T = 1 = flat, 2 = undulating, 3 = hilly

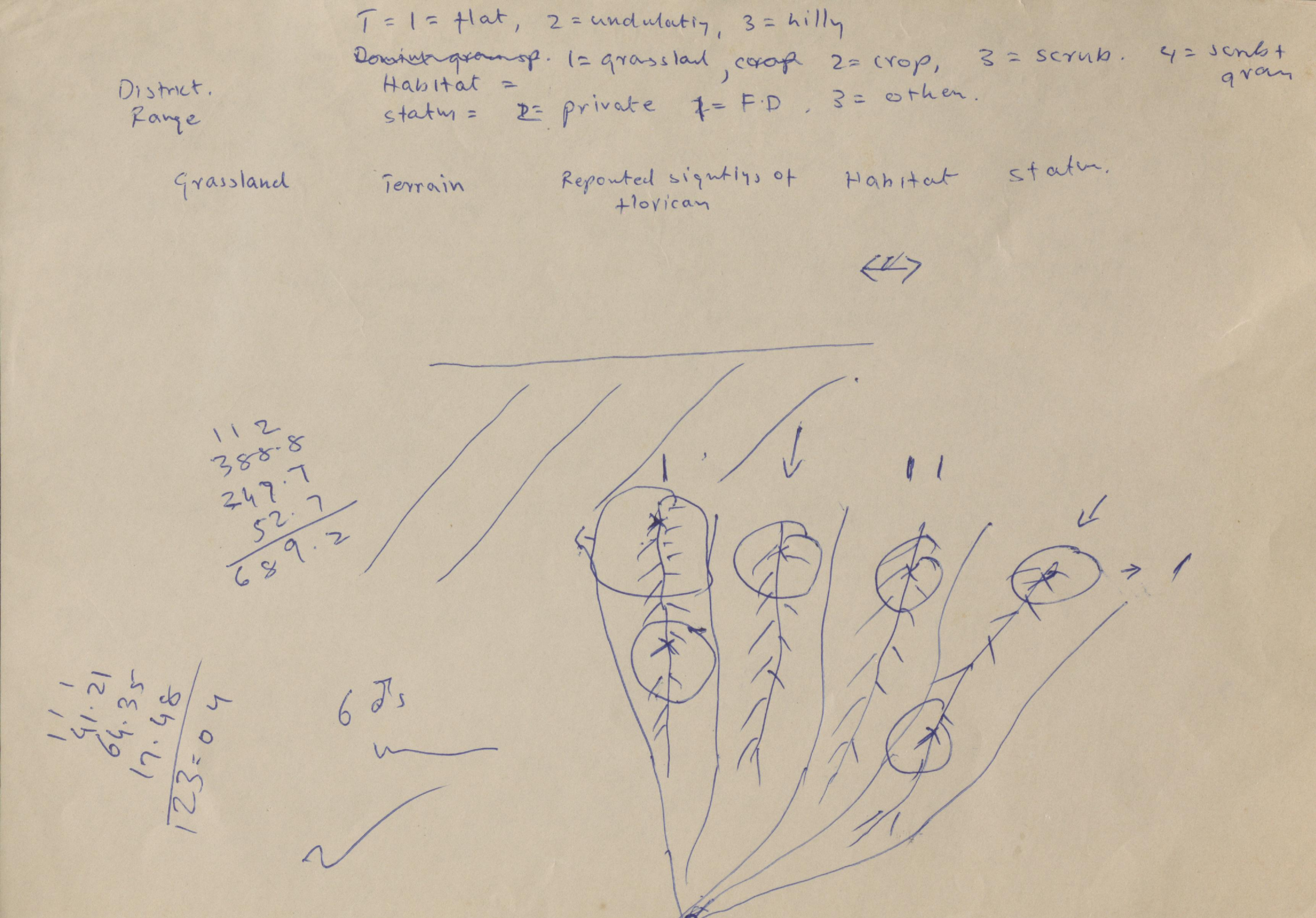
Dominant gramsp. 1 = grassland, crop 2 = crop, 3 = scrub. 4 = scrub + gram

Habitat =

District.
Range

status = 2 = private 1 = F.D. 3 = other.

Grassland Terrain Reported sightings of florican Habitat status.



112
388.8
249.7
52.7
689.2

111
41.21
64.35
17.46
123.04

6 Js

Sehore Ghadhadha Mahuwa Savarkundla Gebar vidi
Ranigado vidi complex Bhasgdana Khambha Bhagadana
Mithiala vidi

AMRELI DISTRICT

Khambha Amreli Dhari Sarasia Rajula

JUNAGHAD DISTRICT

Junaghad Sasan Gir Mendhardha Manavadhar

JAMNAGAR DISTRICT

Jamnagar Pipartoda Bhatia Dwarka Jamjodhpur
Samana Kalavad

RAJKOT DISTRICT

Rajkot Gondal Wankaner Jasdan

KUCHCH DISTRICT

Bhuj Surbari Naliya Jakhau Kothara Mandvi Mundra
Mattanomadha Diyapar Narayansarovar Barenda

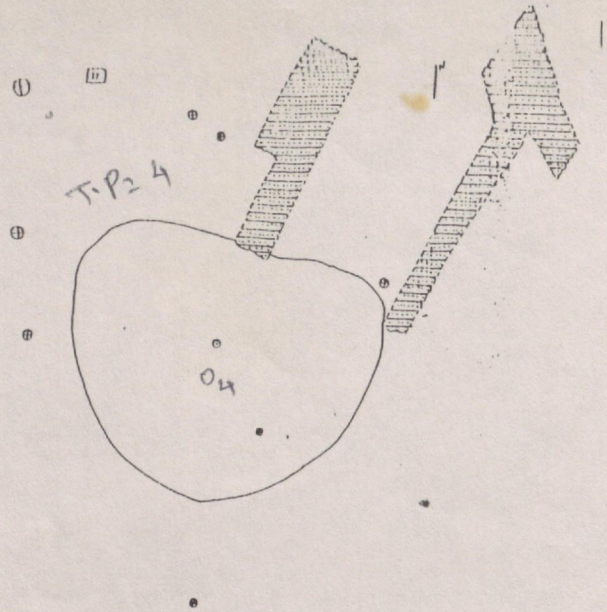
Area under grassland.

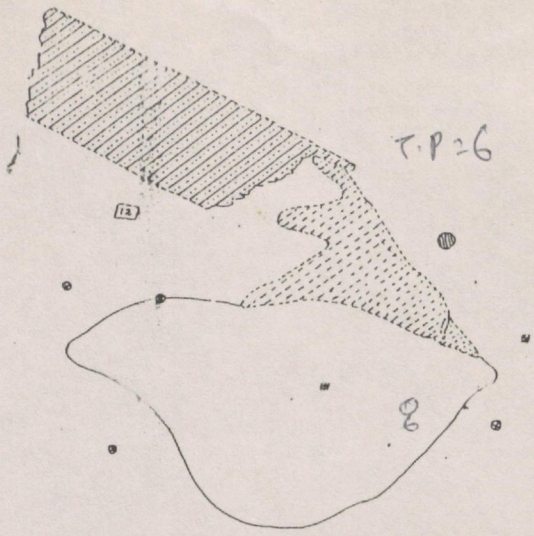
Teresia	3573
Nancowry	351
Trinket	596
Kamorta	4558
Chowra	1497
	10605 ha.

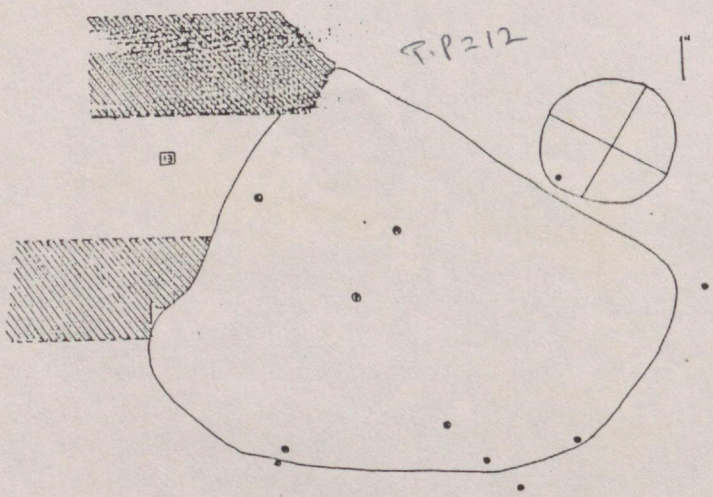
Area

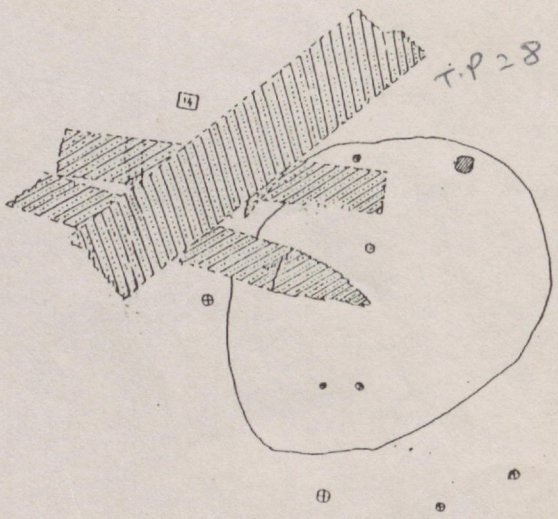
Meroe	51 ha
Trak	26 ha
Treis	26 ha
Menchal	129 ha
Kahra	51 ha

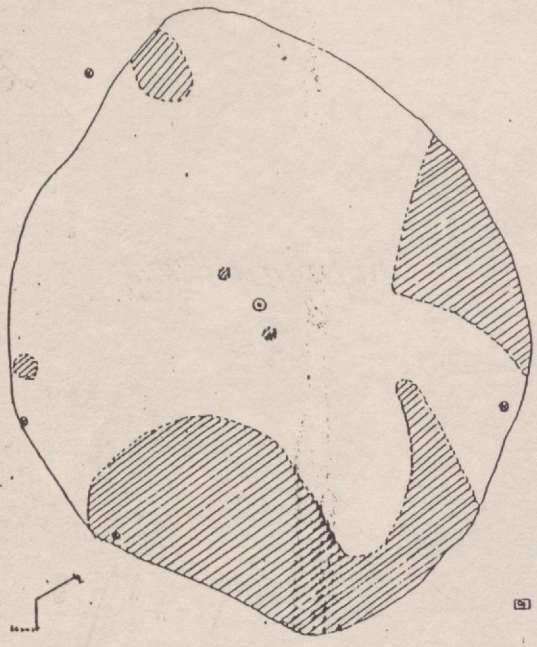
On 24.5.98.

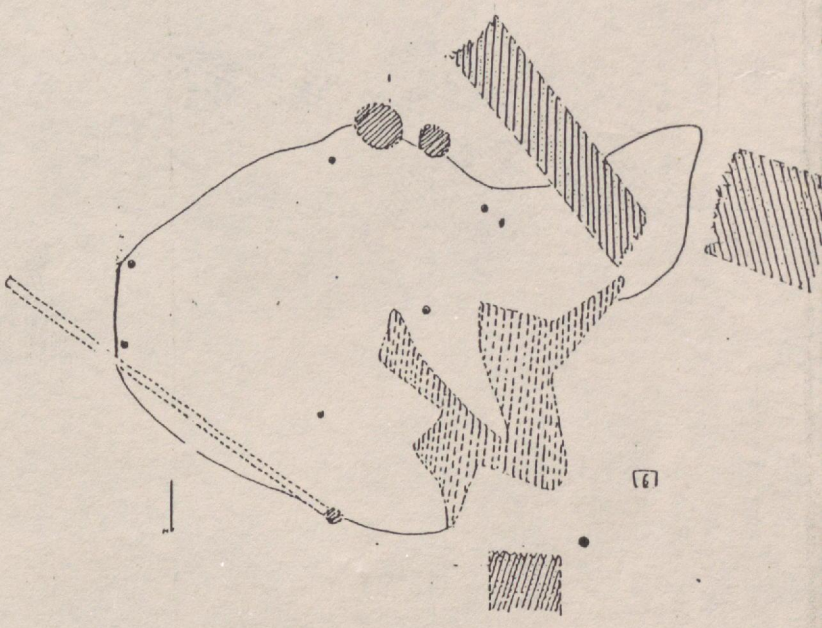


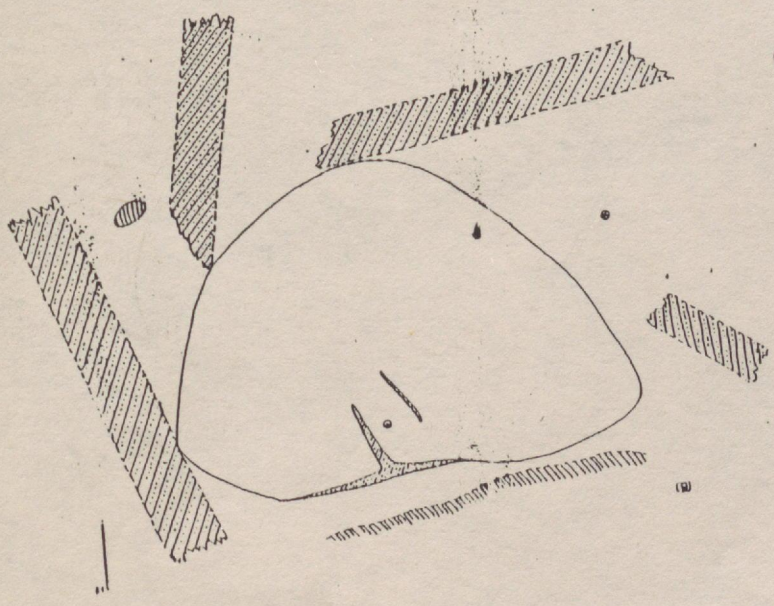


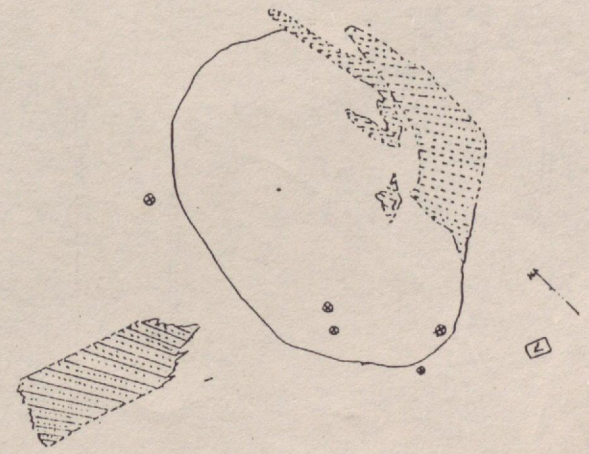


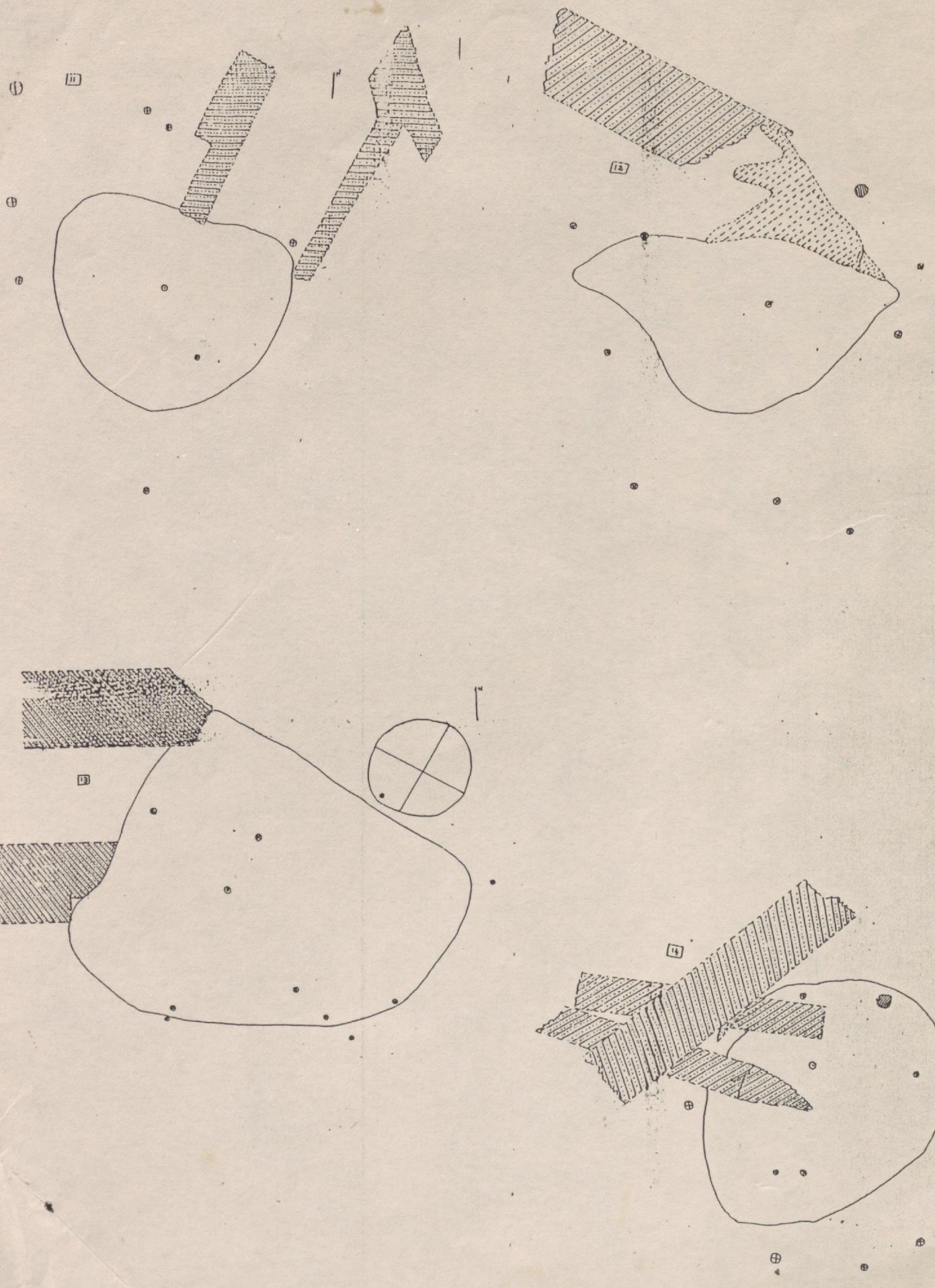


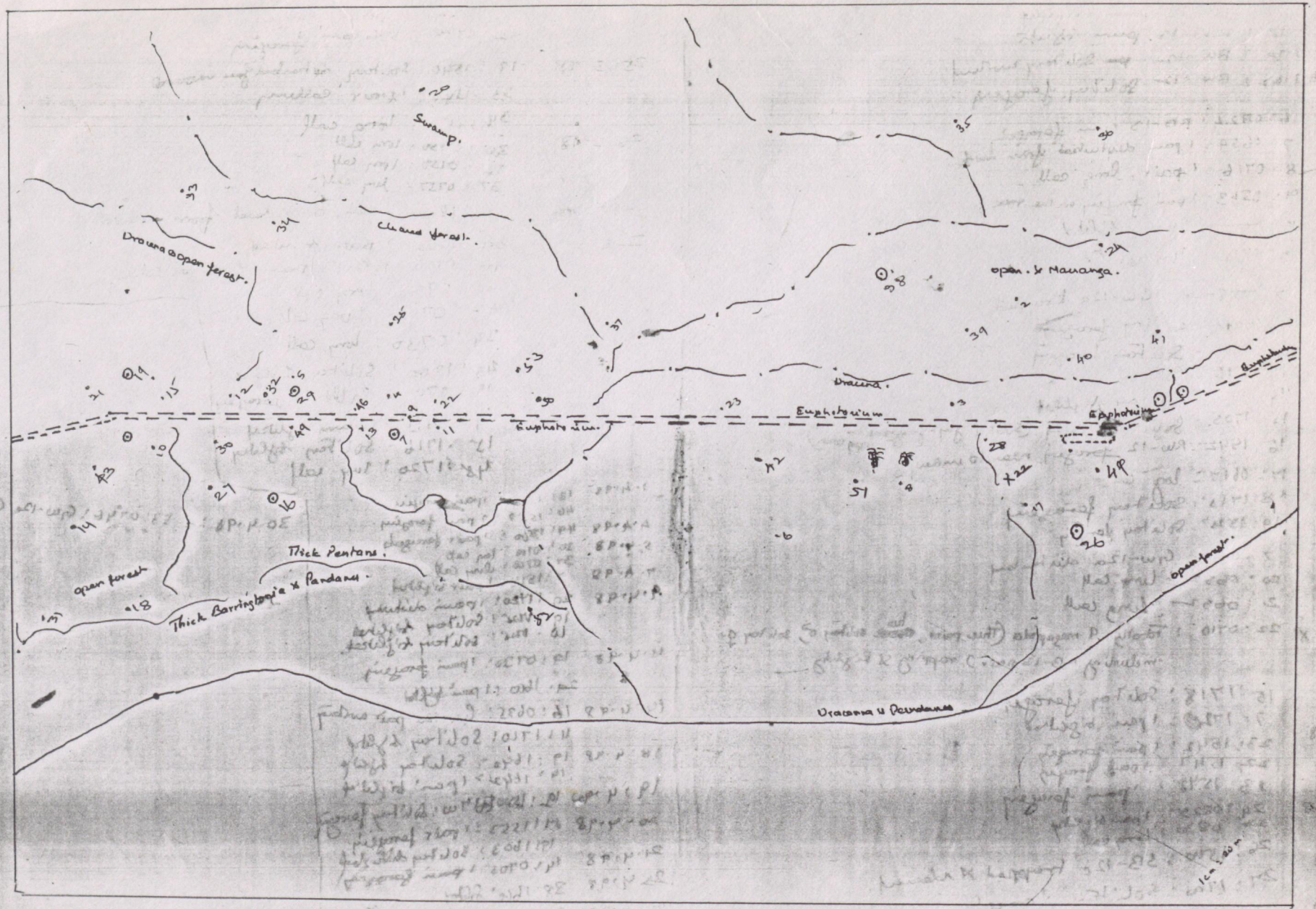











Swamp.
Cleared forest.
Dracena & open forest.
open. & Mananga.
Dracena.
Euphorbium
Euphorbium
Euphorbium
Thick Pentans.
Thick Barringtonia & Pandanus.
open forest
open forest.
Dracena & Pandanus

the Andaman and Nicobar islands from the literature, which included their distribution within the islands, and their distribution or that of their conspecifics outside the islands, their population status and endemic status.

Between August and October, I was engrossed in the preparation of the project proposal on the endemic avifauna of the Andaman and Nicobar islands. One of my major achievements during this period was to prepare a comprehensive list of the avifauna of

Concurrently, I also wrote and submitted two papers. The paper on the territorial system in the Lesser Florican defines and deals with the territory in the males of this species and discusses the effects of grazing on territories and its implications for conservation. The paper on the territorial displays in the Bengal Florican quantifies displays in the males and discusses the little understood phenomenon of stimuli and triggers in displays of this species, an area of ethology that has largely been neglected since Tinbergen first documented it.

Between November 1992 and April 1993, I left for the Andaman and Nicobar islands where I undertook a thorough survey of 8 Nicobar islands for the Nicobar megapode and other endemic avifauna of the islands. The most significant aspect of the study was that I was able to make a thorough documentation of the status of the megapode for those islands, as well as collect valuable baseline information on the incubation mound of the species. Additionally, I made comprehensive checklists of the avifauna of the islands surveyed and an approximation of their abundance, and was able to identify the major threats that they were undergoing. An additional accomplishment of the survey was that I was the first scientist who walked around the entire coast of Great Nicobar and Little Nicobar. Of the 243 days available to me in this year, I spent 140 days in field work (about 57%).

1992 - 1993

Research :- 80-85% 1

Inst. Build. Admin } - 15-20% 2

1993 - 1994

Research 85-[illegible]%

Inst Build Admin } - [illegible]10%

Ext. - 5%

1994 - 1995

Research - 70%-75%

Inst Build Admin } - 10%

Ext. - 2or 15-20%

Work done

31 July 1995 : Joined SACON

Tours

04 Aug. 92 - 10 Aug. 92	: To Madras, to get quotations for equipment
25 Aug. 92 - 04 Sep. 92	: To BNHS, Bombay for reference
10 Nov. 92 - 13 Nov. 92	: To Madras, for Binocluars, and tkt to Andaman
17 Nov. 92 - 12 Apr. 93	: Megapode Survey
19 Apr. 93 - 23 Jul. 93	: Nanda Devi Expedition
23 Aug. 93 - 30 Aug. 93	: Ministry of Environment (Nanda Devi Lecture)
16 Sep. 93 - 19 Sep. 93	: Madras regarding SACON Brochure
11 Nov. 93 - 15 Nov. 93	: Bangalore, OSI conference
25 Nov. ?	: To Madras to book tkt to Andamans
03 Dec. 93 - 04 Apr. 94	: Survey of Megapodes
06 May 94 - 24 May. 94	: Pre workshop / survey tour (Lesser Florican)
06 Jul. 94 - 10 Jul. 94	: Rishi Valley School. Lecture on birds / wildlife
12 Jul. 94 - 23 Sep. 94	: Lesser Florican survey
13 Nov. 94 - 18 Nov. 94	: Lesser Florican workshop arrangements
27 Nov. 94 - 06 Dec. 94	: Lesser Florican Workshop
08 Mar. 95 - 19 May 95	: Edible nest Swiftlet survey
01 Jul. 95 - 14 Jul. 95	: Swamp Deer PHVA at Dehra Dun
01 Aug. 95 - 30 Aug. 95	: Lesser Florican Florican Watch Survey.

Lectures

1) 25 July 1993. At Lalit Kala Academy, Madras. On the Floricans.
2) 9 July 1993. To the Engineer in Chief, Corps of Engineers, New Delhi. On Nanda Devi Expedition.
3) 12 July 1993. To the Chief of Army Staff, Indian Army, at New Delhi. On Nanda Devi Expedition.
4) 26 August 1993. To the first meeting of the Scientific Advisory Committee on Biosphere Reserves, under the Chairmanship of the Secretary, Ministry of Environment and Forests, at Paryavaran Bhavan, New Delhi. On Nanda Devi Expedition.
5) 2 August, 1993. To the Governing Council, and some participants of the Avian Conservation Worshop at SACON. On Nanda Devi.
6) 10 May 1994. To Wildlife Biology Students, Centre for Wildlife & Ornithology, Aligarh Muslim University. On the Andaman & Nicobar islands.
7) 11 May 1994. To Wildlife Biology Students, Centre for Wildlife & Ornithology, Aligarh Muslim University. On the Andaman & Nicobar islands.
8) 6 July 1994. To students and guests of Rishi Valley School, Andhra Pradesh. On Wildlife conservation.
9) 25 October 1994. To school teachers, at SACON. On birds.
10) 7 July 1995. To WII faculty / research scholars / students. On Nicobar islands.
11) 8 July 1995. To WII faculty / research scholars / students. On the conservation of the Lesser Florican.

Project proposals written:

1. A study on the ecology, status and conservation perspectives of certain rare endangered avifauna of the Andaman & Nicobar Islands'. 1992 October.
2. The status and conservation planning of the lesser florican in western

Background: What is a Viable Population?

A viable population is one whose numbers and distribution provide for continued existence at a known likelihood level for a specified period of time in a circumscribed area (Salwasser and Marcot 1986). The degree to which a specific wildlife population is viable is thus relative to the level of certainty, the span of time, and the area of concern.

Most scientists likely would agree with Shaffer (1981) that viability is an long-term concern. From a purely biological perspective, a viable population can be defined as one for which we are highly certain (perhaps 95 percent certain) that the population would resist risks of major decline or extinction for at least a century, perhaps a millennium. The major goals of providing for viability therefore should be to maintain adaptability (variation in genotypes), flexibility (variation in phenotypes), and adequate size of the population over a wide geographic range and for a very long time. However, in specific management cases, some sacrificing of these long range goals might be necessary to accommodate other resource use activities or because of social or political considerations.

The purpose of **population viability planning** is to develop management criteria -- including application guidelines, monitoring procedures, and research studies -- that provide for a specified level of viability for a given species. Population viability planning also includes development and application of explicit criteria for deciding on an appropriate level of viability for a particular species and circumstance.

Population viability analysis is one stage in the viability planning process. The purpose of population viability analysis is to estimate the likelihood of continued existence of a population given existing or proposed

Vegg
Tablela
Table 3
weath3
weath1
colour
Egg pit
Eggsizey
Food
Hg test
Lizard
M sizeal
misieg v1
M sizetest v
Pan
Pit type
Pit type 8
rainattegg
Sr. sort 1
Sunflock
temitest
Actal
Actdiff
Acttime
Bchaue
Bchmovl.
chickirk
chickmirror
Clutch
Terri.
Terifin
Pupsize
Habusa
Myog

Food crab: Glecomeoidea App.

pkunzip
pkzip
ys/misc

Intro – good

Study Area – well written & comprehensive

Habitat suitability

P-16 16 enemies only 15 listed.

20,000
30,000
15,000

Great hornbill is not mountain species only P-17

Ground surveys to check on occurrence of population in trans / patches.

P-18 only $ crores / lahs

location suitable unsuitable

P39

Eq 3.5 patch size sq km? Ha?

2
36
64
144

Presumes that absence was a function of unsuitable habitat only

61 Histogram of distribution from transect to be given.

65 P > should be <

P43 Land cover type Appendix II!

↓ Appendix I agree ct
~~Synopsis~~

$\Delta i\omega_i = 5$

Rates of income-tax

A. Normal rates of tax :

1. Where the total income does not exceed Rs. 1,00,000	*Nil*
2. Where the total income exceeds Rs. 1,00,000 but does not exceed Rs. 1,50,000	10 per cent. of the amount by which the total income exceeds Rs. 1,00,000.
3. Where the total income exceeds Rs. 1,50,000 but does not exceed Rs. 2,50,000	Rs. 5,000 *plus* 20 per cent. of the amount by which the total income exceeds Rs. 1,50,000.
4. Where the total income exceeds Rs. 2,50,000	Rs. 25,000 *plus* 30 per cent. of the amount by which the total income exceeds Rs. 2,50,000.

B. Rates of tax for a woman, resident in India and below sixty-five years of age :

1. Where the total income does not exceed Rs. 1,35,000	*Nil*
2. Where the total income exceeds Rs. 1,35,000 but does not exceed Rs. 1,50,000.	10 per cent. of the amount by which the total income exceeds Rs. 1,35,000.
3. Where the total income exceeds Rs. 1,50,000 but does not exceed Rs. 2,50,000.	Rs. 1,500 *plus* 20 per cent. of the amount by which the total income exceeds Rs. 1,50,000.
4. Where the total income exceeds Rs. 2,50,000	Rs. 21,500 *plus* 30 per cent. of the amount by which the total income exceeds Rs. 2,50,000

C. Rates of tax for an individual, resident in India and of the age of sixty-five years or more at any time during the financial year :

1. Where the total income does not exceed Rs. 1,85,000	*Nil*
2. Where the total income exceeds Rs. 1,85,000 but does not exceed Rs. 2,50,000	20 per cent. of the amount which the total income exceeds Rs. 1,85,000
3. Where the total income exceeds Rs. 2,50,000	Rs. 13,000 *plus* 30 per cent. of the amount by which the total income exceeds Rs. 2,50,000.

Gross Salary $12471 \times 12 = 149652$

Less ~~Prof. tax~~ = 601

~~149051~~

Chaper VI A

GPF $3000 \times 12 = 36000$

LIC = 10476

46476

46476

102575

Net Income -

Tax - upto 1lakh - NIL

Balance 2575 @10%. - 257.

$1355 \times 12 = 16260$

Actual rent recd.

rept paid over 10%.

Or Salary

$1600 \times 12 = 19200$

10846

8354

$6025 + 3013 = 9038 \times 12$

90380

18076

108456 × 40%.

10%. 43382.

46476

8354

54830

Medicl 2713 ✓

✓ 80ccc 7500 - Jeevan Suraksha

80 488 -

43824

✓ 10149

60000

20000

Fidelity

IN-SITU AND EX-SITU CONSERVATION OF THE EDIBLE-NEST SWIFTLET COLLOCALIA FUCIPHAGA IN ANDAMAN AND NICOBAR ISLAND-PHASE-II

CL.1. THE AGREEMENT

CL.1.1 This Agreement is signed between Department of Environment & Forests, A&N (herein after called Department of Environment & Forests, A&N) and Salim Ali Centre for Ornithology & Natural History, Coimbatore (SACON).

CL.1.2. Department of Environment & Forests, A&N and SACON (hereinafter called PARTIES) are engaged in R&D activities. The parties are interested to collaborate with each other in the In-situ and Ex-situ Conservation of the Edible-nest swiftlet in the A & N Islands-Phase-II.

CL.2. SCOPE OF AGREEMENT AND UTILIZATION OF INTELLECTUAL PROPERTY DEVELOPED

A memorandum of understanding between the SACON and the Department of Environment & Forests, A&N Administration should be drawn incorporating the following terms and conditions.

CL.2.1. Regarding the utilization of funds, some minor re-appropriation of budget heads may be required at the final stage. This would be done with the prior/post facto approval of the funding agency.

CL.2.2. SACON has agreed to execute the project with the following conditions:

(i) The fund should be spent strictly according to the items prescribed in the proposal and as per detailed budget annexed to the proposal. There should not be any diversion of fund.

(ii) A certified statement of account shall be submitted on financial year basis as early as possible, preferably before 31st May of the respective next financial year by SACON.

(iii) The staff and Labour of Wildlife Division involved in the project must be trained in the methodology of collection of eggs, their transport and introduction into nests.

(iv) There shall not be any violation of the provisions of various acts and rules in vogue in Andaman & Nicobar Islands.

(v) No specimen of bird, eggs or nests must be transported outside Andaman & Nicobar Islands without the permission of Chief Wildlife Warden by the Investigator.

CL.2.3. The staff of the Department of Environment & Forests, will be trained in Methodology of in-situ and ex-situ conservation of the edible-nest swiftlets.

all WBS = 57

- T + WBS = 12
- T excl = 209
- WBS excl = 26
- all T = 249
- Bats = 51

T + WBS + Bats = 8

T + Bats = 20

WBS + Bats = 11

~~Bats~~
Only
~~Exclusively~~ Bats = 12

A = 2

AB = 34

B = 60

Cii = 196

D = 55

---

249 =

12
+209
28

249

249
26

275
11

286

2
12
209
26
8
20
11

286

1741
+ 2

2
3549

IS —
NO —
CT —
T —
WBS —
Bats —

T = 7 = 8
Bats = + = 21

115 = K. colura
17 = ES kill rhinos
46 = swallows
114, 91 = ES/lows kill
CBC
28, 258, 259
207, 276, 277
281, 310

DATE LOCATION Length

START TIME END TIME cloud cover

START TEMP END TEMP Sunrise.

Seq No.	Time	Species	No.	Direction	Substrate	general vegetation	Reaction.

Seq No.	Time	species	Nos.	Direction	Substrate	general behaviour	Reaction.

Date:- Location:-

Start time End time Start temp end temp.

S. nos.	Time	nos.	Species	No	♂	♀	?	! dot	L/E	Activity	Plant?	Position	Ht.

LOCATION

DATE

CLOUD COVER
WIND SPEED
SUNRISE

START TIME

END TIME

START TEMP

END TEMP

S.No	Time	M/S	Species	No.	♂	♀	Y	Adult	L/P	Activity	Plant sp.	Position	HL	Substrate

S.No.	Time	M/V	Species	No.	♂	♀	Y	Clust	C/R	Activity	Plant-sp.	Position	Ht	Substrate

Referee's comments

The impact of nest collection on the Edible-nest Swiftlet in the Andaman and Nicobar islands" by R. Sankaran

General comments

This paper describes the status of the Edible-nest Swiftlet population in the Andaman and Nicobar islands, and compares present with past estimates of population size to ascertain the degree to which populations have declined. The study is set in context with a description and history of nest harvesting, and differences in the rates of decline are explained in the light of current harvesting circumstances. On this basis, the author then offers some potential solutions to the problem. The paper is very well written and comprehensive, and its main fault is that it is a bit too detailed and long. The author can easily address this problem by avoiding repetition and cutting out unimportant detail. Some minor comments are given below.

Specific comments

P3 para 1. This paragraph is not directly relevant to the study. Perhaps it should just be mentioned that the ES is one of several other species, and one of X species occurring on the islands in question.

P6 para 3. I would omit this detail and simply make a statement near the beginning such as "The population had to be estimated on the basis of nest counts, because counts of birds are too unreliable due to identification problems and the fact that many birds only return to their caves after dark."

P7. This section could easily be reduced. Some details, such as sentence 3 in para 3, hardly seem relevant. In fact, it may even be better to subsume the historical and other background material into the introduction, and concentrate on the science in the main body of the paper.

P9-10. Figures 2 and 3 are interesting, but not essential, especially as the information is largely given in the accompanying tables.

P10. "evidence of sustainable exploitation" is a rather elusive concept. I would rather allude to evidence of largescale overexploitation.

P11 para 2. Table 5 should be Table 4.

P13 para 3, last sentence. Perhaps add "...where populations have already been reduced..."

P14. I agree wholeheartedly that there is obviously a problem of 'open access' due to ill-defined property-rights, and that conferring these rights through contracts would be part of the answer. I would even hesitate to call 10-15 years long term, though, since over exploitation in this time frame may still be worthwhile, depending on how the

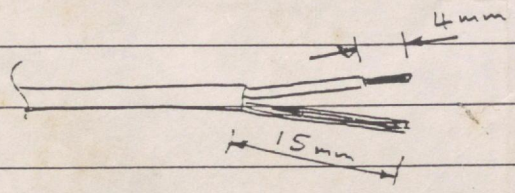
exploiter values present earnings over future ones, and considering that the effects of overexploitation may not be severe during this time frame. A better suggestion may be one of tradeable permits (perhaps with a minumum ownership period), provided that the trade value is directly affected by the way the cave has been exploited (it may require monitoring or expert judgement).

P16. I agree that housefarming may help to relieve the pressure on the species, partially be keeping the price down, but it will not in itself save the wild populations as long as the price of nests is high enough to warrant legal or illegal harvesting in caves.

THERMISTOR PROBE ASSEMBLY

(1) CLEAN INSIDE OF STAINLESS STEEL TUBE

(2) STRIP BACK SCREENED CABLE AS SHOWN :-



(3) CUT LENGTHS OF SLEEVING AS FOLLOWS :-

30mm OF 1mm SILICONE

10mm OF 2mm SILICONE

40mm OF 4·8mm HEAT SHRINK (CLEAR)

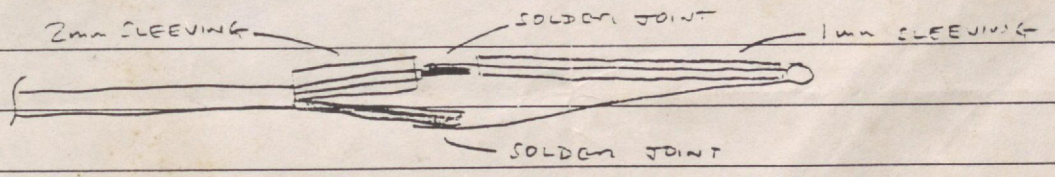
30mm OF 7·5mm HEAT SHRINK (YELLOW)

(4) CUT THERMISTOR WIRES DOWN TO 34mm IN LENGTH

(5) SLIDE 2mm SLEEVING ONTO SCREENED CABLE INNER

(6) SLIDE 1mm SLEEVING ONTO ONE WIRE OF THERMISTOR

(7) SOLDER THERMISTOR WIRES TO SCREENED CABLE AS SHOWN :-



(8) SLIDE 4·8mm SLEEVING OVER THE ABOVE ASSEMBLY AND HEAT SHRINK IN PLACE (SHRINK USING HOT AIR 120°C — 200°C)

(9) SLIDE ASSEMBLY INTO TUBE, SEALING BOTH ENDS WITH EPOXY AND FINALLY SHRINKING ON YELLOW SLEEVING

3x4 – 12 – 2m.

Devoirs

Papier

DS
29/11/95

150cm
1 m

150cm
1 m

75
50
25

Aucun.

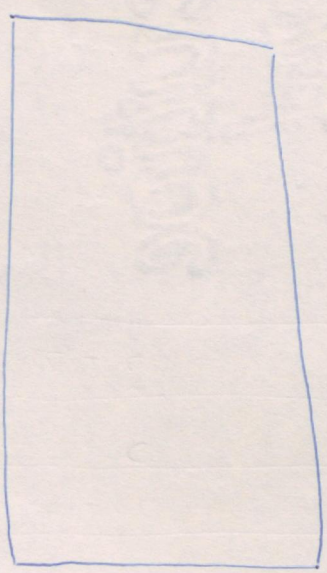
35
4

	n = 42 A	n = 35 B	n = 22 C	Tot
only sand	14	7	4	
only loam.	3	8	5	
only coral	1	0	0	
S + L				
S + V				
S + CL				
S + C				
L + C				

	A	B	C
1) S	32	20	12
2) L	9	15	12
3) S, L	10	8	7
4) L, S	4	2	6
5) S, C	4	1	0
6) L, C	1	1	1
7) C	1	0	0
8) S, CL	2	1	0
9) S, V	4	4	1
10) S, RW	0	0	0
11) L, RW	0	2	0
12) L, CL	0	2	0
13) L, V	1	0	0
14) L, S, V	1	1	2
15) L, S, CL	0	0	0
16) L, S, RW	0	0	0

	A	B	C
17	L, S, C	0	0
18	S, L, C	2	0	0
19	S, L, CL	0	1	0
20	L, RW, C	0	1	0
21)	S, CL, V	0	1	0
22)	L, CL, S	0	1	0

	n=42 A	n=35 B	n=24 C	Tot.
Exclusively sand	14	7	4	
Exclusively loam	3	8	5	
Mainly sand with loam	5	5	7	
Mainly loam with sand.	3	1	4	
% occurence of coral	16·7%	8·6%	4·2%	
⊗ % occurence of ~~vegetation~~ rotting vegetation	21·4	37·1%	~~8·3~~ 12·5	
Exclusively coral	1	–	–	1
Loam with coral				
Sand with coral				



Location	Type		
Great Nicobar '16'	A/B	Overrun by pandaus. At base of large tree - probably mound extended to base.	
Pilobha	B/C	At base of dead tree & spread over large area.	
Strambay	B/C	Over fallen log against 2-3 saplings.	
	A/B	against pandaus.	
CNI	A/B	1 tree on edge of mound giving it appearance of B type	
	B/C	At base of live tree with a dead tree across mound.	
	C/B	Both ~~ch~~ Mound at base of dead stump & live tree	
	A/C		
Pilo Uly. s/z/as	?	Co thin a cave that was open on both ends. On end which megapodes use were several ficus roots.	
	C	At base of rotting stump but not high mound. Diggin seem to be more in the nature of burrowing.	
	B/C	At base of dead tree. Not high mound and diggin into ground at base.	
Nancowrie.	A	Under a copra making machan. No burrow this year (1 yr old) only soil where the burrow had taken place so coal etc. Not large	
	A	Under a broken down Copra making machan Not large mound.	
	A/C	A type with log through it	

Sub-editorial queries : Corrections (indicated in bold).

1. The spelling is **Andrew.**
2. Please change the spelling in Figure 1 to **Pilo Milo.**
3. I have marked **Megapode & Pigeon** Islands on the map. They are very small, and an arrow as made by me should suffice.
4. Please change it to **12** islands.
5. ? (not given by you)
6. O.K.
7. Chaura is not to be included in Table 1. It was not surveyed.
8. Please insert **However.**
9. Stone, T. 1991. Megapode mounds and archaeology in northern Australia. *Emu 91:* 255-256.
10. Please change to '... inhabited **and of the 3 active mounds found one was...'**
11. Please change to '.. outlying islets **in the Great Nicobar Group....'**
12. The correct spelling is **Brown.** Please make correction in references.
13. Please retain second last line to read '... large tracts of optimal megapode habitat **for it not to reflect on active mound densities.'**
14. Please leave it unchanged.
15. O.K.
16. Your changes makes better reading. Only further modify to read '.... hunting pressure may exist. At Tahiyuol 71 legs....'. Delete **'as a recent phenomenon, with the popularisation of airguns.'**
17. The passage does not convey what I want it to say. Passage should read '... **have converted coastal forest to coconut plantations and have clearfelled forests to plant banana, papaya and tuber bearing plants.'**
18. Reference is: Collar, N.J., Crosby, M.J. & Stattersfield, A.J. 1994. Birds to watch 2. The world list of threatened birds. Birdlife conservation series 4. Birdlife International, Cambridge.

(Please see 11 below for further modifications to this passage.)

19. Yes. New Delhi is right.
20. Abbreviations are fine. I have Transposed table numbering.
21. Totals have been given. I think birds in text and pairs in the Table is alright and can be left as it is.

Other Corrections

Page/column/para/line (proof)

1) P. 1. (Abstract) line 16. **848** to be changed to **849.**
2) P. 3.1.1.1. **Mechal** is misspelt. Should read **Menchal.**
3) P. 3.2.2.2. Should read '....rotting vegetation **within** which eggs...' Insert 'in'.
4) P.3.2.last para.3. delete **is** and replace with **of.**
5) P.3.2.last para. '... 17 islands was sampled...' Only 16 islands are given in Table 1. Please add a footnote to Table 1 stating **'Cabra island not included'.**
6) P.4.2.3.last line. '... were recorded **for** every mound seen.' 'f' is missing.
7) P.5.2.3.20. **'thought'** should be **'though'.** Delete 't'.
8) P.5.2.-.5th line from bottom. **Nancowry.** 'N' should be capital.
9) P.7.1.2.3. Delete **'into coconuts'**
10) P.7.2.3.3. Spelling is **Project Yatrik.** Delete 'c' in Yatrick.
11) P.8.2.3. Delete 'It is currently..... the range is greater than 100 km2 (SU).' Rewrite rest of para to read 'The only two criteria **(IUCN criteria for threatened status; Collar *et al.*, 1984)** for which this ....., I propose that it be classified as **vulnerable,** and its status .....'

Correction Number 11 is important because based on my communications, the

recent publication of Birdlife International has changed the classification for this species. Please make this change.

Tables

1) Table 1. : Tribal population of Camorta should read 1406 and not 1046.

2) Table 2. Change number to Table 3.
The column KN should come under *M.n. abbotti* and not under *M. n. nicobariensis*.

3) Table 3. Change number to Table 2.

Add totals to read

M. n. abbotti	849	1698-2972
M. n. nicobariensis	312	624-1093

Please make this correction

Treis	4	8-14

Corresponding Table number changes in text are

P.5.2.1.last line. Table 3 to Table 2.
P.5.2.3.3 from bottom. Table 3 to Table 2.
P.6.1.1.last line. Table 3 to Table 2.
P.6.1.2.4. Table 2 Table 3.
P.6.1.4.4. Table 2 to Table 3.
P.7.1.1.5. Table 2 to table 3.
P.7.1.3.4. Table 2 to table 3.
P.7.1.4.5. Table 2 to table 3.

References

1. Stone, T. 1991. Megapode mounds and archaeology in northern Australia. *Emu* 91, 255-256.
2. Collar, N.J., Crosby, M.J. & Stattersfield, A.J. 1994. Birds to watch 2. The world list of threatened birds. Birdlife conservation series 4. Birdlife International, Cambridge.

SUBEDITORIAL QUERIES - SANKARAN - BIOC/9404AUS

1. Page 2.2.3: Is the spelling Andrews or Andrew, as in the References?

2. Page 3.1.2-3 up: Pilo Milo is spelt as this in the text, but is Pulo Milow in Fig. 1.

3. Page 3.1.2 up: Megapode Island and Pigeon are not included in Fig. 1.

4. Page 2 line 2 up: 13 islands - only 12 appear to be mentioned on page 3. Could you check this, please.

6. Page 6.2.2 up: We have deleted "or 0.1 km".

7. Page 7.3.2 and 8.3.5: Chaura is now shown in Fig. 1 nor included in Table 1.

8. Page 8.1.3-4: "introduction.. of P. larvata" ...." P. hermaphroditus is the only introduced species". This seems contradictory. Do you mean that you disagree with Dekker? In which case, we should add "However, of the two civets...".

9. Page 8.2.6: Stone 1991 is not in the References. Could you please provide details.

10. Page 10.2.11: 1 active mound - 3 are shown under Kondul in Table 2.

11. Page 11, last line: Do you mean the "outlying islets" of the Great Nicobar group?

12. Page 11, line 4 up: Is the spelling Brown, or Browne, as in the References?

13. Page 12,last three lines: We have deleted from "for it not to...as this is repetition of previous statements.

14. Page 13.1.7-11: This passage could be reduced to one sentence, referring to Table 2.

15. Page 13.3.4-5: Are Tahiyuol and Pilo Pakka on Little Nicobar? "on" should be included as otherwise the sentence seems contradictory, with Little Nicobar mentioned as having no hunting and great hunting pressure.

16. Page 13/14: There is a good deal of repetition here. We suggest modifying the wording (from p.13.3.4) as: "collection... Tahiyuol, on Little... Pilo Pakka, also on Little... Hunting was greatest on the west coast of Little Nicobar and rare or uncommon over much of the Nancowry group, particularly Kondul, where continued.... exploitation. Where traditional values have been.... may exist as a recent phenomenon, with the popularisation of air guns. At... up, shot during... (Page 14.1.4).. The Shompen and some Nicobarese do occasionally collect eggs and on Bompoka megapode eggs are gifted..Teressa. (Delete rest of para)

17. Page 15, lines 4-5 up: We have deleted "have converted coastal

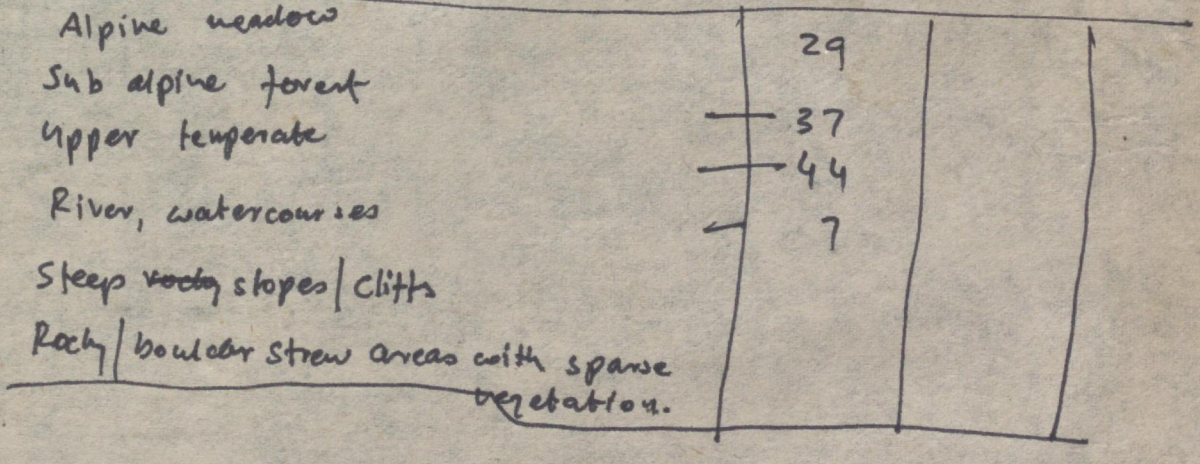
forests abutting their villages into coconut plantations and".

18. Page 16 bottom/17 top: You should give the reference to IUCN.

19. References: Sing 1981 - published in New Delhi?

20. Table 2: We have amended the abbreviations in the footnote for Nancowry to NN and Katchall to KT. Table 2 is mentioned in the text after Table 3. Please add a reference to it earlier, or transpose the table numbering.

21. Table 3: It would be useful to include the totals to the two columns. However, you quote numbers of <u>birds</u> in the text, but <u>pairs</u> in the Table, which appears somewhat confusing. Can you please check this to see whether you should be consistent and that the figures given in the text match the table.


Alpine meadow
Sub alpine forest
Upper temperate
River, watercourses
Steep rocky slopes / Cliffs
Rocky / boulder strew areas with sparse vegetation.
29
37
44
7

Habitats

1. alpine meadow
2. subalpine forest
3. upper temperate
4. River, water courses
5. steep rocky slopes
6. Agriculture / habitation
7. Rocky / boulder strewn areas with sparse vegetation.

Abundance.

1 = 1

2 = 2-5

3 = 6-10

4 = 10-50

5 = 50-100

6 = 100+

1. alpine meadow
2. subalpine forest
3. Upper temperate
4. River; watercourses. Gorge
5 Steep rocky slopes

Accn.	Hilbom Nos.	Name	Habitat	locations	Altitudes	Abundance (Max Nos. in a day)
1	147	Sparrow hawk	2; 1	Dibrugetha	3600	3
2	153	longlegged buzzard	2; 1	Maitoni Pass nalla Dibrugetha	4000, 3300	2
3	164	Booted haw-eagle	4	Rishiganga Gorge	2300 - 3000	< 5
4	166	Golden eagle	1; 2	Above Trishul Rishi Confluence Saman Patal	3500; 4600	3/2 adults 1 imm
5	181	Himalayan Griffon	1,2,3,4	Throughout survey	2800 - 4600	7100
6	188	lammergier	1, 2	Dibrugetha Dadapani Bhujgaira Sandpatar.	3600 - 4600	20-25
7		Falcon sp.	4	Doodgaya	2700 m	1
8	222	Kestrel	1,5	Dibrugetha		
9	227	Snow partridge	1,5	dibrugetha Satkula	4100 m	2
10	238	Black partridge	Agri/alte	Around Joshimath	1800 - 2000m	15-20 ~~20-25~~
11	232	Snowcock	1,5	pathalkhan and above	4100 - 13500'	~~40-50~~
12	290	Monal pheasant	2, 1, 2	Belta - Ramani	2700 - 3900	60-75
13	304	Koklass	2	Dibrugetha	3500	8-10
14	513	Snow pigeon	1	Doodgaya →	2700 - 4500	7100
15	515	Hill pigeon	1	Above trisul Nalah	3700m	1 (6)
16	580	Rufous turtle dove	3	Belta. Auli	2000 - 2700	20-25
17	520	Speckled wood pigeon	3	Rishiganga Belta	2000 - 2700	15-20
18	578	Cuckoo	2, 3	Dibrugetha Belta	2700 - 3600	< 10
19	683	Himalayan swiftlet ?	4, 5			
20	699	large white rumped swift	4, 5	Gorge	2500 - 3000	40-50
21	763	Hoopoe	3/Agri	Auli/Joshimath	2200 - 2500	8-10
22	728	Great Hill barbet	3	Auli	2500	12-15
23	833	Sapsucker	3	Auli	2500	3
24	839	Himalayan pied woodpecker	3	Auli	2500	5-6
25		Woodpecker sp.	2	Dibrugetha.	3600	1
26	946	Rufous headed swine	3, Agri	Auli/Joshimath		15-20
27	963	Black drongo	3, Agri	"		15-20
28	1006	Common myna	Agri	Joshimath		
29	1020	Red crowned jay	3	Auli		4-5
30	1022	Black throated jay	3	Auli		1
31	1027	Redbilled blue magpie	3	Auli		4-5
32	1038	Himalayan tree pie	3	Auli		1
33	1046	Red billed chough.	1, 2	Maitoni - Pathuma	3300 - 4000	7100
34	1045	Yellowbilled chough	1, 2, 5	Bamyani Saman Patal		7100
35	1042	Nutcracker	1, 2, 3	Kalikhore → Ramani		20-25

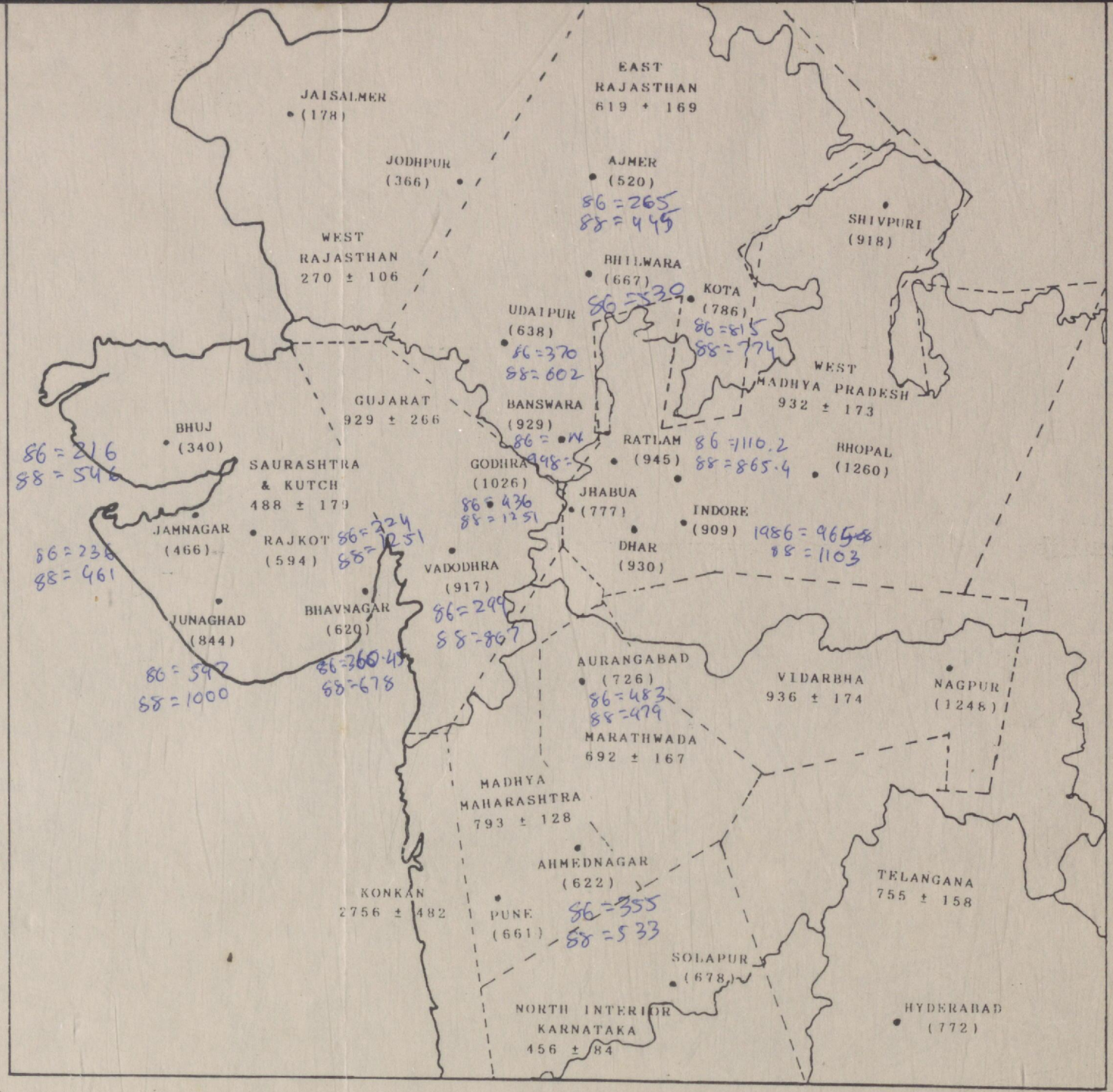
	Fokoy no.	Name	Habitat	location	Altitude	Abundance
36	1049	Home crow	Agri	Soshinath.		
37	1054	Jungle crow	Agri 1, 2, 3, 4	upto Dibru.		750
38	1085	long tailed minivet	3	Aulie		5-6
39	1125	White cheeked bulbul				
40	1148	Black bulbul	3	Aulie		10-12
41	1290	Variegated laughingthrush	3	Belta Aulie		15-20
42	1314	Streaked laughingthrush	Agri / 3.	Above Soshinath		40-50
43	1359	Barthroated siva	2	Dibru Deodi		4
44	1396	Black capped sibia	3	Aulie		4
45	1414	Orange gorgetted flycatcher	2	Deodi / Mouk		3
46	1421	White browed blue "	3	Belta		1
47	1449	Greyheaded flycatcher	3	Aulie		5-25
48	1461	Paradise flycatcher	3	Aulie		25
49	1479	large bush warbler	1	Dibrugella		8-10
50		Cettia sp.	1	Bithantoli		1
51	1578	Tytler's leaf warbler	3, agri	above Soshinath Belta khaled		v.c
	~~1586~~	~~Dusky leaf warbler~~ ?				
52	1581	olivaceous leafwarbler	1	Sonopatal north sanctuary.		
53	1594	Pallas's leaf warbler	3, 4	Doodgaya		1
54	1601	large billed leafwarbler	2, 3, 4,	Deodi, Dibrugella, Belta		15-20
55	1605 ~~1605~~	~~Dull green leaf warbler~~	2	Dibrugella		
56	1606	large crowned leafwarbler	2, 3	Gorge, Belta		
57	1609	Blyth's leafwarbler	2	Gorge Gowan Dibru.		
58	1615	Black browed flycatcher warbler	2	Dibru		8-10
59	1618	Greyheaded flycatcherwarbler	3	Doodgaya		1
60	1629	Goldcrest	2	Dibrugella Deodi		~~5-6~~ 8-10
61	1647	Himalayan rubythroat	1	Bithantoli Sonopatal		4
62	1650	Blue chat ~~Blue chat~~	2	Maltoni		1
63	1658	Orangeflanked bushrobin	2, 3	the Maltoni-Belta		750 ~~20-30~~
64	1670	Blue headed redstart	3	Above Belta		2
65	1671	Black redstart	1	Sonopatal		1
66	1675	Bluefronted redstart	1, 2	Dibru -> Sonai		750
67	1679	plumbeous redstart	4	Nichi gaon, Gorge Cleaning		3
68	1683	Hodgsons grandala	1	Sonopatal		1 (X) Ashwin
69	1684	Little forktail	~~3~~	Dibru		1 (1+1)

Ser.	Hi. book nos	Species	Habitat	Locations	Altitudes	Abundance
70	1688	Spotted forktail	4	Above Joshimath Aulie		3
71	1697	Stone chat	agri	Above Joshimath		725
72	1705	Dark grey bushchat	agri	Above Joshimath		725
73	1716	White capped redstart	4	Rin - Sam patal		725
74	1723	Blue headed rock thrush	3 Agri	Above Joshimath		5-4
75	1729	Blue whistling thrush	5, 4, 1.	Rini - Bithantoli		7100
76	1739	Plain backed mountain thrush	1, 2	Dibrugeth		3
77	1748	Tickells thrush	3	Aulie		<5
78	1749	White collard blackbird	3	Belta Khalah		1
79	1750	Grey winged blackbird	3	Aulie		<5
80	1752	Black bird	3	Aulie Belta		<5
81	1768	Mistle thrush.	2	Dibru		1
82	1770	Wren	4/5	Deodi Ramani		2
83	1775	Brown dipper	4	Kalikona - Doodgaya Dibru		15-20
84	1777	Alpine accentor	5	Pathakan		1+
85	1781	Robin accenton	1 (Dugles)	Sanson Patal		1
86	1783	Rufous breasted accentor	1	N. Sanch		<5
87	1799	Green backed tit	3	Aulie Kalikona		8 to 10
88	1802	Crested black tit	2/3	Belta -> Ramani		750
89	1804	Black tit	2	Deodi Joshimath		2
90	1815	Fire capped tit	Joshimath 2	Bithantoli		2 (8-10)
91	1822	White throated tit	2	Deodi Dibru		2 (5-7)
92	1832	White cheeked nuthatch	2/	Dibru		1
93	1842	Tree creeper	2	Dibru		1
94	1847	Himalayan tree creeper	2	Dibru - Joshimath		<5
95	1852	Indian tree pipit	2/3	Dibru -		10-20
96	1865	Vinaceous breasted r	1	Sansonpatal Bithantoli		750
97	1884	Grey wagtail	4	Dibru. Rishiganga.		<5
98	1896	Yellowbellied Flowerpecker	3.	Kalikona		2
99	1933	White eye	3	Aulie		5 to 10
100	1938	House sparrow	Agri	Joshimath		
101	1982	Black & yellow grosbeak	3	Aulie		2
102	1986	Spotted winged grosbeak	3/2	Aulie Dibru, Belta		10-15
103	1998	Gold fronted finch	Agri 3	Above Joshimath Aulie		7100
104	2000	Hodgsons mountain finch	1	N. Sanctum		2

N.	Hinde's No.	Species	Habitat	Locations	Altitude	Abundance
105	2013	common rosefinch	1	Dibru		1(3)
106	2017	Pinkbrowed rosefinch	1, 2			
107	2019	Spottedwinged rosefinch				
108	2021	whitebrowed rosefinch				
109	2023	Beautiful rosefinch	5	Bithantoli		1(2)
110	2031	red breasted rosefinch				
111	2039	red headed bullfinch	2	near Ramani		2

Island	Area	survey dated	Coastline	% coastline surveyed	# sampling sites	sampling distance

Island	Area	survey dates	Total Coastline	# sampling sites	Total transect assessed	% Coast surveyed
GMI	1045.1	11-12-92 to 28-1-93; 19/2/93 to 25-2/93	213	19	30.4 km	14.3
Megapode Ist.	0.125	~~25/12/92~~	1.5	1	1 km	≤ 50.75
LMI	159.1	28/1 - 15/2	78	12	12.7	16.3
Pilo Milo	1.3	16-2 - 18/2	3.0	1	2.5	83%
Iquanda	18.2	1-3/93 to 18/3/93	112.5	8	12.2	10.8
Trinkat	36.3	19/3 - 24/3	30	2	4.0	13.3
Naucowry	66.9	26/2 to 29/3	44.3	4	10.25	7.4
katchall	174.4	31/3 - 3/4	78.0	3	8	10.1


EAST
RAJASTHAN
619 ± 169
JAISALMER
(178)
JODHPUR
(366)
AJMER
(520)
86 = 265
88 = 445
SHIVPURI
(918)
WEST
RAJASTHAN
270 ± 106
BHILWARA
(667)
86 = 530
KOTA
(786)
86 = 815
88 = 774
UDAIPUR
(638)
86 = 370
88 = 602
WEST
MADHYA PRADESH
932 ± 173
GUJARAT
929 ± 266
BANSWARA
(929)
86 = NA
88 = 998
BHUJ
(340)
86 = 216
88 = 546
RATLAM
(945)
86 = 110.2
88 = 865.4
BHOPAL
(1260)
SAURASHTRA
& KUTCH
488 ± 179
GODHRA
(1026)
86 = 436
88 = 1251
JHABUA
(777)
INDORE
(909)
1986 = 965
88 = 1103
JAMNAGAR
(466)
86 = 238
88 = 461
RAJKOT
(594)
86 = 324
88 = 1251
DHAR
(930)
VADODHRA
(917)
86 = 299
88 = 867
JUNAGHAD
(844)
86 = 592
88 = 1000
BHAVNAGAR
(620)
86 = 360
88 = 678
AURANGABAD
(726)
86 = 483
88 = 479
VIDARBHA
936 ± 174
NAGPUR
(1248)
MARATHWADA
692 ± 167
MADHYA
MAHARASHTRA
793 ± 128
AHMEDNAGAR
(622)
86 = 355
88 = 533
TELANGANA
755 ± 158
KONKAN
2756 ± 482
PUNE
(661)
SOLAPUR
(678)
NORTH INTERIOR
KARNATAKA
456 ± 84
HYDERABAD
(772)

4	2	14.6	20.8	64.6	
	1	4	3	45	15	40
	1	4	4	7.1	1.2	91.7
	1	4	5	15.5	0	84.5
	1	3	1	3.6	0	96.4
	1	3	2	1.7	60	38.3
	1	3	3	14.3	26.9	58.7
	1	3	4	14.3	57.1	28.6
	1	3	5	10.2	42.85	46.9
	1	2	1	28.67	33.6	37.8
	1	2	2	16.4	44	39.6
	1	2	3	29.7	24.3	45.9
	1	2	4	32.8	24.5	42.6
	1	2	5	34.7	45.1	20.1
	1	1	1	88.1	3.2	8.7
	1	1	2	86	5.6	8.4
	1	1	3	95	2.5	2.5
	1	1	4	80.7	12.6	6.7
	1	1	5	73.1	19.4	7.4
	2	4	1	0	94.6	5.3
	2	4	2	1.1	95.8	3.2
	2	4	3	2.8	89.6	7.5
	2	2	1	0	90.3	9.7
	2	2	2	13.8	85.2	1
	2	2	3	8.2	89.3	2.5
	3	4	1	0	71.4	28.6
	3	4	2	4.4	80.9	14.7
	3	4	3	9.8	35.3	54.9
	3	4	4	0	26.7	73.3
	3	4	5	0	11.6	88.4
	3	1	1	11.4	34.2	54.5
	3	1	2	2.2	11.4	86.4
	3	1	3	7.6	12.8	79.5
	3	1	4	9.5	7.1	83.3
	3	1	5	3.1	13.8	83.1
	3	3	1	2.1	48.9	48.9
	3	3	2	6.3	84.4	9.3
	3	3	3	0	93.8	6.3
	3	3	4	0	84	16
	3	2	1	0	85	15
	3	2	2	3	70.3	26.6
	3	2	3	0	64.7	35.3
	3	2	4	0	51.2	48.8
	3	2	5	0	58.1	41.9
	1	4	1	23.4	6	70.1
	1	4	2	14.6	20.8	64.6
	1	4	3	45	15	40
	1	4	4	7.1	1.2	91.7
	1	4	5	15.5	0	84.5
	1	3	1	3.6	0	96.4
	1	3	2	1.7	60	38.3
	1	3	3	14.3	26.9	58.7
	1	3	4	14.3	57.1	28.6
	1	3	5	10.2	42.85	46.9
	1	2	1	28.67	33.6	37.8

	1	2	2	16.4	44	39.6
	1	2	3	29.7	24.3	45.9
	1	2	4	32.8	24.5	42.6
	1	2	5	34.7	45.1	20.1
	1	1	1	88.1	3.2	8.7