co.s.c NJWS TECC=0S
formy on lady

7.28 St1A

7.28.20 St1A NFI

7.28.25 St1A N.D

7.29.00 St1A NFI

7.29.25 St1A N.D

7.29.30 foramy

7-30.00 S+1A.

PC=1 82°F

7-31.15 C.C- & NFI

7-31.30 S+1A N.D.

7-31.50 tomqiny

7-33 S+1A

7-37 toraqiy

7-37.30 C.C. & S+A NFI

7-37.45 S+1A N.D.

7-41.50 CC. & NFI

7-43.00 S+1A N.D.

744.00 S+1A NFI

7-44.15 Lwaiky NFI

7-44.30 S+1A N.D.

7-46.45 Stí tomy

7-55 tomy'y

8.00 toraqiy O.H.'s into east Satlane

83°F PC=1

8.15 O.H.'s left tired.

14/5/89 Nawalkhael

5·10 → clear no wind.

5·17 1♂ flew and aerial chase of another ♂ Both landed in west Nawalkad. Chaser glidly in swiftly from quite high.

71°F

5·21 chicky began from grass.

5·22·45 Aerial chase. terr

Evening. Kowhaghatti

4·15 → sny / clear slgnt to moderate wind.

4·20 104°F

4·25 foraged into display zone from direction of sheeshum scrub.

4·27 st1A

4·31 O·4·J.

4·42 located st1A. Mostly screend by grass clump only top of head visible.

4·44. slunk to another grass clump with head held low. st1A only head visible. On leeward side of grass (sun opp.).

4·50 104°F PC=0

st1A.

5.02 C.C. ♂ NFI then two steps NFI then stLA NFI
and so on.

5.04.10 walky NPI CC throughout.

5.04.30 stLA N.D

5.05.20 CC. stLA N.D.

5.05.50 stLA N.D.

5.10 stLA N.D behind bush.

5.17.10 C.C. ♂ NFI

5.17.50 N.D.

5.19.30 walking NPI

5.20 stLA N.D
102° F PC=0

5.21.35 walky NFI

5.21.50 stLA NFI

5.22.10 Displayed C.J.C. NJWJ NJS.

5.22.20 stLA NFI on lady

5.23.00 foray N.D.

5.28 stLA behind grass.

5.33 foraging

5.37 forged O.H.J.

5.42 located stLA

5.42.40 NJS displayed C.J.C. NJWJ. foraging
N.D after lady

5.45 foraging

5:46:30 ♂ began c-D. chase.

5:48 approach of ♀ in sideways shake display. ♀ flew. ♂ followed and landed in display dive between sheeshum scrub and road. ♀ flew o.u.s over north Satiana.
♂ stIA N.D.

5:49 stIA then foraging

5:50 o.u.s.
98°F PC = 0

6:00 located ♂ being mobbed by Red wattled lapwing. similar reaction to last time when lapwing settled ♂ ran away from it.

6:02 foraging

6:05 o.u.s.

6:20 o.u.s.
93°F PC = 0

6:30± sunset
♂ o.u.s.

6:34 located a ♀ foraging on southern edge of display zone.

6:35 o.u.s.

6:50 Both o.u.s.
88°F PC = 0

7:00 87°F PC = 3.

14/5/89 Nawalkad.

5.10 → clear no wind.

5.17. 1 ♂ flew aerial chare of anoth ♂.

Both landd in west Satlana

71°F

5.21 began chicky from grass.

5.22.45 Aerial chare. Territorial ♂ escorted ♂ out

territay in direction of Howhaghatti

5.25 ♂ landed in display zone.

S+lA on landing

5.26 Sunrise.

5.29 S+.A.

5.32 foraging

5.35 S+lA

5.37 foraging

5.50 72°F PC=2

♂ forged O.H.J.

5.56 re locatd foraging

6.08 locatd foraging

6.09.35 P.C.M ♂ displayd w.j.c.

NJWJ TEPC=0J

6.12 foraging

6.14.45 ♂ displayd w.j.c. NJWJ NJJ

TEPC= 2m7J

foraging then O.H.J.

(121) (120)

6.20.32 C.C. ♂ displayed w.s.c NJSWS TECC=0s

6-21 Foraging

PC=3 77°F

6.35.05 ♂ displayed Ext tlt. D.D. w.s.c NJS

TEPC= 12 m

6.35.15 ♂ took to flight Ext tlt landed in display dive. (took to flight almost immediately attn display lady). O.H.S.

6.50 O.H.S.

82° F PC=1

6.55.30 ♂ displayed w.s.c. NJS back in eastern display area.

O.H.S.

7.17. CC ♂ displayed NWS D.D.

7.20 88°F PC=1

7.50 89°F PC=0

8.05 left field.

Evening

4.10 Navalhad

4.20 102° F

4.50 104° F PC=0

5.26.25 NJS ♂ displayed w.s.c. NJWS

99° F PC=0

5:33 ♂ displayed C.J.C, NJSWS NJS.

5:42:45 P.C.C (meow) ♂ displayed C.J.C. NJSWS

TEPC=0S

5:50 97°F PC=1

♂ O.H.S throughout.

5:55 located ♂ foraging

5:56:30 St1A.

5:57:15 NJS displayed C.J.C. NJSWS

6:04 located foraging

6:05:40 St1A

6:06:05 P.C.C (meow) ♂ NFI momentarily found and displayed C.J.C. NJSWS TEPC=0S

6:07:32 CC ♂ NFI ♀ displayed C.J.C NJSWS TEPC=0S

6:20 O.H.S.

93°F PC=1

6:25 located foraging

6:26 coalmine/St1A NPI

6:27:00 walk NFI then NPI

6:27:45 foraging N.I.D.

6:28:05 St1A

6:33:45 Scratched head with foot.

6:34 St1A

6:35:25 P.C.F (meow) ♂ NFI found displayed C.J.C.

NJSWS TEPC=0S

6·37·52 C.C. ♂ NFI ♂ displayed Co·J·C NJWS
TECC=0s FAtt 1. D·D. (land 6·38·03)

6·41 sunset.

6·42. 28 C.C. ♂ displayed Co·J·C NJWS TECC=0s

6·44 located StIA

6·45·10 P.C. M/F ♂ NFI

6·45·30 StIA N·D

6·46·15 P·C·F ♂ NFI

6·46·20 StIA N·D

6·47· StIA

6 50 StIA 90° F
PC=6

6·58 StIA.

6·59·30 P.C.M (meow) ♂ NFI turned and displayed
Co·J·C. NJWS TEPC=0s
0·41·).

7·05 left Markham. PC=6.

15/5/89.

Chapra.

5.10 →

5.15 76° F

5.31 sunrise.

5.45 76° F PC = 3

6.15 78° F PC = 3

6.25 left Machan.

♂ not present in territory.

Evening Hide.

5.15 → 6.45 ♂ displayed 7 times. twice without coly beat sound.

6.24 p.m Chapra ♂ flew in from Nawathi into display zone

↓

6.45 No display.

16/5/89.

Chapra ♂.

5.20 a.m. displayed.

17/5/09

5·35 → 6·35 Rowhaghetti

Cloudy/cool./windy.

♂ not located.

7·50 ♂ moving towards south sattara.

6·12 a.m. 1 ♀ flew in from Gola, over R.H. towards Nawalkal.

Every Hide.

4·00 →

5·05 located ♂.

5·17 C.C. ♂ displayed

5·35 displayed.

5·42 displayed.

6·45 left hide.

18/5/09.

Chapra. Cloudy No wind.

5·00 81°F

5·07 located ♂ foraging at edge of Harrow area.

5·10 foraging

5·30 " 81°F PC=6

5:37 took to flight landed in display zone
STLA.

5:39:45 foraging.

5:43 STLA.

5:45:20 P.C.C/M. (kia-kia & koh koh) of NF1 &
displayed W.S.C. NSWS TEPC=0s STLA on lawly.

5:47 foraging

5:49:55 P.C.C (meow) & NF1

5:50 STLA N'D.

5:54:35 C.C. of NF1

5:54:40 STLA N'D.

5:55:05 P.C.C (meow) & NF1 & displayed W.S.C.
NSWS TEPC=0s

5:56. STLA.

5:57:55 P.C.C & NF1

5:58:00 Foraging | STLA N'D.

6:00 83° F PC=8

6:01:10 P.C.C & NF1

6:01:15 STLA N'D.

6:06 foraging

6:10:46 P.C.C (meow/kia) of NF1 & displayed
W.S.C. NSWS TEPC=0s STLA on lawly.

Dur. 6:45.

6·15 foraging sun/clean up.

6·17·50 P·C·F ♂ NFI & displayed c.s.c. NJWS TEPC=0s

6·20·45 P·C·F/C·C ♂ NFI

6·20·47 St1A N·D.

6·21·10 C.C. ♂ NFI

6·21·15 P·C·C (meow once) ♂ displayed c.s.c NJWS TEPC=0s. landed on road.

6·22 foraging

6·27 St1A

6·29·10 P·C·C (meow/kia) ♂ NFI

6·29·15 St1A N·D.

6·30 St1A on rat sand mound.
85°F PC=9.

6·32 St1A

6·35·45 C.C. ♂ NFI

6·35·52 ♂ displayed c.s.c NJWS TECC=3s

6·36 St1A

6·37 foraging

6·39 St1A

6·42·40 foraging

6·45 foraging

6·46·15 P·C·F ♂ displayed c.s.c. NJWS TEPC=0s
foraging on lawn

6·50 O·H·S.

7·00 O·H·S.

92°F PC=5

7·09 ♂ took ↗ to flight in direction of Navalhd

7·13 ♂ retrnd. landd in display zone. STIA.

(cloudy) ↓

7·21 preen started.

7·23 STIA

7·24·10 P·C·M (meow) ♂ NFI

7·24·15 STIA N·D.

7·26·25 P·C·M (meow) ♂ NFI & displayed

W·S·C NSWS TEPC=0s

7·27 foraging

7·30 foraging

84°F PC=4

7·32 foraging cloudy ↓ slight wind.

7·33·25 P·C·((meow) ♂ NFI and displayed W·S·C.

NSWS TEPC=0s Foraging on landy

7·36 STIA.

7·38 " scratchd head with foot.

7·40 preening.

7·40·30 S+IA.

7·43 S+IA sunny ↓

7·44·25 P·C·L (meow) ♂ MPI 2s

7·45 S+IA N·D

7·46 foraging

7·46·40 P·C·L ♂ S+IA NFI

7·46·45 Foraging N·D

7·54 foraging then O·H·J.

8·00 O·H·J.

94°F PC= 11 (mostly in cloudy period)

8·10.

Seethagaddaia

18/5/89 Evening.

4.35 →

4.45 103° F

4.58.54 cc ∈ ♂ displayed ω.s.N.C TEcc=0s

5.15 104° F PC=13

5.24.19 c.c. ∈ ♂ displayed ω.s.N.C TEcc=0s

5.27.18 c.c. ∈ ♂ displayed ω.s.N.C TEcc=5s

5.39.54 ω ♂ displayed ω.s.c NISω5

5.42.00 ∈ ♂ displayed ω.s.c. NISω5 NSS.

5.45 99° F

5.45.50 NIS ∈ ♂ displayed ω.s.N.C. (chicky audible)

5.52-05 NSS ω ♂ displayed ω.s.c.

5.55.20 P.C.C ∈ ♂ displayed ω.s.c. TEPC=0s.
(PC= kia)

6.13.14 P.C.C (kain/kakoo) ∈ ♂ displayed ω.s.c.F.
TEPC=0s

6.45 94° F

6·16·41 E ♂ displayed w.s.c.

6·24·58 ω ♂ displayed w.s.c.

6·29·24 E ♂ displayed w.s.c.

6·37·25 E ♂ displayed w.s.c.

6·38·38 P.C.C ω ♂ displayed w.s.c. TEPC=0s

6·43·52 P.C.C E ♂ displayed w.s.c. TEPC=0s.

6·45 94° F

(III^rd ♂ not observed)

20/5/09 Seethagaddala.

5·05 →

5·11 third ♀ from very close to machan. Single 'queen' call.

5·13.10 NSS E ♂ displayed w.s.N.c.

5·20·05 P.C.M (Kain) E ♂ displayed TEPC=0s

~~5·22·15~~ 5·22·12 E ♂ displayed w.s.c.r.

5·23 Sunrise.

5·29·48 E ♂ displayed w.s.N.c.

5·29·50 ω ♂ displayed w.s.c.

5·38·50 ω ♂ displayed w.s.c.

5·40·05 P·C·L ∈ π displayed w.s.c.

5·46·25 ω π displayed w.s.c NSS.

5·47·45 P·C·M ∈ π displayed w.s.c.

5·54·54 P·C·M ∈ π displayed w.s.c.

77° F

6·16·13 C·C· ∈ π displayed w.s.c.

6·25 83° F

6·55·15 ∈ π displayed w.s.c.

7·00 85° F

7·16·53 C·C· ∈ π displayed w.s.c.

7·30 88° F

7·45 90° F

8·00 left field.

III rd π No display.

Evening.

4·30 → 108° F

4·57·41 ∈ π displayed w.s.c.

5·00 106° F P(= 4

5·05·11 NSS ω π displayed w.s.c.

5-26 E ♂ flew and landed c. 3-400 m from display zone.

5·30 1♀ (small one) flew in and landed near machan.

104°F PC=3

5·33 3♂ In aerial chase flew in over ω ♂ territory landed between E ♂ ω ♂ territory

5·36 Agnostic.

5·37 2 ♂ took to flight. Chaser 2-3 wing beat sounds. Flew over forest at canopy level, blow tops of some trees. landed near E ♂ display zone.

5·40 1♂ took to flight circled grassland and landed in ω ♂ display zone.

6·00 ♀ 97.5° F PC=6

6·10·57 ω ♂ displayed ω.j.c.

6·11·50 P.C.C E ♂ displayed ω.j.c.

6·15 1♂ flew from towards II ♂ territory towards railway line (west).

6·19·32 P.C.M (E ♂ displayed ω.j.c.)

6·20 Sun went down behind trees.

6·20·45 P·C·M ω ♂ displayed

6·24·08 C-C. ♀ ♂ displayed ω·ɔ·c.

6·24·30 C-C. ω ♂ displayed ω·ɔ·c.

6·27·35 C.C ω ♂ displayed ω·ɔ·c.

6·31·37 C.C ω ♂ displayed ω·ɔ·c.

91°F PC=8

6·33·25 C.C. ♀ ♂ displayed ω·ɔ·c.

6·38·50 C.C. ω ♂ displayed ω·ɔ·c.

6·39·22 C-C. ♀♂ displayed ω·ɔ·c.

6·41. ♀ flew from near maihar style (quacks) call. circled ♀ ♂ territory who flew and landed and then again flew and landed near who ♀ had already landed.

6·44·35 P·C·M ω ♂ displayed ω·ɔ·c.

7·00 88°F PC=6

7·02·27 P·C·C ♀ ♂ displayed ω·ɔ·c.

III rd ♂. displayed at 5·38·45 ; 6·07·20, 6·24·30 p.m.

21/5/89. Morn.

5·40 chetwa ♂ present in territory.

5·53 kurmania ♂ displayed. Display zone shifted from western side to eastern side of road. c. 100–150m from 1988 site.

22/5/89 chepra. Morn

5·05 located ♂ foraging in harrowed area.

5·10 81°F

5·11 O.M.S.

5·19 located foraging in same area.

5·19. sunrise.

5·32 st/A.

5·34 foraging

5·40 " 82°F PC=7

5·44 foraging

5·49 stopped stretched calls flapped carried on foraging

5·55 took to flight landed in display zone

5·56 foraging

5·56·30 st/A.

5·59·10 cc ♂ MPI turned then preening.

5·59·35 st/A.

6·01 foraging

6·07·00 P·C·F ♂ NF1

6·07·05 foraging

6·07·25 St1A on rat sand mound.

6·08·32 P·C·F/C·C·C ♂ NF1 ♂ displayed w.d.c. NSWs TESM os.

6·09·30 foraging back.

6·09·45 St1A.

84°F PC=8

6·15 foraging

6·16 St1A where displayed from

6·17·40 NF1

6·17·50 St1A N·D

6·20 St1A

6·20·55 P·C·C ♂ NF1

6·21·15 St1A N·D.

6·22·45 P·C·F ♂ NF1

6·22·55 St1A N·D

6·29·30 Started preening

6·30·00 St1A

6·32 preening

6·35 St1A.

6·37·15 PCM ♂ NF1

6-37-20 S+C A N·D

6·40 S+C A

86°F PC=5

6·45 S+I A.

6·47 took to flight flew to Chaprataal circled taal then retnd flew over disply zone and

6·51 O·U·S in direction of Ghola

7·10 O·U·S.

91°F PC= 3.

7·20 Gh left field.

22/5/89 Evening

3·45 Hide.

5·05 located ♂ in territory.

5·34 cc/p.c. displayed CDSC NDWS.

5·38 NDS displayed CDSC NDWS

5·44 NDS displayed CDSC NDWS

5·50 NDS displayed CDSC NDWS

5·58 NDS displayed CDSC. NDWS.

6·04 NDS disp'nd (heard) NDWS NSWS

6·33 A CC ♂ displayed CDSC NDSWS.

6·50 left hide.

22/5/09 Evening Chopra.

6.07 ♂ (foraged in from North Chopra) flew

6.15 flew and landed in harrowed

No display upto 6.40 pm.

23/5/09 Morning

5.05 Nawalkal.

5.10 located ♂ ST1A

5.15 ST1A

86° F

5.16 foraging

5.17 ST1A

5.17.15 foraging

5.18 ST1A

5.20 ST1A

5.21.15 preening

5.22.30 ST1A

5.25.20 preening

5.25.45 ST1A

5.27.30 foraging

5.29.35 ~~ST1A~~ P.C.F (meow) ♂ NF1/NP1 ST1A.

5·27·45 St1A MD

5·35·25 stretchd coiys walkd a little.

5·35·45 st1A.

5·36·18 walkd a little turnd MF1 & displayed

Lose MSWS TEPC= 6m 2s

5·37 foraging back.

5·37·45 St1A.

5·38·30 foraging

5·41 foraging

5·44 O·H·S.

5 50 87°F PC=6

6·20 88°F PC=3

6·50 91°F PC=0

7·00 left field.

Every Mwalkd.

4·30 →

4·40 108°F

5·00 mod to stry wmd.

5·10 " " " / cloudy

95°F PC=1

5·20 sny / cloudy

5·21 1 ♀ flew and landed near east tree zone.

5·30 Wind slight to mod. Sun

5·40 Slight to moderate wind.

96° F PC=0

6·10 93° F PC=1 Slight wind

6·21 1 ♀ flew from east Nawalk and landed(?) in west Nawalk beyond tree line.

6·28 head ♂ display NEWS, NSS only chirky

6·39.54 ♂ displayed NEWS, NSS, only chirky

6·40 92° F PC=3

6·44 sunset.

7·00 90° F PC= 2

7·02 ♂ displayed NEWS NSS

7·10 left field.

24/5/89

5·00 kowhaghatti

5·07 cc heard ♂ chicky

5·08 located foraging

5·15 foraging

84° F

5·20 foraging

5·24·10 STIA NIFI

5·25·05 Took to flight 1-2 faint calls landed in South Saltana.

5·29·15 Took to flight landed in D·D Ext flt. Most liy ♀ present.

Jule cat enters display zone moves close to S·deer who are not bothered.

5·34·05 ♂ flew in and landed in display zone ext. flt. D·D. Jule cat c. 40 mts away.

5·35 ♂ forging towards cat.

5·37 ♂ stands my towards cat less than 7-8 mts apart.

5·38 ♂ still following cat. as it escorts out of zone.

5·38·30 ♂ STIA/only as cat moves into taller grass.

5·40 ♂ moves back into display zone. Cat-liy away

into sheeshm scrub.

[♂ certainly stuck my tounb the cat on seeing it. ♂ a little taller than the cat. Throughout every when ♂ was at one point less than 5 mts from cat, cat ignored ♂ totally

No eqa agression demonstration by ♂, but perhaps mny itself was an intimidatory act. ♂ must have follow cat at a distance of less than 10 mts for over 50 mts.

5·43 ♂ stIA.

5·44 foraging

5·46 foraging 84°F PC=0

5·51 foraging

5·56 forny clowly/ shy

5·59 O.H.S.

6·06 located foraging

6·15 stIA

55°F PC=0

6·16 foraging

6·20 stIA.

6·22 foraged o.h.s.

6·29 located foraging cloudy/sun

6·30.5[illegible] Indian pied hornbill called. ♂ displayed
c.s.c. NSWS TESM Os.

6·32 foraging

6·37 STIA

6·42 foraging

6·50 " 88°F PC=2

6·51.40 STIA

6·54 foraging

6·55 overcast v. strong wind

6·56 STIA

7·02 STIA / foraging overcast.

7·04 o.h.s.

7·10 located ♂ STIA NP1

7·10.20 STIA N.D.

7·11.31 P.C.F (meow) ♂ NF1 ♂ displayed c.s.c.
NSWS TEPC=Os

7·12 foraging

7·15 82°F PC=1 foraging

12-20 96° F PC=5.

12-35 located ♂ foraging at edge of south satrium

12-50 O.H.S.

93° F PC=0 cloudy/dry

1-05 96° F PC=0 O.H.S.

left hive.

Eng.

3-50 Hide.

4-56-50 C.C. ♂ MFI ♂ displayed w.s.c. NSWS

TECC=0s

5-10± ♂ displayed w.s.c NSWS NSS

5-23 P.C.F (meow) ♂ MFI ♂ displayed w.s.c.

TEPC=0s

5-37 P.C.M (meow) ♂ MFI ♂ displayed w.s.c.

TEPC=0s

5-45-58 P.C.F (meow) ♂ turned MFI ♂ displayed

w.s.c. NSWS TEPC=0s

6-17 ♂ took to flight and landed near west road.

left hide.

(146)

25/5/89.

Every. Chipra ♂ present in harrow area.

26/5/89.

6·45 a.m. Fluid ♂ from display zone Chipra

5·30 p.m. Chipra ♀ crossed rd into harrow area.

5·10 p.m. 1♀ satiut drive corner of Nawalkul.

27/5/89.

5·52 pm Kowrughatti ♂ displayed.

30/5/89.

Nawalkul ♂ displayed twice. 5·50 a.m & 6·30 a.m.

29/5/89.

5·30 p.m. Fluid ♂ from Imperata patch Chipra

Mouth waterhole. Plenty of insects.

Flew landed in Chipra phase.

Florican footprints at waterhole.

(14)

8·25 foraging

8·28 STIA.

8·31 stuck drizzly & STIA.

8·31·54 P·C·M (meow) & tuned MFI & displayed a.s.c. NSWS TEPC=0. (while drizzly)

8·32 town.

8·40 left field.

8·50 → heavy rain/hail.

9·30 stopped rain.

9·40 Kowhaghatti
cloud/overcast no wind.
77° F.

9·55 & STIA near hide.

9·58 STIA.

10·10 73° F PC=0 overcast.

10·12 rainy.

10·15 " left field.

11·15 stopped rain

11·40 Kowhaghatti

11·50 92° F sun/clear.

7-25 foraging sty/cloud

7-30 stIA overcat.

7-33 foraging

7-43 stIA.

7-45 foraging

80°F PC=0 Cloudy
stray wspl.

7-58 stIA

8-01 foraging

8-04 stIA

8-15-15 stIA NPI

8-15-30 stA N·D.

78°F PC=0

8-16-50 P·C·F & NFI & displayed Co-ord·N·H.

TEPC=0's.

8-18 stIA. overcat stry wind.

8-21-20 P·C·M. (meow) & NFI & displayed NWS

TEPC=0s foraging back.

8-22 stIA.

8-22-45 foraging

8-24 stIA.

30/5/89. Evng cloudy (drizzled in morng).

4.30 93°F Chagrc.

5.00 92°F cloudy PC=14

5.30 92°F cloudy PC=8

6.00 90°F "

6.30 89°F PC=7

7.00 80°F PC=4

7.10 left tlm.

Not sighted ♂.

31/5/89 Kowhaghatti

5.05 a.m. cloudy / No wind.

5.15 80°F

5.16 ♂ forged out from behd hide.

5.17 STIA.

5.19.20 P.C.M (meow) ♂ NFI & displayed c.w.s.c.

NJWS TEPC=05 STIA on landing.

5.23.40 foraging

5.24.30 STIA.

5.27 foraging

5.28 STIA.

5.36.30 cc. ♂ NFI

5-38 stIA NPI

5-39 " NFI | NPI

5·44·30 " NPI | NFI

5·47·45 P.C.M (meow) ♂ NFI ♂ displayed. c.o.s.c.

NSWS TEMP C= 0. foraging on landy.

5·50 foraging

79° F PC=4

5·51 P.C.M (meow & kia) ♂ NFI displayed c.o.s.c.f

Ext flt landd in south sation in a displg dive.

O.K.'s.

6·03 foraged into displg zone from south sation.

Quest

6·13 stIA.

80° F PC=3

6·19·15 c.c ♂ NFI then walky NFI

6·19·45 stIA N·D

6·21·30 stand preeny

↓

6·27 shd formgly

6·29 st LA

6·32 preeny

6·35 st LA.

(49)

6:42:05 P.C.M (meow) & NFI & displayed w.s.c.
NSWS TEPC=0. Then O.W.S.

6:45 O.H.S.
83°F PC=2

6:46 foraging

6:56 STLA

7:03:05 STLA NFI

7:03:20 STLA N.D.

7:04:55 preen

7:07:45 stopped preen started foraging

7:11 foraging then O.H.S.

7:15 86°F PC=2

7:19 located foraging near 2 S.D.eer.

7:20 foraging into South tree zone.

7:25 foraging then O.H.S. moved towards east tree zone.

7:40 O.H.S.

7:50 86°F PC=1

8:10 87°F PC=0

↓

9:35 O.H.S.

(150)

Evening. Cloudy whole day. Kowhaghatti

4:30 → Slight drizzle

4:36 P.C.F (meow) ♂ displayed TEPC=0s

4:40 78°F

4:49 NSs ♂ displayed C.J.N.H (drizzly)

5:10 drizzly 76°F PC=0

5:40 drizzly 74°F PC=0

5:50 Slight drizzle

5:53·51 P.C.F (meow) ♂ ~~displayed~~ displayed C.J.N.C

TEPC=0s No drizzle.

6:06·35 P.C.F (meow) ♂ displayed C.J.N.C.

TEPC=0s (No drizzle only very sparse droplets).

6:20 79°F PC=3

6:40 ♀ 76°F PC=4

6:48 2 ♂ flew in from Navalkal. Kowhaghatti ♂ took to flight as well. Intruder ♂ one mobbing the other in ~~the~~ air. landed near Machan. A mount later Kowhatti ♂ landed.

6:50 Agnostic Chicky from grant.

6·52 Agnostic warbly & chirky. 2 ♂s more intensely 3rd ♂ less so.

6·55·10 1♂ took to flight in direction of Navalul. other 2♂s stay watum ↑↑ go.

[3rd ♂ actuly not chicky but had watched proceedy from bend clump of grass as other two threated each other.]

6·57 Chirp goes on grass clump ♂ moves away other. St 1A.

6·59 Chick types to finnish. both ♂s st 1A 10–20 cts apart.

7·03 Both ♂s st 1A 10–20 cts apart. No chicky.

7·07 1♂ st 1A other moves towds display zone.

7·10 1♂ moves slowly towds west saltlane other ♂ o.u.s

75°F ρ ⟨= 20

7·13 1♂ moves in direction which other ♂ had gone scoiftly.

7·14·15 Chirp stops both ♂s o.u.s.

7·15·30 Chick stops

7·20 left field.

(152)

1/6/89. Many tourists

4.55 → ~~Overcast~~ grnd wet with dew/rain.

5.13.20 NSS ♂ displayed NWS.

71°F

5.23 P.C.M (meow) ♂ displayed NWS TERGEOS

5.26 sunrise.

5.50 72°F

♂ SHA tail could similar to dewy morning end counter

6.10 left field.

3/6/89 Evening

4.45-> Chapra Hot / Humid

5.00 - 105° F

5.23 ♂ flew in from North Chapra perhaps waterhole area. landed edge of harrowed area. St1A.

5.26 foraging

5.27 St1A.

5.32 O.W.J. ↓ 101° F PC = 6

5.35 cloudy slight to medium wind.

5.51 located foraging into display zone C.G.

6.00 St1A cloudy / slight wind.
96° F PC = 1

6.06 foraging

6.07 St1A on rat sand mound

6.09 preening

6.10 St1A

6.10.40 scratched head with foot.

6.10.45 St1A

6.11.30 Scratch head with foot.

6.11.35 St1A

6.13.20 ↓ CC ♂ NF1

6.13.50 ↓ CC ♂ displayed C.J.C NJW1 TECC = 05

St1A on lanky

6·16 foraging

6·18 STLA

6·21 P·C·M (sort of strayed meow) ♂ MFI ♂ displayed W·S·C· MSWS TEPC=0s foraging back on landy. (Both display usual rat sand mound.)

6·23 Took to flight landed in harrowed area STLA.

6·26 STLA

6·30 STLA PC=3 94°F

↓

6·45 O·H·S

6·50 located foraging

6·59·50 P·C·M meow ♂ MFI half displayed W·S·N·C· MDD Ext flt landed R·H·G· O·H·S·

7·03 foraging stray wind.

7·05 O·H·S·

90°F PC=3

7·10 O·H·S·

(155)

5/6/89 Overcast.
wet ground/grass.

5·20 → Kowhaghatti

5·30 72°F
located ♂ stIA. possibly moved out of
sheeshum scrub.

5·40 stIA

5·49.10 c.c. ♂ MFI ♂ displayed w.s.c MSWS
TECC= 0s foraging on landing

5·53 stIA.

5·55 foraging

5·55·30 stIA

Throughout MPI due to dew bird wet.

5··58 stIA.

6·03 started rain heavily.

6·05 ♂ o.h.s.

6·20 stopped raining o.h.s.

7·00 o.h.s left field.

Rained throughout morning.

5/6/89 Even.

3·50 Hide.

4·05 located ♂.

4·08 Agnostic Charity

4·11 stopped Chicky. O·4·S.

5·50·30 NSS displayed W·J·C NJWS

6·07 NSS displayed W·J·C NJWS

6·17 CC ♂ displayed W·J·C NJWS

6·49 flew off towards Chapra.

7/6/89 Mony

4·55 → Chapra. wet/dew/clear.

5·00 72° F

5·45 73° F

6·35 77° F

7·00 80° F

Chapra ♂ not sighted.

left field.

8/10/89 Morning / dew wet ground.

5:10 Chapra.

5:15 73° F
located ♂ foraging.

5:20 foraging

5:25 foraged O.H.S. } - sunrise.

5:28 located foraging

5:34:43 C.C. ♂ NFI ♂ displayed W.S.C. NSWS

TECC = 0s
STIA on landing.

5:41 STIA

5:46 foraging then O.H.S.

6:00 74° F

6:11 foraging ♂ into display cove

6:14 STIA NFI shook out feathers.

6:15 STIA

6:16 NFI shook out feather.

6:18 shook feathers of body tail then stretched wings
shook them then flapped them. STIA.

6:20 STIA

6:22 preening

6:15:00 C.C. ♂ NFI ↓

6:25:20 CC ♂ displayed W.S.C. NSWS TECC=0s STIA on
landing.

6·32 foraging

6·32·45 P·C·((meow) ♂ NFI ♂ displayed w·s·c Ext tlt
very shallow D·D. St1A on lawn.

6·39 St1A. tail cocked.

78° F

6·44 St1A wings drooped tail cockd.

6·47·10 P·C·C (meow) ♂ NFI

6·47·20 St1A N·D Tail cockd.

6·50 St1A T·C.

6·50·30 preen

6·51·40 St1A

6·52·20 P·C·C (meow) ♂ NFI

6·52·25 St1A N·D

6·57·00 P·C·C (meow) ♂ NFI ♂ displayed w·s·c
Ext tlt NSWS D·D. foraging on lawn

6·59 St1A tail cockd.

82° F

7·03 St1A tail cockd

7·05·50 P·C·C meow ♂ NFI

7·05·55 St1A N·D

7·08 St1A tail cockd

7·10·50 P·C·C (meow) ♂ NFI

7.11.15 STIA NIDA Tail cocktail

7.13 preemy

7.15 STIA

7.22.10 P.C.C (meow) of NIFI

7.22.17 " " of displayed w.j.c. NJWS

TEPC = 05 STIA on lanky

87°F

7.33.05 P.C.C (meow) of NIFI

7.33.08 " " of displayed w.j.c NJWS

TEPC = 05 - STIA.

7.47 STIA 91°F

8.02 O.U.S

8.08 foreign on road.

8.10 STIA in shade of tree on road.

93°F

8.10.30 forged back into grass edge of displayzone.

8.11 flank by pedestrian with lamb in water

vole area North Chapra or flew off

towards Nawabhat.

8.15 left field.

Every

5·10 chapra. sun/clear.

5·20 102°F

5·39 ♂ flew in from North Chpra landed in narrowed chikkiy. while landy the tail seemd to be cocked while gliding in

stIA on landy

5·42 stIA

5·43 foraging

5·45-30 stIA

5·49 preeniy

5 50 " 97°F

5·58 stIA

5·59 ♀ foraging

5·59·30 stIA

6·00·20 foraging

6·05 O·H·S·

6·17 located preeny

6·19 foraging

6·21 StIA

6·27 foraging

6·28 StIA

6·30 foraging

6·33·04 MSS displayed c.s.c MSWS

6·35 O·H·S.

6·39 located foraging

6·40 STIA
93° F

6·43 foraging

6·49 P.C.M (meow) ♂ NFI displayed c.s.c. MSWS
TEPC=0s O·H·S on lanky.

6·52 foraging

6·53 STIA

6·54 foraging

6·56 sunset.

6·59 O·H·S.

7·01 located foraging

7·05·05 P.C.M (meow) ♂ TIFI displayed c.s.c MSWS
TECC=0s

7·06 foraging

7·15 " 88° F

7·22 foraging

7·25 left field.

9/6/89 Morning

5.05 → Kowhaghatti ground wet with dew.

5.09 located ♂ foraging

5.14 stIA

5.17 foraging

5.17.30 stIA

5.22 CC ♂ MFI (4-5s) displayed C.J.C.
NJWJ TECC = Os stIA on lamp. 70°F

5.23.40 foraging

5.26 stIA

5.27 " sunrise.

5.28 foraging

5.29 stIA.

5.44 foraging
76° F

5.46 stIA.

5.49.05 P.C.F (meow) ♂ MFI ♂ displayed C.J.C.
NJWJ TEPC = Os foraging on lamp.

5.52 stIA.

5.56 foraging

6.00 stIA.

6.10 " 78° F.

6.23 foraging

6·25 StIA preemy

6·28 preemy

6·30 StIA

6·32 preemy

6·40 foraging 81°F

6·42 StIA.

6·44 preemy

6·48 ~~pre~~ StIA

6·48·45 cc. ♂ NIFI

6·48·55 StIA

6·57 preemy

7·00 84°F
left fieldd.

Every Hide.

3·30 ♂ foraging

4·00 " "

4·56 NSS ♂ displayed w.s.c. NSWS
Exit HI D.D.

5·12 NSS ♂ displayed w.s.c. NSWS D.D.
(Redwattled lapwing calling while ♂ displayed.)

5·44 ♂ displayed NSS WSC NSWS

~~5·44~~
6·00 NSS ♂ displayed w.s.c NSWS
(sound of engine of jeep while displaying).

11/6/89

Nawalki ♂ present in territory.

5.05 a.m → 5.25 a.m.

11/6/89 Evening.

4.40 → Seethagaddala.

4.45 - 101°F

5.15 - 98°F PC=0

543.50 NJJ ♀ ♂ displayed ♀♪NH.

5.45 94°F

6.21 NJJ ♂ ♂ displayed ♀♪C.F

93°F

6.45 ♂ ♂ took to flight. flew towards 3rd ♂ territory. 88°F

6.52.35 ♀ ♂ displayed NJJ ♀♪C. NJWS.

7.01.52 NJJ ♀ ♂ displayed ♀♪C. NJWS.

7.06.55 P.C.L (meow) ♀ ♂ displayed ♀♪C. NJWJ TEPC=0s

7.08 87°F PC=1

7.11 2 ♂ flew in aerial chase from over (high) ω ♂ territory. (Possibly E ♂ + 3rd ♂) Circled E ♂ display zone and flew back over ω ♂ display zone. 1 ♂ descend on it to land.

7.13 ω ♂ took to flight and joind aerial chase. All. 3 perhaps moved into III rd ♂ display zone o.h.s.

7.20 left field. PC = 0.

12/6/89 Morning

5.05 Seethagaddala

5.15 82° F

5.35 P.C.M (meow) E ♂ displayed w.s.c TEPC=0s

5.45 81° F PC=3

6.12.17 P.C.M(meow) E ♂ displayed w.s.c TEPC=0s

6.15 83° F PC=1

6.39 ♀ flew and land about 60-75 mts. earlier from same patch had heard some hoarse croak like caller that I thought might be ♀ contact call to which

6.41 1 ♂ flew into land near where ♀ had landed E ♂ promptly took to flight and land near 1st ♂. (→ c. 200 mts)

6.42 1 ♂ flew and land c. 50-75 mts closer to ω ♂ territory

6·44·30 E ♂ flew (2 w·B·s) and landed in display zone.

6·45 84° F PC=4.

7·08·17 E ♂ displayed w·j·c.
NJWJ TEPC= 5 ± 5
cloudy throughout.

7·15 86° F

7·28 ·20 NJJ E ♀ displayed w·j·c.

7·30 sun comes through.

7·40·50 P·C·C (meow) E ♂ displayed 1-2s later
w ♂ displayed both in air together (w·j·c F)
for both. TEPC = 0s for both.

7·45 88° F PC=3 cloudy/sun

8·00 cloudy/sun/stoudy

8·10 93° F PC=0

8·15 91° F cloudy/sun

left field.

III rd ♂ no display.

(167)

12/6/89 Every Seethagaddaia.

4.10 →

4.15 104° F

4.45 104° F PC=0

5.03.28 C.C. ♂ displayed W.J.C. TECC=0s
102° F (sy/cloudy)

5.15 sy 103.5° F

5.26.21 C.C. ♂ ♂ displayed W.J.C.
TECC=0s

5.36.47 CC ♂ displayed W.J.C TECC=0s

5.42.31 C.C. W ♂ displayed W.J.C 1-2s
later (probably on heavy W.J.) ♂ displayed
W.J.C. TECC=0s both in air together.

5.45 102° F PC=0

5.50 ♀ flew in and landed exactly where
it had laid this morning. Seem to be quite
small, most probably an immature ♀.

5.57.52 C.C. W ♂ displayed W.J.C NJWS
TECC=0s

6.00.20 C.C.(?) ♂ displayed W.J.C.

~~96° F PC=0~~

6·16·26 NSS ♂ displayed w.s.c.

96°F PC=0

6·20·17 NSS w ♂ displayed w.s.c.

6·30 94°F PC=0

6·40·02 NSS ♂ displayed w.s.c.

6·45 92·5°F PC=0

6·55·43 NSS ♂ displayed w.s.c NSWS

7·15 91°F PC=0

7·16·07 NIS w ♂ displayed w.s.c NSWS.

7·17 1 imm ♂ flying over grassland belly change?
by another ♂. ♂ took to flight and
followed towards R.H.

1 imm ♂ white on wings. body neck and head brown heavily to lightly streaked with black. slight crest, areal eye butt but head mottly is quite heavy. belly mostly butt.

[4] rd ♂

7·18 ♂ displayed returned to display zone

[11] rd ♂ 6·24·15 display heard not seen.

13/6/89 Evem Seethagaddara.

5·00 1 ♂ took to flight from E ♂ territory flew over / landed near W ♂ display zone.

5·07. 1 ♂ flew from between E & W zone landed in W ♂ display zone.

5·08 saw 1 ♂ lady near E ♂ display zone.

5·15 96° F PC=0

5-26 2 ♂ took to flight from E ♂ display zone landed on edge of W ♂ zone. while lady W ♂ took to flight and landed with / near them.

5-30 2 ♂ flew in over E ♂ display zone from the west forest. likely earlier 2 ♂'s. One land E ♂ display zone. Other perhaps moved to 3rd ♂ zone.

5-31 1 ♂ took to flight from E ♂ display zone and landed near machan. Appeared to have plenty butt on head but size of adult. Possibly imm ♂ or ♂ coming out of plumage.

170

5·35 Sny/clear

5·55 97° F

5·57·21 NSS E ♂ displayed w.s.c.

6·00 2 ♂ aerial chase E ♂ joint them escorted them out towards R.H. phanta and returned.

6·03 1 imm ♂ flew from where had landed and flew out of phanta. lot of black on head neck and belly but predomint colour ~~black~~ buff. with white but not as in adult, some buff/black markings.

Other 2 ♂s returned and landed in E ♂ territory.

6·04. 1 ♂ flew and landed away from E ♂ zone. 1 ♂ flew short distance and land in E ♂ display zone.

6·20 95° F

6·29 1 ♂ flew from (6·04 point) and land W ♂ display zone.

6·32 1 ♂ flew from W ♂ display zone and landed closer to III rd ♂ territory

6·50 93° F PC=0

(171)

7.02 1 imm ♂ flew from w ♂ display zone and landed w the imm ♂ had flown from (6.03) possibly different ♂ than seen 1st one return. Both times while flying imm ♂ did not chick.

7.15 92° F

7.18 left machan.

III rd ♂ no display.

6.28 1 ♀ flew from edge of w ♂ territory towards III rd ♂.

15/6/89 Mon

Overcast wet ground.

5.15 → chapra.

5.25 80° F

5.55 80° F

6.21 80° F

6.45 left field.

Every chapra.

5·00 → . sky / clear

5·04 flushed ♂ from edge of rd C·4· probably forged in from ~~harrowed~~ North chapra. area . landed in harrowed area.

5·09 preening

5·12 St I A

5·15 94° F PC=0

5·16 preening

5·29 St I A

5·40 preen

5·45 " 92° F PC=2

5·48 " scratch head with foot

5·49 St I A

5·50·40 cc ♂ NFI

5·50·45 St I A NID

5-52 St I A

5·53 P·C·M meow ♂ displayed and then carried on flying veered towards Navalhud and then O·H·S perhaps towards Kowhaghatti (moved to Kowhatti)

6·04 aerial chase at Kowhaghatti 2 ♂ landed 3rd in air chicky on ground.

6·05 1♂ flew off toward Nawathal

6·06 1♂ returned from " "

6·07 1♂ chasing returning ♂ off towards Nawathal

6·11 1♂ returned and landed in display zone of Kowhaghatti - flew in silently.

6·20 left Kowhaghatti

6·35 Chigra machan.
♂ not present.

6·45 88° F
(sunset ~)

7·15 85° F

7·8·0 left machan.

16/6/89 Kowhaghatti dew | sy | cloudy

5·21 a.m flushed ♂ from roost to machan

5·23 sunrise

5·25 located st | A

5·31 st | A 77° F

5·33 foraging

5·35 st | A

6·00 st | A 76° F overcast

6·10 walked little | st | A

6·15 O.K.S.

6·30 O·U·S

76°F 5-30 - 6·30 PC=3

6·35 located ♂ foraging in South tree zone

6·37 STIA drenched

6·51 STIA tail cocked NPI

7·00 " " " "

78°F PC=1

7·05 O·U·S.

7·30 O·U·S left field.

Chyra ♂ in territory.

Evening Kowhaykatti sunshot.

4·30 →

4·45 100°F

4·48 located ♂ foraging in from south satiana.

4·49 STIA

4·51 preening

4·55 foraging

5·00 foraging into display zone

5·02 O·U·S.

5·08 located foraging

5·11 STIA

5·15 stIA 97°F PC=0

5·17 foraging

5·20 stIA in sheesham shade

5·24 preening

5·33 stIA

5·39 preeny

5·41 stIA

5·43 Foraging

5·44 " stretchd wings.

95°F PC=0

Clouds rapidly building up from the SW.

5·46 foraging

5·48 Overcast Slight to moderate wind.

5·50 foraging

5 53 overcast mod to stong wind

5·55 stIA

6·09 foraging

6·14 stIA 85°F PC=0

6·22 Stretchd wings stIA

6·29 foraging

6·31 stIA

6·40 stIA 83°F PC=0

6·50± sunset

6.59 MSS MFI ♂ displayed c.s.c. MSCWS
Chose a lull in the wind to display.
St1A.

7.01 foraging

7.07 St1A

7.08.25 P.C.M (meow) ♂ MFI

7.08.30 St1A M.D

7.11 foraging

7.15 foraging
83°F PC=5

7.20 left field.

18/6/89 Morn Cloudy slight wind.

5.05 Navalkad.

5.25 P.C.F (meow) ♂ displayed c.s.c. MSCWS
TEPC = 05
cannot see ♂. obscured by grass.

5.30 78°F

6.10 79°F sun comout. PC=02

6.22 1♂ flying in from over Dhangadi machan
Navalkd took to flight and o.h.s behind it.

6.55 82°F PC=0

7.15 82°F PC=0

7.25 left field.

18/6/89 Every Hawaiki.

5·00

5·10 94° F

5·40 93° F

6·03 P·C·F (meow) ♂ displayed C.S.C. NSWS
TEPC=0s

6·20 92° F PC=1

6·28·10 NSS ♂ displayed C.S.C. NSWS

6·29 ♂ flew ext. Flt. D·D·

6·33·20 NSS displayed C.S.C NSWS. (Sound stimulus
I'l- at all may have been a faint cheetah bugle).

6·42 located in C·D·

6·44 STHA MPI. (Obviously ♀ present.)

6·48·23 NSS ♂ displayed C.S.C. NSWS

6·50 90° F

6·53·40 NSS ♂ displayed C.S.C NSWS. Just before
landy ♂ jhitted possibly due to some obstacle at
landy point.

& 9°F PC=0

6·55 sunset.

7·02·15 NSS ♂ displayed C.S.C. NSWS

7·09·55 NSS Displayed C.S.C NSWS

7·13 88°F PC=1

(178)

7.14.55 P.C.F (meow) ♂ displayed

C.J.C. MSW3 TERC=0.

7.20 left machan.

19/6/89

7.40 a.m Chaya ♂ flew from territory over R.H and possibly into Ghola agriculture.

20/6/89. Every

Chetwa ♂ Not present

Kurmania ♂ displayed 6.29 MIS WC MSW3.

22/6 raind every heavily

23/6 raind morn

Even overcast.

4.15 Kowkaghatti

4.30 85° F

4.50 sm com out.

5.00 87° F PC=0

5.15 sm / cleary up

5·30 89°F PC=0

5·50 cloudy

5·54 located ♂ STIA in 1987 display zone

5·54·20 C·C· ♂ NIFI

5·55·05 STIA N·D

5·56·45 preen

5·57 STIA

(No sign of moulting out of plumage).

5·57·50 C·C· ♂ NIFI

5·58.20 STIA N·D

6·07 preen

6·08·30 foraging

6·09·15 STIA

86°F PC=0

6·10 O·H·S·

6·13 located foraging

6·16 O·H·S·

6·18 foraging

6·20 O·H·S·

6·40 84°F PC=0

(180)

6·44 located STIA

6·44·30 foraging

6·45 O.H.S.

7·00 84° F O.H.S.

7·15 left field.

(Chopra ♂ No display | not located)

24/6/89

Rain through Morn and Afternoon.

C. 6·00 p.m. located Chopra ♂ next to harrowed area

25/6/89 Morn cloudy

5·50 → Kowhaghatti

6·55 Kowhaghatti ♂ located mat to display tree

↓ mostly preen

7·13 C.C. ♂ displayed C.C. NSWS TECC=0S

(Chopra ♂ located in territory briefly when flapped coings.) (C. 7·00 a.m)

Afternoon heavy rain.

24/6/89 Even

5·15 Kowhaghatti cloudy

5·45 85°F P(=0

6·01 located ♂ foraging in 1987 display zone only glimpses.

6·04 foraging towards sheeshum scrub

6·06 6·4·S.

6·15 85°F P(=0

6·19 located foraging back out of sheesh scrub

6·20 6·4·S.

6·30 sun/cloudy

6·45 st/A / foraging slowly

6·55 83°F P(=1

6·59 ± sunset

7·00 st/A probably preen

7·04 stretch / flapped wings st/A ↓ ♂ no reaction.)
(so far crow calls 2-3 tim

7·07 C·C. No response.

7·10 B·C·F (neow) No response.

7·12 82°F P(=2

25/6/09 Every

Chopra ji Not sighted.

26/6/09 Morn no rain partly clear sky

afternoon light to stray drizzle.

Every sky/clear.

6.20 Kowhaghatti

6.25 located ji foraging

6.26 stA

6.28 stIA / foraging next to display tree.

6.31 O.H.S.

6.35.05 C.C. ji MFI 2-3s then displayed

U.S.C. MSWS TECC=0s

foraging back on landy then O.H.S

6.44 located foraging

7.00 foraging SMS set(-)

PC=0

7.12 foraged O.H.S.

7.15 left machan.

Chopra ji Not sighted / display.

27/6/89

5.15 p.m – 7.15 p.m

Nawabkhedi ♂ not seen/heard.

29/6 Kowhaghatti Evening

4.45 → ♂ flew in from display tree area. landed normally near sheeshham scrub. O.K.

5.01 located foraging into 1987 display zone.

5.03 St/A.

↓

6.08 St/A more or less same place. only top of head visible.

6.09. foraging then O.K.

6.30 P.C.C (meow) (1st of session) No response.

8.00 O.K. left field. Chopra ♂ not located.

30/6/89. Evening

Kowhaghatti ♂ not located (PC=0) (CC=1)

Chopra ♂ not located.

1/7/89

Kowhaghatti & Chopra ♂ not located.

PC= 0 CC = 2

2/7/89. Evening

Chopra ♂ not located.

6.56. 1♀/imm ♂ flew from mound area and towards Kowhaghatti

(184)

3/7/89.

Morm.

Kowlaghti ♂ not present in territory.

4/7/89.

Morm.

Nawathl ♂ not located.

5/7/89.

Morm Chopra ♂ not located.