U N I V E R S I T Y O F S O U T H A M P T O N

The Social Organisation and Ecology of the Japanese sika deer (*Cervus nippon*) in Southern England

V O L U M E T W O

D A T A A N D F I G U R E S

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by

JAMES CHRISTOPHER EDWARD

MANN

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V O L U M E T W O

C O N T E N T S

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2:12 Statistical comparison of total occupance per month: New Forest driven transects

2:13 Statistical comparison of total occupance per month: New Forest walked transects

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2:17 Day and night habitat occupance from New Forest driven transects

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2:19 Total occupance per habitat; New Forest driven transects; Day and night separated (histograms)

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Agrostis setacea

Agrostis tenuis

Betula sp.

Calluna vulgaris

Fagus sylvatica

Ilex aquifolium

Molinia caerulea

Pinus nigra

Quercus sp.

Rubus agg.

Salix sp.

Ulex europaeus

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"Leaves"

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CHAPTER ONE

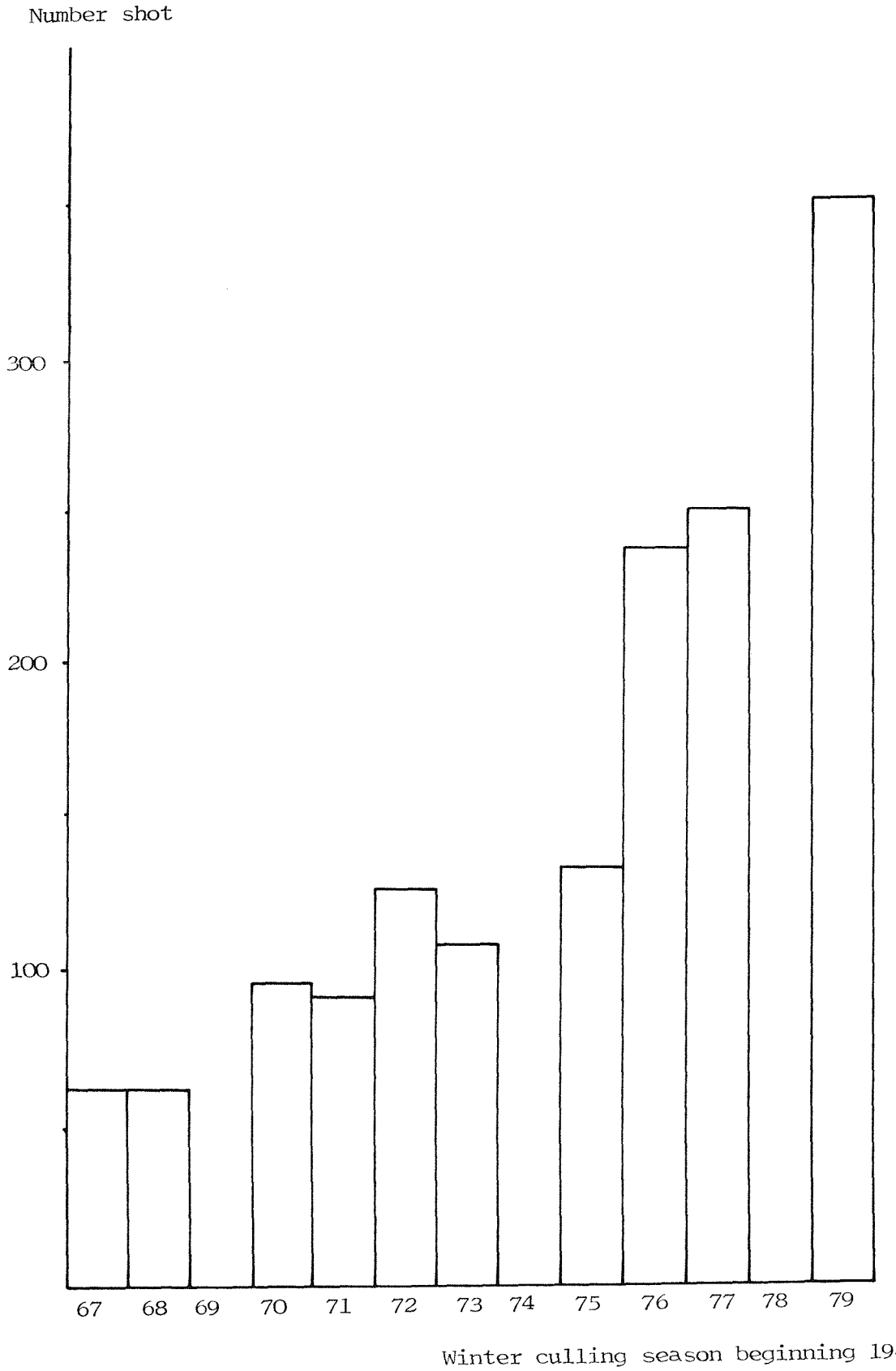
Introduction

FIGURE 1:1

The distribution of sika deer in Britain

FIGURE 1:2

The annual cull of sika deer in Scotland



C H A P T E R T W O

Habitat occupation

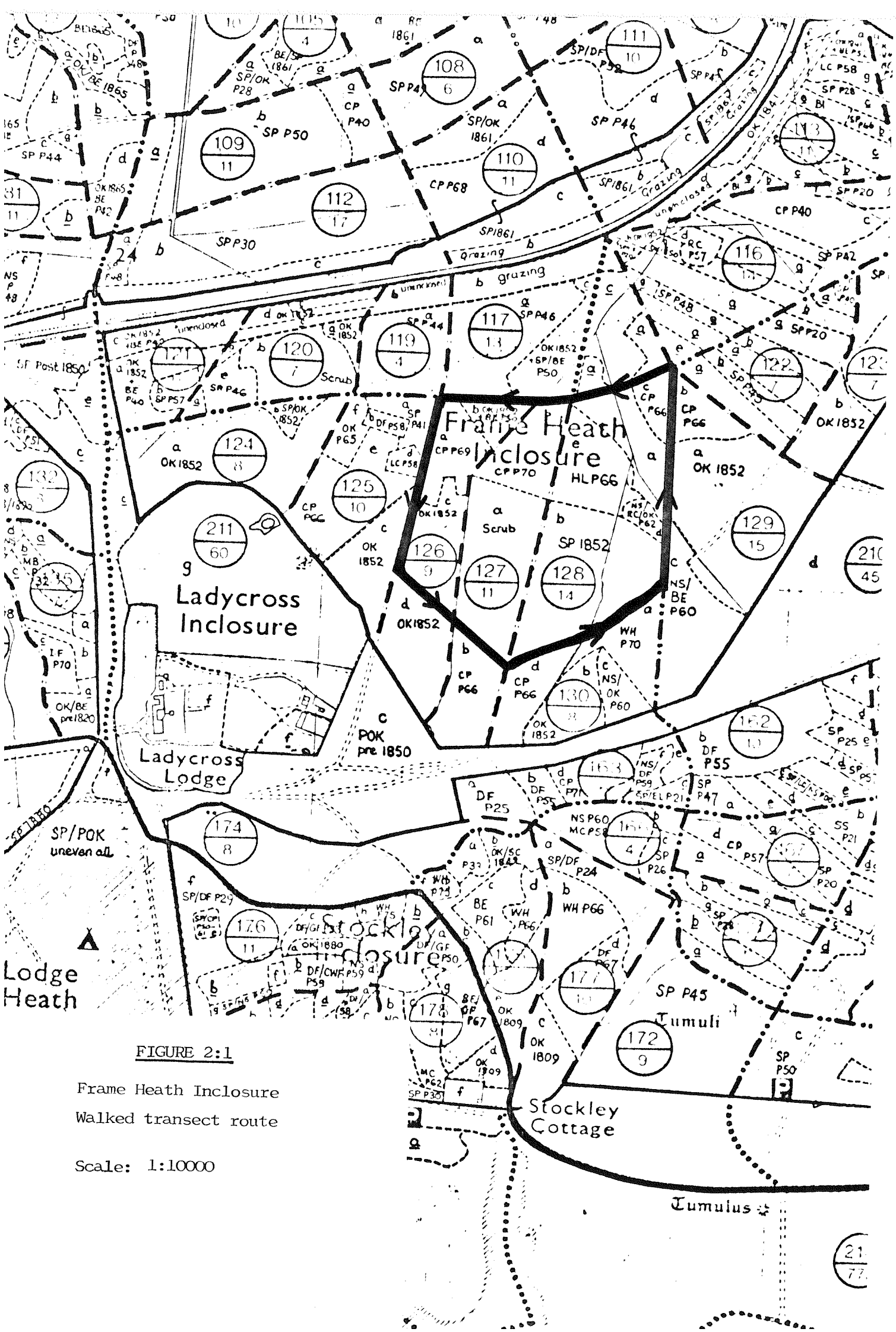


FIGURE 2:1

Frame Heath Inclosure

Walked transect route

Scale: 1:10000

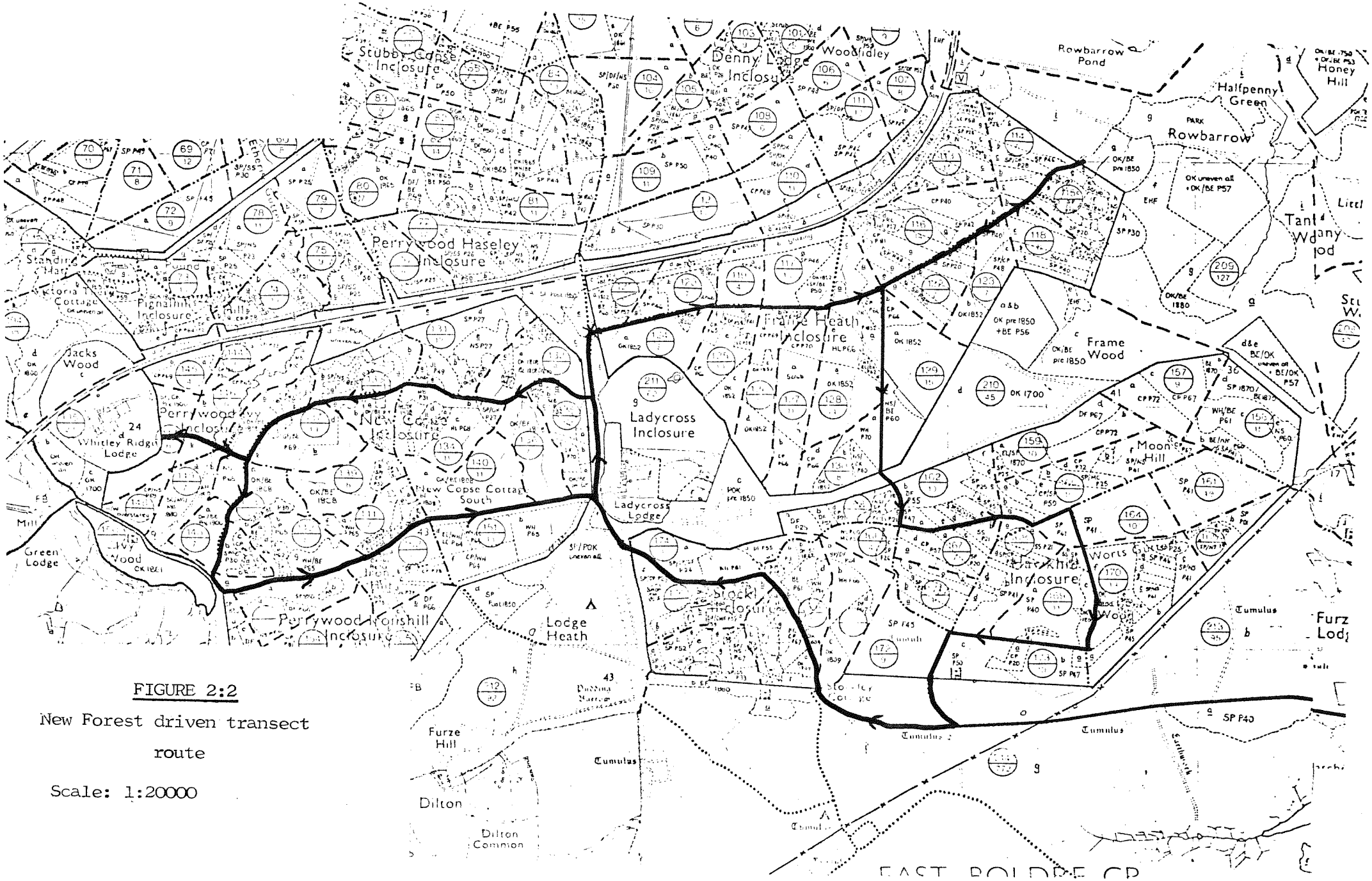


FIGURE 2:2

New Forest driven transect route

Scale: 1:20000

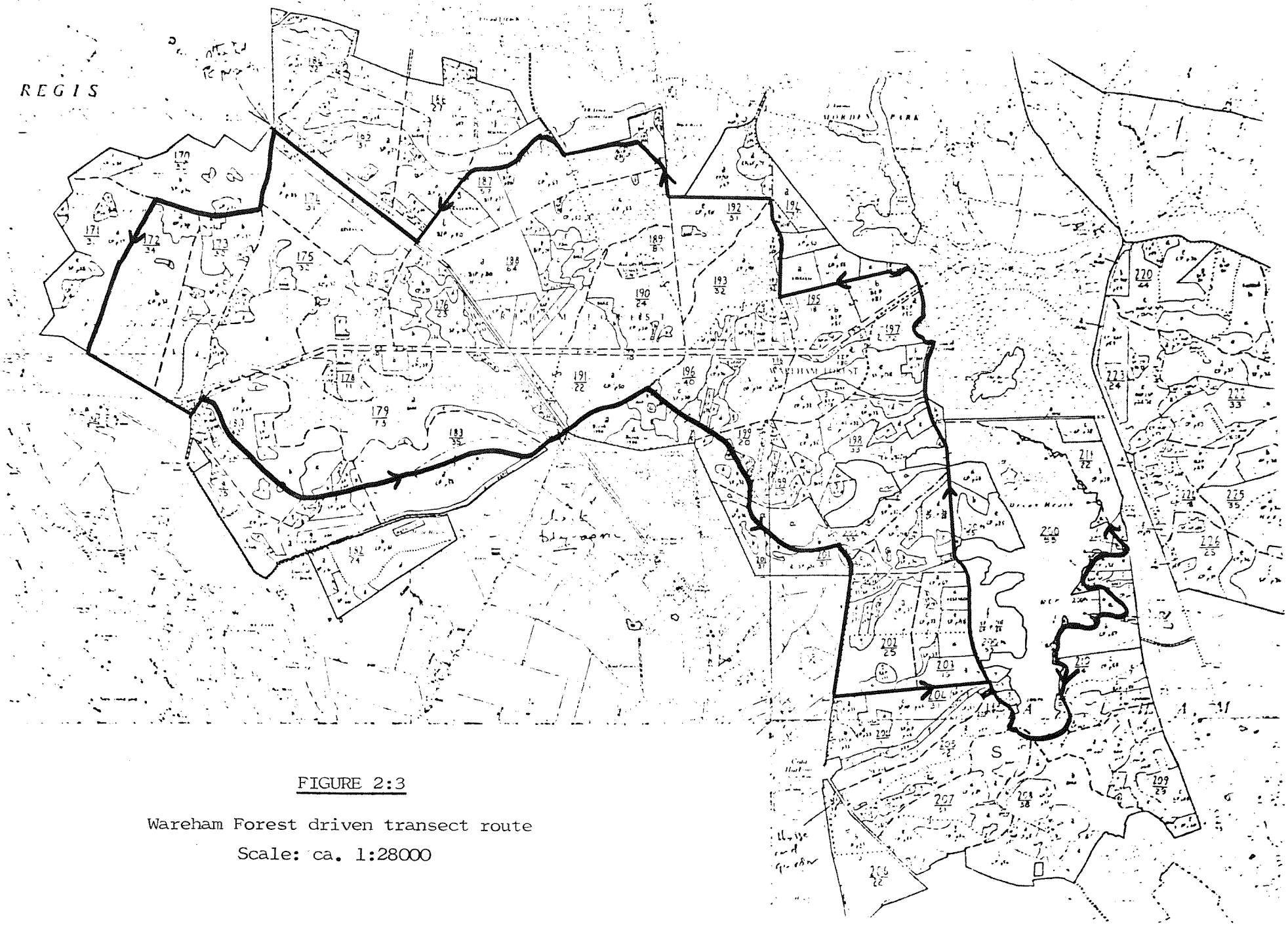


FIGURE 2:3

Wareham Forest driven transect route

Scale: ca. 1:28000

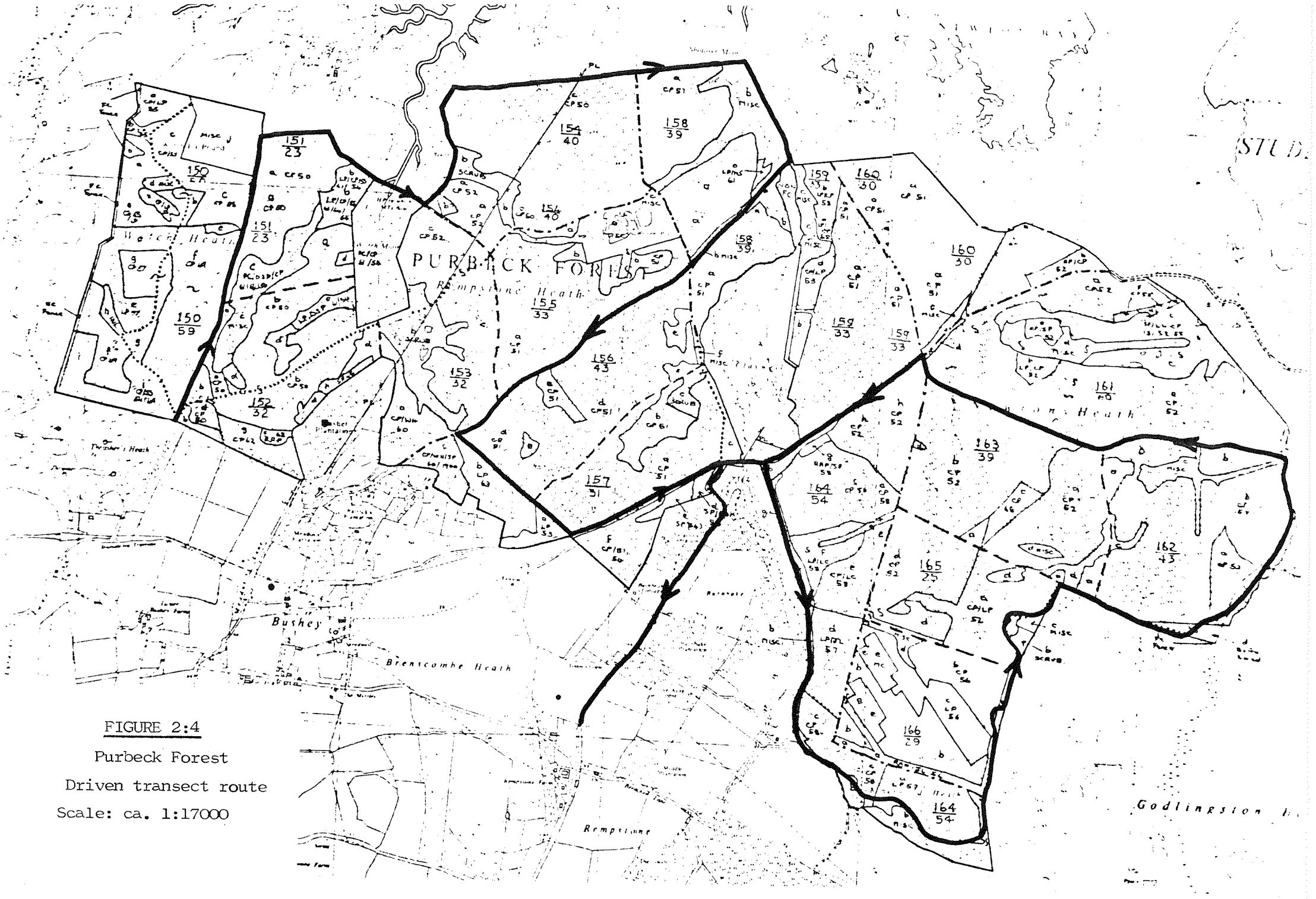


FIGURE 2:4

Purbeck Forest

Driven transect route

Scale: ca. 1:17000

FIGURE 2:5

Total observations on the

New Forest driven transects

	OW	Pl	PT	PS	C	H	F	R
May 1980								
N	317	3	68	38	36	0	59	116
%	49.8	0.5	10.7	6.0	5.7	0	9.3	18.2
June								
N	171	0	38	75	71	1	53	103
%	33.4	0	7.4	14.6	13.9	0.2	10.4	20.1
July								
N	129	0	13	38	90	0	45	72
%	33.3	0	3.4	9.8	23.3	0	11.6	18.6
August								
N	218	1	28	98	96	2	60	79
%	37.5	0.2	4.8	16.8	16.5	0.3	10.3	13.6
September								
N	No data were collected here							
%								
October								
N	623	0	30	89	71	0	25	130
%	64.4	0	3.1	9.2	7.3	0	2.6	13.4
November								
N	737	0	26	67	30	0	17	114
%	74.4	0	2.6	6.8	3.0	0	1.7	11.5

OW Oak woodland Pl Plantation PT Prethicket

C Clear-felled H Heath F Fields R Rides

FIGURE 2:5 continued

Total observations on the

New Forest driven transects

	OW	Pl	PT	PS	C	H	F	R
December 1980								
N	219	0	8	30	22	0	15	60
%	61.9	0	2.3	8.5	6.2	0	4.2	16.9
January 1981								
N	285	0	49	68	37	0	39	98
%	49.5	0	8.5	11.8	6.4	0	6.8	17.0
February								
N	303	0	35	64	26	0	93	64
%	51.8	0	6.0	10.9	4.4	0	15.9	10.9
March								
N	147	0	15	23	33	0	42	35
%	49.8	0	5.1	7.8	11.2	0	14.2	11.9
April								
N	190	4	31	23	51	0	8	39
%	54.9	1.2	9.0	6.6	14.7	0	2.3	11.4
May								
N	241	16	28	51	88	0	42	64
%	45.5	3.0	5.3	9.6	16.6	0	7.9	12.1
June								
N	143	5	57	69	104	0	20	122
%	27.5	1.0	11.0	13.3	20.0	0	3.8	23.5

FIGURE 2:5 continued

Total observations on the

New Forest driven transects

	OW	Pl	PT	PS	C	H	F	R
July 1981								
N	111	0	70	57	114	4	104	59
%	21.4	0	11.0	22.0	0.8	0.8	19.0	11.4
August								
N	147	5	48	58	138	0	36	142
%	25.6	0.9	8.4	10.1	24.0	0	6.3	24.7
September								
N	201	2	21	51	152	3	25	127
%	34.5	0.3	3.6	8.8	26.1	0.5	4.3	21.8
October								
N	227	3	38	122	32	7	38	77
%	41.7	0.6	7.0	22.4	5.9	1.3	7.0	14.2
November*								
N	124	0	29	49	15	0	7	45
%	46.1	0	10.8	18.2	5.6	0	2.6	16.7

OW Oak woodland Pl Plantation PT Prethicket

PS Polestage C Clear-felled H Heath

F Fields R Rides

* Data in November is offered for completeness' sake, but contains no circuits driven between 22.00 and 08.00

FIGURE 2:6

Total observations on the

New Forest walked transects

	OW	R	PT	PS	C
1978					
November					
N	240	157	15	28	
%	54.5	35.7	3.4	6.4	
December					
N	242	110	40	6	
%	60.8	27.6	10.1	1.5	
1979					
January					
N	403	137	89	44	
%	59.9	20.4	13.2	6.5	
Survey suspended here					
October					
N	163	110	45	76	
%	41.4	27.9	11.4	19.3	
November					
N	201	100	81	15	
%	50.6	25.2	20.4	3.8	
December					
N	387	156	73	36	
%	59.4	23.9	11.2	5.5	

OW Oakwoodland R Rides P Prethicket

PS Polestage C Clear

FIGURE 2:6 continued

Total observations on the

New Forest walked transects

	OW	R	PT	PS	C
1980					
January					
N	312	164	88	31	51
%	48.3	25.4	13.6	4.8	7.9
February					
N	191	89	55	13	58
%	47.0	21.9	13.5	3.2	14.3
March					
N	154	60	23	8	59
%	62.3	24.3	9.3	3.2	23.9
April					
N	218	120	145	6	67
%	39.2	21.6	26.1	1.1	12.1
May					
N	140	124	112	4	84
%	30.4	27.0	24.3	0.9	18.3
June					
N	105	140	99	8	60
%	25.5	34.1	24.1	1.9	14.6
July					
N	83	101	179	3	28
%	21.1	25.6	45.4	0.8	7.1

FIGURE 2:6 continued

Total observations on the

New Forest walked transects

	OW	R	PT	PS	C
1980					
August					
N	98	150	62	16	46
%	27.1	41.4	17.1	4.4	12.7
September					
N	167	130	43	17	38
%	42.3	32.9	10.9	4.3	9.6

OW Oakwoods R Rides PT Prethicket

PS Polestage C Clear-felled

FIGURE 2:7

Percentage of animals seen each month in each habitat

New Forest prethicket areas

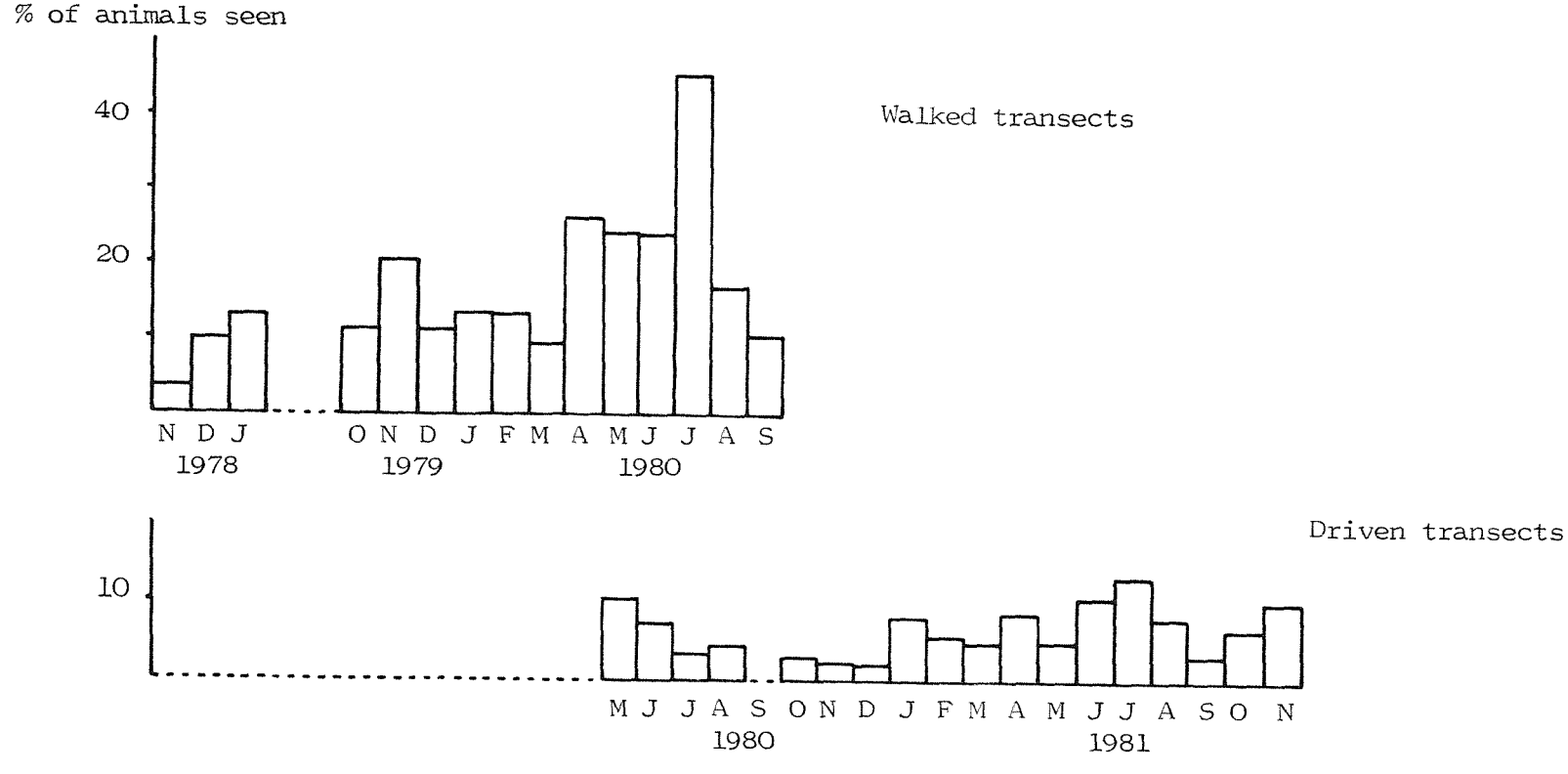


FIGURE 2:7 continued

Percentage of animals seen each month in each habitat

New Forest polestage areas

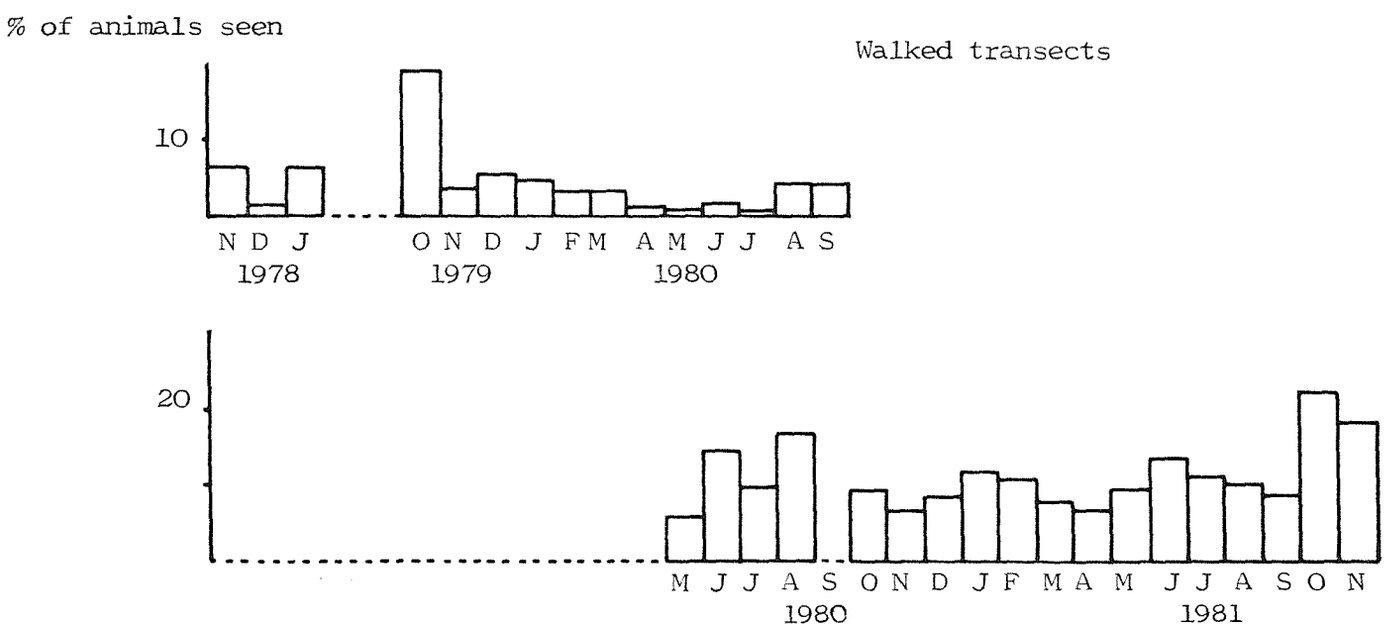


FIGURE 2:7 continued

Percentage of animals seen each month in each habitat

New Forest clear-felled areas

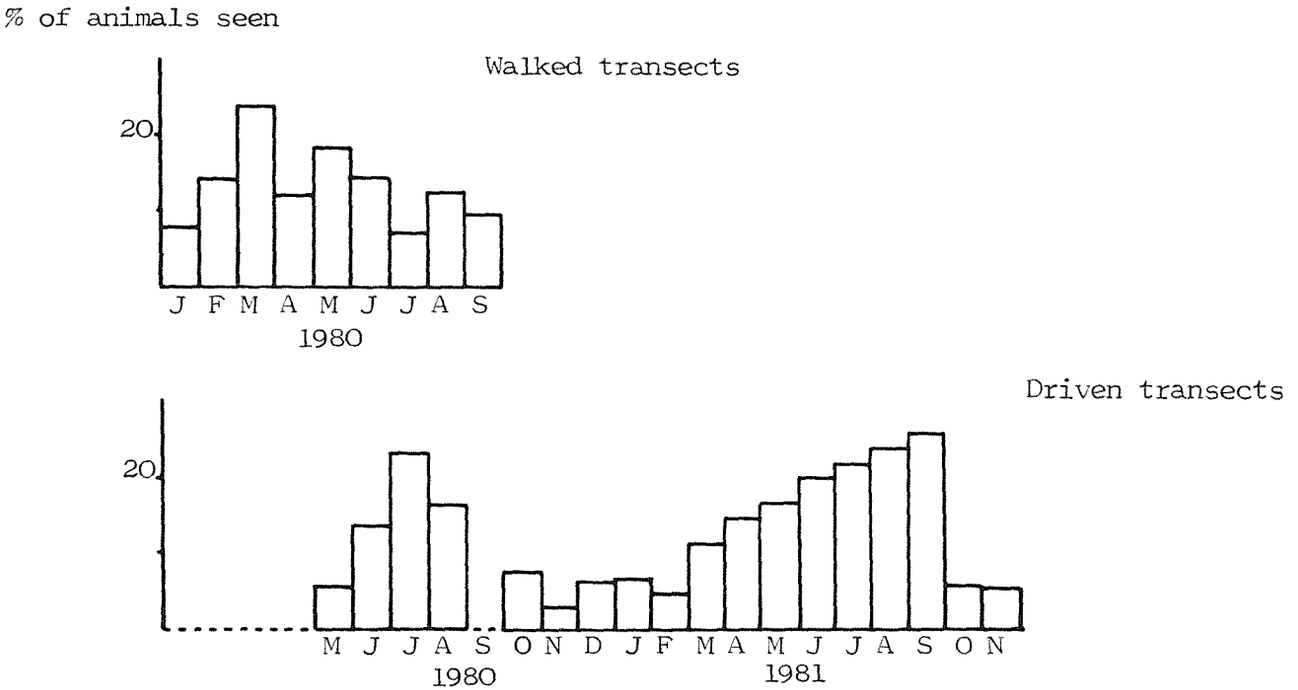


Figure 2:7 continued

Percentage of animals seen each month in each habitat

New Forest rides

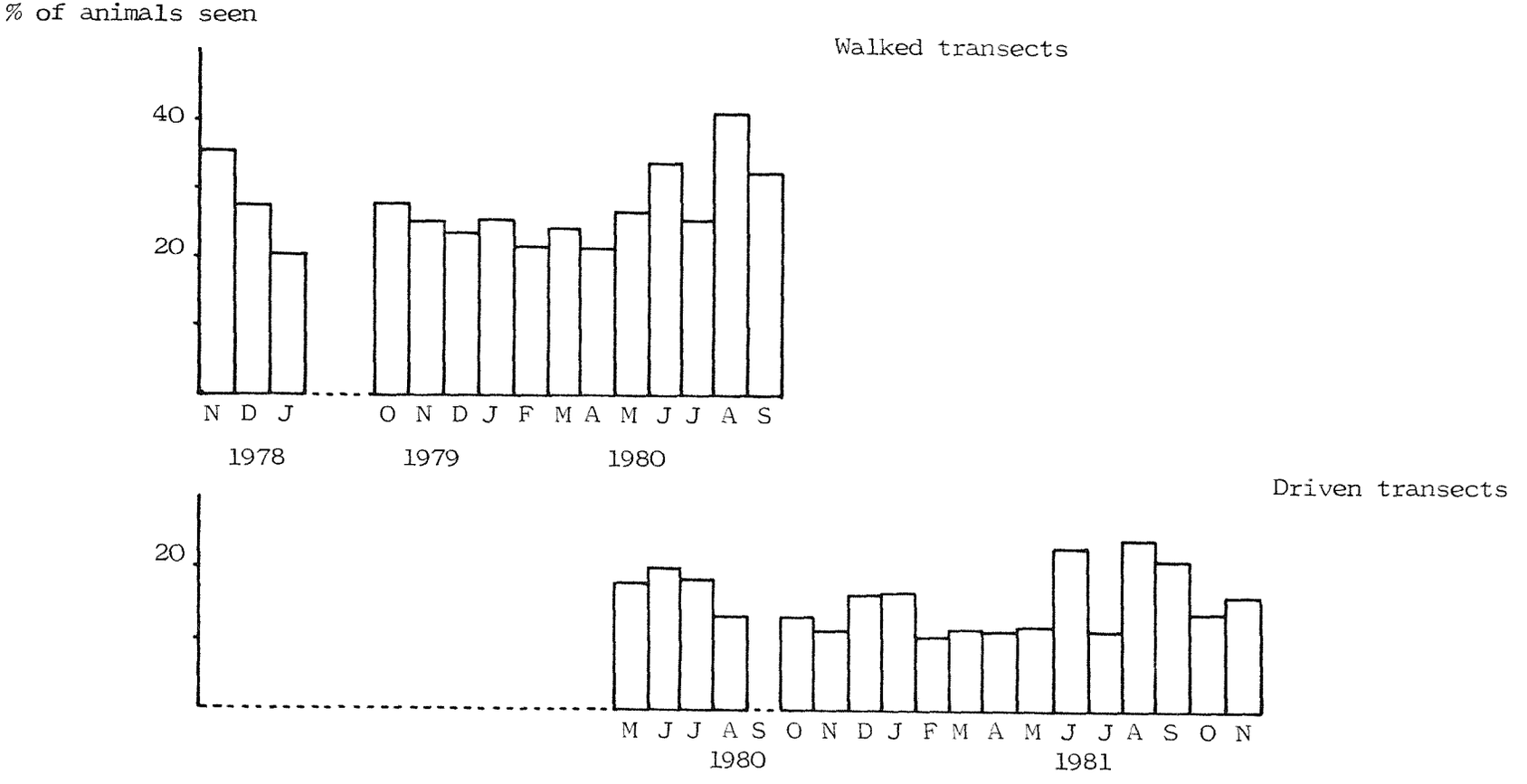


FIGURE 2:7 continued

Percentage of animals seen in all the habitats each month

New Forest

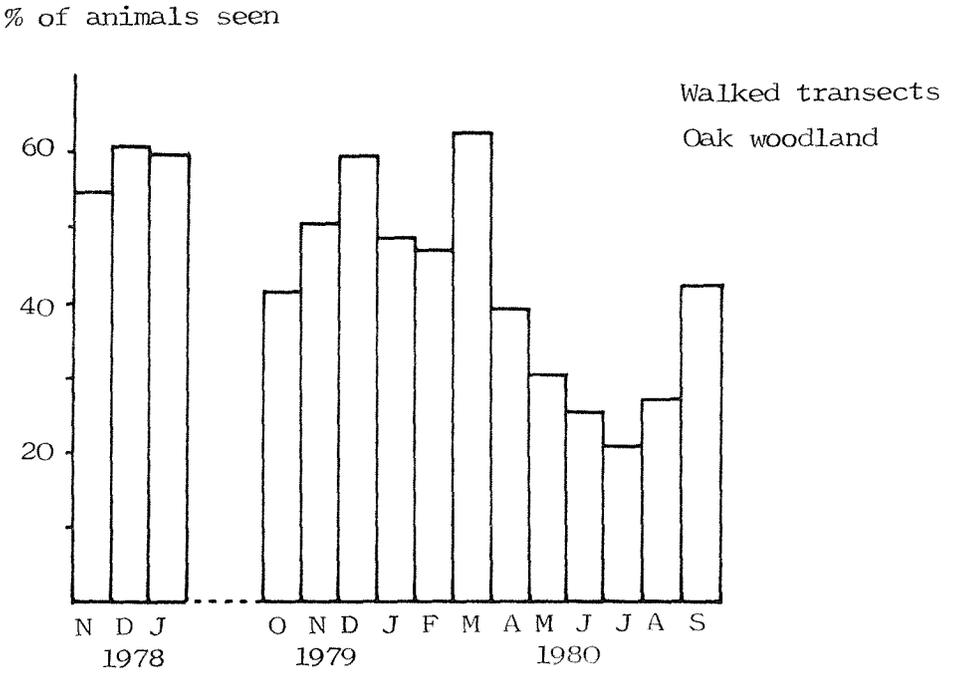
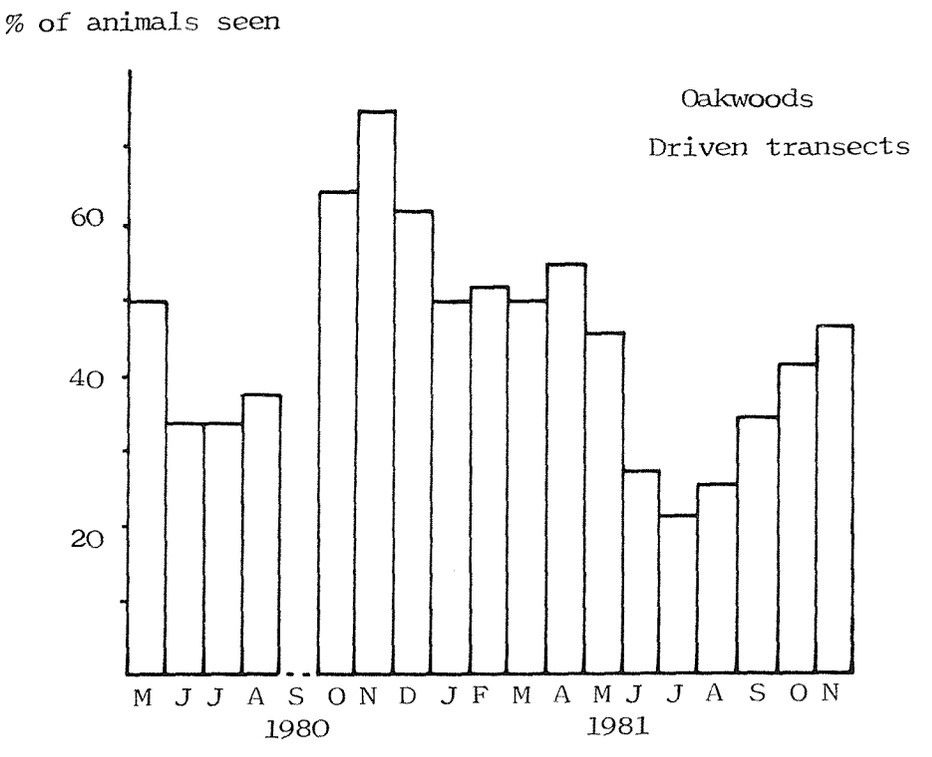


FIGURE 2:7 continued

Percentage of animals seen each month in each habitat

New Forest



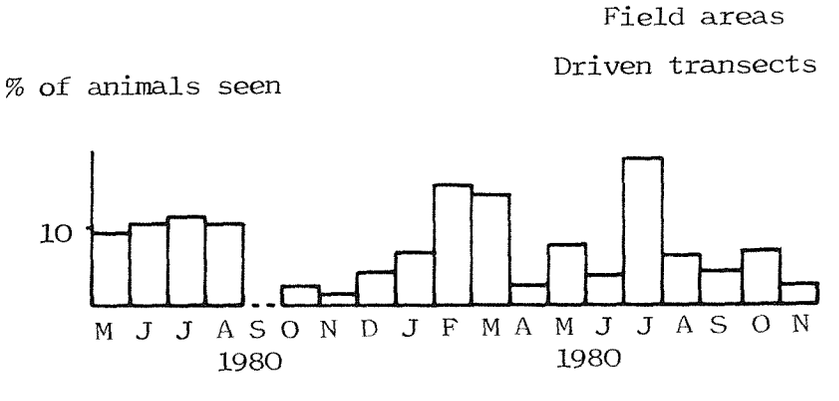


FIGURE 2:8

Habitat areas in Frame

Heath Inclosure

Driven transects

	Area sampled ha	% of total sampled	% of total available	Total available ha
Oakwoods	40.0	38.7	12.4	322
Plantation	0.5	0.5	50.0	1
Prethicket	1.4	1.3	1.2	117
Polestage	35.0	33.9	16.1	217
Cleared	11.5	11.1	28.0	41
Heath	5.0	4.8	5.3	95*
Fields	3.0	2.9	42.9	7
Rides	7.0	6.8	25.0	28
Total	103.4		12.5	828

* Heath, by being an extensive, perimeter habitat, is estimated using a depth of 200m.

FIGURE 2:9

Habitat areas in Frame

Heath Inclosure

Walked transects

	Area sampled ha	% of total sampled	% of total available	Total available ha
Oakwoods	4.65	43.7	2.8	164
Prethicket	0.75	7.0	2.5	30
Polestage	1.55	14.6	2.4	65
Rides	2.2	20.7	22.0	10
Cleared	1.5	14.1	10.7	14
Total	10.65		3.8	283

FIGURE 2:10

Total habitat occupance from

New Forest driven transects

	OW	Pl	PT	PS	C	F	R
1980							
May	31.0	0.1	60.3	2.1	0.9	0.8	4.7
June	30.1	0	51.1	7.2	3.0	2.0	6.6
July	41.8	0	33.0	6.9	6.9	3.2	8.7
August	39.7	0	38.7	10.0	4.2	2.3	5.1
September	No data were collected here						
October	64.4	0	21.6	5.8	2.1	0.6	5.5
November	70.4	0	19.1	4.5	0.9	0.4	4.6
December	64.5	0	18.2	6.3	2.1	1.1	7.8
1981							
January	36.1	0	47.6	6.2	0.2	1.3	8.1
February	43.5	0	38.5	9.2	1.7	3.5	4.1
March	48.1	0	34.2	5.1	4.4	3.4	4.8
April	35.9	0.2	53.4	2.9	3.9	0.4	3.3
May	39.5	0.6	41.8	5.6	5.8	1.8	4.9
June	20.3	0.1	62.1	5.4	5.1	0.6	6.4
July	14.5	0	70.1	4.4	5.0	3.0	2.9
August	22.5	0.1	55.9	5.4	7.2	1.2	7.7
September	37.5	0.1	34.3	6.0	11.0	1.1	10.0
October	36.1	0.1	42.0	13.2	2.1	1.6	5.0

OW Oak woodland

Pl Plantation

PT Prethicket

PS Polestage

C Clear-felled

F Fields

R Rides

FIGURE 2.11

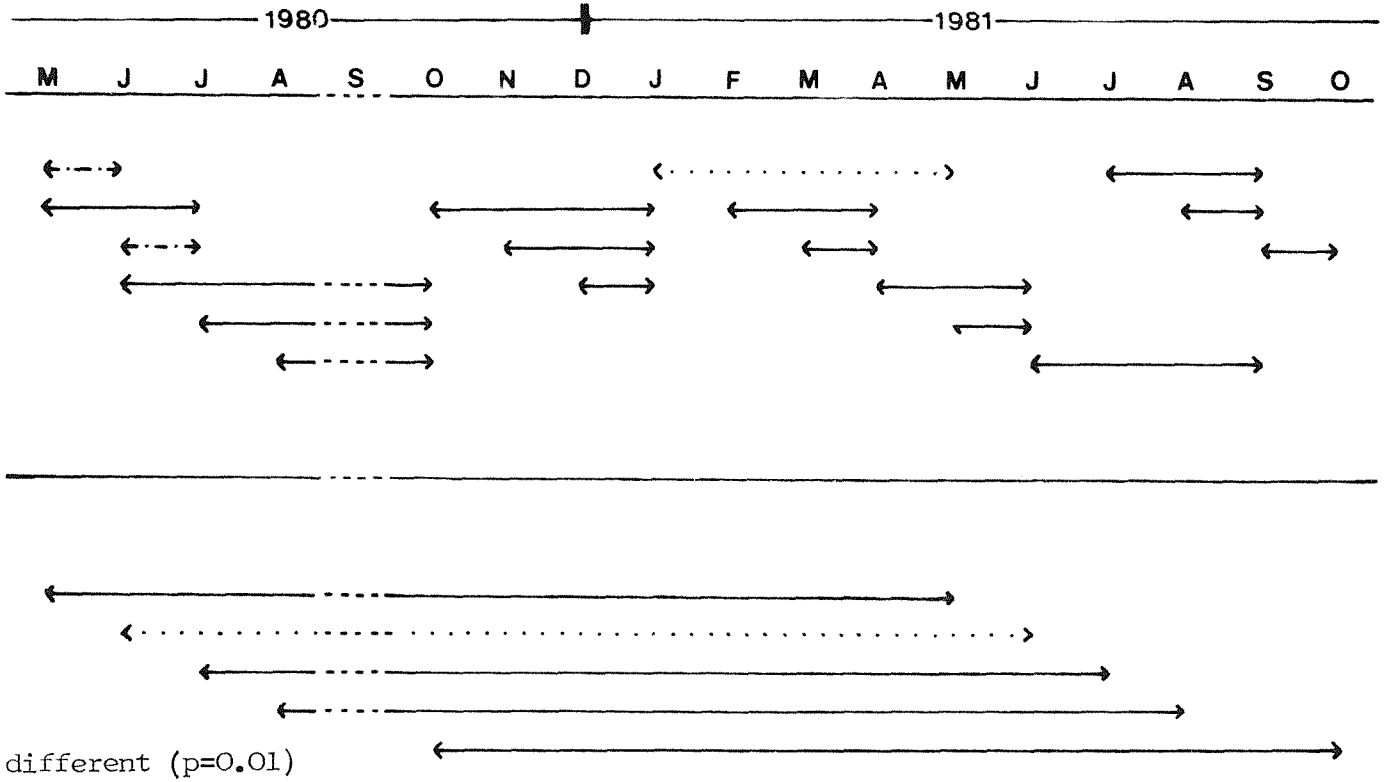
Total habitat occupance from New Forest walked transects

	OW	R	PT	PS	C
1978					
November	77.2	6.3	6.0	10.5	
December	77.4	4.5	15.8	2.3	
1979					
January	69.1	3.1	18.8	9.1	
Survey suspended here					
October	57.7	3.9	14.4	24.0	
November	60.6	4.0	30.1	5.4	
December	71.7	3.7	16.7	7.9	
1980					
January	63.7	4.0	19.3	6.7	6.3
February	61.7	3.5	19.0	4.5	11.4
March	73.6	3.5	11.8	4.1	7.0
April	53.0	3.7	37.5	1.6	4.2
May	47.3	3.7	35.3	1.5	12.3
June	44.2	5.2	38.9	3.6	8.1
July	30.7	3.3	61.5	1.2	3.3
August	48.8	6.6	28.6	8.6	7.3
September	69.5	4.6	13.3	7.7	4.9

OW Oak woodland R Rides PT Prethicket
PS Polestage C Clear-felled

FIGURE 2:12

Statistical comparison of total occupance per month
New Forest driven transects



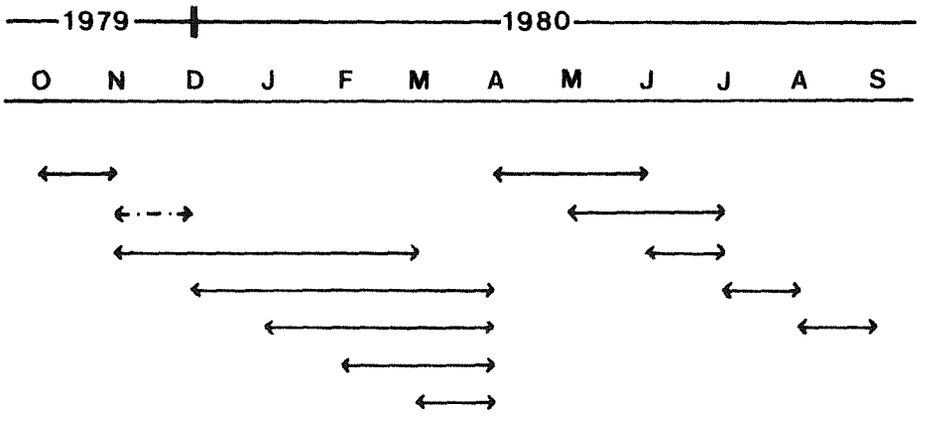
Significantly different (p=0.01)

Significantly different (p=0.05)

Not significantly different

FIGURE 2:13

Statistical comparison of total occupance per month New Forest walked transects



⟷ Significantly different (p = 0.01)

⟷ Significantly different (p = 0.05)

FIGURE 2:14

Dung accumulation results

New Forest

	No. of piles collected			% of total		
	OW *	PT	PS	OW **	PT	PS
1979						
October	27	17	5	29.0	54.8	16.1
November	41	23	6	32.0	53.9	14.1
December	39	11	4	46.4	39.3	14.3
1980						
January	20	28	4	17.2	72.4	10.3
February	15	20	4	17.2	69.0	13.8
March	16	8	2	34.8	52.2	13.0
April	17	22	0	20.5	79.5	0
May	29	12	5	36.3	45.0	18.7
June	28	26	6	22.6	62.9	14.5
July	15	25	7	13.5	67.6	18.9
August	22	22	3	22.7	68.0	9.3
September	33	18	6	31.4	51.4	17.1
October	38	17	5	36.5	49.0	14.4
November	27	11	4	37.5	45.8	16.7
December	24	9	5	36.4	40.9	22.7
1981						
January	17	7	1	41.5	51.2	7.3
February	11	12	1	22.0	72.2	6.0
March	No data collected due to foot and mouth					
April						

* Total from three transects ** Mean of the three transects

FIGURE 2:14 continued

Dung accumulation results

New Forest

	No. of piles collected			% of total		
	OW*	PT	PS	OW**	PT	PS
1981						
May	30	15	4	34.5	51.7	13.8
June	11	22	6	10.6	70.2	19.3
July	7	35	1	6.1	91.3	2.6
August	9	21	1	12.0	84.0	4.0
September	17	19	8	17.4	58.2	24.5

OW Oakwoods PT Prethicket PS Polestage

* Total from three transects

** Mean of the three transects

FIGURE 2:15

Theoretical dung deposition in each habitat : New Forest

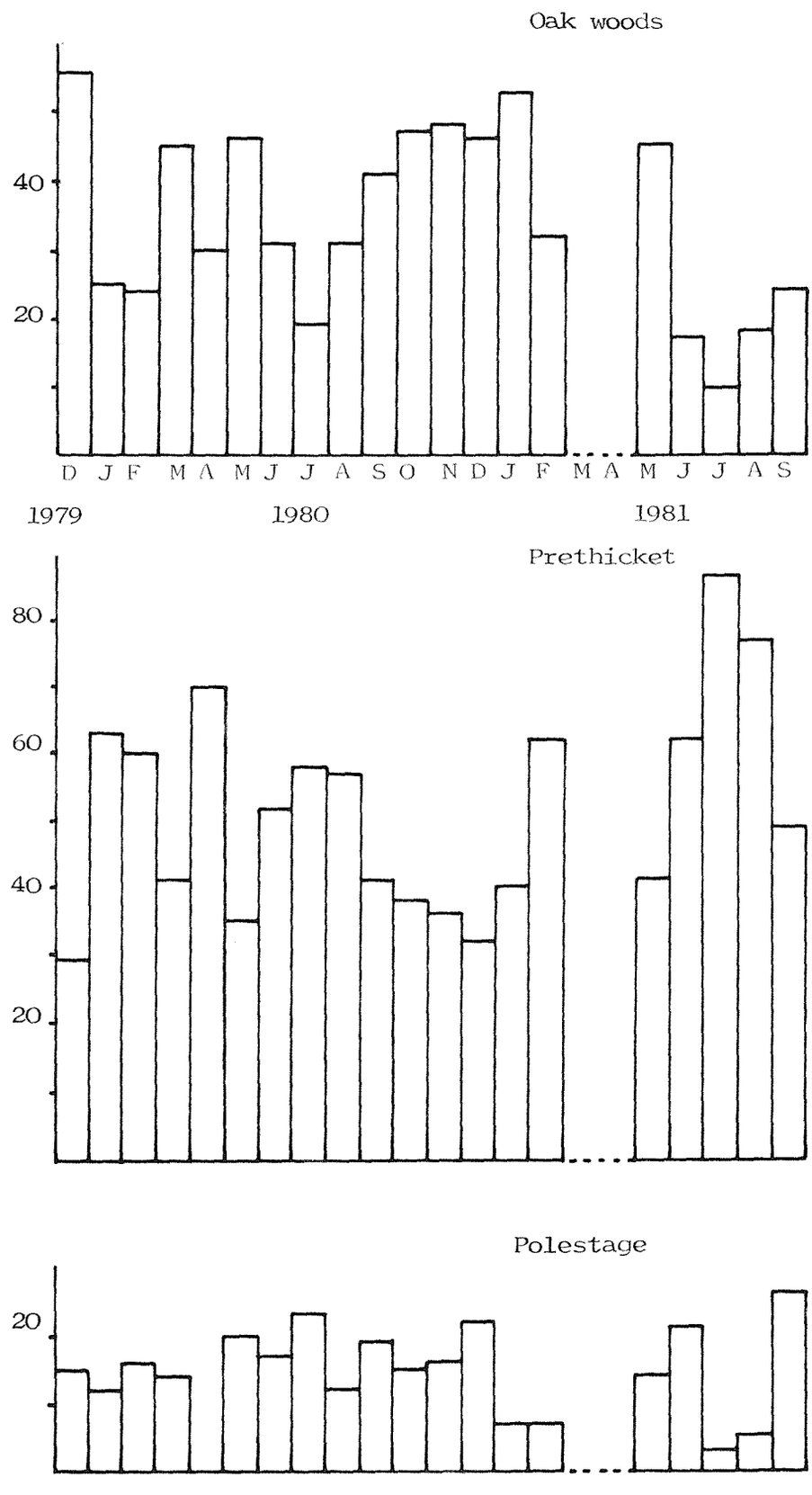


FIGURE 2:16

Total occupance per habitat

New Forest walked transects

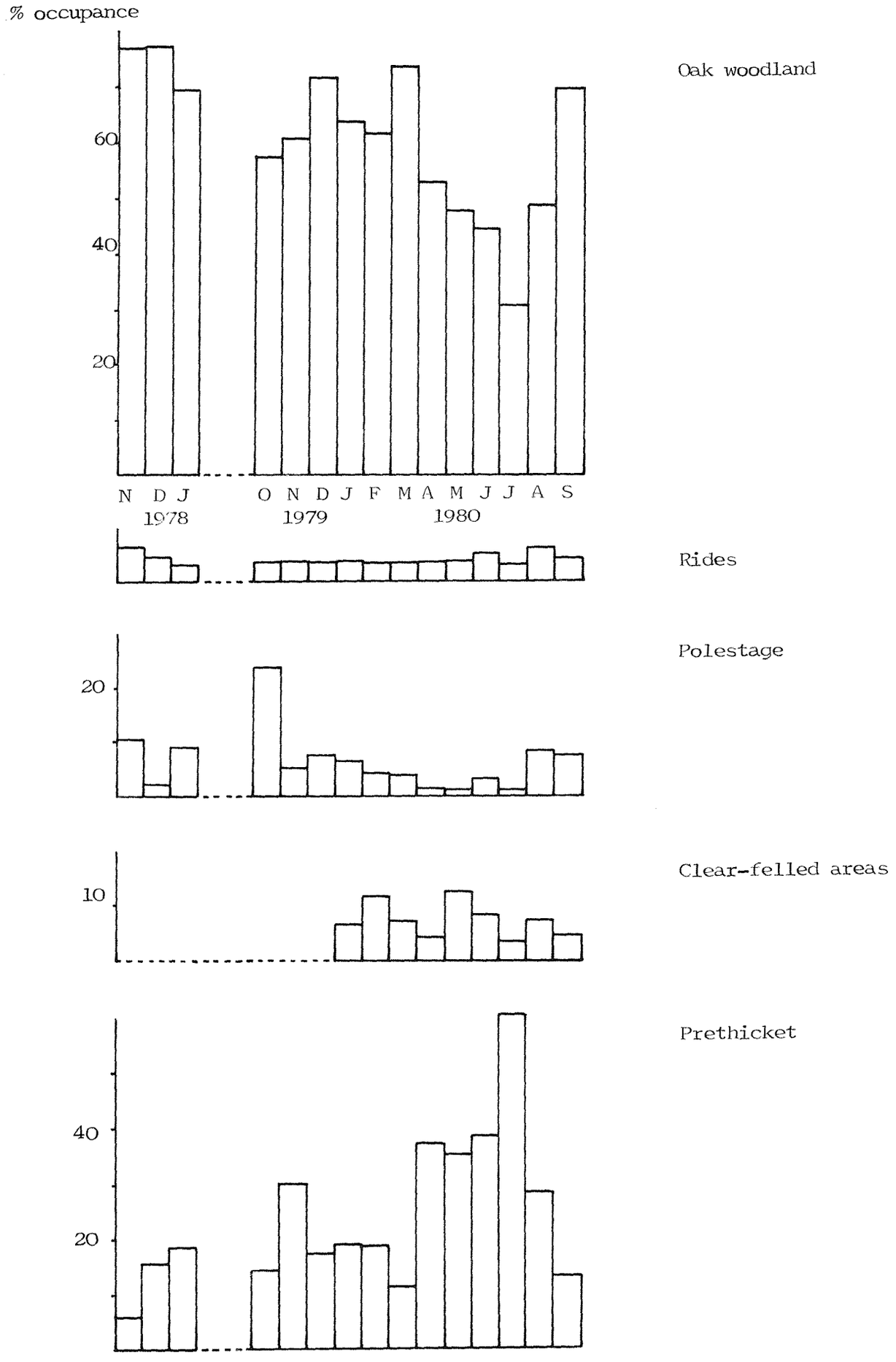


FIGURE 2:16a

Total occupance per habitat

New Forest driven transects

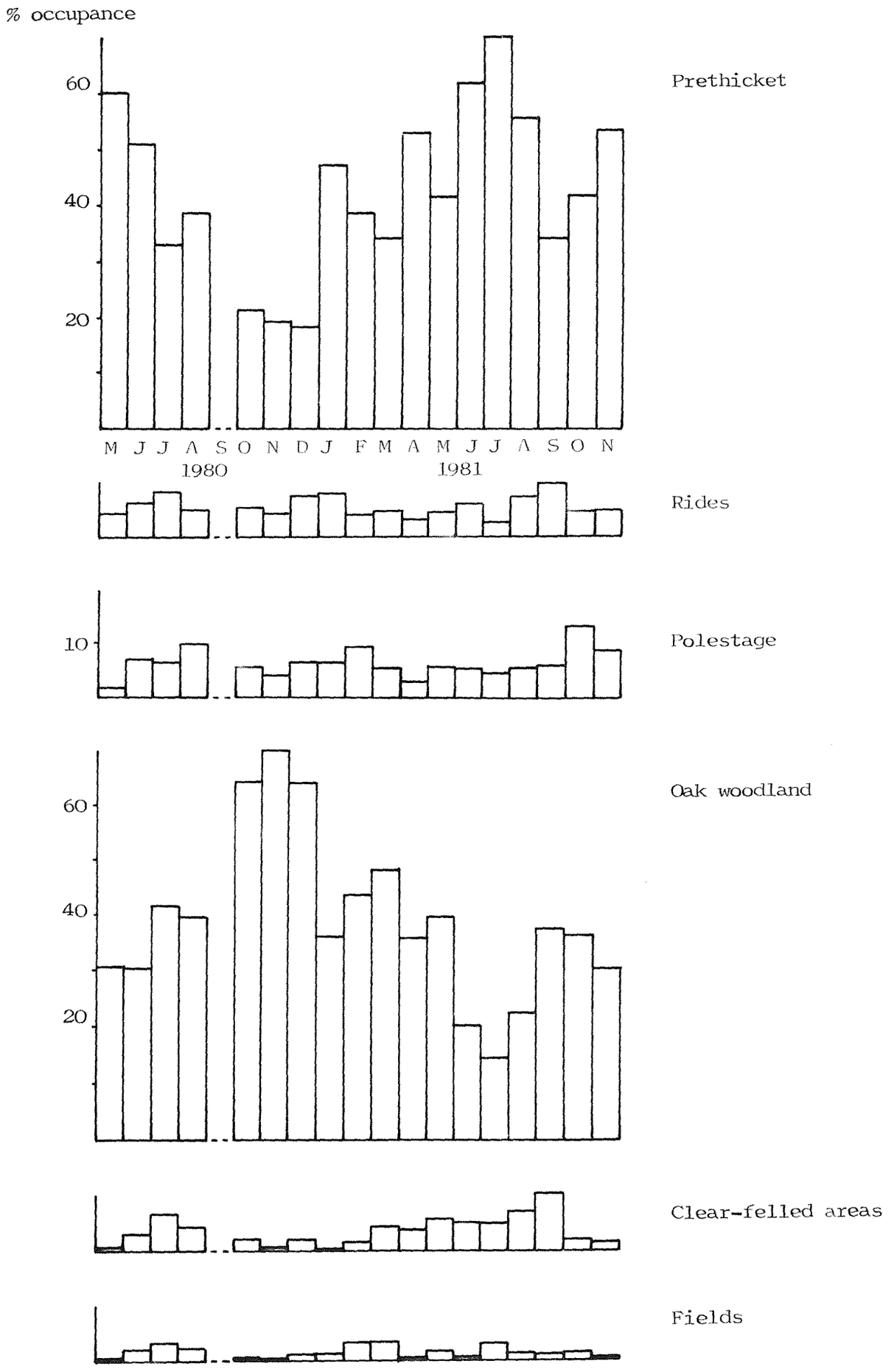


FIGURE 2:17

Day and night habitat occupance from New Forest driven transects

		OW	Pl	PT	PS	C	F	R
1980								
May	D	24.8	0.1	65.5	1.9	1.1	0.8	5.8
	N	52.4	0.1	37.3	4.0	0.4	3.4	2.4
June	D	27.2	0	56.9	4.1	3.2	2.0	6.6
	N	46.0	0	18.1	24.9	1.3	2.4	7.1
July	D	40.5	0	33.3	4.7	8.1	3.6	9.9
	N	46.8	0	29.2	13.6	3.1	2.1	5.2
August	D	28.6	0	36.2	16.9	5.1	3.9	9.3
	N	44.6	0	38.9	7.3	4.2	1.6	3.3
September	D	No data were collected here						
	N							
October	D	58.5	0	24.2	5.5	1.9	1.1	8.8
	N	68.8	0	19.5	5.9	2.4	0.3	3.1
November	D	57.9	0	23.0	9.3	0.3	1.1	8.3
	N	74.6	0	17.9	2.9	1.2	0.2	3.3
December	D	41.0	0	38.3	3.6	1.1	2.8	13.1
	N	75.3	0	6.8	7.6	4.5	0.4	5.3
1981								
January	D	22.8	0	63.2	5.8	0.7	1.2	6.3
	N	59.4	0	25.8	6.9	0.7	1.6	5.4

FIGURE 2:17 continued

Day and night habitat occupance from New Forest driven transects

		OW	Pl	PT	PS	C	F	R
1981								
February	D	33.1	0	58.5	1.3	0.2	0.9	6.0
	N	61.3	0	13.7	15.6	1.1	6.6	1.7
March	D	45.5	0	41.6	1.9	1.7	3.6	5.7
	N	61.0	0	17.6	14.8	1.0	4.2	4.1
April	D	30.9	0.2	60.5	2.8	1.6	0.3	3.6
	N	59.4	0	33.1	4.0	0.3	0.8	2.4
May	D	32.7	0.5	51.1	5.5	2.8	1.3	6.1
	N	56.9	0.8	29.4	7.0	0.5	2.8	2.6
June	D	19.3	0	67.1	5.4	0.2	0.7	7.3
	N	26.9	0.4	56.5	8.3	2.7	0.5	4.6
July	D	16.7	0	68.0	5.3	2.0	3.1	4.5
	N	13.4	0	77.5	3.8	1.6	2.6	1.0
August	D	12.3	0	75.9	2.1	1.3	0.9	7.4
	N	40.4	0.3	34.5	10.7	4.4	1.4	8.4
September	D	34.7	0	25.7	5.6	3.2	0	30.7
	N	37.9	0.1	42.8	6.5	4.5	2.0	6.2
October	D	15.2	0	73	7.6	0.2	0.7	3.2
	N	43.3	0.2	41.1	9.8	1.0	1.6	2.8

OW Oak woodland Pl Plantation PT Prethicket

PS Polestage C Clear-felled F Fields

R Rides

FIGURE 2:18

Habitat occupance from New Forest
walked transects
Day and night separated

		OW	R	PT	PS	C
1978						
November	D	70.4	9.3	8.4	11.9	
	N	82.3	4.5	1.8	11.4	
December	D	71.3	6.3	21.0	1.4	
	N	87.4	3.4	4.8	4.5	
1979						
January	D	66.4	3.9	18.9	10.9	
	N	73.1	3.2	12.2	11.5	
		Survey suspended here				
October	D	51.6	5.9	17.7	24.8	
	N	35.4	2.5	10.6	51.5	
November	D	59.9	5.9	30.3	3.9	
	N	59.5	1.1	26.2	13.2	
December	D	70.0	4.8	17.6	7.7	
	N	71.5	3.3	10.7	14.6	
1980						
January	D	60.3	6.1	22.7	9.0	2.0
	N	49.6	0.8	11.5	8.6	29.5
February	D	80.2	5.5	13.5	7.6	4.2
	N	17.6	1.0	43.1	0	38.3

OW Oak woodland R Rides PT Prethicket
PS Polestage C Clear-felled

FIGURE 2:18 continued

Habitat occupance from New Forest

walked transects

Day and night separated

		OW	R	PT	PS	C
1980						
March	D	54.4	6.5	16.4	8.0	14.7
	N	56.0	4.1	30.6	0	9.4
April	D	52.3	3.9	36.8	1.9	5.0
	N	0	21.5	48.7	0	29.7
May	D	46.5	4.0	36.3	1.7	11.5
	N	79.7	20.3	0	0	0
June	D	41.0	5.6	39.3	4.1	10.0
	N	96.0	4.0	0	0	0
July	D	31.2	3.4	60.4	1.5	3.5
	N	20.5	4.5	67.8	0	7.3
August	D	52.2	6.4	22.8	10.8	7.7
	N	20.1	6.6	51.5	3.6	18.2
September	D	67.3	4.3	15.2	7.3	5.9
	N	49.1	8.3	19.8	14.7	8.1

FIGURE 2:19

Total occupance per habitat
New Forest driven transects
day and night separated

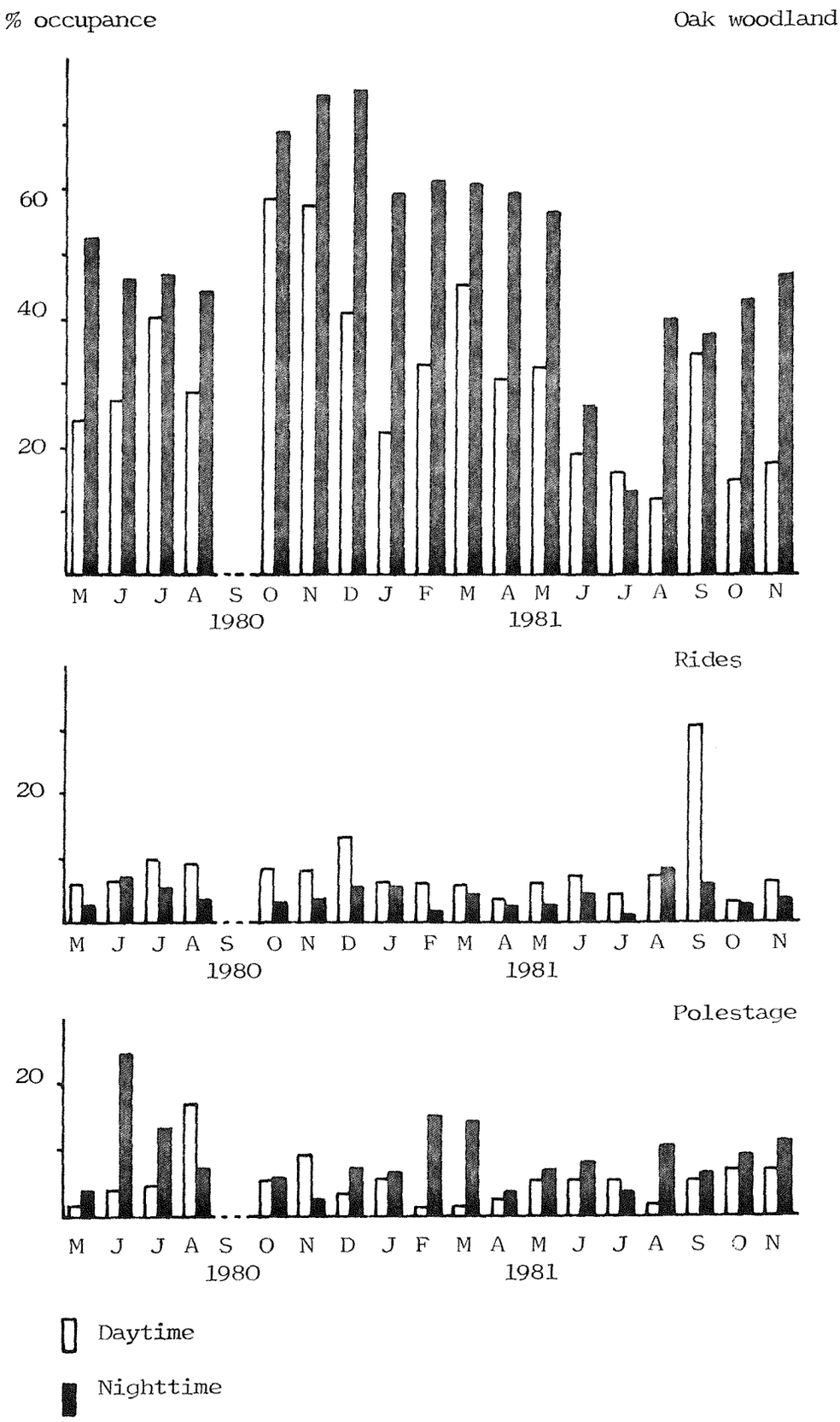


FIGURE 2:19 continued

Total occupance per habitat

New Forest driven transects

day and night separated

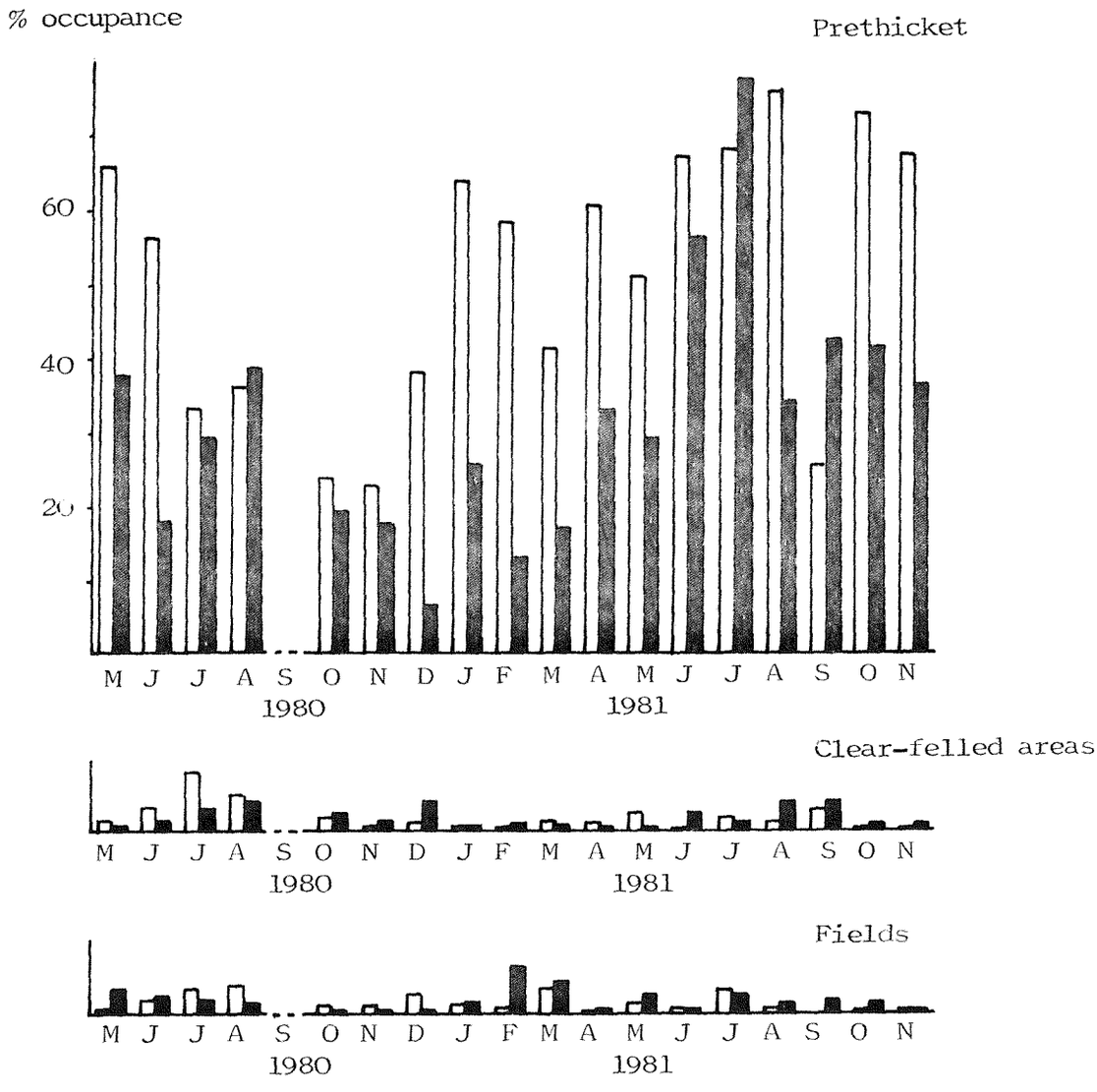


FIGURE 2:20

Total occupance per habitat
New Forest walked transects
day and night separated

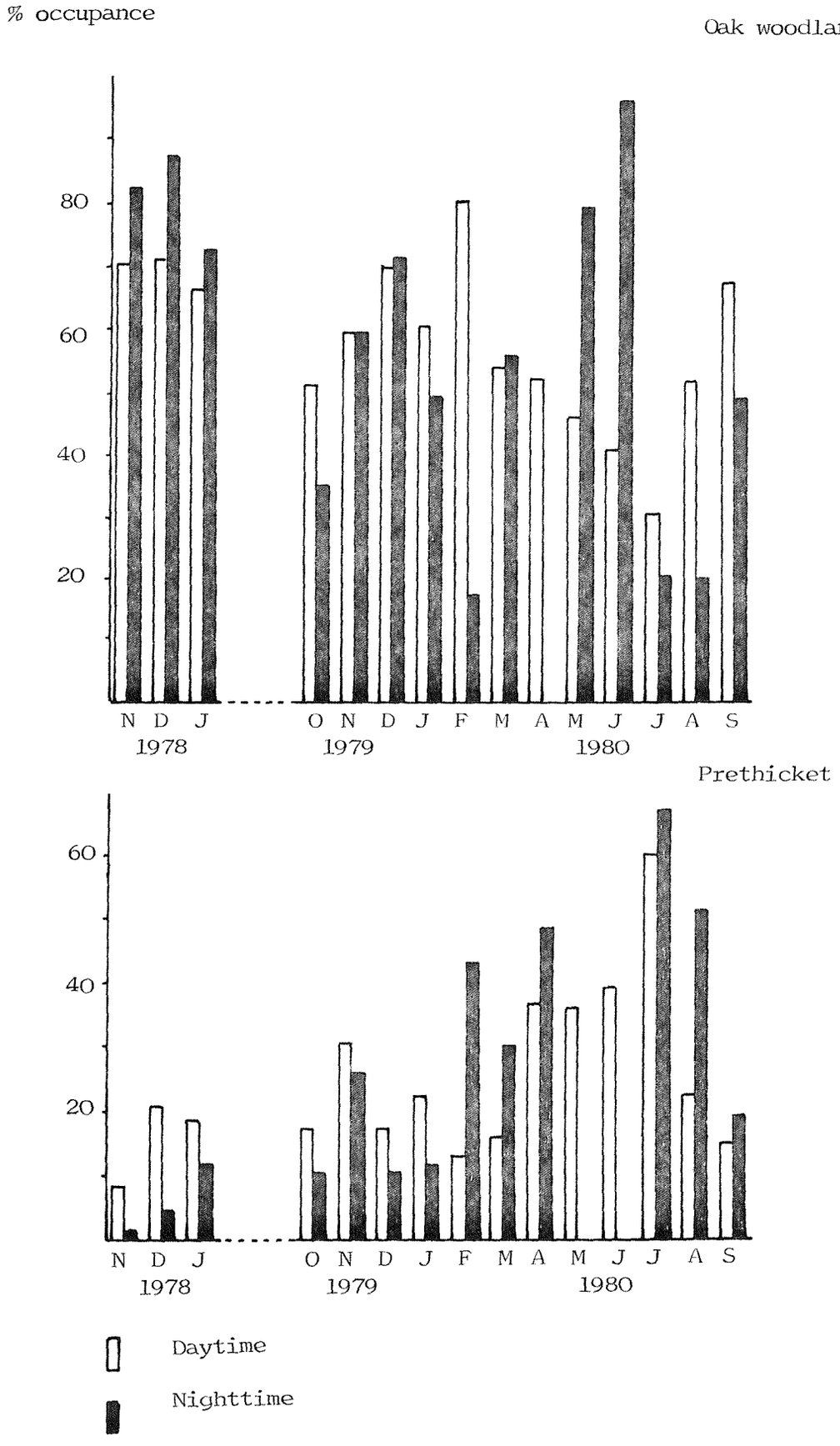
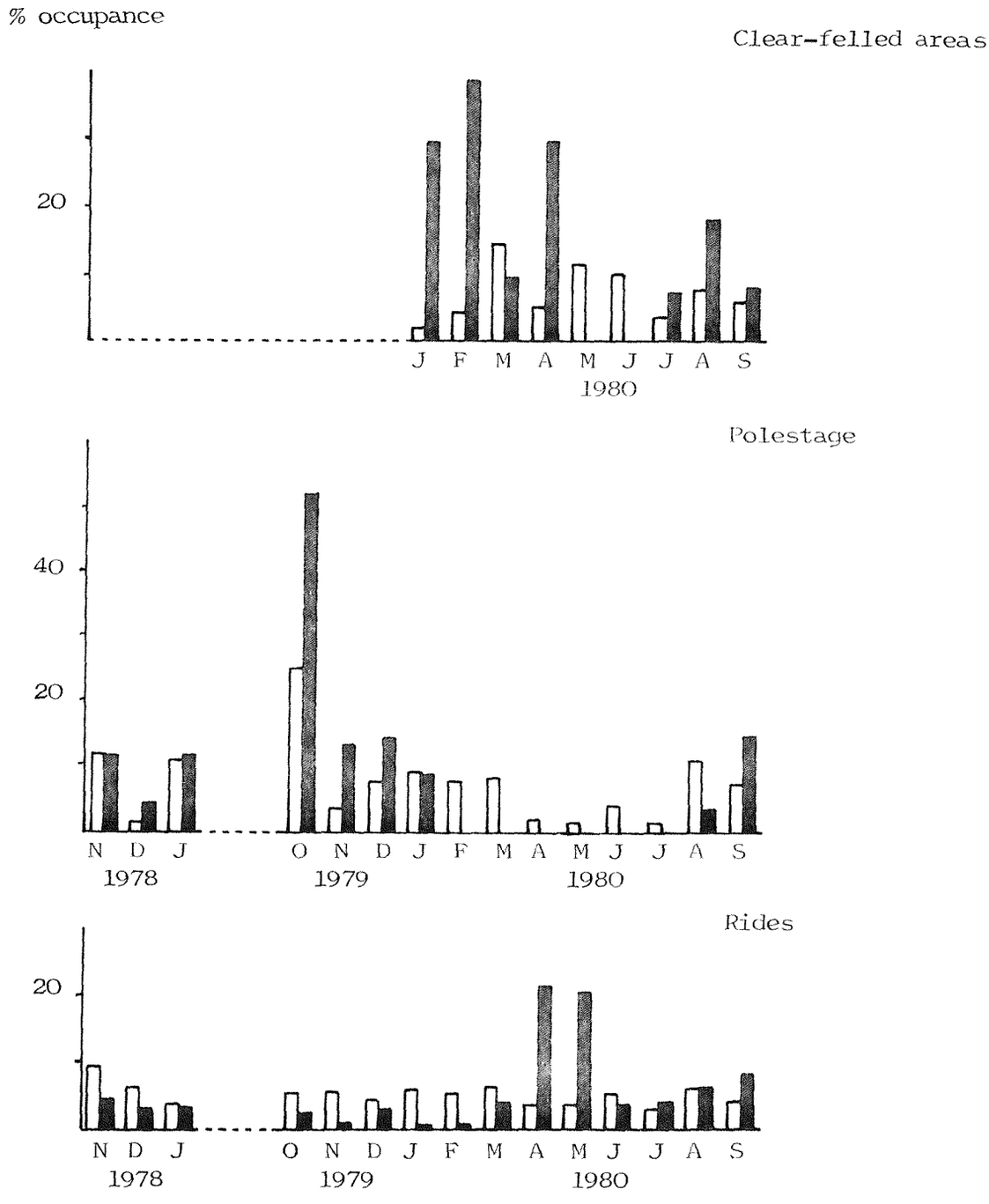


FIGURE 2:20 continued

Total occupance per habitat
New Forest walked transects
day and night separated



KEY

New Forest occupance figures

Prethicket.

Oakwoodland

Polestage

Purbeck occupance figures

Thicket

Fields

Heath

Night-time

Purbeck and New Forest activity rhythms

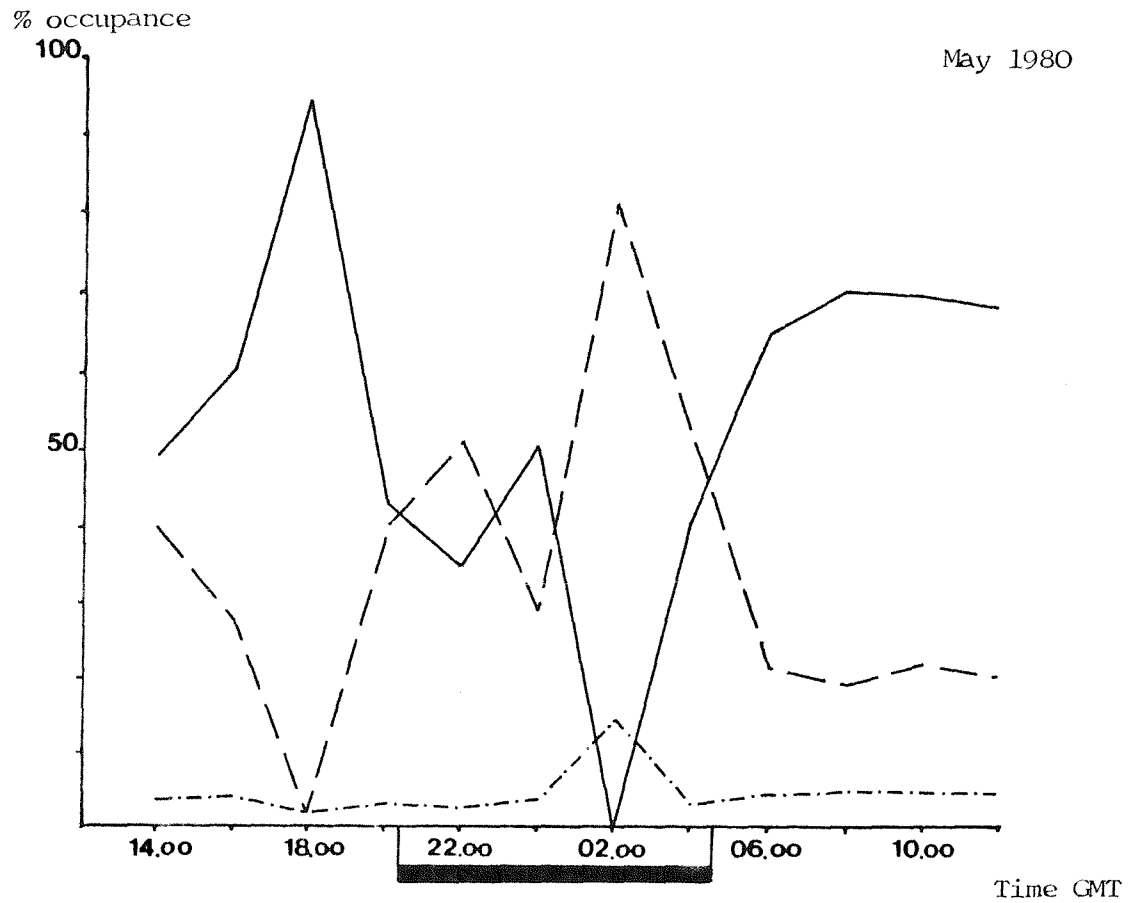
Animals feeding

Animals lying up and ruminating

Animals walking

FIGURE 2:21

Habitat occupance in the New Forest



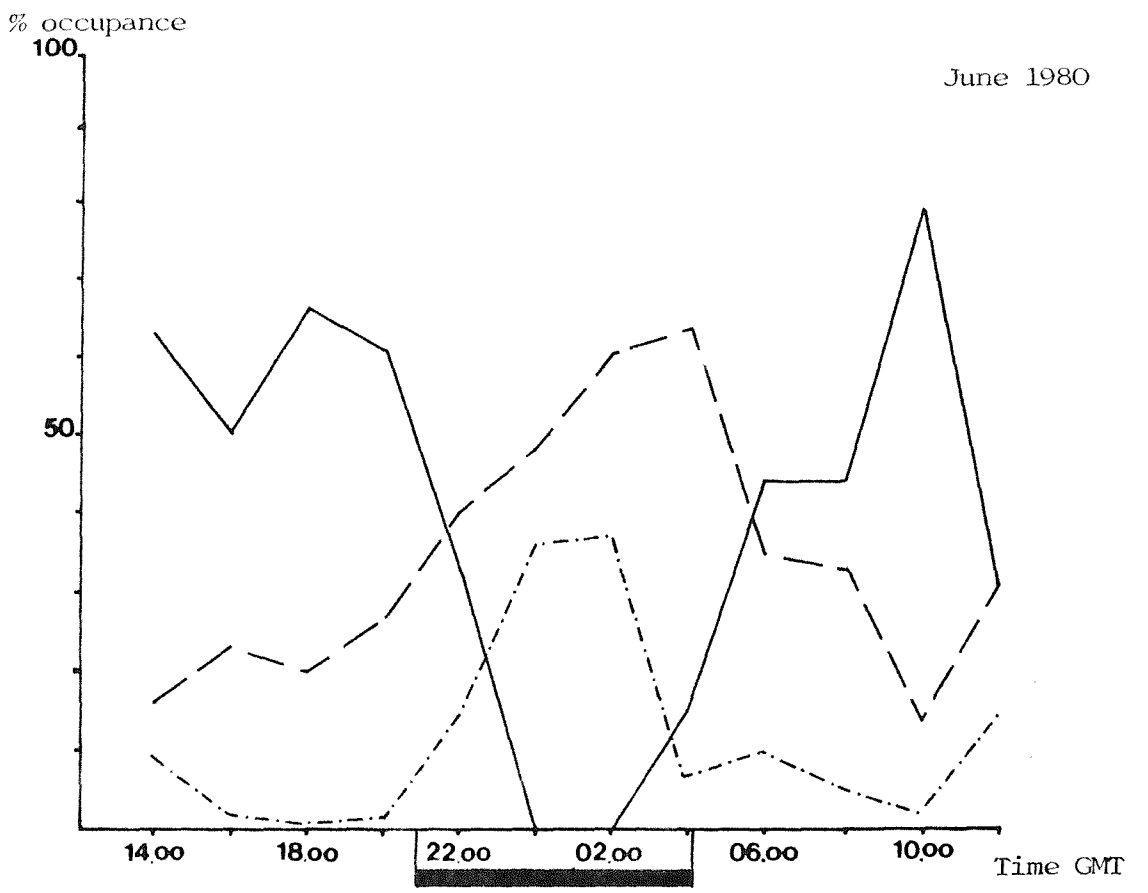
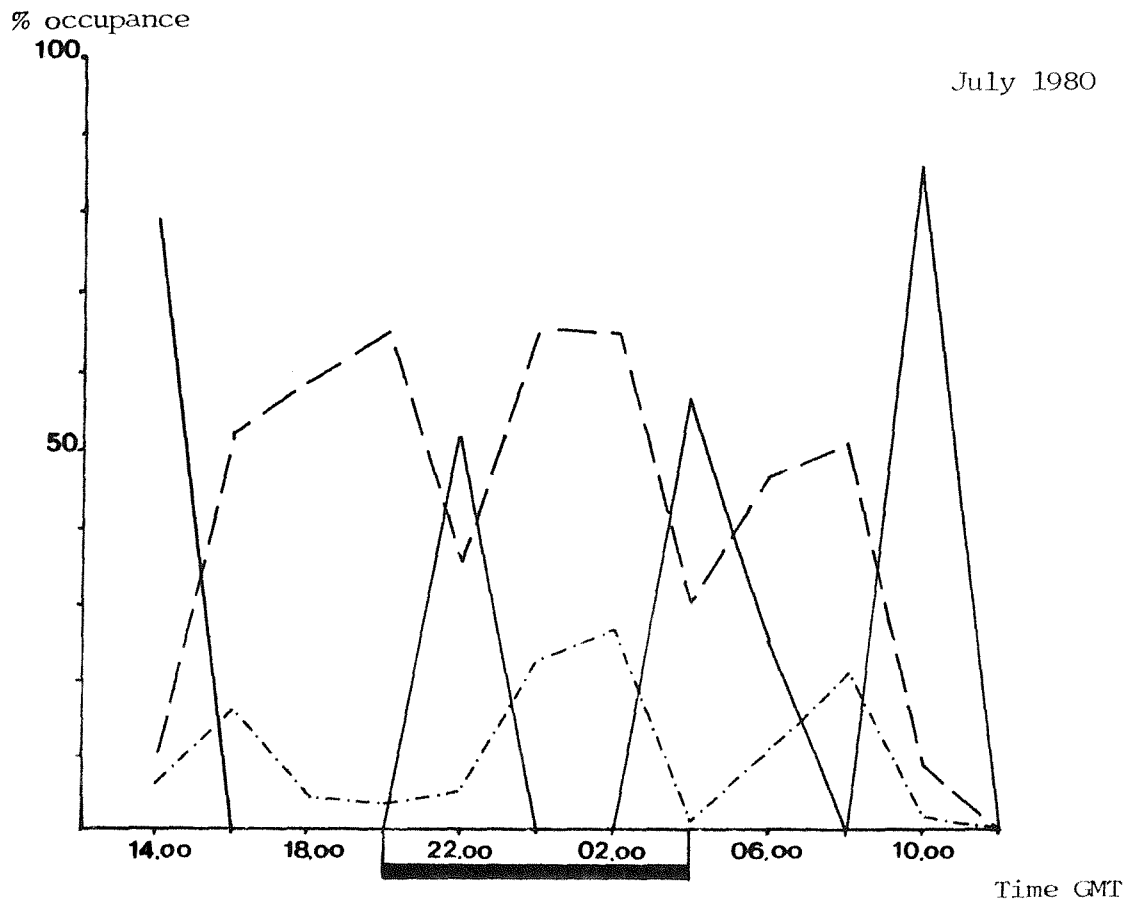


FIGURE 2:21 continued

Habitat occupance in the New Forest



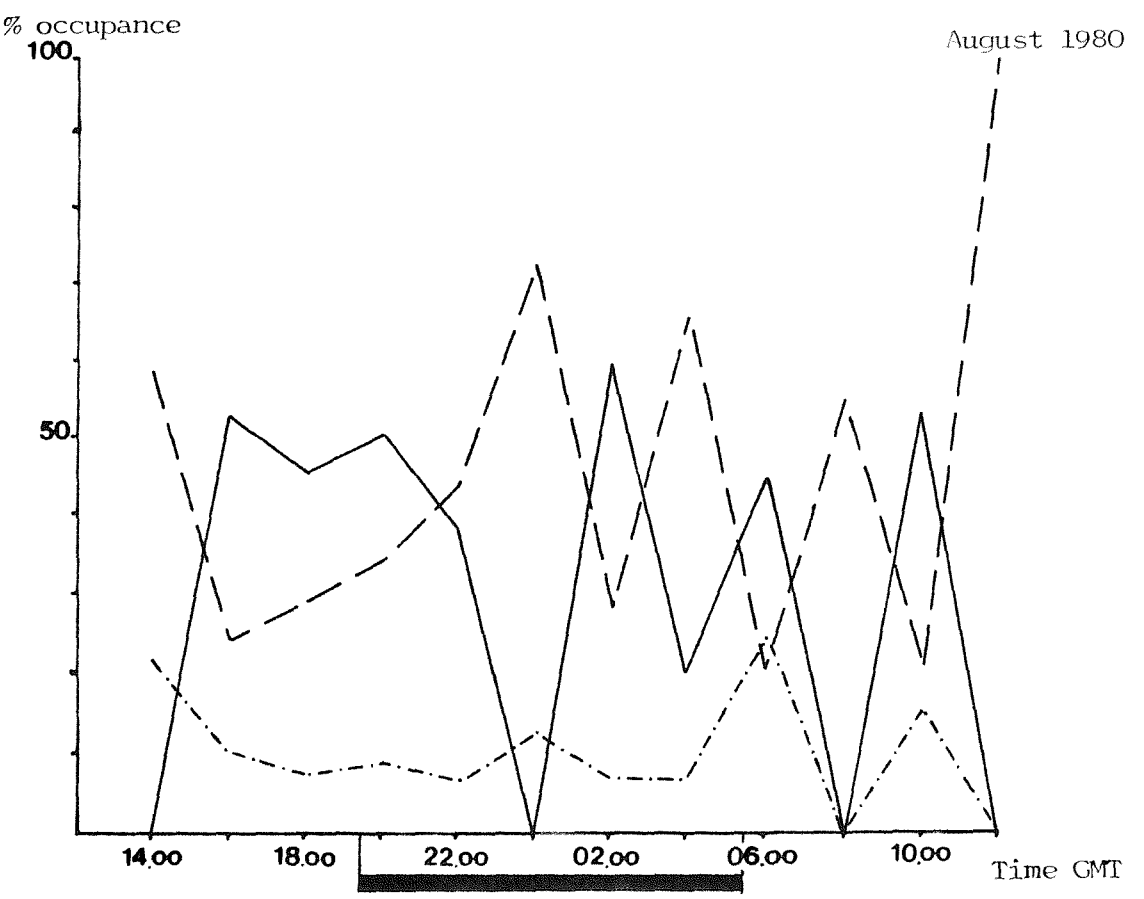
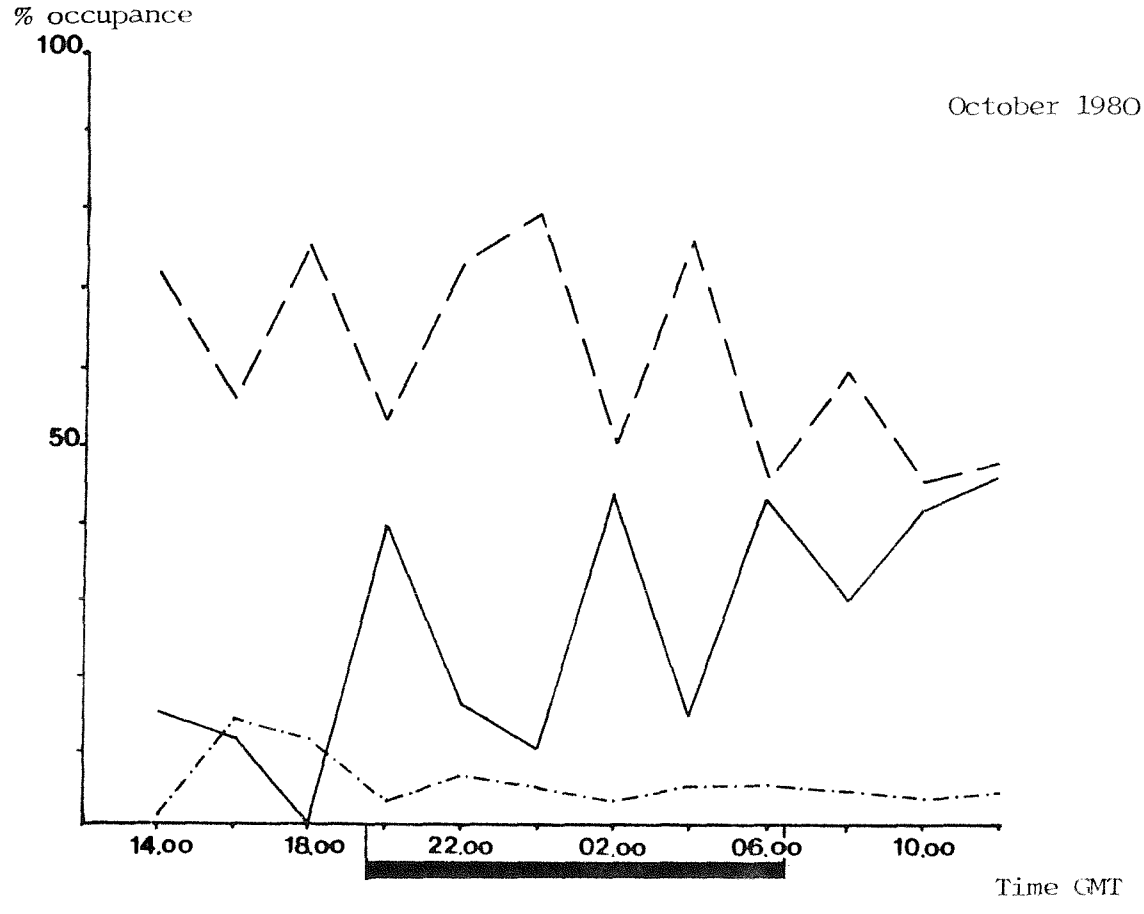
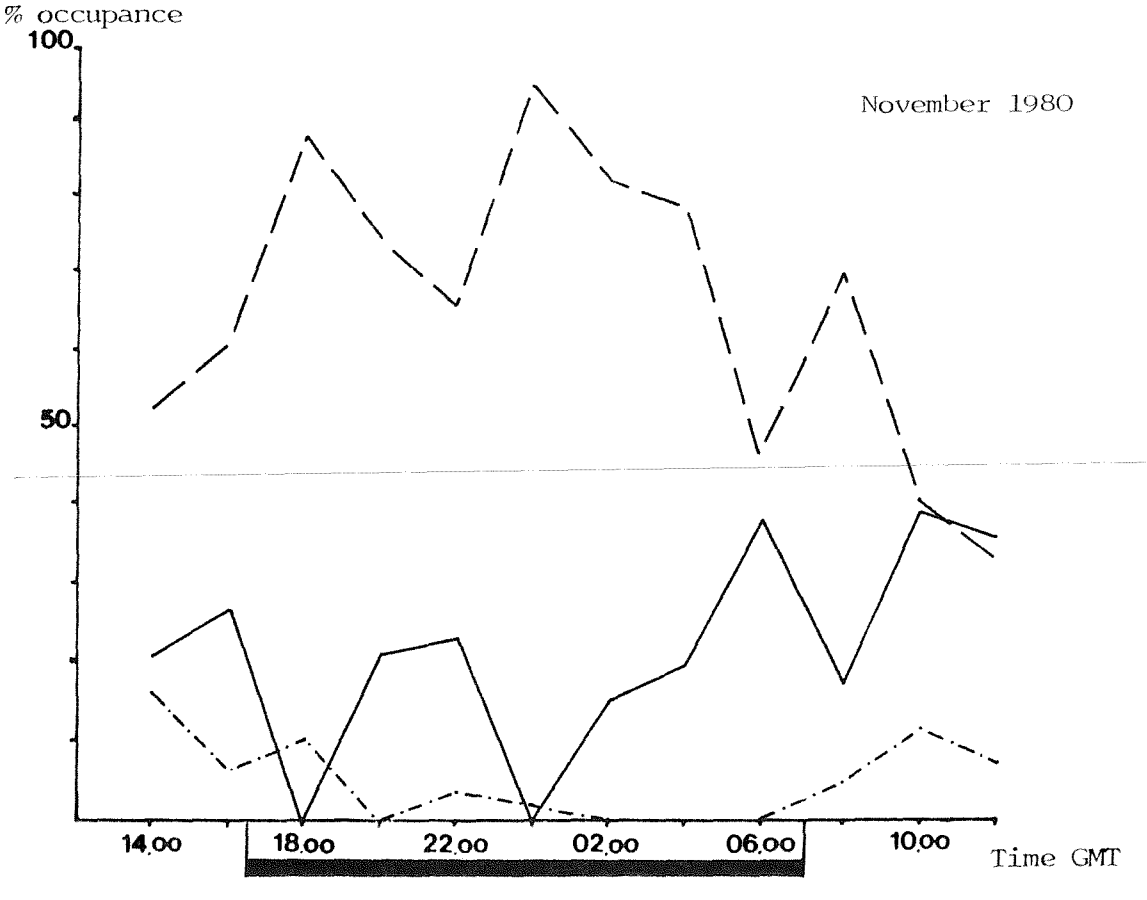


FIGURE 2:21 continued

Habitat occupance in the New Forest





KEY

New Forest occupance figures

———— Prethicket.

— — — Oakwoodland

-·-·-·-·- Polestage

Purbeck occupance figures

———— Thicket

— — — Fields

-·-·-·-·- Heath

▬▬▬▬ Night-time

Purbeck and New Forest activity rhythms

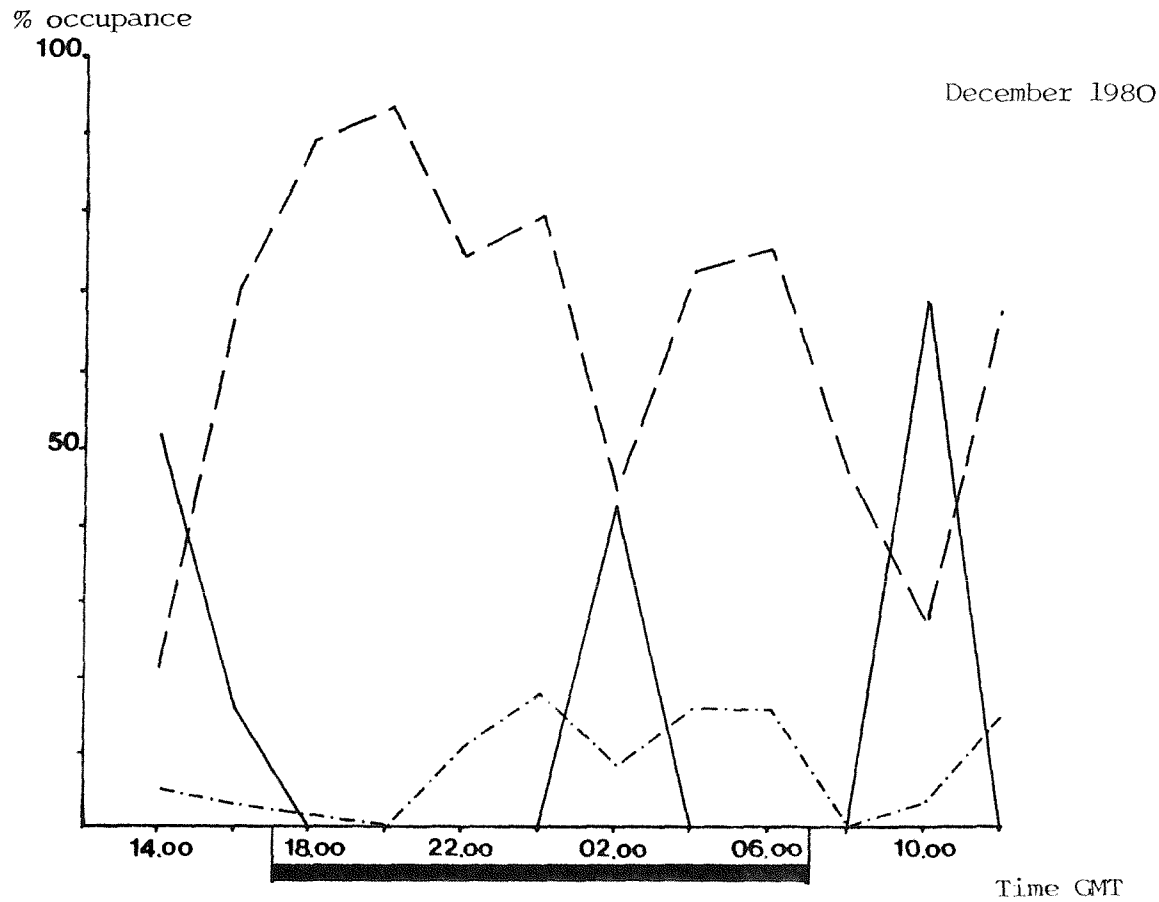
———— Animals feeding

— — — Animals lying up and ruminating

-·-·-·-·- Animals walking

FIGURE 2:21 continued

Habitat occupance in the New Forest



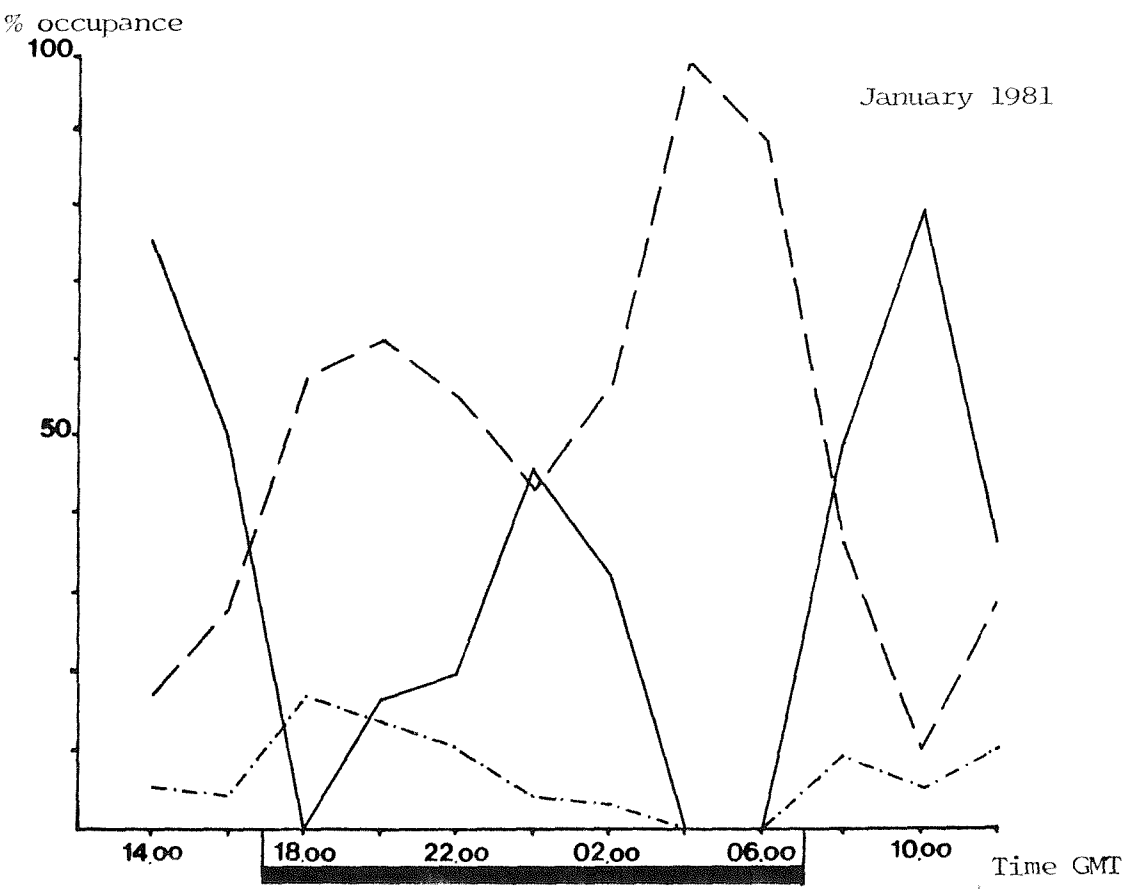
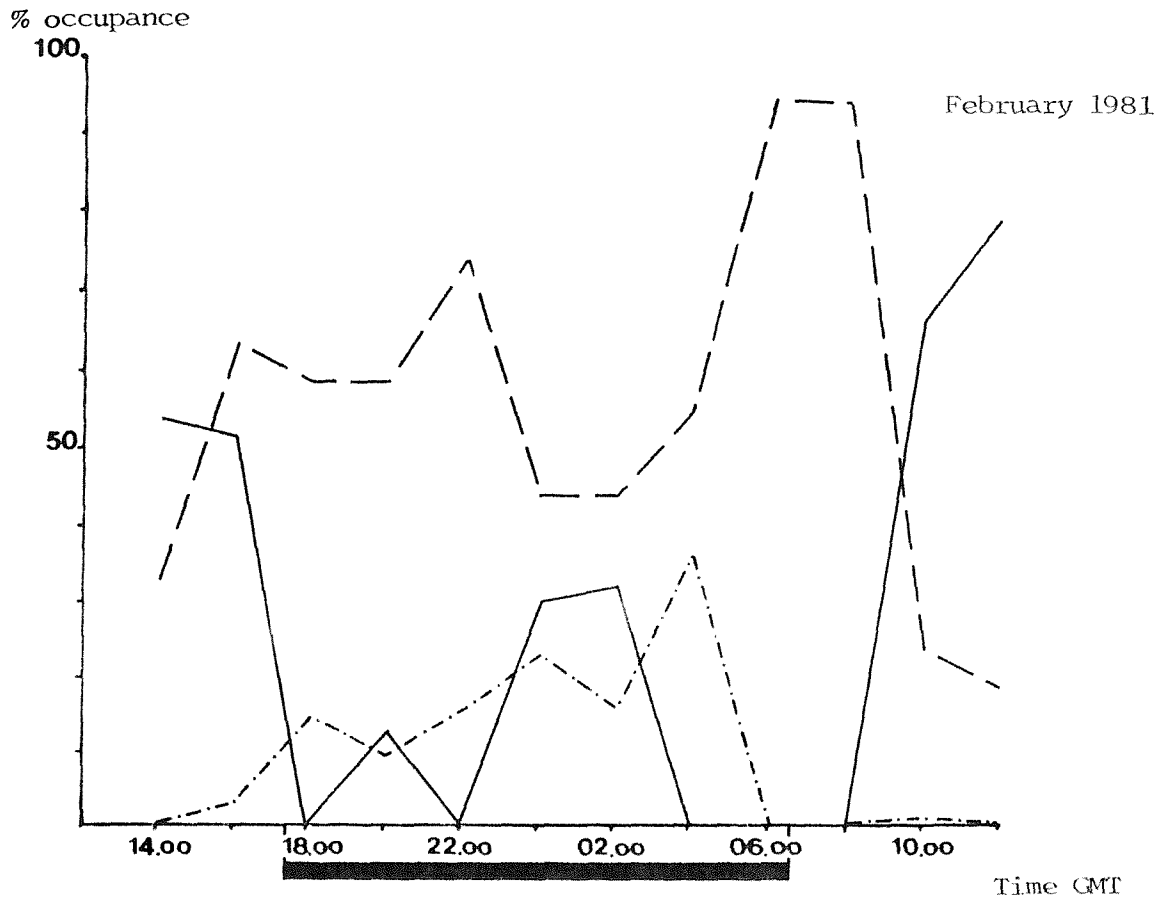


FIGURE 2:21 continued

Habitat occupance in the New Forest



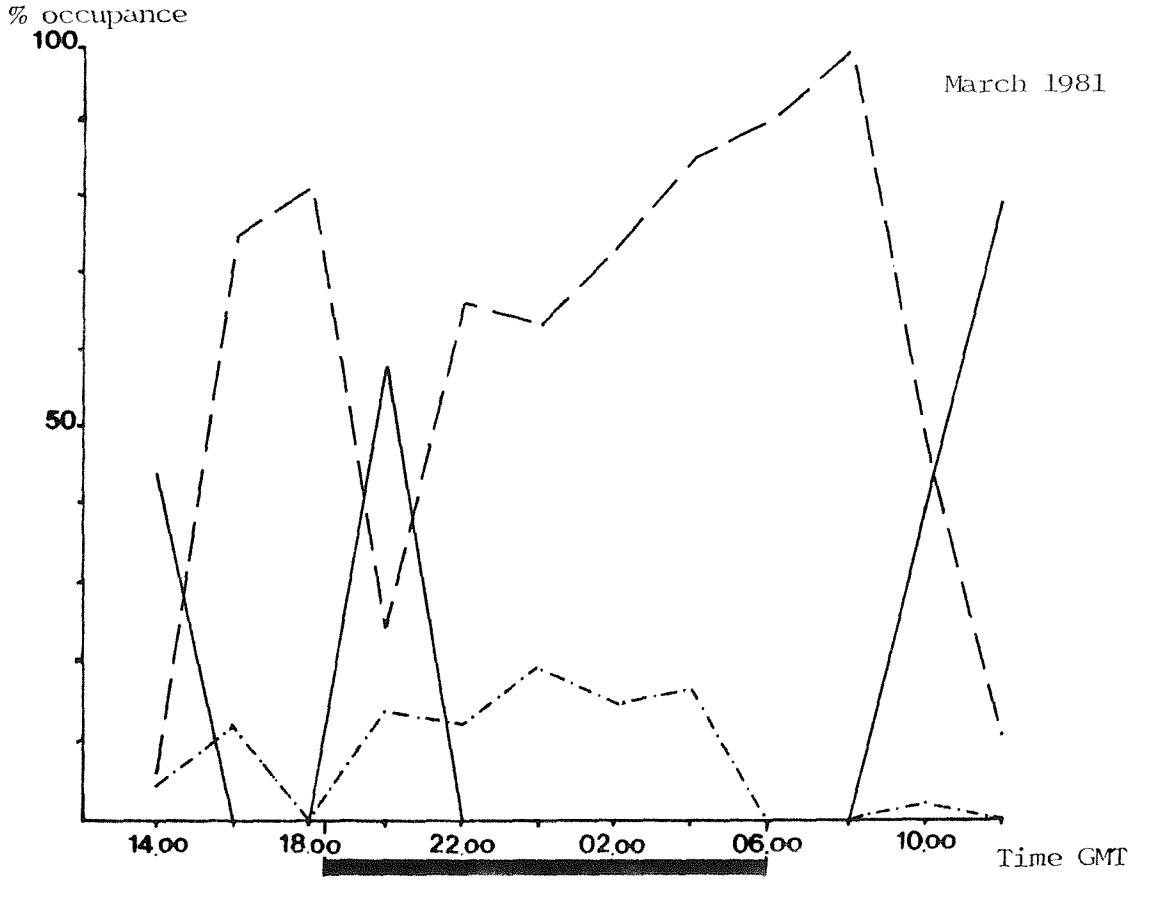
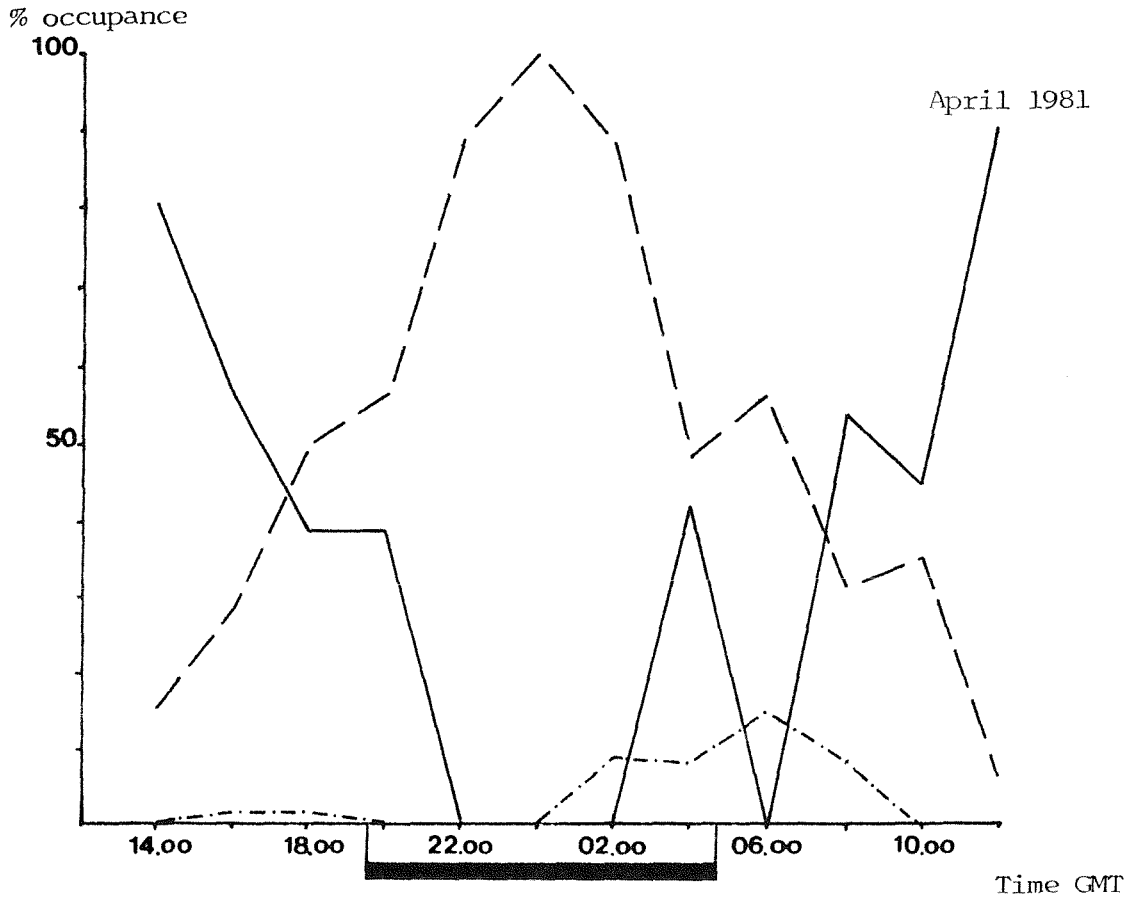
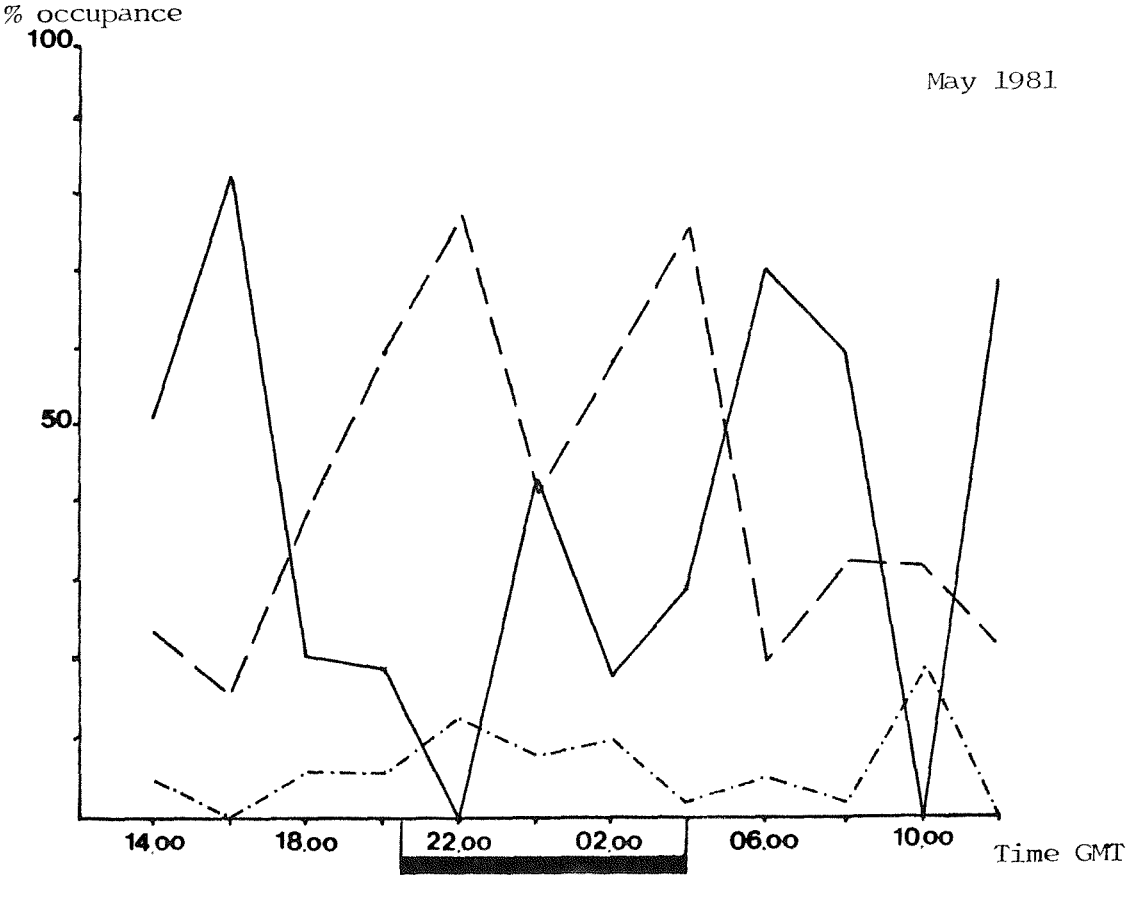


FIGURE 2:21 continued

Habitat occupance in the New Forest





KEY

New Forest occupance figures

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Polestage

Purbeck occupance figures

Thicket

Fields

Heath

Night-time

Purbeck and New Forest activity rhythms

Animals feeding

Animals lying up and ruminating

Animals walking

FIGURE 2:21 continued

Habitat occupance in the New Forest

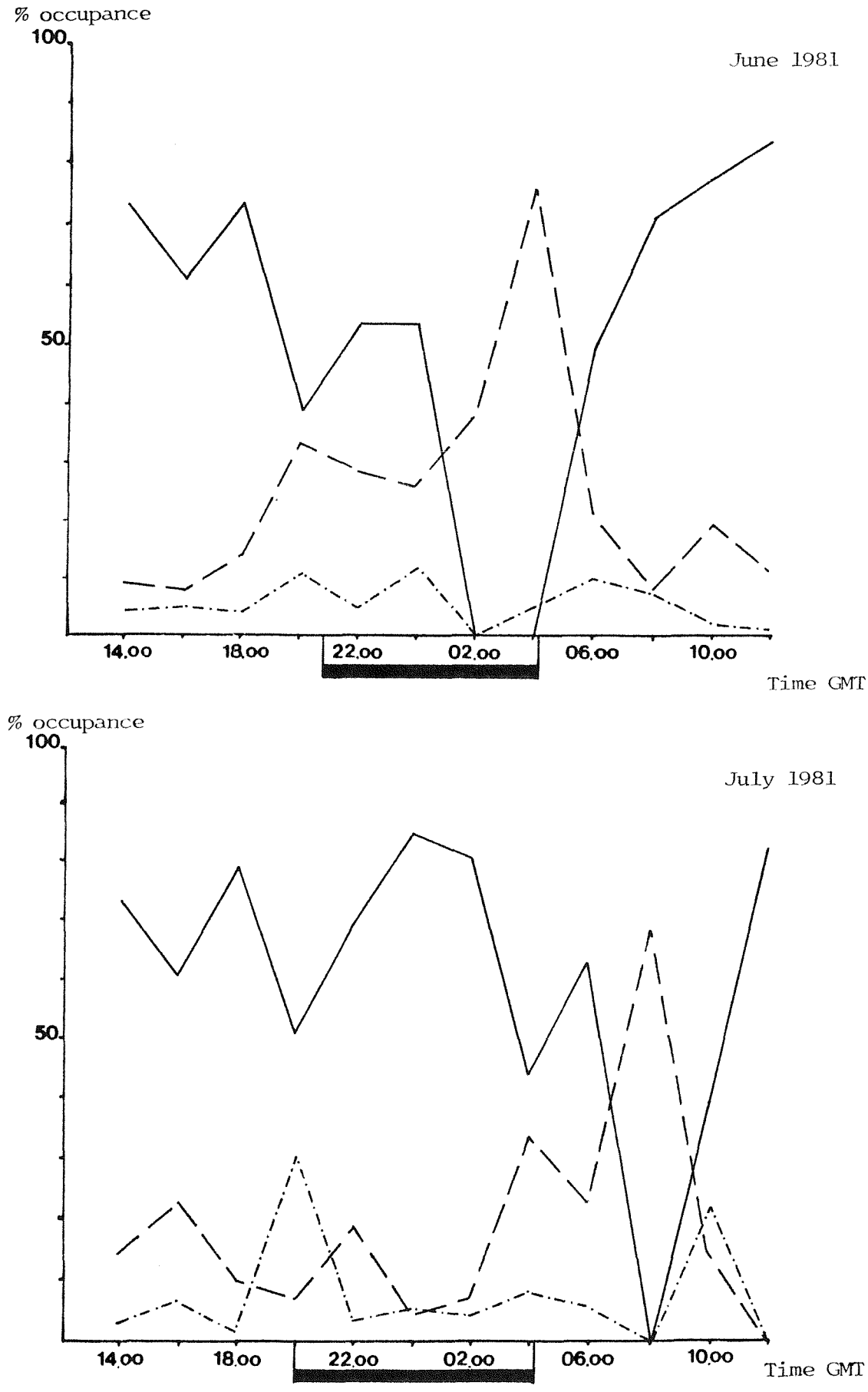
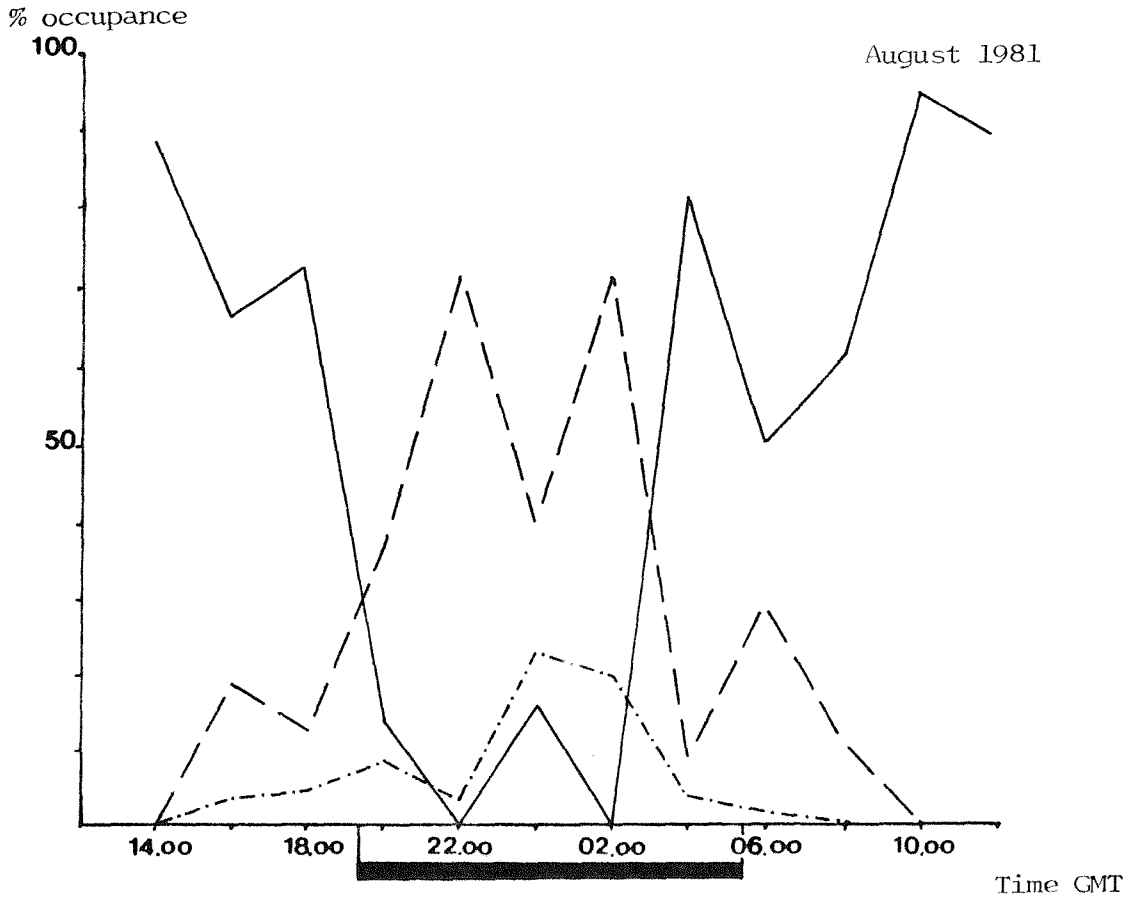


FIGURE 2:21 continued

Habitat occupance in the New Forest



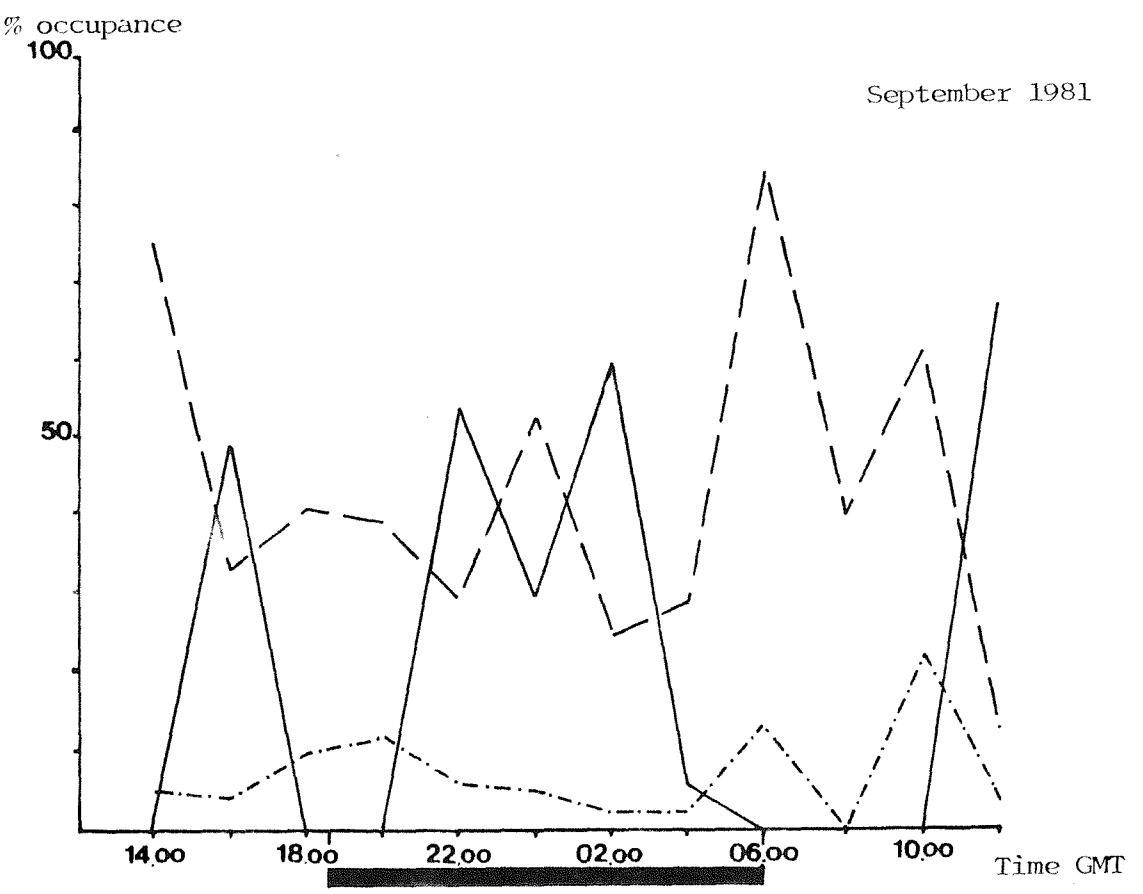


FIGURE 2:21 continued

Habitat occupance in the New Forest

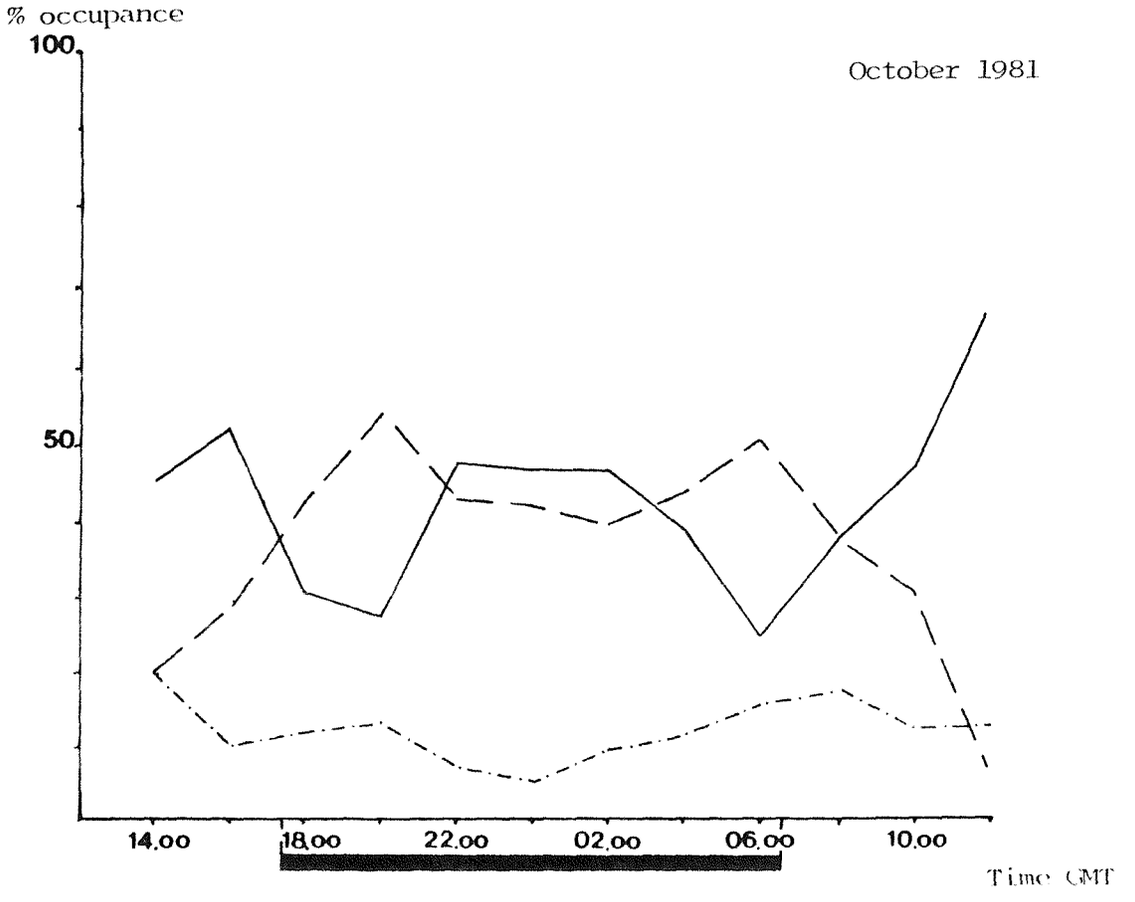


FIGURE 2:22

Habitat preference ratings from

New Forest driven transects

	OW	Pl	PT	PS	C	H	F	R
1980								
May	1.39	0.93	7.47	0.14	0.98	0	1.69	2.45
June	1.04	0	4.88	0.37	2.36	0.04	3.23	2.64
July	1.03	0	2.21	0.25	3.92	0	3.66	2.47
August	1.18	0.31	3.15	0.44	2.87	0	3.11	1.75
September	No data were collected here							
October	1.81	0	1.67	0.24	1.38	0.06	0.76	1.78
November	2.00	0	1.49	0.19	0.62	0	0.54	1.49
December	1.69	0	1.31	0.25	0.44	0	1.37	2.34
1981								
January	1.32	0	4.81	0.33	0.57	0.11	2.21	2.38
February	1.42	0	3.47	0.45	0.43	0	5.31	1.40
March	1.45	0	2.84	0.23	1.04	0	4.72	1.68
April	1.60	2.39	6.54	0.19	1.37	0	0.80	1.66
May	1.31	6.18	3.83	0.28	1.53	0	2.70	1.88
June	0.88	1.86	7.44	0.35	1.73	0	1.23	3.18
July	0.68	0	9.12	0.31	1.87	0.14	6.58	1.6
August	0.70	1.38	4.78	0.25	1.75	0	1.66	2.75
September	1.05	0.71	2.64	0.25	2.43	0.10	1.48	3.24
October	1.25	1.15	3.99	0.67	0.56	0.25	2.43	1.97

OW Oak woodlands Pl Plantation

PT Prethicket PS Polestage

C Clear H Heath

F Fields R Rides

FIGURE 2:23

Habitat preference ratings from

New Forest driven transects

Day and night separated

		OW	Pl	PT	PS	C	H	F	R
1980									
May	D	1.28	0.83	9.29	0.15	1.30	0	1.97	3.43
	N	1.72	0.90	3.37	0.19	0.34	0	5.09	0.90
June	D	1.04	0	5.96	0.23	2.77	0	3.47	2.90
	N	1.06	0	1.15	0.85	0.69	0.17	2.53	1.87
July	D	0.98	0	2.20	0.17	4.46	0	3.96	2.74
	N	1.29	0	2.21	0.56	1.98	0	2.62	1.64
August	D	0.70	0	2.45	0.62	2.88	0	4.37	2.63
	N	1.45	0	3.47	0.35	3.13	0	2.32	1.25
September	D	No data were collected here							
	N								
October	D	1.63	0	1.85	0.23	1.23	0	1.40	2.82
	N	1.97	0	1.54	0.25	1.58	0.11	0.41	1.01
November	D	1.59	0	1.74	0.38	0.22	0	1.45	2.80
	N	2.15	0	1.42	0.12	0.80	0	0.28	1.08
December	D	1.22	0	3.12	0.16	0.25	0	3.82	4.47
	N	1.92	0	0.48	0.30	0.90	0	0.48	1.55
1981									
January	D	1.04	0	7.91	0.39	0.74	0	2.43	3.30
	N	1.59	0	1.90	0.28	0.41	0.22	1.99	1.67

FIGURE 2:23 continued

Habitat preference ratings from

New Forest driven transects

Day and night separated

		OW	Pl	PT	PS	C	H	F	R
1981									
February	D	1.54	0	7.51	0.09	0.21	0	2.00	3.22
	N	1.36	0	0.84	0.51	0.58	0	6.74	0.43
March	D	1.44	0	3.63	0.09	1.26	0	5.21	2.07
	N	1.50	0	1.18	0.54	0.59	0	4.73	1.14
April	D	1.42	3.39	7.63	0.19	1.73	0	0.57	1.94
	N	2.10	0	3.22	0.21	0.22	0	1.28	0.97
May	D	1.07	5.0	4.58	0.27	2.11	0	1.88	2.28
	N	1.68	7.66	2.40	0.31	0.37	0	3.83	0.89
June	D	0.86	0	8.17	0.36	1.58	0	1.39	3.74
	N	0.39	2.10	2.28	0.18	0.91	0	0.35	0.78
July	D	0.69	0	7.74	0.33	1.88	0	5.97	2.27
	N	0.69	0	11.03	0.30	1.93	0.38	6.30	0.59
August	D	0.52	0	8.77	0.13	1.28	0	1.83	3.55
	N	0.96	2.25	2.25	0.37	2.40	0	1.57	2.28
September	D	1.10	0	2.23	0.08	2.34	0	0	
	N	0.94	1.08	2.92	0.24	2.54	0.20	2.25	1.77
October	D	1.09	0	14.41	0.76	0.39	0	2.15	2.66
	N	1.46	2.28	3.80	0.49	0:80	0.67	2.54	0.48

OW Oak woodland Pl Plantation PS Polestage

C Clear-felled H Heath PT Prethicket

F Fields R Rides

FIGURE 2:24

Habitat preference ratings

New Forest walked transects

Day and night separated

		C	PT	OW	PS	R
1978						
November	D		0.48	0.72	0.27	1.47
	N		0.17	1.33	0.42	1.12
December	D		1.68	1.03	0.05	1.42
	N		0.44	1.45	0.17	0.87
1979						
January	D		1.72	1.08	0.40	0.98
	N		0	1.00	0.35	0.69
		Survey suspended here				
October	D		1.59	0.83	0.91	1.49
	N		1.09	0.66	2.16	0.72
November	D		2.51	0.89	0.13	1.38
	N		3.02	1.23	0.62	0.35
December	D		1.52	1.09	0.27	1.15
	N		1.00	1.20	0.56	0.86
1980						
January	D	0.28	1.81	0.86	0.29	1.36
	N	3.93	0.88	0.68	0.27	0.17
February	D	0.61	1.10	1.18	0.25	1.25
	N	6.06	3.89	0.29	0	0.25
March	D	1.33	0.85	0.50	0.17	0.94
	N	1.31	2.46	0.81	0	0.92
April	D	0.78	3.27	0.83	0.14	0.98
	N	1.77	1.65	0	0	2.05

FIGURE 2:24 continued

Habitat preference ratings

New Forest walked transects

Night and day separated

		C	PT	OW	PS	R
1980						
May	D	2.07	3.74	0.86	0.08	1.15
	N	0	0	0.65	0	2.57
June	D	1.42	3.16	0.59	0.14	1.26
	N	0	0	2.61	0	1.72
July	D	0.60	5.88	0.54	0.06	0.92
	N	2.00	10.78	0.59	0	2.00
August	D	1.07	1.81	0.74	0.35	1.43
	N	2.30	3.72	0.26	0.11	1.32
September	D	0.94	1.39	1.10	0.27	1.09
	N	1.02	1.44	0.64	0.43	1.69

C Clear-felled PT Prethicket

OW Oak woodland PS Polestage

R Rides

FIGURE 2:25

Total observations from Purbeck driven transects

		OW	Sm	H	T	F	R
1981							
January	N	11	76	86	38	323	95
	%	2.0	12.0	14.0	6.0	51.0	15.0
February	N	4	43	87	6	121	24
	%	1.4	15.1	30.6	2.1	42.6	8.5
March		No data were collected here					
April	N	5	65	88	27	328	43
	%	0.9	11.7	15.8	4.9	59.0	7.7
May	N	0	39	34	30	194	25
	%	0	12.1	10.6	9.3	60.2	7.8
June	N	0	61	28	16	97	41
	%	0	25.1	11.5	6.6	39.9	16.9
July	N	0	73	6	13	74	25
	%	0	38.2	3.1	6.8	38.7	13.2
August	N	0	88	20	10	115	32
	%	0	33.2	7.5	3.8	43.4	12.1
September	N	12	138	58	20	239	40
	%	2.4	27.2	11.4	3.9	47.1	7.9

OW Oak woodland Sm Saltmarsh H Heath

T Thicket F Fields R Rides

FIGURE 2:26

Habitat areas on the Purbeck driven transect

	area sampled ha	area available ha	% of total available	% of total sampled
Thicket	19.5	1523	1.3	16.4
Rides	10.0	28	35.7	8.4
Fields	36.0	240	15.0	30.3
Saltmarsh	15.0	34	44.1	12.6
Heath	37.5	280	13.4	31.5
Oak woods	1.0	25	4.0	0.8

FIGURE 2:27

Total habitat occupance from Purbeck driven transects

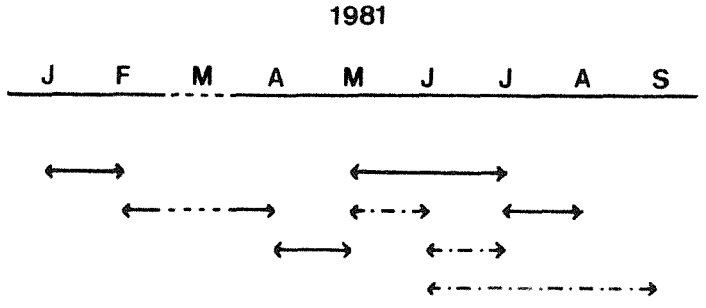
	OW	T	Sm	H	F	R
1981						
January	3.8	45.8	3.0	10.2	33.5	3.7
February	4.3	22.9	4.2	33.7	31.9	2.9
March	No data were collected here					
April	2.2	39.5	2.6	12.5	41.1	2.1
May	0	57.8	2.1	6.5	32.1	1.6
June	0	52.8	5.9	8.9	27.5	4.9
July	0	59.4	9.7	2.6	24.1	4.1
August	0	40.9	9.8	8.0	36.9	4.4
September	6.5	35.8	6.8	10.1	38.3	2.4

OW Oak woodland T Thicket
Sm Saltmarsh H Heath
F Fields R Rides

FIGURE 2:28

Statistical comparison of total occupance per month

Purbeck driven transects



⟷ Significantly different (p = 0.01)

⟷ Significantly different (p = 0.05)

FIGURE 2:29

Dung accumulation results

Wareham

	No. of groups				% of total			
	Pl	Th	PT	PS	Pl	Th	PT	PS
1980								
November	1	33	3	0	2.7	89.2	8.1	0
December	1	7	2	1	9.1	63.6	18.2	9.1
1981								
January	8	5	5	3	38.1	23.8	23.8	14.3
February	3	16	2	1	13.6	72.7	9.1	4.5
March	No data were collected here							
April								
May	1	14	0	13	5.6	77.8	0	16.7
June	2	11	1	1	13.3	73.3	6.7	6.7
July	3	1	1	0	60.0	20.0	20.0	0
August	0	1	3	0	0	25.0	75.0	0
September	0	0	1	2	0	0	33.3	66.7
October	2	3	1	3	22.2	33.3	11.1	33.3

Pl Plantation Th Thicket

PT Prethicket PS Polestage

FIGURE 2:30

Modified faecal accumulation data

Wareham

	Pl	Th	PT	PS
1980				
November	0.01	95.9	4.0	0
December	0.4	75.3	9.9	14.5
1981				
January	2.6	43.0	19.7	34.7
February	0.6	87,1	5.0	7.3
March	No data were collected here			
April				
May	0.3	77.4	0	22.3
June	0.6	83.1	0.04	12.2
July	6.5	64.4	29.5	0
August	0	42.1	57.9	0
September	0	0	14.6	85.6
October	10.0	39.6	6.1	53.3

Pl Plantation PT Prethicket

Th Thicket PS Polestage

FIGURE 2:31

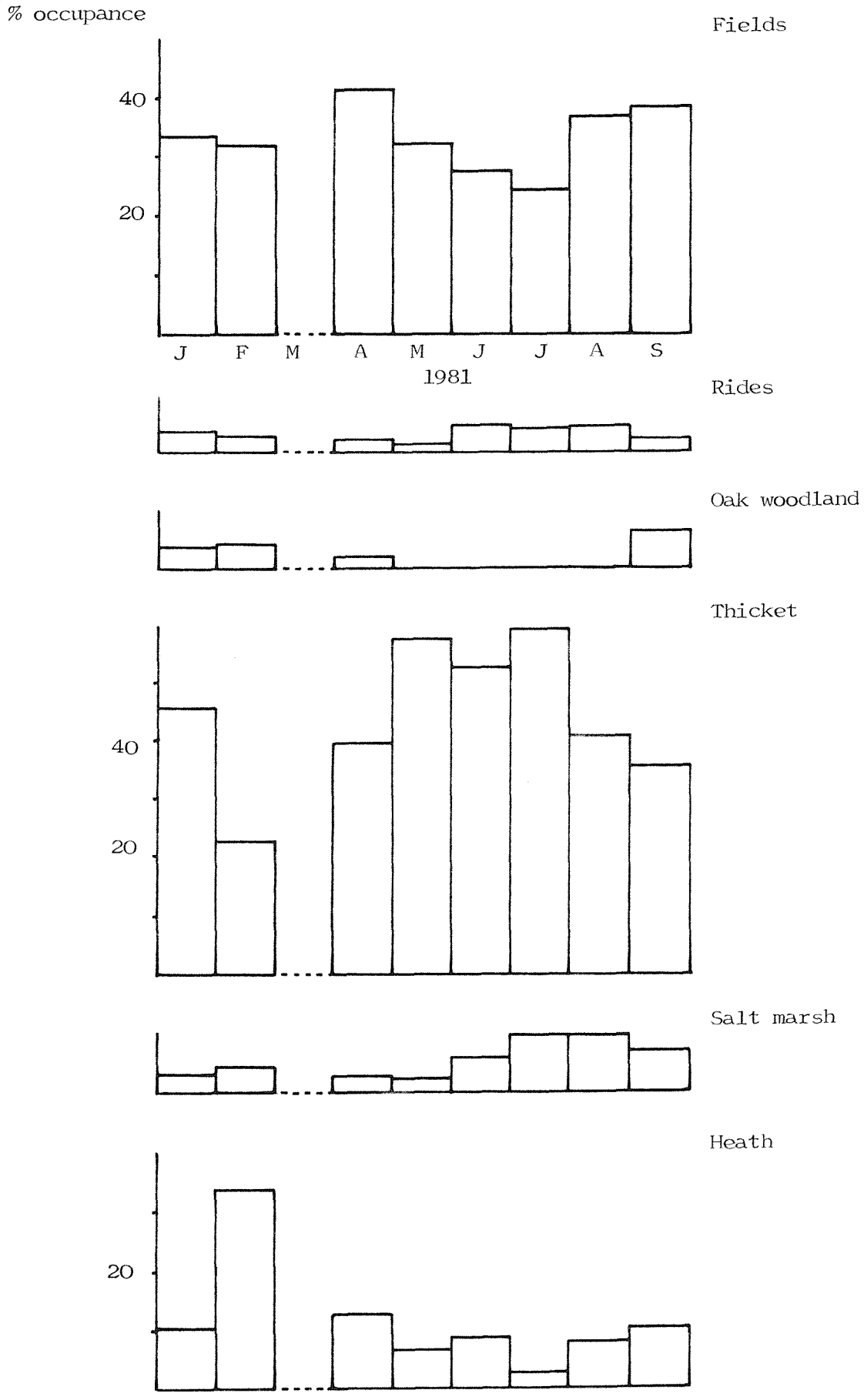
Habitat occupance from
Purbeck driven transects
Day and night separated

		OW	T	Sm	H	F	R
1981							
January	D	0	98.2	0	0	0	1.8
	N	4.1	39.7	2.6	11.9	38.3	3.4
February	D	0	100.0	0	0	0	0
	N	4.0	18.7	3.9	32.3	38.5	2.7
March		No data were collected here					
April	D	0	79.8	1.0	11.0	1.4	6.8
	N	2.6	25.4	2.9	13.2	55.0	0.8
May	D	0	49.1	6.3	7.7	35.4	1.4
	N	0	60.9	0.8	5.9	30.8	1.6
June	D	0	80.5	0.2	9.1	3.1	11.2
	N	0	54.2	6.2	5.1	33.9	1.6
July	D	0	66.2	0.6	6.1	15.3	11.8
	N	0	57.6	11.3	1.3	28.3	1.6
August	D	0	84.1	0	0	9.8	6.1
	N	0	30.4	11.1	10.3	44.3	3.9
September	D	0	46.6	6.5	10.2	33.6	3.1
	N	7.4	34.4	6.6	10.6	38.8	2.2

OW Oak woodland T Thicket Sm Saltmarsh
H Heath F Fields R Rides

FIGURE 2.32

Total occupance per habitat; Purbeck driven transects



KEY

New Forest occupance figures

Prethicket.

Oakwoodland

Polestage

Purbeck occupance figures

Thicket

Fields

Heath

Night-time

Purbeck and New Forest activity rhythms

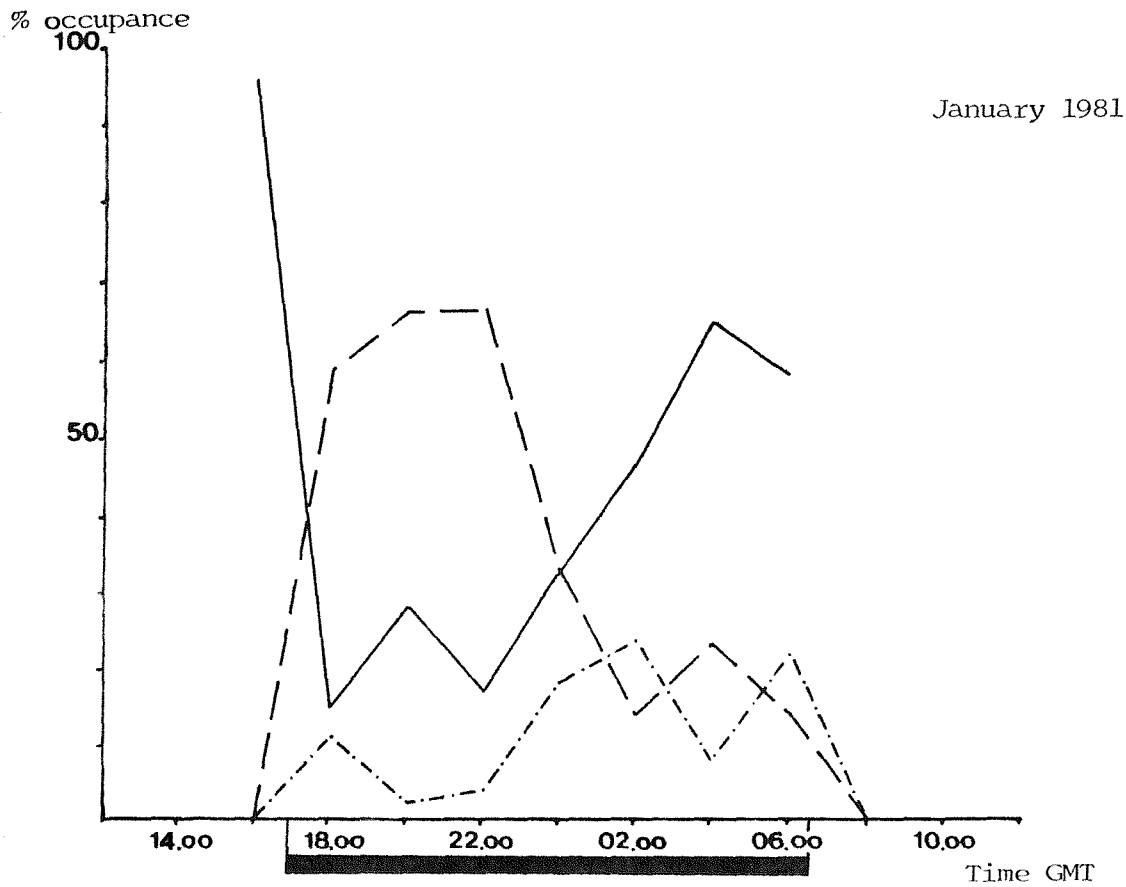
Animals feeding

Animals lying up and ruminating

Animals walking

FIGURE 2:33

Habitat occupance at Purbeck



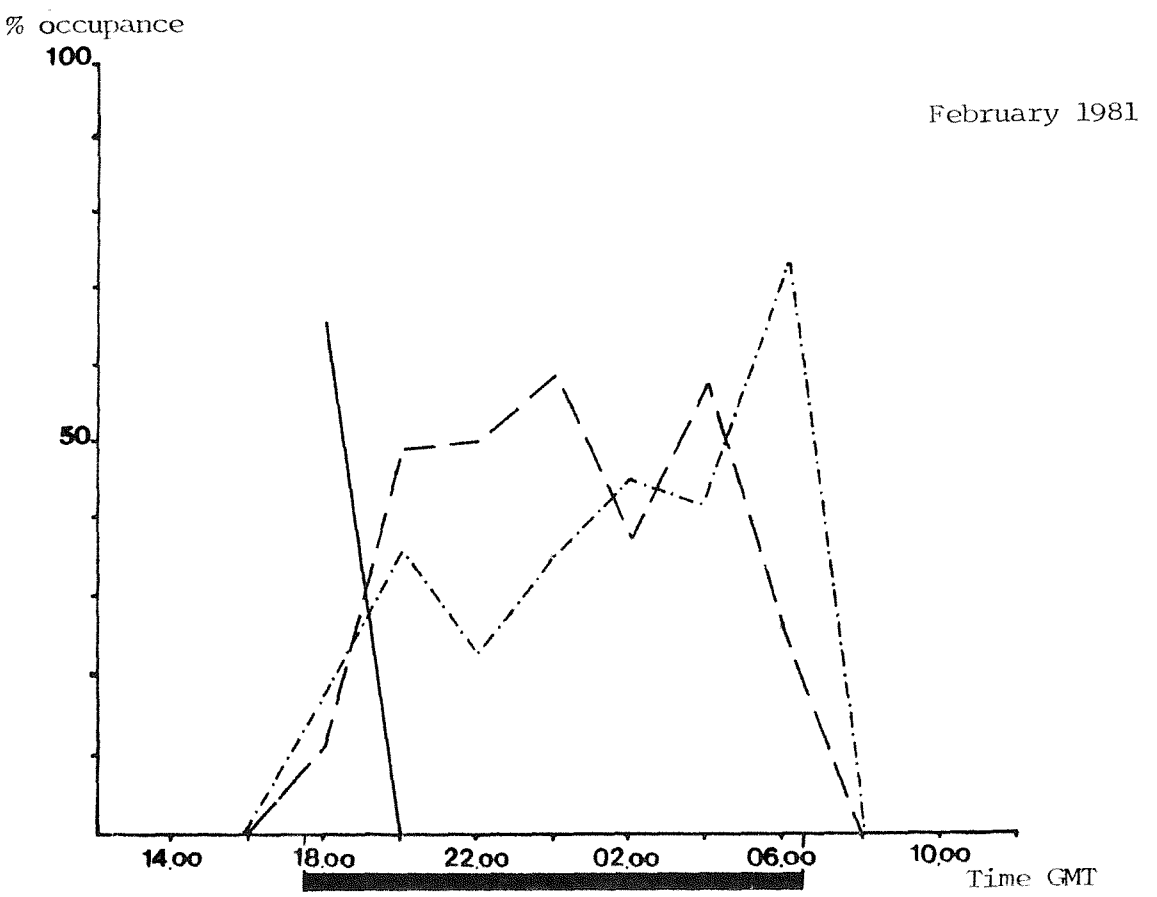
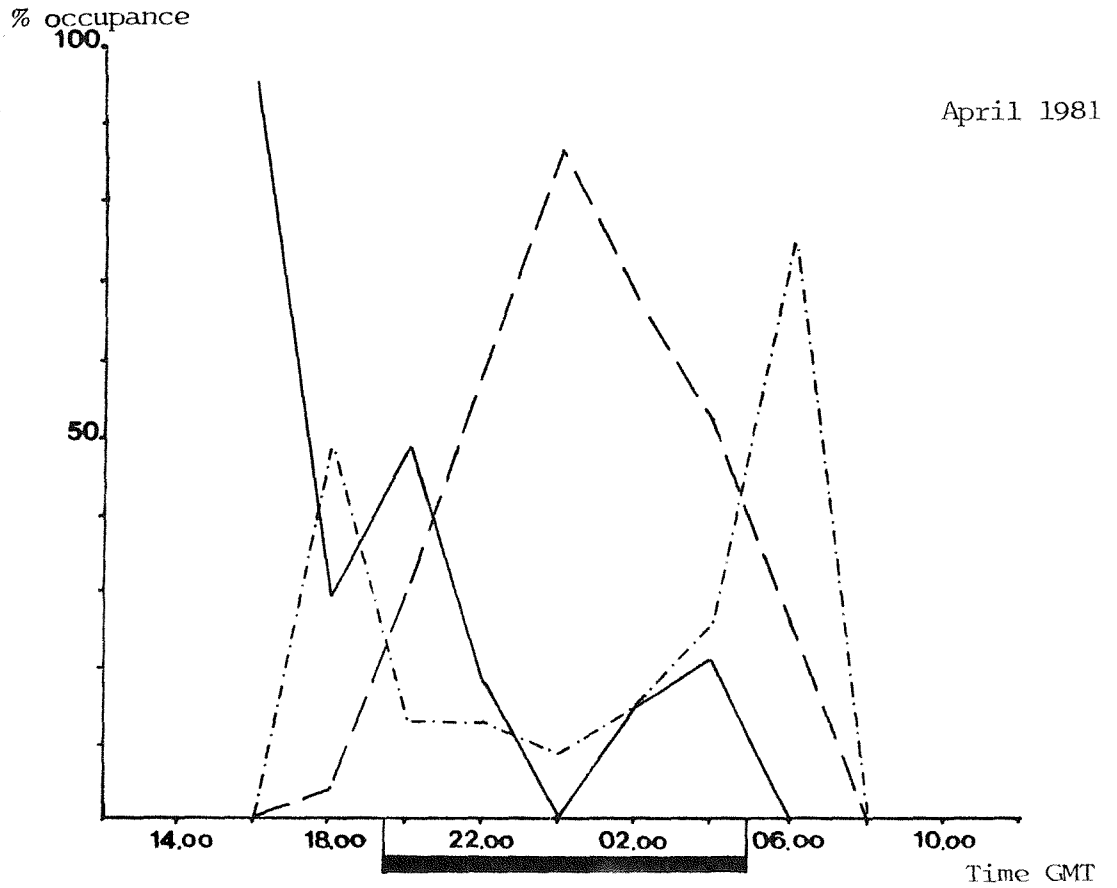


FIGURE 2:33 continued

Habitat occupance at Purbeck



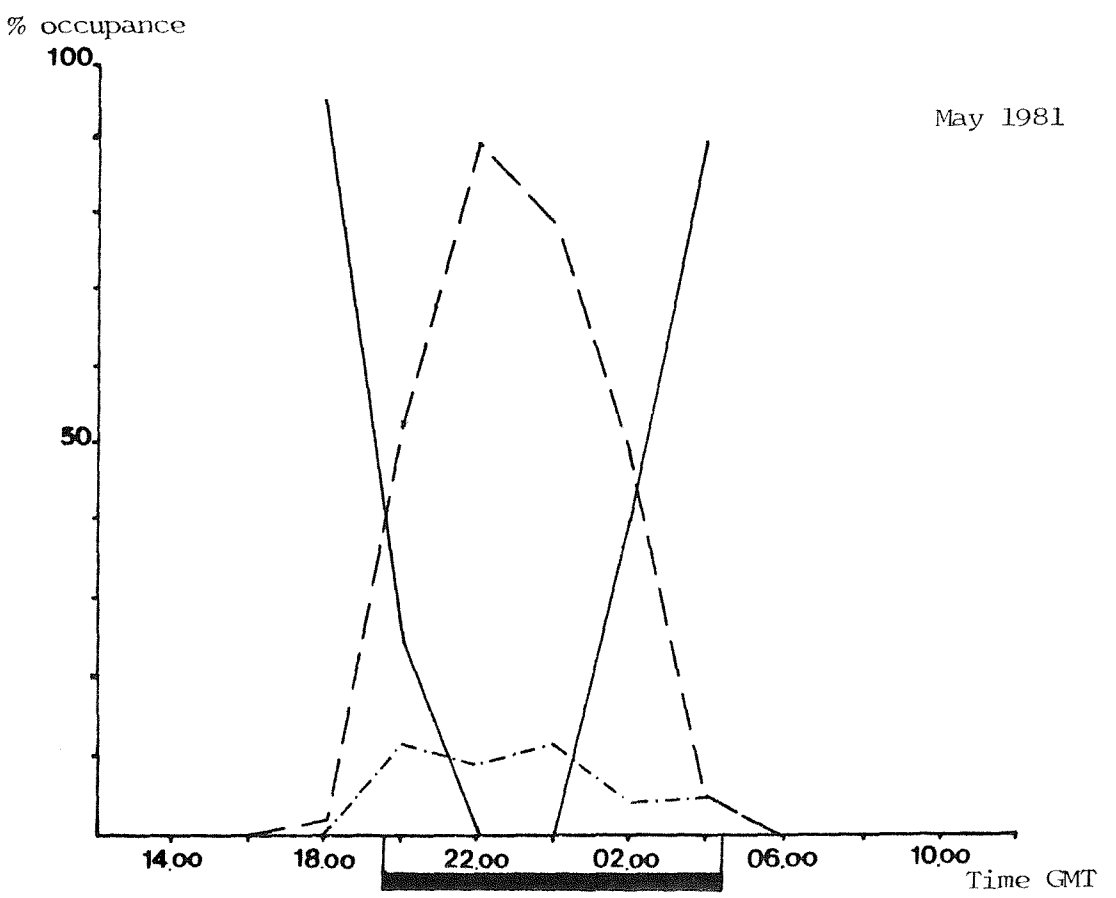
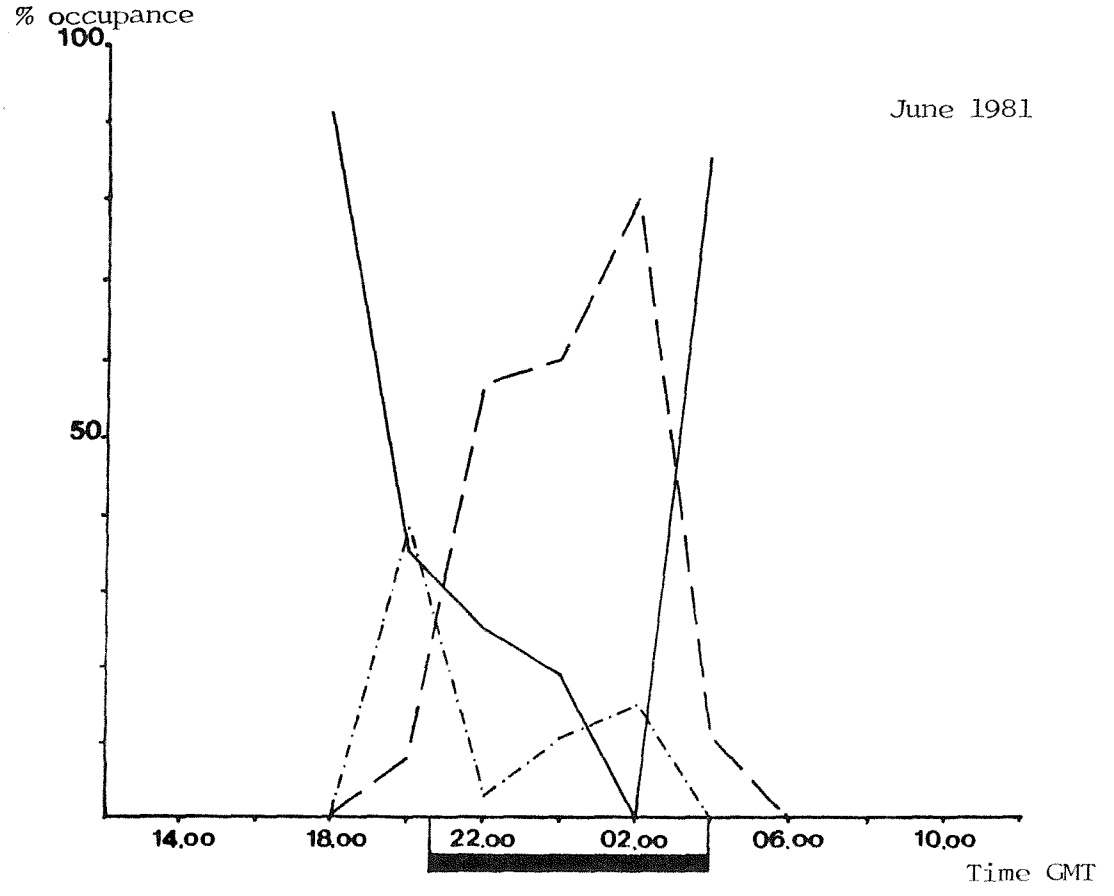


FIGURE 2:33 continued

Habitat occupance at Purbeck



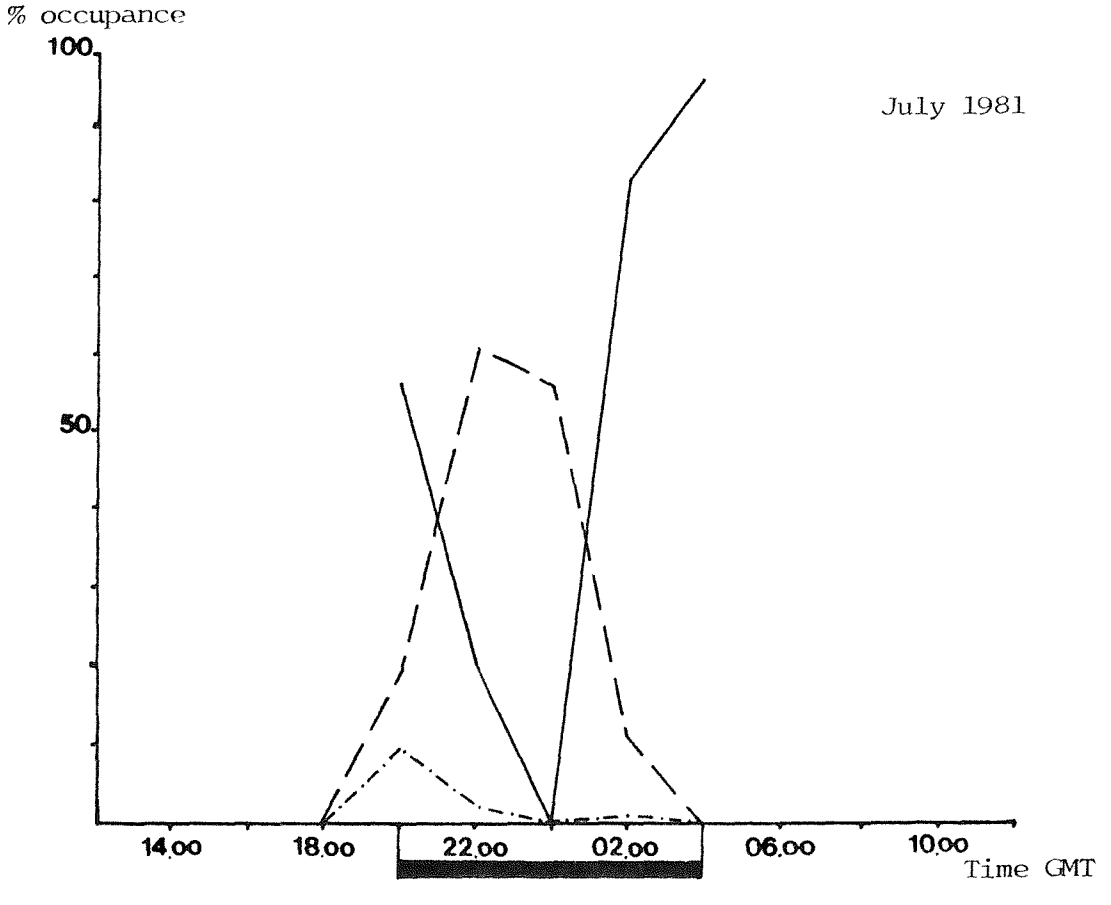
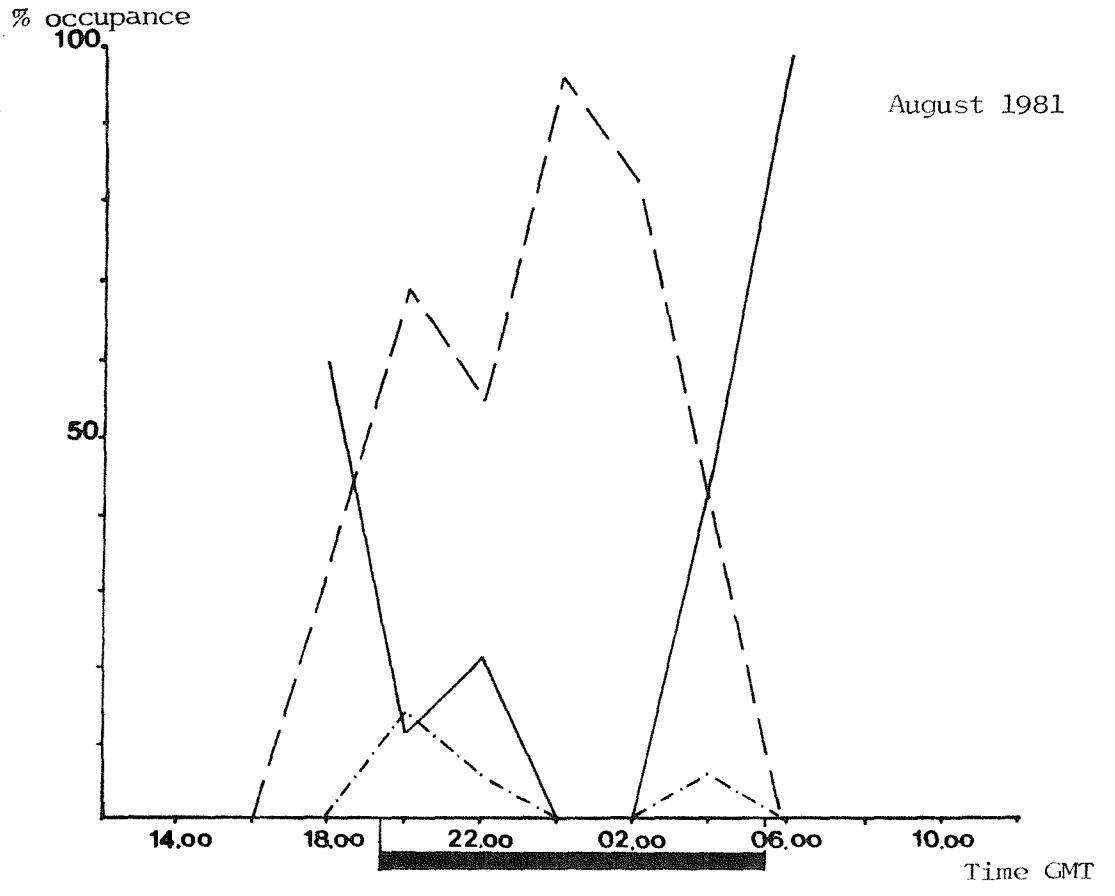


FIGURE 2:33 continued

Habitat occupance at Purbeck



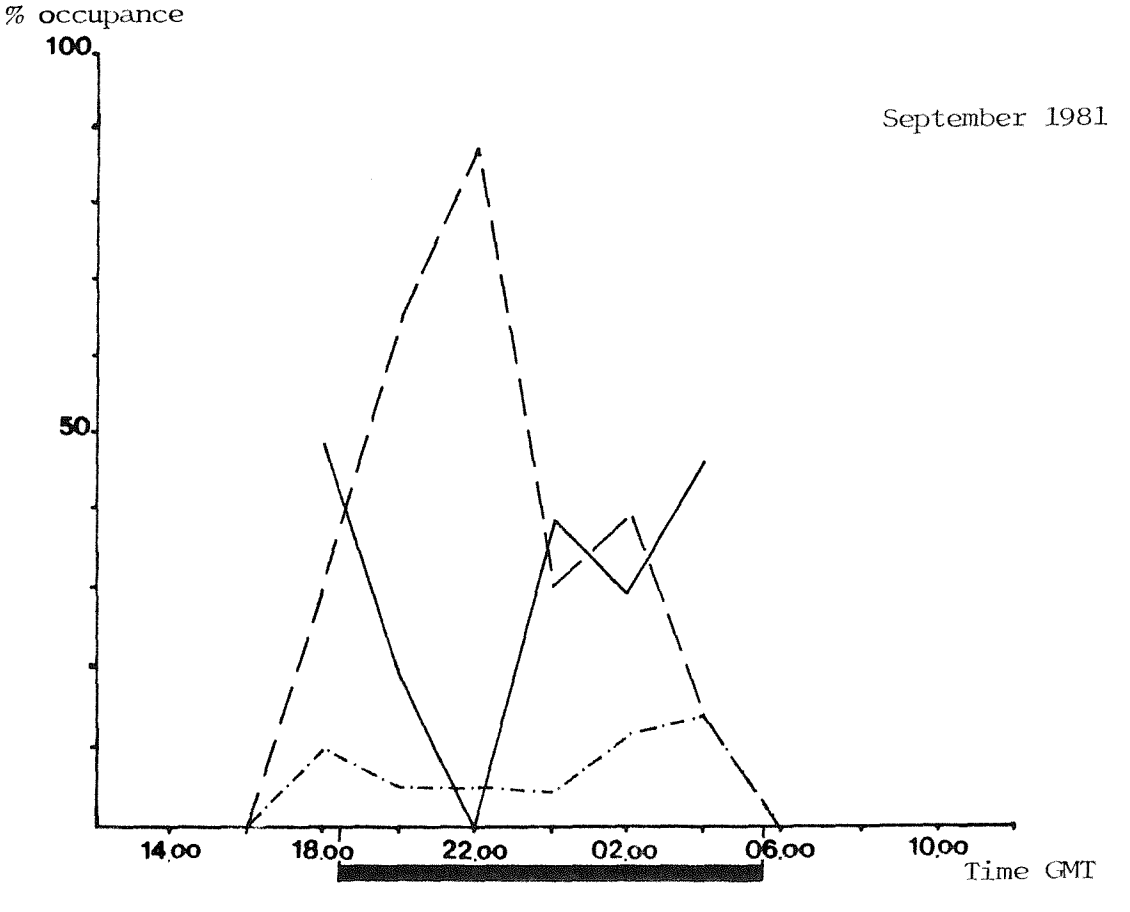


FIGURE 2:34

Habitat preference ratings from Purbeck driven transects

	OW	T	Sm	H	F	R
1981						
January	1.94	0.38	1.09	0.45	1.78	1.66
February	1.50	0.13	1.09	1.05	1.68	0.91
March	No data were collected here					
April	1.03	0.31	0.89	0.52	2.01	0.89
May	0	0.84	1.35	0.51	2.93	1.30
June	0	0.41	2.04	0.40	1.32	2.11
July	0	0.42	3.10	0.10	1.32	1.57
August	0	0.24	2.54	0.23	1.47	1.41
September	2.74	0.25	2.11	0.38	1.62	0.90

OW Oak woodland T Thicket F Fields

Sm Saltmarsh H Heath R Rides

FIGURE 2:35

Habitat preference ratings from Purbeck driven transects: Day and night separated

		OW	T	Sm	H	F	R
1981							
January	D	0	7.84	0	0	0	7.8
	N	1.89	0.30	0.87	0.49	1.85	1.43
February	D	0	6.29	0	0	0	0
	N	1.48	0.14	1.06	1.06	1.50	0.89
March	D	No data were collected here					
	N						
April	D	0	1.20	0.62	0.92	0.15	5.62
	N	1.08	0.17	0.86	0.48	2.33	0.32
May	D	0	0.39	2.26	0.34	1.81	0.64
	N	0	0.69	0.39	0.36	2.19	0.98
June	D	0	1.26	0.15	0.76	0.30	6.06
	N	0	0.46	2.35	0.25	1.79	0.78
July	D	0	0.63	0.24	0.29	1.14	6.14
	N	0	0.37	3.30	0.06	1.40	0.06
August	D	0	1.42	0	0	1.29	5.81
	N	0	0.15	2.46	0.27	1.52	1.06
September	D	0	0.35	2.17	0.44	1.62	1.24
	N	3.00	0.23	1.96	0.38	1.64	0.80

OW Oak woodland T Thicket Sm Saltmarsh

H Heath F Fields R Rides

C H A P T E R T H R E E

Habitat utilisation

and

activity rhythms

FIGURE 3:1

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

	OW	Pl	PT	PS	C	H	F	R
May 1980								
Feeding								
N	269	3	72	27	34	0	47	84
%	50.2	0.6	13.4	5.0	6.3	0	8.8	15.7
Lying								
N	45	0	0	5	0	0	8	0
%	77.6	0	0	8.6	0	0	13.8	0
Walking								
N	3	0	0	2	0	0	4	30
%	7.7	0	0	5.1	0	0	10.3	76.9
June								
Feeding								
N	155	0	38	50	69	1	44	85
%	35.1	0	8.6	11.3	15.6	0.2	10.0	19.2
Lying								
N	14	0	0	22	0	0	9	0
%	31.1	0	0	48.9	0	0	20.0	0
Walking								
N	2	0	0	0	2	0	0	18
%	9.1	0	0	0	9.1	0	0	81.9

OW Oakwoods Pl Plantation PT Prethicket

PS Polestage C Clear-felled H Heath

F Fields R Rides

FIGURE 3:1 continued

	OW	Pl	PT	PS	C	H	F	R
July 1980								
Feeding								
N	112	0	13	25	82	0	39	59
%	33.9	0	3.9	7.6	24.8	0	11.8	17.9
Lying								
N	12	0	0	13	5	0	6	0
%	33.3	0	C	36.1	13.9	0	16.7	0
Walking								
N	5	0	0	0	3	0	0	14
%	22.7	0	0	0	13.6	0	0	63.6
August								
Feeding								
N	168	1	28	80	84	2	51	59
%	35.5	0.2	5.9	16.9	17.8	0.4	10.8	12.5
Lying								
N	45	0	0	13	11	0	9	0
%	57.7	0	0	16.7	14.1	0	11.5	0
Walking								
N	5	0	0	3	1	0	0	20
%	17.2	0	0	10.3	3.4	0	C	69.0

September

There was no data collected this month

FIGURE 3:1 continued

	OW	P1	FT	PS	C	H	F	R
October 1980								
Feeding								
N	514	0	24	69	56	3	18	111
%	64.7	0	3.0	8.7	7.0	0.4	2.3	14.0
Lying								
N	91	0	3	16	6	0	5	0
%	75.2	0	2.5	13.2	5.0	0	4.1	0
Walking								
N	30	0	3	2	13	0	2	19
%	43.5	0	4.3	2.9	18.8	0	2.9	27.5
November								
Feeding								
N	585	0	25	51	30	0	16	85
%	73.9	0	3.2	6.4	3.8	0	2.0	10.7
Lying								
N	107	0	0	11	0	0	0	0
%	90.7	0	0	9.3	0	0	0	0
Walking								
N	45	0	1	0	0	0	1	29
%	59.2	0	1.3	0	0	0	1.3	38.2
December								
Feeding								
N	176	0	8	10	22	0	15	44
%	64.0	0	2.9	3.6	8.0	0	5.5	16.0
Lying								
N	39	0	0	20	0	0	0	0
%	66.1	0	0	33.9	0	0	0	0
Walking								
N	4	0	0	0	0	0	0	16
%	25.0	0	0	0	0	0	0	75.0

FIGURE 3:1 continued

	OW	Pl	PT	PS	C	H	F	R
January 1981								
Feeding								
N	238	0	49	46	35	3	37	106
%	46.3	0	9.5	8.9	6.8	0.6	7.2	20.6
Lying								
N	43	0	0	19	0	0	0	0
%	69.4	0	0	30.6	0	0	0	0
Walking								
N	4	0	0	1	0	0	2	15
%	18.2	0	0	4.5	0	0	9.0	68.2
February								
Feeding								
N	229	0	33	35	26	0	93	63
%	47.8	0	6.9	7.3	5.4	0	19.4	13.2
Lying								
N	57	0	1	26	0	0	0	0
%	67.9	0	1.2	31.0	0	0	0	0
Walking								
N	17	0	1	3	0	0	0	1
%	77.3	0	4.5	13.5	0	0	0	4.5

OW Oakwoods Pl Plantation PT Prethicket

PS Polestage C Clear-felled H Heath

F Fields R Rides

FIGURE 3:1 continued

	OW	Pl	PT	PS	C	H	F	R
March 1981								
Feeding								
N	101	0	12	20	33	0	41	23
%	43.9	0	5.2	8.7	14.3	0	17.8	10.0
Lying								
N	31	0	3	3	0	0	1	0
%	81.6	0	7.9	7.9	0	0	2.6	0
Walking								
N	5	0	0	0	0	0	0	12
%	29.4	0	0	0	0	0	0	70.6
April								
Feeding								
N	149	4	30	21	51	0	8	32
%	50.5	1.4	10.2	7.1	17.3	0	2.7	10.8
Lying								
N	24	0	1	2	0	0	0	0
%	88.9	0	3.7	7.4	0	0	0	0
Walking								
N	17	0	0	0	0	0	0	7
%	70.8	0	0	0	0	0	0	29.2
May								
Feeding								
N	209	16	28	45	88	0	42	55
%	43.3	3.3	5.8	9.3	18.2	0	8.7	11.4
Lying								
N	19	0	1	7	0	0	0	0
%	70.4	0	3.7	25.9	0	0	0	0
Walking								
N	19	0	1	7	0	0	0	0
%	70.4	0	3.7	25.9	0	0	0	0

FIGURE 3:1 continued

	OW	Pl	PT	PS	C	H	F	R
June 1981								
Feeding								
N	122	4	56	54	97	0	19	111
%	26.3	0.9	12.1	11.7	21.0	0	4.1	24.0
Lying								
N	19	1	1	16	3	0	1	1
%	45.2	2.4	2.4	38.1	7.1	0	2.4	2.4
Walking								
N	6	0	0	0	4	0	0	10
%	30.0	0	0	0	20.0	0	0	50.0
July								
Feeding								
N	96	0	65	46	112	3	101	50
%	20.3	0	13.7	9.7	23.7	0.6	21.4	10.6
Lying								
N	8	0	5	10	0	0	3	0
%	30.8	0	19.2	38.5	0	0	11.5	0
Walking								
N	7	0	0	1	2	0	0	9
%	36.8	0	0	5.3	10.6	0	0	47.4

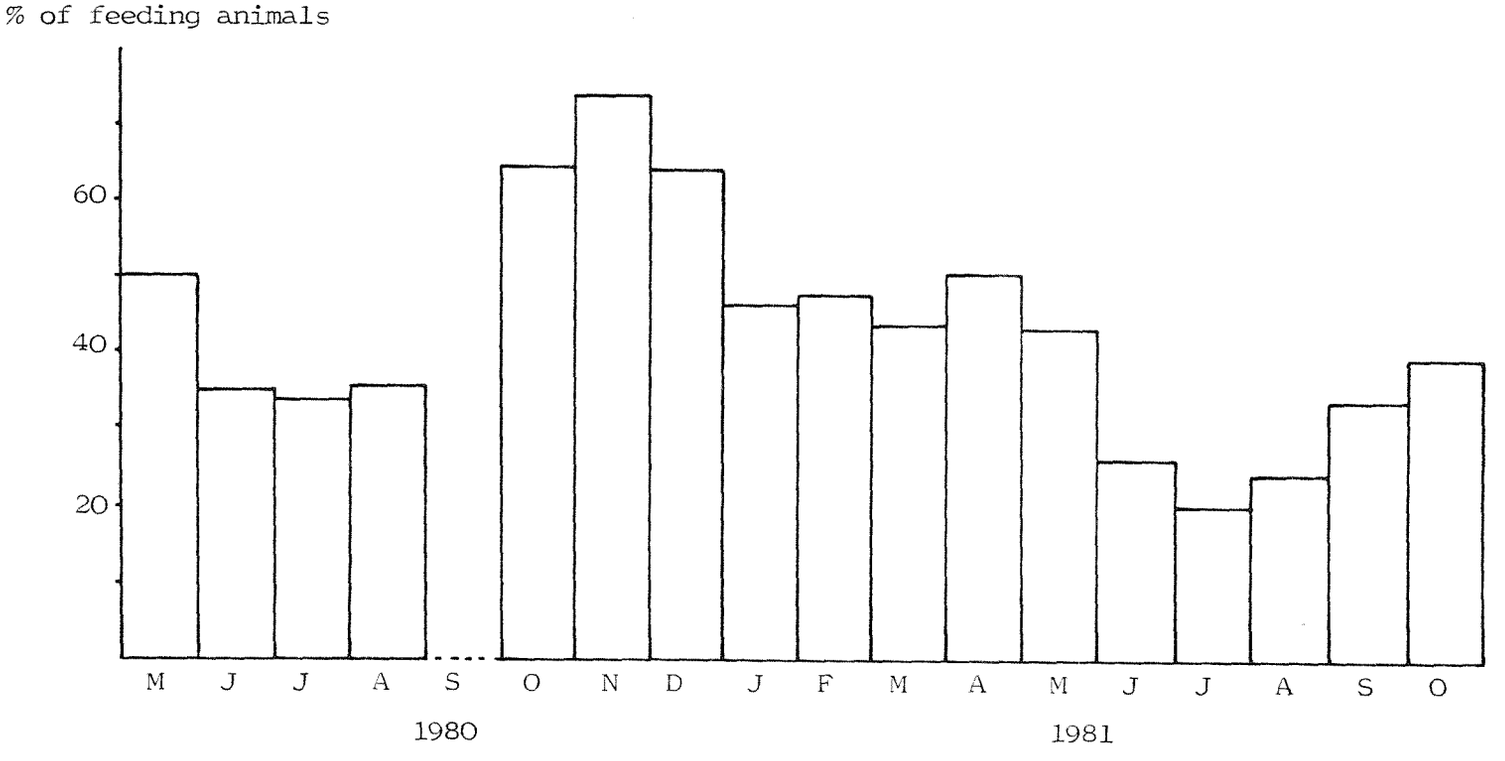
OW	Oakwoods	PT	Prethicket	C	Clear-felled
Pl	Plantation	H	Heath	R	Rides
F	Fields	PS	Polestage		

FIGURE 3:1 continued

	OW	Pl	PT	PS	C	H	F	R
August 1981								
Feeding								
N	129	5	48	35	133	0	36	135
%	24.8	1.0	9.2	6.7	25.5	0	6.9	25.9
Lying								
N	17	0	0	20	2	0	0	0
%	43.6	0	0	51.3	5.1	0	0	0
Walking								
N	1	0	0	3	3	0	0	7
%	7.1	0	0	21.4	21.4	0	0	50.0
September								
Feeding								
N	183	2	21	45	149	3	22	116
%	33.8	0.4	3.9	8.3	27.5	0.6	4.1	21.4
Lying								
N	19	0	0	4	3	0	3	0
%	65.5	0	0	13.8	10.3	0	10.3	0
Walking								
N	7	0	0	0	0	0	0	12
%	36.8	0	0	0	0	0	0	63.2
October								
Feeding								
N	194	3	36	112	30	7	40	66
%	39.8	0.6	7.4	23.0	6.1	1.4	8.2	13.5
Lying								
N	35	0	2	15	0	0	1	0
%	66.0	0	3.8	28.3	0	0	1.9	0
Walking								
N	1	0	0	0	4	0	0	11
%	6.3	0	0	0	25.0	0	0	68.8

FIGURE 3:2

Percentage of feeding animals in
oak woodland: New Forest driven transects



Key:

O Oak woodland

Pl Plantation

Pt Prethicket

Ps Polestage

C Clear

H Heath

F Fields

R Rides

FIGURE 3:3

The monthly distribution of
feeding animals on the
New Forest driven transects

% of all animals feeding

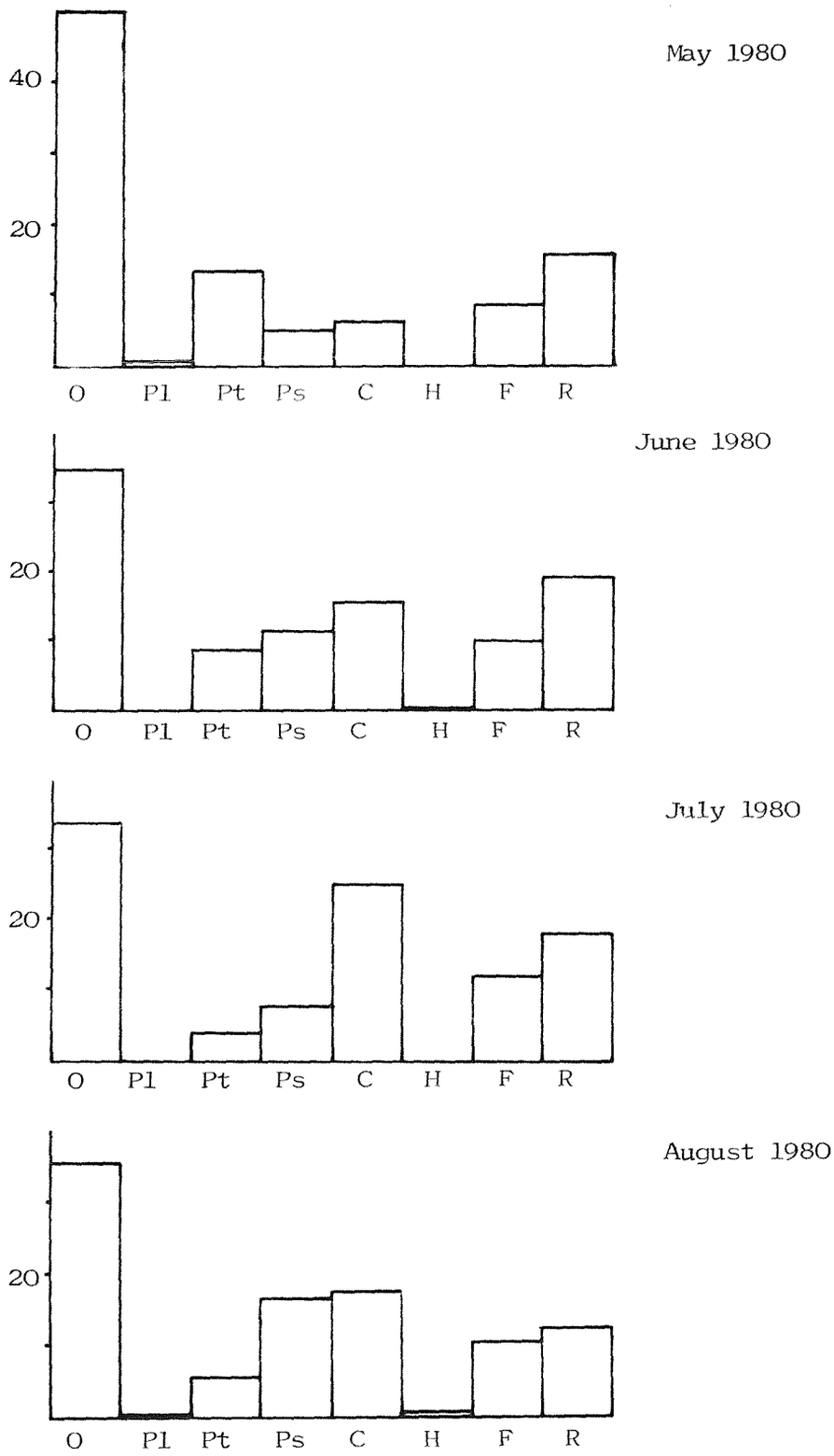


FIGURE 3:3 continued

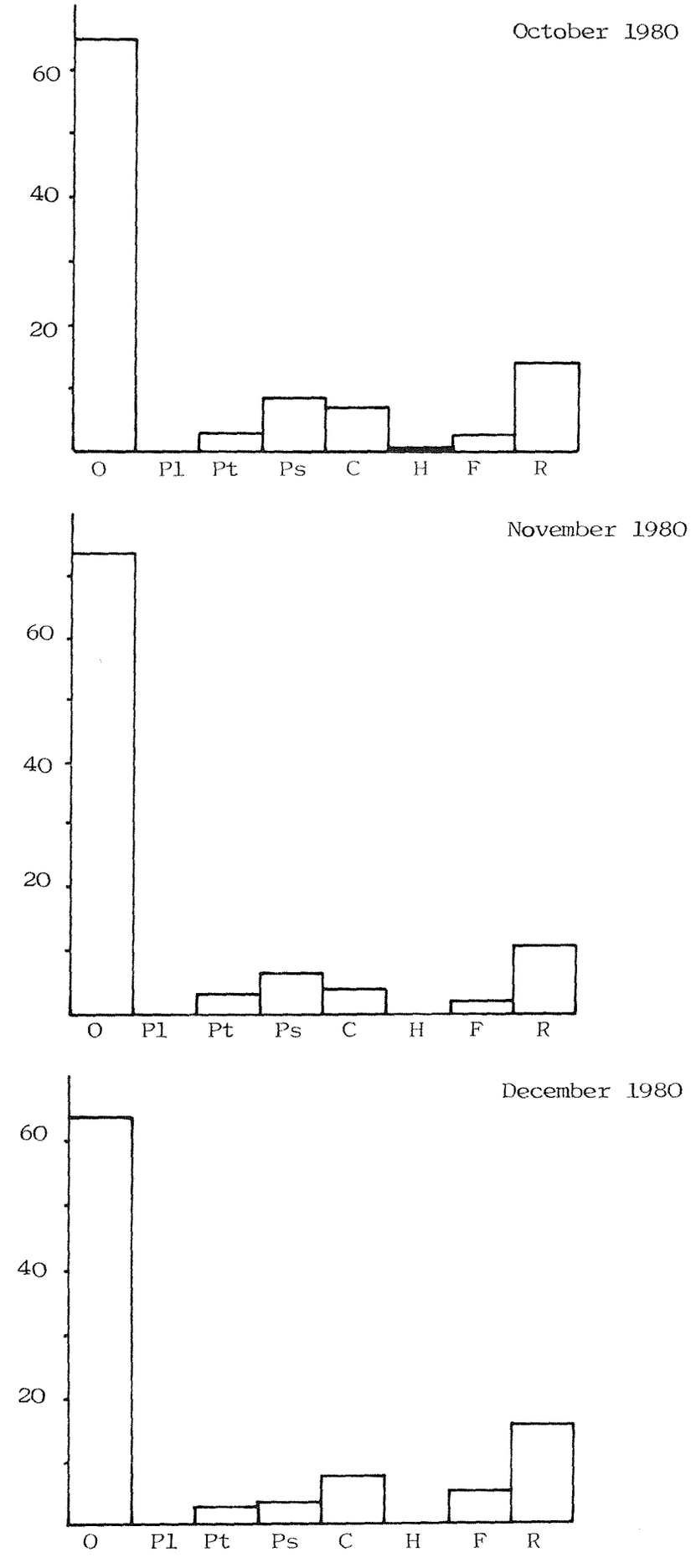
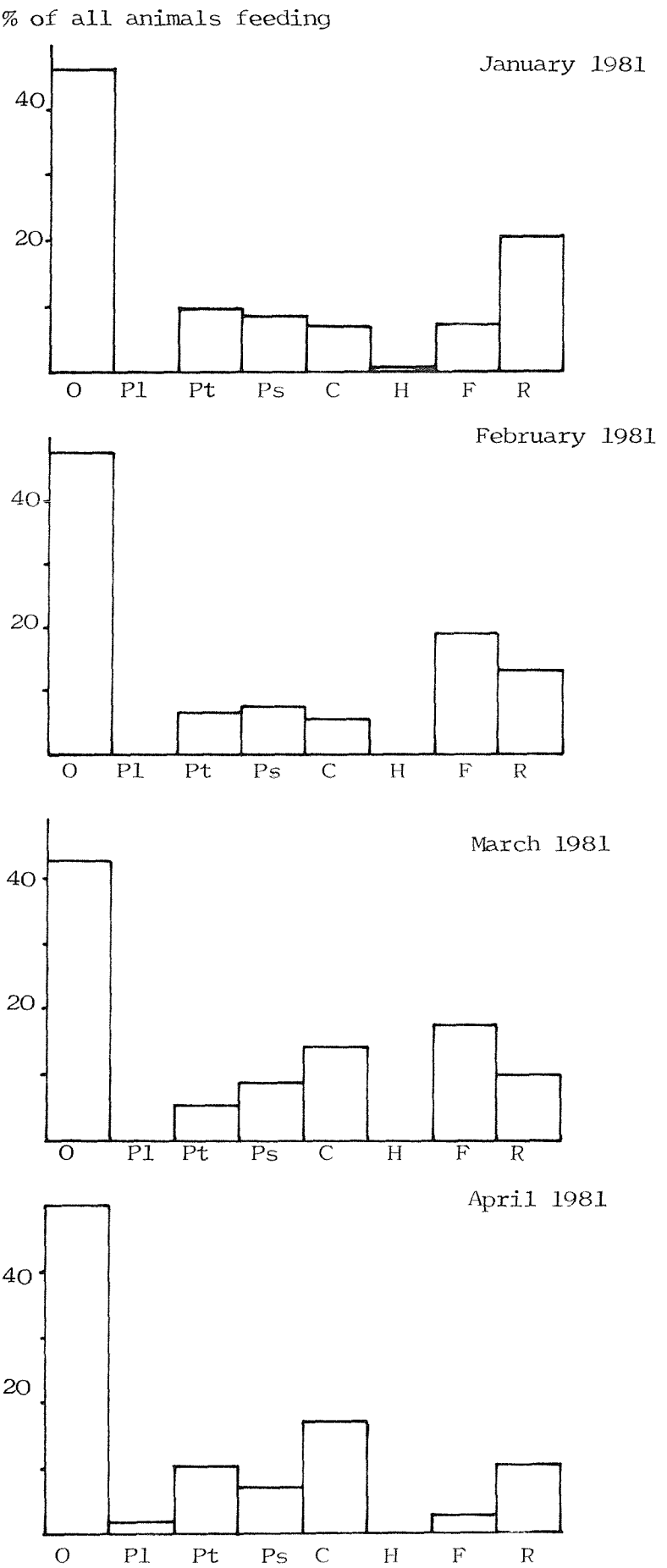


FIGURE 3:3 continued



Key:

O	Oak woodland
Pl	Plantation
Pt	Prethicket
Ps	Polestage
C	Clear
H	Heath
F	Fields
R	Rides

FIGURE 3:3 continued

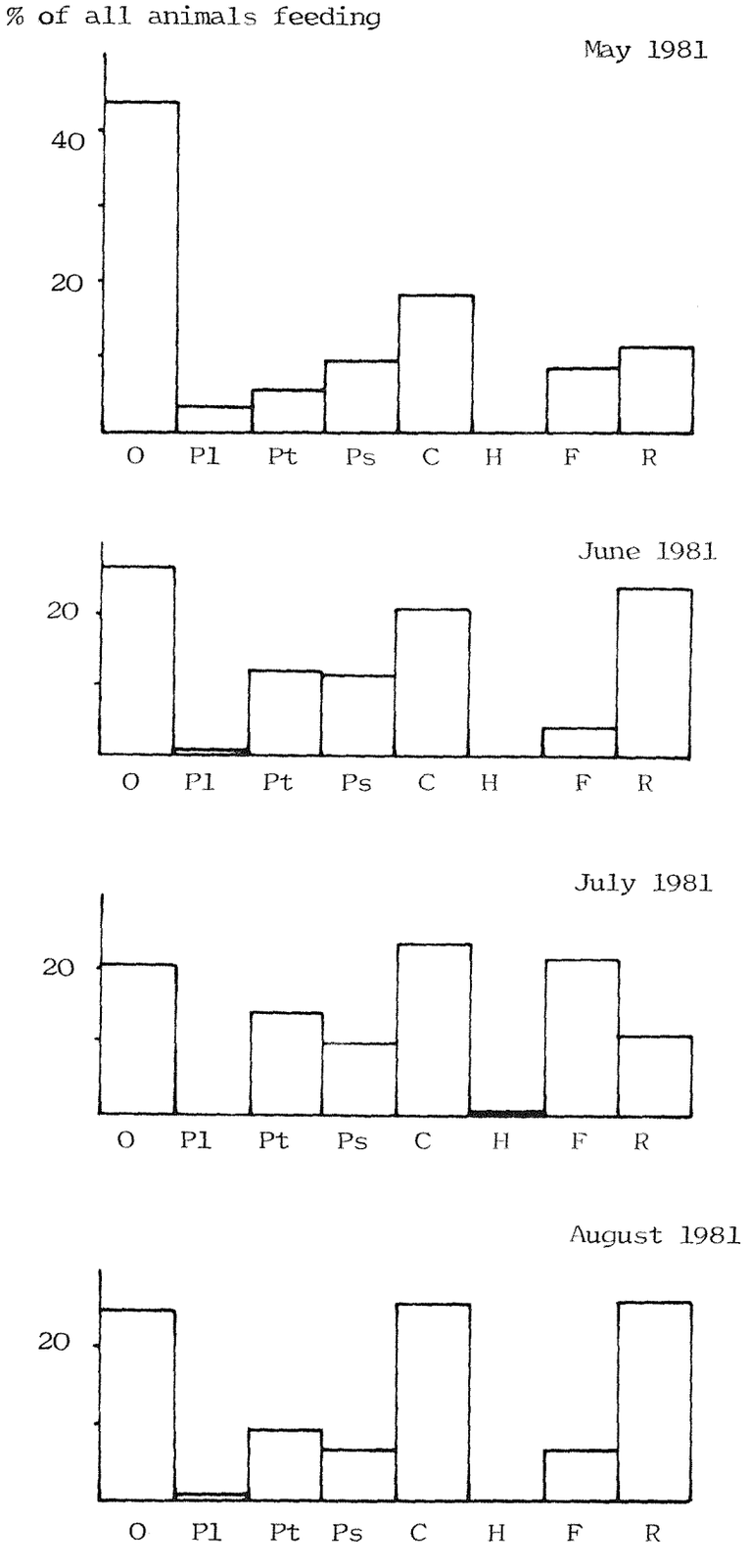


FIGURE 3:3 continued

The monthly distribution of
feeding animals on the
New Forest driven transects

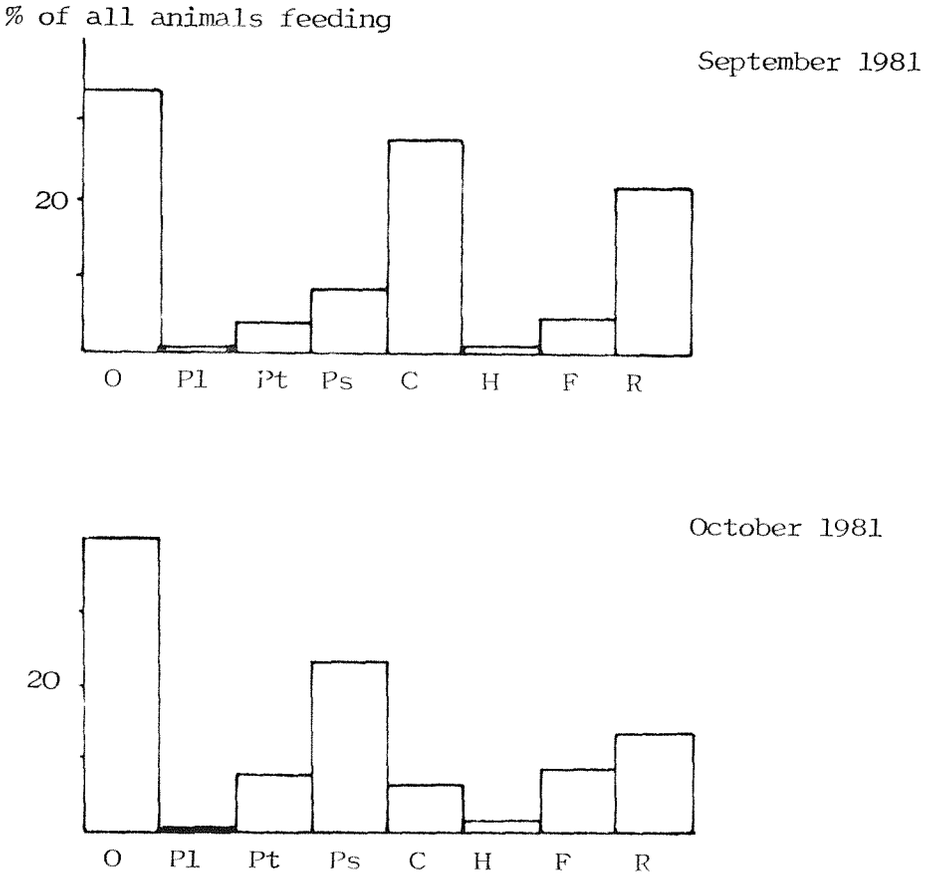


FIGURE 3:4

Percentage of animals lying up, in oak woodlands: New Forest driven transects

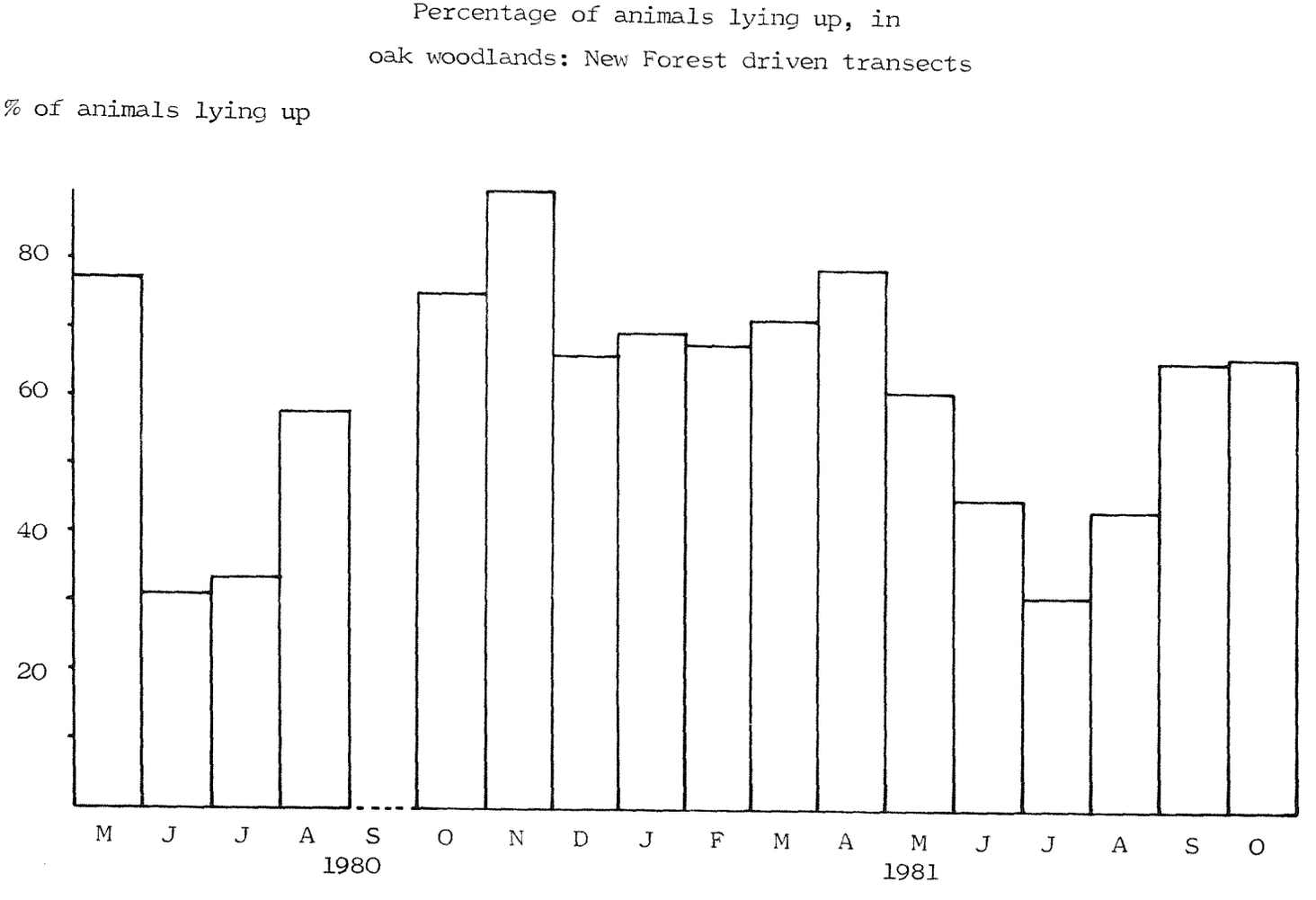


FIGURE 3:5

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
May 1980						
DAYTIME						
Feeding						
N	186	63	19	31	25	72
%	47.0	15.9	4.8	7.8	6.3	18.2
Lying						
N	20	0	1	0	0	0
%	95.2	0	4.8	0	0	0
Walking						
N	0	0	1	0	0	28
%	0	0	3.4	0	0	96.6
NIGHTTIME						
Feeding						
N	83	9	8	3	22	12
%	60.6	6.6	5.8	2.2	16.1	8.8
Lying						
N	25	0	4	0	8	0
%	67.6	0	10.8	0	20.6	0
Walking						
N	3	0	1	0	4	2
%	30.0	0	10.0	0	40.0	20.0

OW Oak woodland PS Polestage F Fields

PT Prethicket C Clear-felled R Rides

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
June 1980						
DAYTIME						
Feeding						
N	133	36	35	65	36	69
%	35.7	9.7	9.1	17.4	9.7	18.5
Lying						
N	0	0	0	0	6	0
%	0	0	0	0	100.0	0
Walking						
N	1	0	0	2	0	15
%	5.6	0	0	11.1	0	83.3
NIGHTTIME						
Feeding						
N	22	2	15	4	8	16
%	32.8	3.0	22.4	3.0	11.9	23.9
Lying						
N	14	0	22	0	3	0
%	35.9	0	56.4	0	7.7	0
Walking						
N	1	0	0	0	0	3
%	25.0	0	0	0	0	75.0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
July 1980						
DAYTIME						
Feeding						
N	93	10	19	75	33	50
%	33.2	3.6	6.8	26.8	11.8	17.9
Lying						
N	0	0	0	4	3	0
%	0	0	0	57.1	42.9	0
Walking						
N	2	0	0	2	0	10
%	14.3	0	0	14.3	0	71.4
NIGHTTIME						
Feeding						
N	21	3	6	7	6	9
%	40.4	5.8	11.5	13.5	11.5	17.3
Lying						
N	12	0	13	1	3	0
%	41.4	0	44.8	3.4	10.3	0
Walking						
N	3	0	0	1	0	4
%	37.5	0	0	12.5	0	50.0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
August 1980						
DAYTIME						
Feeding						
N	43	7	43	33	23	23
%	25.0	4.1	25.0	19.2	13.4	13.4
Lying						
N	0	0	0	0	2	0
%	0	0	0	0	100.0	0
Walking						
N	0	0	2	0	0	12
%	0	0	14.3	0	0	85.7
NIGHTTIME						
Feeding						
N	125	21	37	51	28	36
%	41.9	7.0	12.4	17.1	9.4	12.1
Lying						
N	45	0	13	11	7	0
%	59.2	0	17.1	14.6	9.2	0
Walking						
N	5	0	3	1	0	8
%	29.4	0	17.6	5.9	0	47.1

OW Oak woodland PS Polestage F Fields

PT Prethicket C Clear-felled R Rides

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
October 1980						
DAYTIME						
Feeding						
N	235	15	35	20	13	71
%	60.4	3.9	9.0	5.1	3.3	18.3
Lying						
N	11	0	3	0	3	0
%	64.7	0	17.6	0	17.6	0
Walking						
N	5	0	0	10	1	13
%	17.2	0	0	34.5	3.4	44.8
NIGHTTIME						
Feeding						
N	279	9	34	36	5	40
%	69.2	2.2	8.4	8.9	1.2	9.9
Lying						
N	80	3	13	6	2	0
%	76.9	2.9	12.5	5.8	1.9	0
Walking						
N	25	3	2	3	1	6
%	62.5	7.5	5.0	7.5	2.5	15.0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
November 1980						
DAYTIME						
Feeding						
N	136	8	22	3	10	36
%	63.3	3.7	10.2	1.4	4.7	16.7
Lying						
N	6	0	9	0	0	0
%	40.0	0	60.0	0	0	0
Walking						
N	12	0	2	0	1	14
%	41.4	0	6.9	0	3.5	48.3
NIGHTTIME						
Feeding						
N	449	17	29	27	6	49
%	77.8	2.9	5.0	4.7	1.0	8.5
Lying						
N	101	0	2	0	0	0
%	98.1	0	1.9	0	0	0
Walking						
N	33	1	0	0	0	15
%	67.3	2.0	0	0	0	30.6

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
November 1980						
DAYTIME						
Feeding						
N	136	8	22	3	10	36
%	63.3	3.7	10.2	1.4	4.7	16.7
Lying						
N	6	0	9	0	0	0
%	40.0	0	60.0	0	0	0
Walking						
N	12	0	2	0	1	14
%	41.4	0	6.9	0	3.5	48.3
NIGHTTIME						
Feeding						
N	449	17	29	27	6	49
%	77.8	2.9	5.0	4.7	1.0	8.5
Lying						
N	101	0	2	0	0	0
%	98.1	0	1.9	0	0	0
Walking						
N	33	1	0	0	0	15
%	67.3	2.0	0	0	0	30.6

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
January 1981						
DAYTIME						
Feeding						
N	97	32	29	22	18	67
%	36.6	12.1	10.9	8.3	6.8	25.3
Lying						
N	12	0	8	0	0	0
%	60.0	0	40.0	0	0	0
Walking						
N	0	0	1	0	0	13
%	0	0	7.1	0	0	92.9
NIGHTTIME						
Feeding						
N	141	17	17	13	19	39
%	57.3	6.9	6.9	5.3	7.7	15.9
Lying						
N	31	0	11	0	0	0
%	73.8	0	26.2	0	0	0
Walking						
N	4	0	0	0	2	2
%	50.0	0	0	0	25.0	25.0

OW Oakwoodland PS Polestage F Fields

PT Prethicket C Clear-felled Rides

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
February 1981						
DAYTIME						
Feeding						
N	120	28	7	5	12	51
%	53.8	12.6	3.1	2.2	5.4	22.9
Lying						
N	5	1	0	0	0	0
%	83.3	16.7	0	0	0	0
Walking						
N	4	1	0	0	0	1
%	66.7	16.7	0	0	0	16.7
NIGHTTIME						
Feeding						
N	109	5	28	21	81	12
%	42.6	2.0	10.9	8.2	31.6	4.7
Lying						
N	52	0	26	0	0	0
%	66.7	0	33.3	0	0	0
Walking						
N	13	0	3	0	0	0
%	81.3	0	18.7	0	0	0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
March 1981						
DAYTIME						
Feeding						
N	77	10	6	27	27	19
%	46.4	6.0	3.6	16.3	16.3	11.4
Lying						
N	8	3	0	0	1	0
%	75.0	20.0	0	0	5.0	0
Walking						
N	3	0	0	0	0	7
%	30.0	0	0	0	0	70.0
NIGHTTIME						
Feeding						
N	24	2	14	6	14	4
%	37.5	3.1	21.9	9.4	21.9	6.3
Lying						
N	23	0	3	0	0	0
%	88.5	0	11.5	0	0	0
Walking						
N	2	0	0	0	0	5
%	28.6	0	0	0	0	71.4

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
April 1981						
DAYTIME						
Feeding						
N	97	26	17	49	4	26
%	44.3	11.9	7.8	22.4	1.8	11.9
Lying						
N	13	1	0	0	0	0
%	92.9	7.1	0	0	0	0
Walking						
N	17	0	0	0	0	6
%	73.9	0	0	0	0	26.1
NIGHTTIME						
Feeding						
N	52	4	4	2	4	6
%	72.2	5.6	5.6	2.8	5.6	8.3
Lying						
N	11	0	2	0	0	0
%	84.6	0	13.4	0	0	0
Walking						
N	0	0	0	0	0	1
%	0	0	0	0	0	100.0

OW Oak woodland PS Polestage F Fields

PT Prethicket C Clear- felled R Rides

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
May 1981						
DAYTIME						
Feeding						
N	126	22	33	79	18	48
%	38.7	6.7	10.1	24.2	5.5	14.7
Lying						
N	4	1	0	0	0	0
%	80.0	20.0	0	0	0	0
Walking						
N	11	0	0	0	0	7
%	61.1	0	0	0	0	38.9
NIGHTTIME						
Feeding						
N	83	6	12	9	24	7
%	58.9	4.3	8.5	6.4	17.0	5.0
Lying						
N	15	0	7	0	0	0
%	68.2	0	31.8	0	0	0
Walking						
N	4	0	0	0	0	6
%	40.0	0	0	0	0	60.0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
June 1981						
DAYTIME						
Feeding						
N	89	44	42	65	14	85
%	26.3	13.0	12.4	19.2	4.1	25.0
Lying						
N	6	0	5	2	1	1
%	40.0	0	33.3	13.3	6.7	6.7
Walking						
N	3	0	0	1	0	10
%	21.4	0	0	7.1	0	71.4
NIGHTTIME						
Feeding						
N	33	12	12	32	5	26
%	27.5	10.0	10.0	26.7	4.2	21.7
Lying						
N	13	1	11	1	0	0
%	50.0	3.8	42.3	3.8	0	0
Walking						
N	3	0	0	3	0	0
%	50.0	0	0	50.0	0	0

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
July 1981						
DAYTIME						
Feeding						
N	63	34	34	68	54	41
%	21.4	11.6	11.6	23.1	18.4	13.9
Lying						
N	1	1	1	0	0	0
%	33.3	33.3	33.3	0	0	0
Walking						
N	3	0	1	2	0	7
%	23.1	0	7.7	15.2	0	53.8
NIGHTTIME						
Feeding						
N	33	31	12	44	47	9
%	18.8	17.6	6.8	25.0	26.7	5.1
Lying						
N	7	4	9	0	3	0
%	30.4	17.4	39.1	0	13.0	0
Walking						
N	4	0	0	0	0	2
%	66.7	0	0	0	0	33.3

OW Oak woodland PS Polestage F Fields

PT Prethicket C Clear-felled R Rides

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
August 1981						
DAYTIME						
Feeding						
N	45	36	11	37	15	62
%	21.8	17.5	5.3	18.0	7.3	30.1
Lying						
N	0	0	0	1	0	0
%	0	0	0	100.0	0	0
Walking						
N	0	0	2	3	0	3
%	0	0	25.0	37.5	0	37.5
NIGHTTIME						
Feeding						
N	84	12	24	96	21	73
%	27.1	3.9	7.7	31.0	6.8	23.5
Lying						
N	17	0	20	1	0	0
%	44.7	0	52.6	2.6	0	0
Walking						
N	1	0	1	0	0	4
%	16.7	0	16.7	0	0	66.7

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
September 1981						
DAYTIME						
Feeding						
N	105	8	24	67	0	71
%	38.2	2.9	8.7	24.4	0	25.8
Lying						
N	1	0	0	0	0	0
%	100.0	0	0	0	0	0
Walking						
N	0	0	0	0	0	11
%	0	0	0	0	0	100.0
NIGHTTIME						
Feeding						
N	78	13	21	82	22	45
%	29.9	5.0	8.0	31.4	8.4	17.2
Lying						
N	18	0	4	3	3	0
%	64.3	0	14.3	10.7	10.7	0
Walking						
N	7	0	0	0	0	1
%	87.5	0	0	0	0	12.5

FIGURE 3:5 continued

Field data : Numbers of deer in the New Forest on the driven transects engaged in each activity

Day and night separated

	OW	PT	PS	C	F	R
October 1981						
DAYTIME						
Feeding						
N	102	23	76	12	20	48
%	36.3	8.2	27.0	4.3	7.1	17.1
Lying						
N	3	0	5	0	1	0
%	33.3	0	55.6	0	11.1	0
Walking						
N	1	0	0	3	0	9
%	7.7	0	0	23.1	0	69.2
NIGHTTIME						
Feeding						
N	92	13	36	18	20	18
%	46.7	6.6	18.3	9.1	10.2	9.1
Lying						
N	32	2	10	0	0	0
%	72.7	4.5	22.7	0	0	0
Walking						
N	0	0	0	1	0	2
%	0	0	0	33.3	0	66.7

FIGURE 3:6

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

	Th	Sm	H	F	R	OW
January 1981						
Feeding						
N	32	71	76	306	63	7
%	5.8	12.8	13.7	55.1	11.4	1.3
Lying						
N	2	5	6	15	11	4
%	4.7	11.6	14.0	34.9	25.6	9.3
Walking						
N	5	0	0	0	4	0
%	55.6	0	0	0	44.4	0
February 1981						
Feeding						
N	2	27	73	109	21	4
%	0.8	11.4	30.9	46.2	8.9	1.7
Lying						
N	0	7	0	12	0	0
%	0	36.8	0	63.2	0	0
Walking						
N	2	3	15	1	3	0
%	8.3	12.5	62.5	4.2	12.5	0

Th Thicket Sm Salt marsh H Heath

F Fields R Rides OW Oak woods

FIGURE 3:6 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

	Th	Sm	H	F	R	OW
April 1981						
Feeding						
N	26	44	74	246	23	3
%	6.3	10.6	17.8	59.1	5.5	0.7
Lying						
N	0	17	11	72	0	0
%	0	17.0	11.0	72.0	0	0
Walking						
N	1	4	3	0	3	2
%	7.7	30.8	23.1	0	23.1	15.4
May 1981						
Feeding						
N	29	38	20	130	5	0
%	13.1	17.1	9.0	58.6	23.0	0
Lying						
N	0	1	2	62	0	0
%	0	1.5	3.1	95.4	0	0
Walking						
N	1	0	8	1	17	0
%	3.7	0	29.6	3.7	63.0	0

FIGURE 3:6 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

	Th	Sm	H	F	R	OW
June 1981						
Feeding						
N	16	61	27	78	32	0
%	7.5	28.5	12.6	36.4	15.0	0
Lying						
N	0	0	1	19	0	0
%	0	0	5.0	95.0	0	0
Walking						
N	0	0	0	0	4	0
%	0	0	0	0	100.0	0
July 1981						
Feeding						
N	12	57	6	67	18	0
%	7.5	35.6	3.8	41.9	11.3	0
Lying						
N	0	16	0	5	0	0
%	0	76.2	0	23.8	0	0
Walking						
N	1	0	0	2	1	0
%	25.0	0	0	50.0	25.0	0

Th Thicket Sm Saltmarsh H Heath

F Fields R Rides OW Oak woodland

FIGURE 3:6 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

	Th	Sm	H	F	R	OW
August 1981						
Feeding						
N	10	83	20	113	18	0
%	4.1	34.0	8.2	46.3	7.4	0
Lying						
N	0	5	0	2	0	0
%	0	71.4	0	28.6	0	0
Walking						
N	0	0	0	0	1	0
%	0	0	0	0	100.0	0
September 1981						
Feeding						
N	20	117	49	204	19	11
%	4.8	27.9	1.7	48.6	4.5	2.6
Lying						
N	0	21	8	34	0	1
%	0	32.8	12.5	53.1	0	1.6
Walking						
N	1	0	1	1	3	0
%	16.7	0	16.7	16.7	50.0	0

FIGURE 3:7

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
January 1981						
DAYTIME						
Feeding						
N	9	0	0	0	11	0
%	45.0	0	0	0	55.0	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	1	0
%	0	0	0	0	100.0	0
NIGHTTIME						
Feeding						
N	23	71	76	306	52	7
%	4.3	13.3	14.2	57.2	9.7	1.3
Lying						
N	2	5	6	15	11	4
%	4.7	11.6	14.0	34.9	25.6	9.3
Walking						
N	5	0	0	0	3	0
%	62.5	0	0	0	37.5	0

Th Thicket H Heath F Fields

Sm Salt marsh R Rides OW Oak woodland

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
February 1981						
DAYTIME						
Feeding						
N	1	0	0	0	0	0
%	100.0	0	0	0	0	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
NIGHTTIME						
Feeding						
N	1	27	73	109	21	4
%	0.4	11.5	31.1	46.4	8.9	1.7
Lying						
N	0	7	0	12	0	0
%	0	36.8	0	63.2	0	0
Walking						
N	2	3	15	1	3	0
%	8.3	12.5	62.5	4.2	12.5	0

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
April 1981						
DAYTIME						
Feeding						
N	14	5	18	3	22	0
%	22.6	8.1	29.0	4.8	35.5	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	3	0	0	0
%	0	0	100.0	0	0	0
NIGHTTIME						
Feeding						
N	12	39	56	243	1	3
%	3.4	11.0	15.8	68.6	6.3	1.0
Lying						
N	0	17	11	72	0	0
%	0	17.0	11.0	72.0	0	0
Walking						
N	1	4	0	0	3	2
%	10.0	40.0	0	0	30.0	20.0

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
May 1981						
DAYTIME						
Feeding						
N	3	27	12	60	2	0
%	2.9	26.0	11.5	57.7	1.9	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	1	0	0	0	3	0
%	25.0	0	0	0	75.0	0
NIGHTTIME						
Feeding						
N	26	11	8	70	3	0
%	22.0	9.3	6.8	59.3	2.5	0
Lying						
N	0	1	2	62	0	0
%	0	1.5	3.1	95.4	0	0
Walking						
N	0	0	8	1	14	0
%	0	0	34.8	4.3	60.9	0

Th Thicket H Heath F Fields

Sm Salt marsh R Rides OW Oak woodland

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
June 1981						
DAYTIME						
Feeding						
N	13	1	16	6	27	0
%	20.6	1.6	25.4	9.5	42.9	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	1	0
%	0	0	0	0	100.0	0
NIGHTTIME						
Feeding						
N	3	60	11	72	5	0
%	2.0	39.7	7.3	47.7	3.3	0
Lying						
N	0	0	1	19	0	0
%	0	0	5.0	95.0	0	0
Walking						
N	0	0	0	0	3	0
%	0	0	0	0	100.0	0

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
July 1981						
DAYTIME						
Feeding						
N	4	1	4	13	15	0
%	10.8	2.7	10.8	35.1	40.5	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	1	0
%	0	0	0	0	100.0	0
NIGHTTIME						
Feeding						
N	8	56	2	54	3	0
%	6.5	45.5	1.6	43.9	2.4	0
Lying						
N	0	16	0	5	0	0
%	0	76.2	0	33.8	0	0
Walking						
N	1	0	0	2	0	0
%	33.3	0	0	66.7	0	0

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
August 1981						
DAYTIME						
Feeding						
N	2	0	0	6	4	0
%	16.7	0	0	50.0	33.3	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
NIGHTTIME						
Feeding						
N	8	83	20	107	14	0
%	3.4	35.8	8.6	46.1	6.0	0
Lying						
N	0	5	0	2	0	0
%	0	71.4	0	28.6	0	0
Walking						
N	0	0	0	0	1	0
%	0	0	0	0	100.0	0

FIGURE 3:7 continued

Field data : Numbers of deer at Purbeck on the driven transects engaged in each activity

Day and night separated

	Th	Sm	H	F	R	OW
September 1981						
DAYTIME						
Feeding						
N	1	21	12	43	8	0
%	1.2	24.7	14.1	50.6	9.4	0
Lying						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
Walking						
N	0	0	0	0	0	0
%	0	0	0	0	0	0
NIGHTTIME						
Feeding						
N	19	96	37	161	11	11
%	5.7	28.7	11.0	48.1	3.3	3.3
Lying						
N	0	21	8	34	0	1
%	0	32.8	12.5	53.1	0	1.6
Walking						
N	1	0	1	1	3	0
%	16.7	0	16.7	16.7	50.0	0

FIGURE 3:8

Monthly behavioural occupance of sika deer in the New Forest

	OW	PT	PS	C	F	R
May 1980						
Feeding	25.2	61.3	1.6	0.9	1.1	3.4
Lying	4.2	0	0.3	0	0.2	0
Walking	0.3	0	0.1	0	0.1	1.3
June 1980						
Feeding	27.3	51.2	4.8	2.9	1.7	5.5
Lying	2.5	0	2.2	0	0.3	0
Walking	0.4	0	0	0.1	0	1.2
July 1980						
Feeding	36.3	32.3	4.6	6.3	2.8	7.1
Lying	3.9	0	2.4	0.4	0.4	0
Walking	1.6	0	0	0.2	0	1.7
August 1980						
Feeding	31.1	39.3	7.0	3.8	2.0	3.6
Lying	8.3	0	1.3	0.5	0.3	0
Walking	0.9	0	0.5	0	0	1.2
September 1980						
Feeding						
Lying	No data were collected here					
Walking						
October 1980						
Feeding	52.5	17.0	4.5	1.7	0.4	4.6
Lying	9.3	2.1	1.1	0.2	0.1	0
Walking	3.1	2.1	0.1	0.4	0	0.8

FIGURE 3:8 continued

Monthly behavioural occupance of sika deer in the New Forest

	OW	PT	PS	C	F	R
November 1980						
Feeding	55.8	18.4	3.4	0.9	0.4	3.6
Walking	10.2	0	0.8	0	0	0
Lying	4.3	0.7	0	0	0.4	1.2
December 1980						
Feeding	51.9	18.2	2.1	2.1	1.1	5.7
Lying	11.5	0	4.2	0	0	0
Walking	1.2	0	0	0	0	2.1
January 1981						
Feeding	30.1	47.6	4.3	2.0	1.4	6.1
Lying	5.5	0	1.8	0	0	0
Walking	0.5	0	0.1	0	0.1	0.9
February 1981						
Feeding	33.4	37.0	3.9	1.7	3.6	4.2
Lying	8.3	1.1	2.9	0	0	0
Walking	2.5	1.1	0.3	0	0	0.1
March 1981						
Feeding	34.2	28.2	4.6	4.5	3.4	3.3
Lying	10.5	7.1	0.7	0	0.1	0
Walking	1.7	0	0	0	0	1.7
April 1981						
Feeding	28.7	52.6	2.7	4.0	0.4	2.7
Lying	4.6	0.2	0.3	0	0	0
Walking	3.3	0	0	0	0	0.6

OW Oak woodland PT Prethicket PS Polestage
C Clear-felled F Fields R Rides

FIGURE 3:8 continued

Monthly behavioural occupance of sika deer in the New Forest

	OW	PT	PS	C	F	R
May 1981						
Feeding	36.1	44.0	5.3	6.1	1.9	3.7
Lying	3.3	1.6	0.8	0	0	0
Walking	2.2	0	0	0	0	0.6
June 1981						
Feeding	17.2	60.3	4.6	4.6	0.6	5.8
Lying	2.7	1.1	1.4	0.1	0	0.1
Walking	0.8	0	0	0.2	0	0.5
July 1981						
Feeding	12.5	65.1	3.6	5.0	2.9	2.5
Lying	1.0	5.0	0.8	0	0.1	0
Walking	0.9	0	0.1	0.1	0	0.4
August 1981						
Feeding	19.9	55.9	3.2	6.9	1.2	7.5
Lying	2.6	0	1.8	0.1	0	0
Walking	0.2	0	0.3	0.2	0	0.4
September 1981						
Feeding	32.9	34.3	5.5	10.8	1.0	9.0
Lying	3.4	0	0.5	0.2	0.1	0
Walking	1.3	0	0	0	0	0.9
October 1981						
Feeding	30.4	39.2	12.0	1.9	1.5	4.5
Lying	5.5	2.2	1.6	0	0	0
Walking	0.2	0	0	0.3	0	0.8

FIGURE 3:9

Monthly behavioural occupance of sika deer at Purbeck

	Th	Sm	H	F	R	OW
January 1981						
Feeding	40.0	2.2	8.9	31.0	2.4	2.4
Lying	2.5	0.2	0.7	1.5	0.4	1.4
Walking	6.3	0	0	0	0.2	0
February 1981						
Feeding	8.8	2.8	30.3	30.6	2.7	4.6
Lying	0	0.7	0	3.4	0	0
Walking	8.8	0.3	6.2	0.3	0.4	0
March 1981						
Feeding						
Lying	No data were collected here					
Walking						
April 1981						
Feeding	40.0	1.8	10.6	30.8	1.1	1.4
Lying	0	0.7	1.6	9.0	0	0
Walking	1.5	0.2	0.4	0	0.1	0.9
May 1981						
Feeding	60.8	2.1	3.9	18.5	0.3	
Lying	0	0.1	0.4	8.8	0	
Walking	2.1	0	1.6	0.1	1.2	

Th Thicket Sm Salt marsh H Heath F Fields

R Rides OW Oak woodland

FIGURE 3:9 continued

Monthly behavioural occupance of sika deer at Purbeck

	Th	Sm	H	F	R	OW
June 1981						
Feeding	54.1	5.9	8.4	21.7	3.8	0
Lying	0	0	0.3	5.3	0	0
Walking	0	0	0	0	0.5	0
July 1981						
Feeding	53.7	7.2	2.5	24.6	2.8	0
Lying	0	2.0	0	1.8	0	0
Walking	4.5	0	0	0.7	0.2	0
August 1981						
Feeding	41.5	9.0	7.7	38.1	2.4	0
Lying	0	0.5	0	0.7	0	0
Walking	0	0	0	0	0.1	0
September 1981						
Feeding	37.2	5.7	8.5	30.9	1.2	6.0
Lying	0	1.0	1.4	5.2	0	0.5
Walking	1.9	0	0.2	0.2	0.2	0

FIGURE 3:10

Feeding occupance of sika deer
in the New Forest

Day and night separated

	OW	PT	PS	C	F	R
May 1980						
Day	22.5	70.1	1.5	1.0	0.8	4.1
Night	46.9	44.6	2.9	0.5	2.6	2.4
June						
Day	27.4	57.8	4.2	3.2	1.7	5.7
Night	42.3	28.1	15.7	2.0	2.7	9.2
July						
Day	41.2	34.2	4.8	7.7	3.4	8.8
Night	40.7	42.4	6.2	3.5	2.0	5.2
August						
Day	29.9	37.9	16.8	5.3	3.7	6.4
Night	38.2	46.7	6.1	4.1	1.5	3.4
September						
Day	No data were collected here					
Night						
October						
Day	58.2	25.6	5.5	1.4	0.9	8.3
Night	71.3	16.2	5.7	2.9	0.3	3.7
November						
Day	57.8	26.0	6.6	0.4	1.3	8.0
Night	71.7	20.9	3.3	1.5	0.2	3.1
December						
Day	40.6	41.3	3.8	0.4	3.0	10.8
Night	80.8	9.6	1.8	2.2	0.3	5.2

FIGURE 3:10 continued

Feeding occupance of sika deer

in the New Forest

Day and night separated

	OW	PT	PS	C	F	R
January 1981						
Day	23.5	59.2	5.1	2.4	1.3	8.5
Night	45.2	42.4	4.1	1.9	1.4	5.0
February						
Day	32.3	57.5	1.4	0.6	1.0	7.2
Night	53.9	19.2	10.7	4.7	9.3	2.4
March						
Day	43.4	38.9	2.3	6.1	4.2	5.1
Night	43.9	25.7	17.9	4.5	5.4	2.6
April						
Day	25.5	62.8	3.0	5.2	0.3	3.2
Night	54.5	36.8	2.9	2.6	0.9	2.3
May						
Day	30.7	49.4	5.4	7.8	1.2	5.5
Night	53.4	33.9	5.4	2.4	3.3	1.6
June						
Day	17.3	66.3	4.9	4.3	0.6	6.6
Night	22.5	59.4	4.9	7.4	0.6	5.3
July						
Day	16.3	68.2	5.3	2.8	3.2	4.2
Night	11.3	77.4	2.5	5.1	2.8	0.9

FIGURE 3:10 continued

Feeding occupance of sika deer

in the New Forest

Day and night separated

	OW	PT	PS	C	F	R
August 1981						
Day	12.1	75.2	1.8	3.4	0.9	6.6
Night	34.5	35.8	5.8	13.4	1.5	8.9
September						
Day	41.1	28.8	6.3	10.6	0	13.1
Night	30.2	44.1	5.7	13.0	0.8	6.3
October						
Day	29.6	46.0	14.9	1.4	1.6	6.6
Night	40.6	40.3	11.1	3.3	1.9	2.9

OW	Oak woodland
PT	Prethicket
PS	Polestage
C	Clear-felled
F	Fields
R	Rides

FIGURE 3:11

Ruminating occupance of sika deer
in the New Forest
Day and night separated

	OW	PT	PS	C	F
May 1980					
Day	96.9	0	3.1	0	0
Night	85.4	0	8.9	0	5.7
June					
Day	0	0	0	0	100.0
Night	53.1	0	45.0	0	2.0
July					
Day	0	0	0	57.2	42.8
Night	60.6	0	35.4	1.4	2.6
August					
Day	0	0	0	0	100.0
Night	80.2	0	12.5	5.1	2.2
September					
Day	No data were collected here				
Night					
October					
Day	80.1	0	13.9	0	6.0
Night	71.5	18.8	7.6	1.7	0.4
November					
Day	48.5	0	51.5	0	0
Night	98.6	0	1.4	0	0

FIGURE 3:11 continued

Ruminating occupance of sika deer

in the New Forest

Day and night separated

	OW	PT	PS	C	F
December 1980					
Day	100.0	0	0	0	0
Night	70.9	0	29.1	0	0
January 1981					
Day	67.4	0	32.6	0	0
Night	79.1	0	20.9	0	0
February					
Day	39.6	60.4	0	0	0
Night	72.2	0	27.8	0	0
March					
Day	27.6	71.5	0	0	0.9
Night	91.7	0	8.3	0	0
April					
Day	58.5	41.5	0	0	0
Night	88.7	0	11.3	0	0
May					
Day	30.3	69.7	0	0	0
Night	75.4	0	24.6	0	0
June					
Day	60.6	0	30.2	6.9	2.3
Night	47.8	26.7	24.2	1.2	0

FIGURE 3:11 continued

Ruminating occupance of sika deer
in the New Forest
Day and night separated

	OW	PT	PS	C	F
July 1981					
Day	10.7	82.9	6.4	0	0
Night	16.7	69.2	12.8	0	1.2
August					
Day	0	0	0	100.0	0
Night	58.0	0	40.9	1.2	0
September					
Day	100.0	0	0	0	0
Night	79.5	0	12.3	5.4	2.8
October					
Day	45.2	0	50.1	0	4.1
Night	60.3	26.5	13.2	0	0

OW	Oak woodland
PT	Prethicket
PS	Polestage
C	Clear-felled
F	Fields

FIGURE 3:12

Feeding occupance of sika deer

at Purbeck

Day and night separated

	Th	Sm	H	F	R	OW
January 1981						
Day	95.2	0	0	0	4.8	0
Night	37.6	2.8	12.2	41.9	2.5	3.0
February						
Day	100.0	0	0	0	0	0
Night	5.3	3.3	36.5	46.4	3.2	5.4
March						
Day	No data were collected here					
Night						
April						
Day	82.5	1.0	9.7	1.5	5.3	0
Night	31.2	2.3	13.8	50.7	0.1	2.0
May						
Day	29.8	8.9	10.9	49.6	0.8	0
Night	79.5	0.8	2.3	17.2	0.3	0
June						
Day	80.4	0.2	9.1	3.4	6.9	0
Night	26.5	12.1	9.2	51.0	1.3	0

FIGURE 3:12 continued

Feeding occupance of sika deer

at Purbeck

Day and night separated

	Th	Sm	H	F	R	OW
July 1981						
Day	65.6	0.6	6.0	17.8	10.1	0
Night	57.6	9.2	1.4	31.2	0.6	0
August						
Day	77.5	0	0	16.2	6.4	0
Night	41.2	9.8	9.7	37.2	2.1	0
September						
Day	14.9	10.4	16.4	53.4	4.9	0
Night	52.2	6.1	9.6	23.6	0.9	7.7

Th Thicket

Sm Salt marsh

H Heath

F Fields

R Rides

OW Oak woodland

FIGURE 3:13

Feeding preferences of sika deer in the New Forest

	OW	PT	PS	C	F	R
1980						
May	1.42	9.53	0.13	1.18	2.91	2.23
June	1.10	5.67	0.29	2.66	3.12	2.52
July	1.07	2.61	0.20	4.22	3.75	2.39
August	1.16	4.04	0.39	3.22	3.38	1.53
September	No data were collecteted here					
October	1.85	1.65	0.23	1.34	0.64	1.87
November	2.00	1.81	0.18	0.78	0.64	1.46
December	1.81	1.74	0.11	0.58	1.81	2.28
1981						
January	1.36	5.90	0.29	0.70	2.57	3.16
February	1.33	4.05	0.23	0.53	6.57	1.91
March	10.9	3.18	0.28	1.46	6.43	1.55
April	1.49	7.50	0.21	1.62	0.95	1.62
May	1.26	4.22	0.28	1.69	3.0	1.47
June	0.85	8.27	0.34	1.82	1.33	3.33
July	0.66	9.40	0.28	2.04	7.07	1.50
August	0.69	5.37	0.17	1.89	1.87	3.01
September	0.99	2.86	0.25	2.58	1.41	3.15
October	1.20	4.24	0.70	0.58	2.79	2.03

OW Oak woodlands PT Prethicket PS Polestage

C Clear-felled F Fields R Rides

FIGURE 3:14

Ruminating preferences of sika deer in the New Forest

	OW	PT	PS	C	F	R
1980						
May	2.18	0	0.26	0	4.54	0
June	1.00	0	1.30	0	6.30	0
July	1.13	0	1.00	2.50	5.50	0
August	1.83	0	0.44	2.50	0.22	0
September	No data were collected here					
October	2.13	1.33	0.34	0.93	1.13	0
November	2.44	0	0.25	0	0	0
December	1.84	0	1.00	0	0	0
1981						
January	1.88	0	0.88	0	0	0
February	2.40	2.80	0.40	0	0	0
March	2.43	4.48	0.24	0	0.91	0
April	2.11	0	0	0	0	4.44
May	2.14	2.71	0.71	0	0	0
June	1.50	1.67	1.17	0.67	0.83	0.33
July	1.00	12.63	1.25	0	3.63	0
August	1.15	0	1.23	0.39	0	0
September	1.78	0	0.33	0.89	3.33	0
October	1.94	2.13	0.88	0	0.63	0

OW Oak woodland PT Prethicket PS Polestage

C Clear-felled F Fields R Rides

FIGURE 3:15

Feeding preferences of sika deer at Purbeck

	Th	Sm	H	F	R	OW
1981						
January	0.38	0.95	0.46	1.90	1.26	1.40
February	0.06	0.82	1.07	1.26	0.96	1.80
March		No data were collected here				
April	0.41	0.81	0.59	2.02	0.63	0.82
May	0.85	1.32	0.30	1.67	0.26	
June	0.48	2.34	0.41	1.23	1.84	
July	0.48	2.89	0.12	1.42	1.37	
August	0.27	2.61	0.27	1.57	0.85	
September	0.31	2.15	0.39	1.66	0.52	3.34

Th Thicket Sm Salt marsh

H Heath F Fields

R Rides OW Oak woodland

KEY

New Forest occupance figures

———— Prethicket.

— — — Oakwoodland

-·-·-·-·- Polestage

Purbeck occupance figures

———— Thicket

— — — Fields

-·-·-·-·- Heath

▬▬▬▬ Night-time

Purbeck and New Forest activity rhythms

———— Animals feeding

— — — Animals lying up and ruminating

-·-·-·-·- Animals walking

Figure 3:16

Activity rhythms in the New Forest

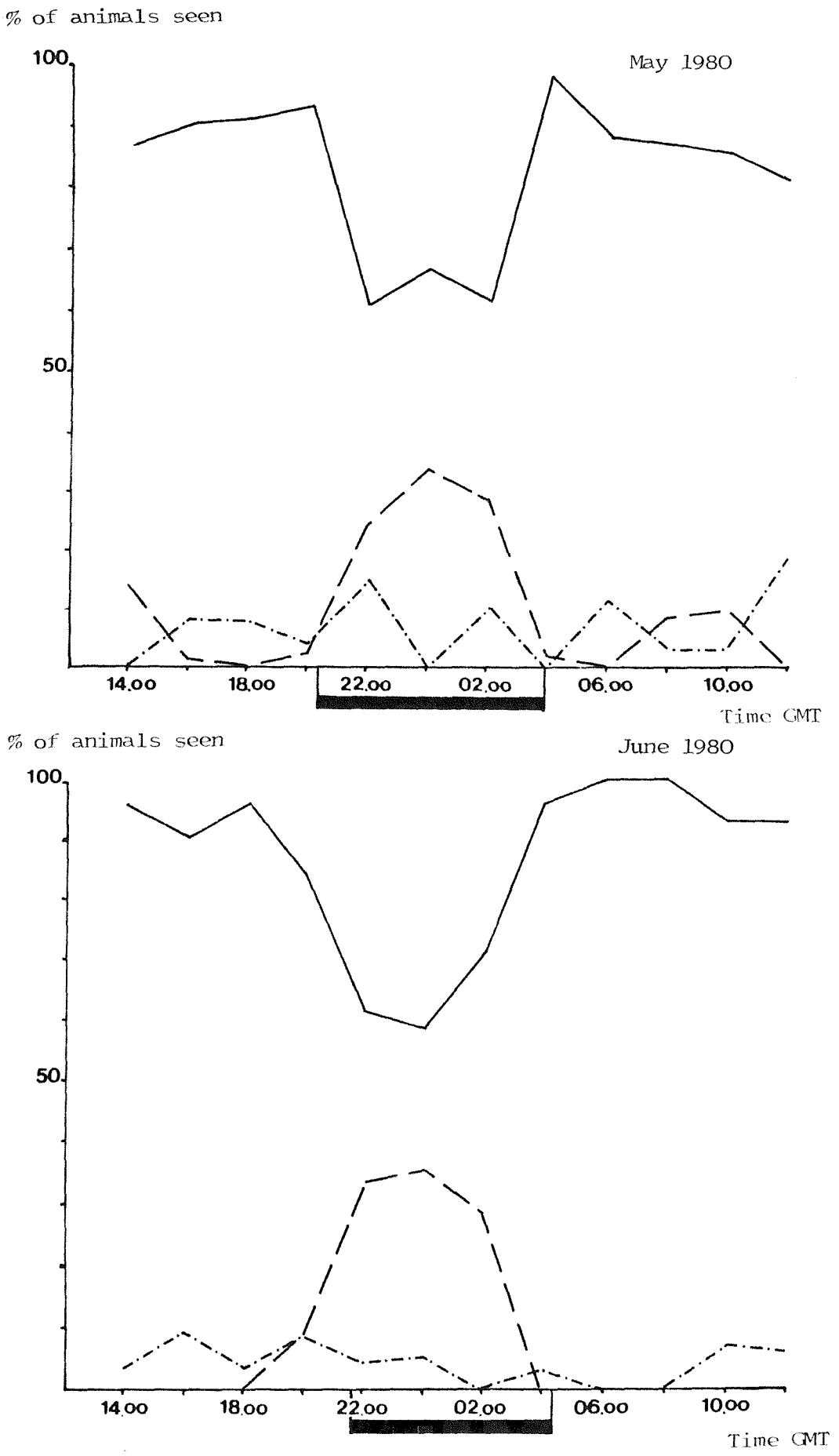


Figure 3:16 continued

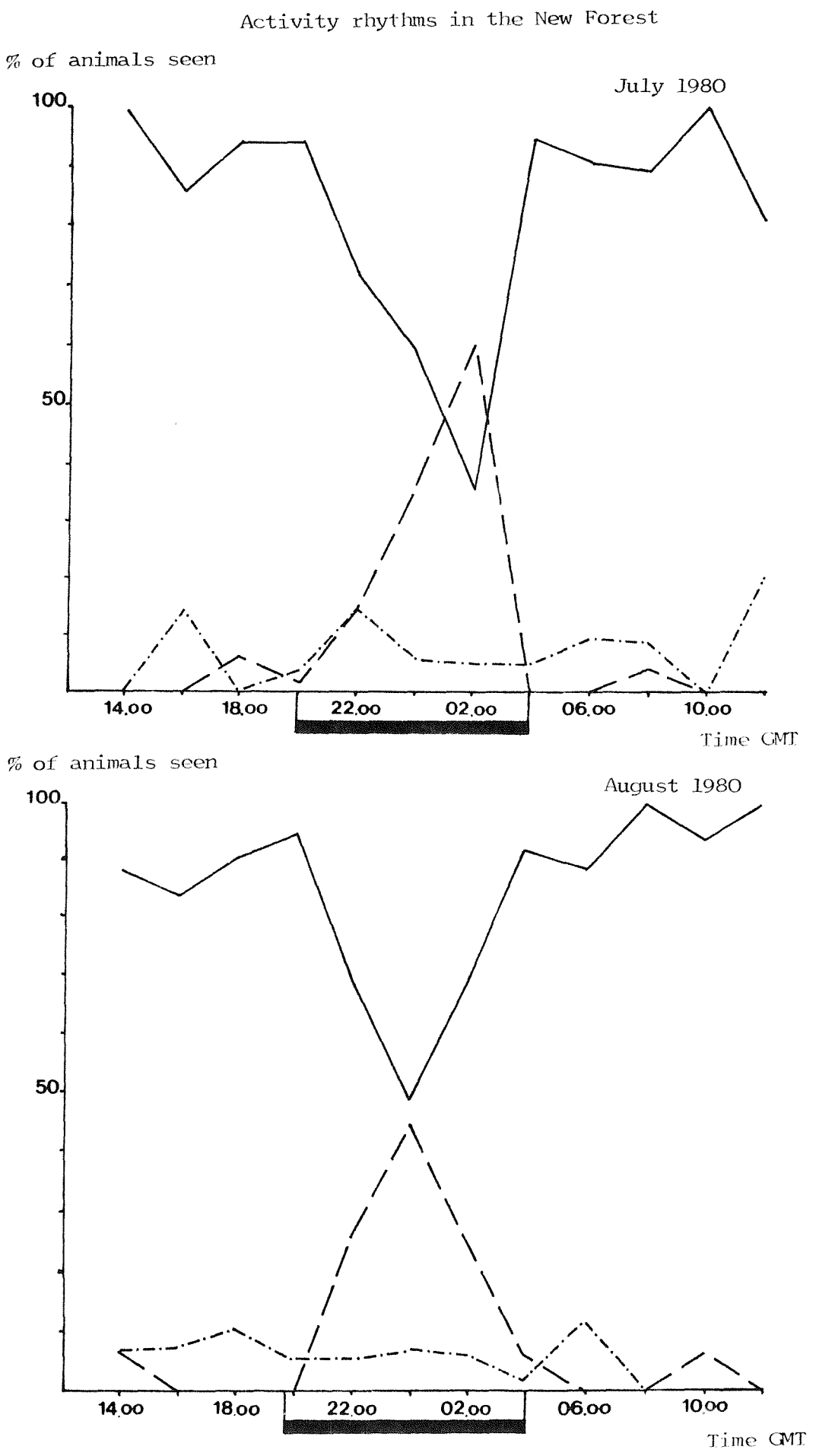
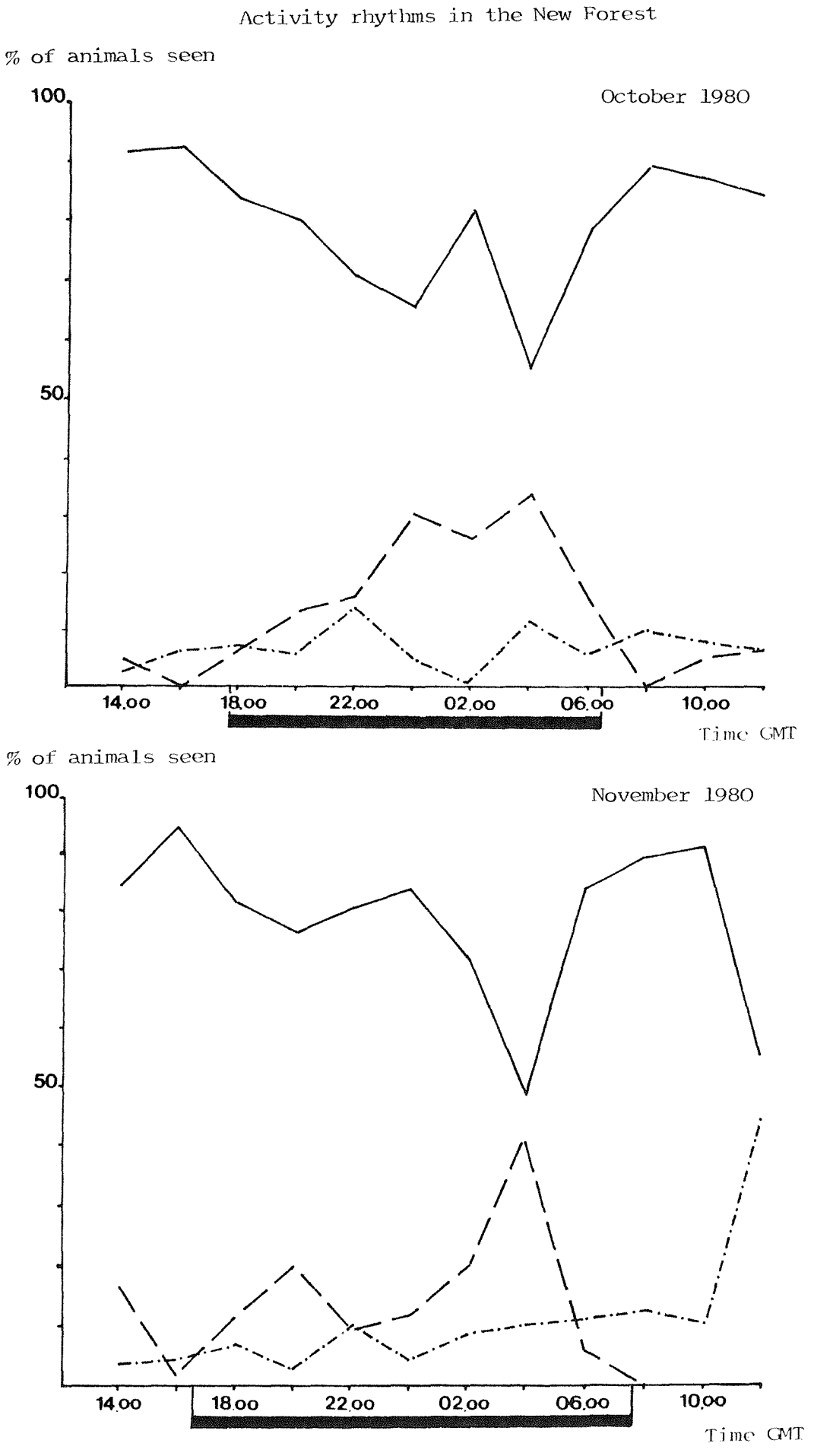


Figure 3:16 continued



KEY

New Forest occupance figures

———— Prethicket.

— — — Oakwoodland

-·-·-·-·- Polestage

Purbeck occupance figures

———— Thicket

— — — Fields

-·-·-·-·- Heath

▬▬▬▬ Night-time

Purbeck and New Forest activity rhythms

———— Animals feeding

— — — Animals lying up and ruminating

-·-·-·-·- Animals walking

Figure 3:16 continued

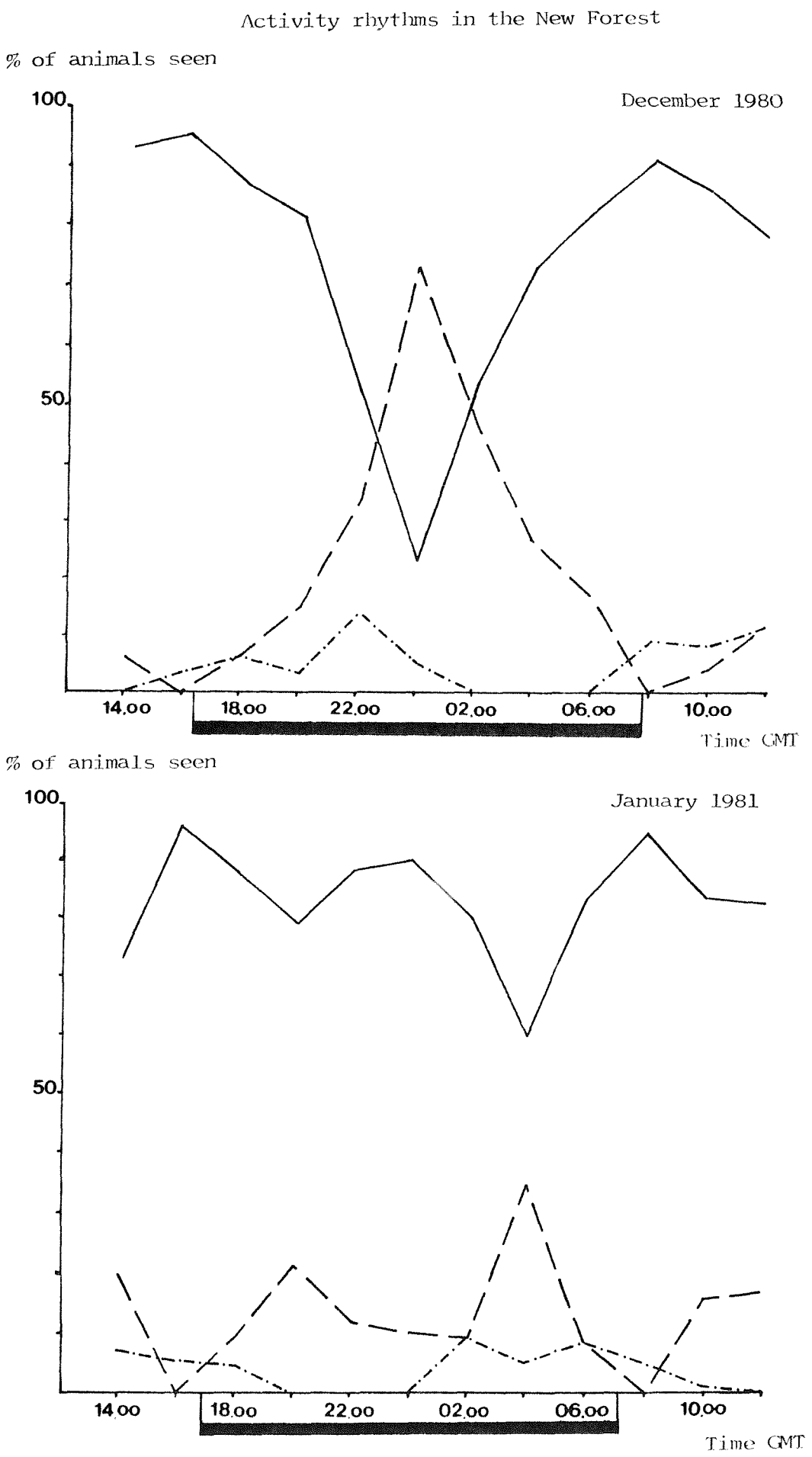


Figure 3:16 continued

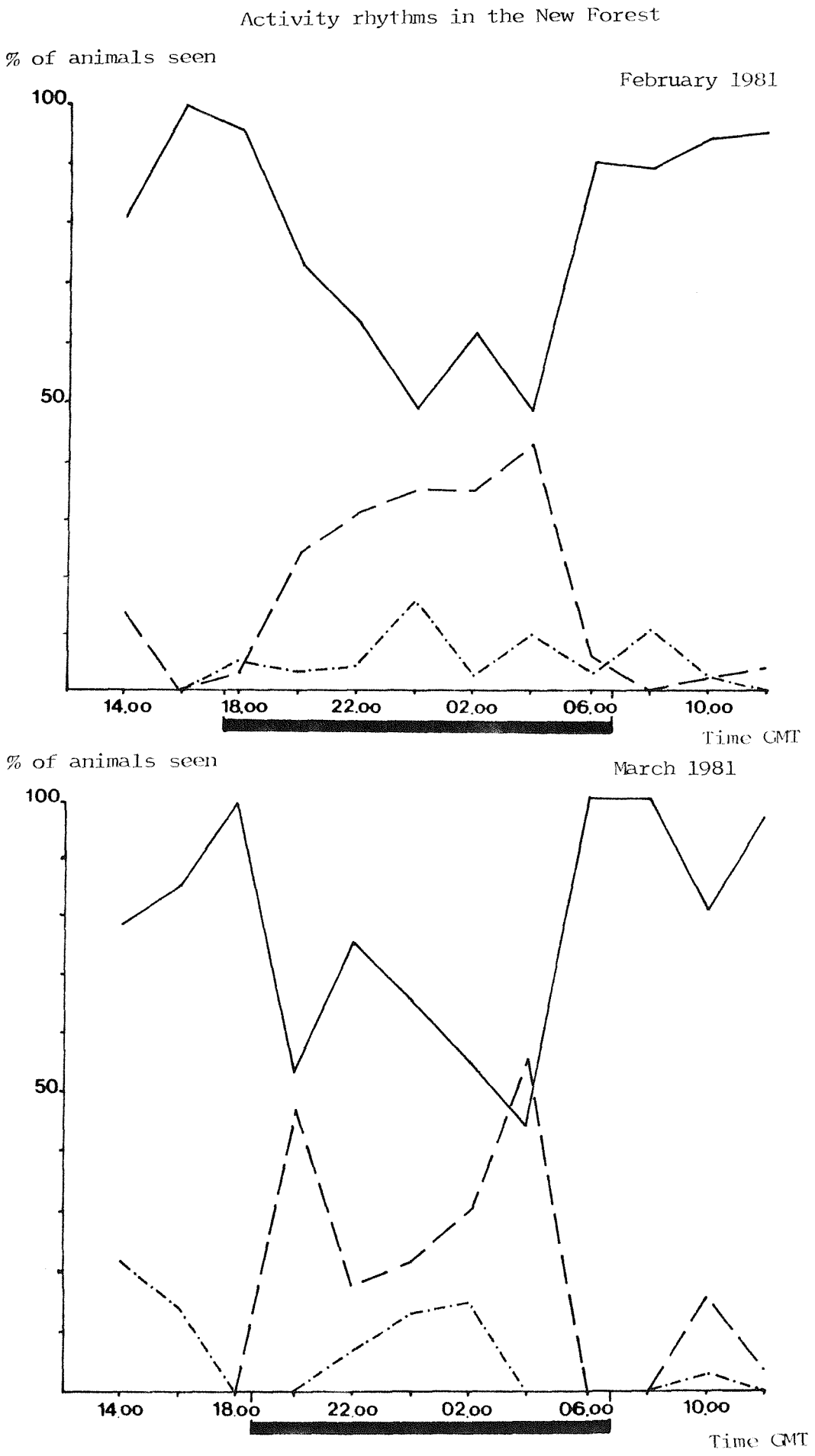
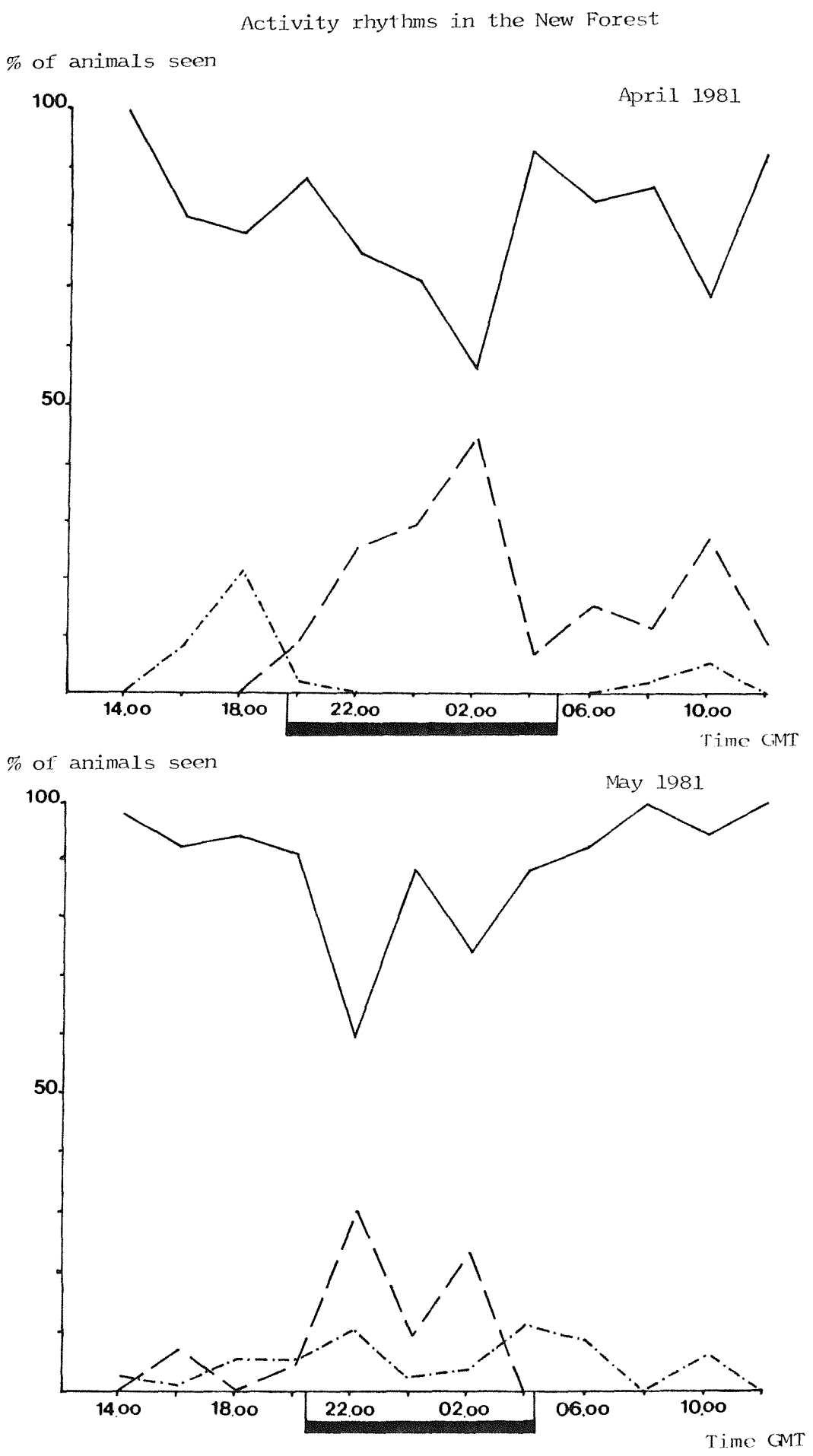


Figure 3:16 continued



KEY

New Forest occupance figures

Prethicket.

Oakwoodland

Polestage

Purbeck occupance figures

Thicket

Fields

Heath

Night-time

Purbeck and New Forest activity rhythms

Animals feeding

Animals lying up and ruminating

Animals walking

Figure 3:16 continued

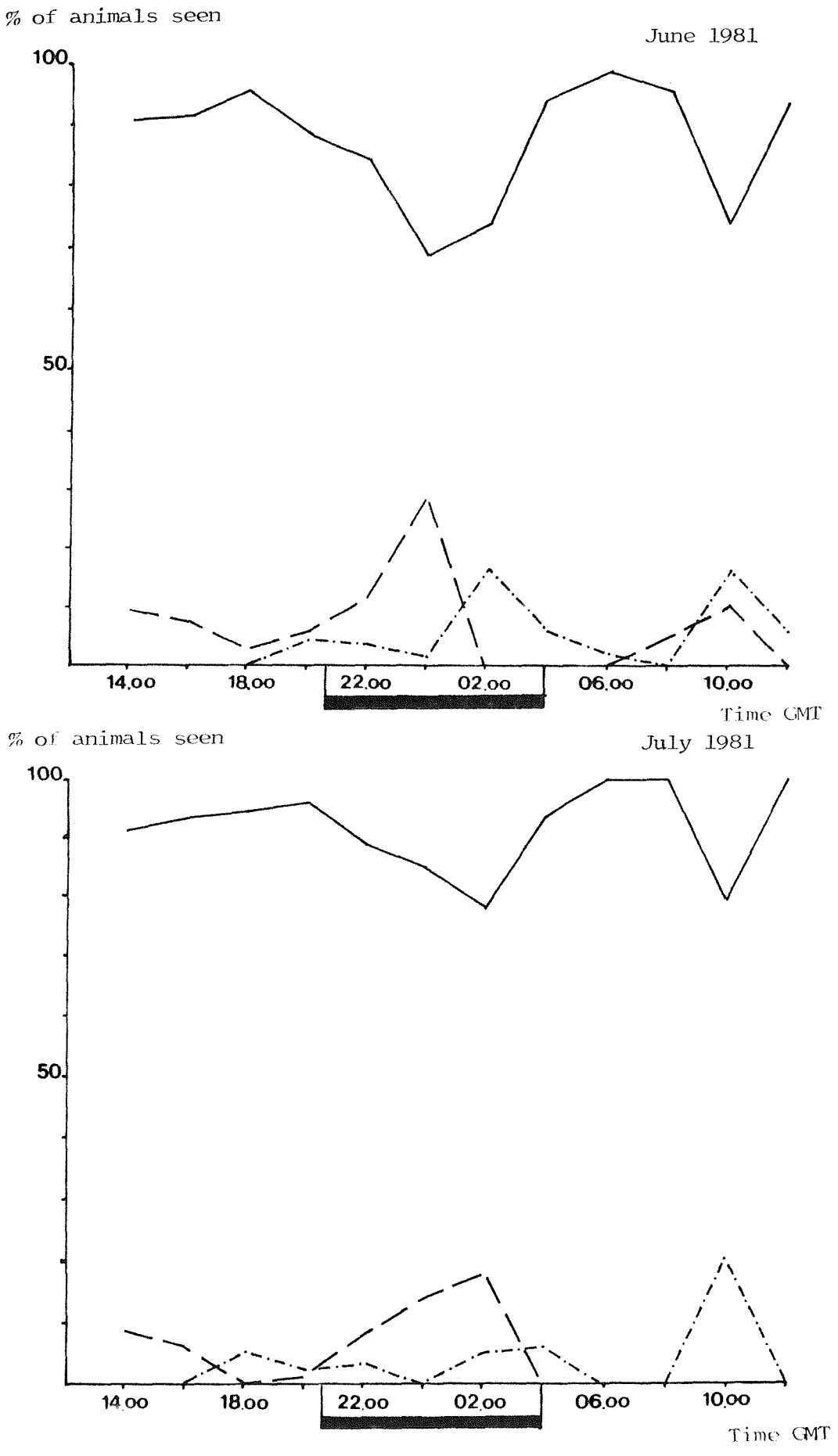


Figure 3:16 continued

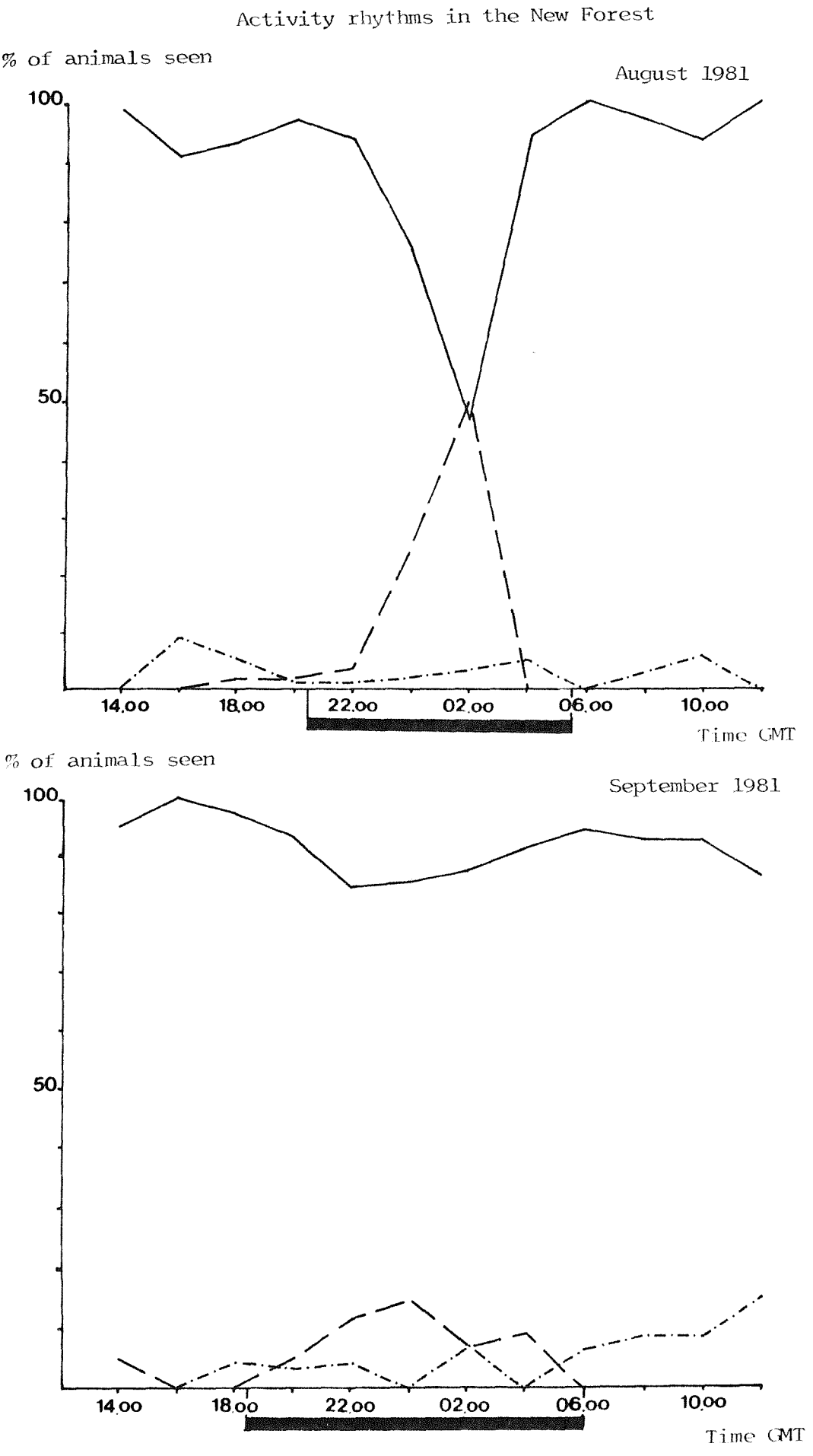
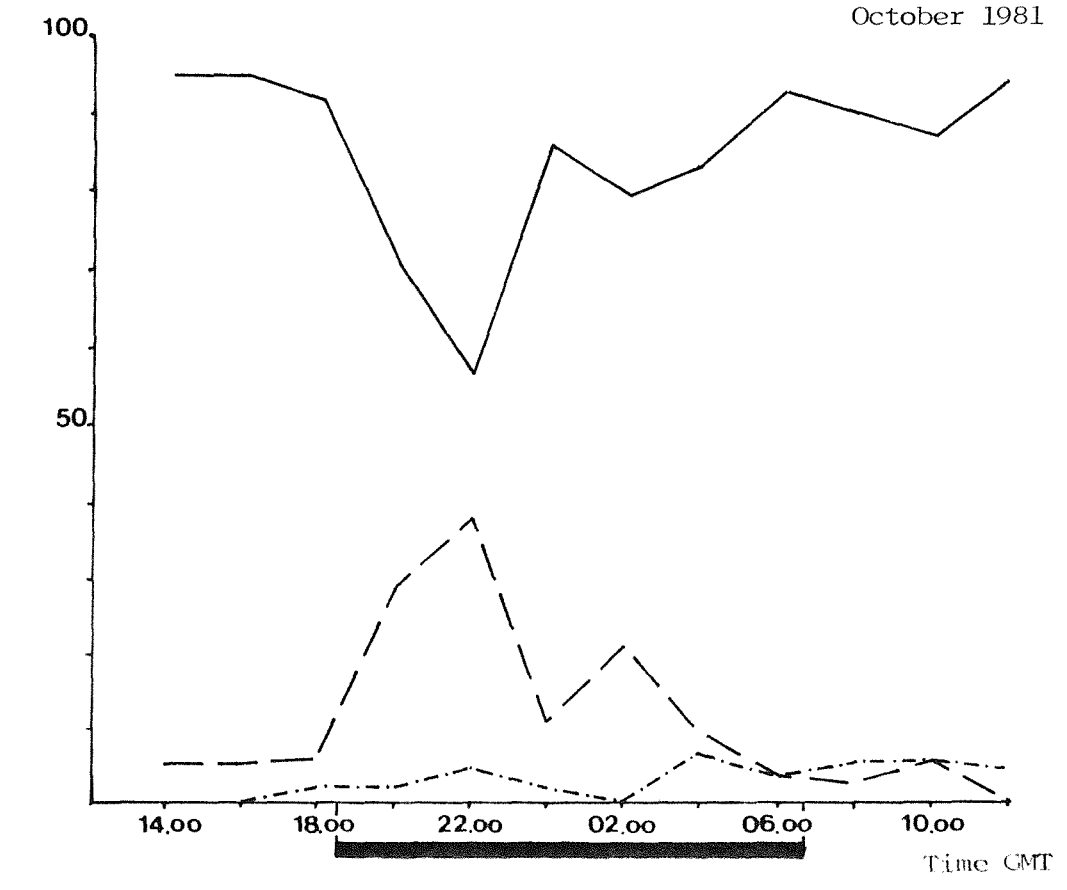


Figure 3:16 continued



KEY

New Forest occupance figures

———— Prethicket.

— — — Oakwoodland

-.-.-.-.- Polestage

Purbeck occupance figures

———— Thicket

— — — Fields

-.-.-.-.- Heath

▬▬▬▬ Night-time

Purbeck and New Forest activity rhythms

———— Animals feeding

— — — Animals lying up and ruminating

-.-.-.-.- Animals walking

Figure 3:17

Activity rhythms in Purbeck

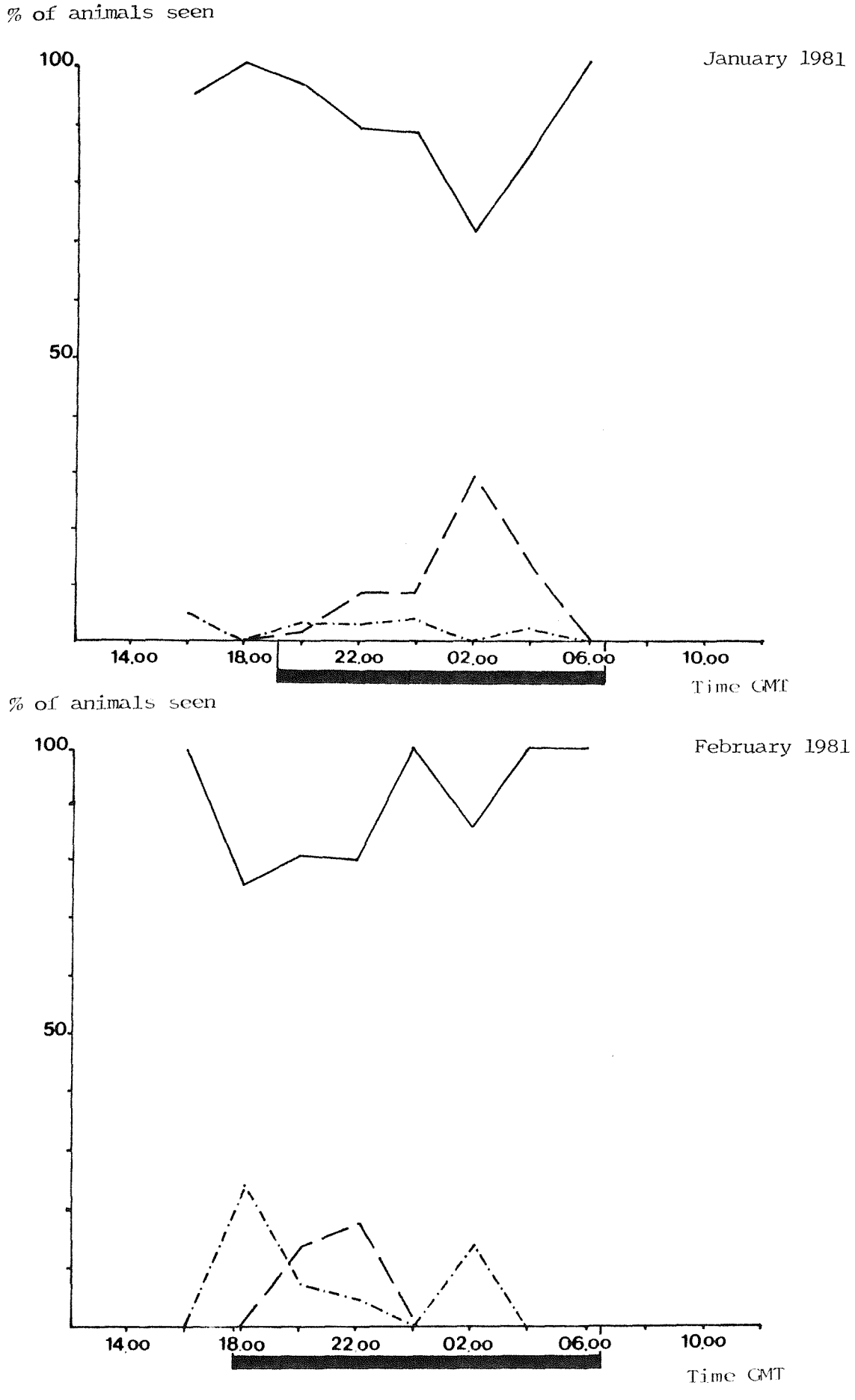
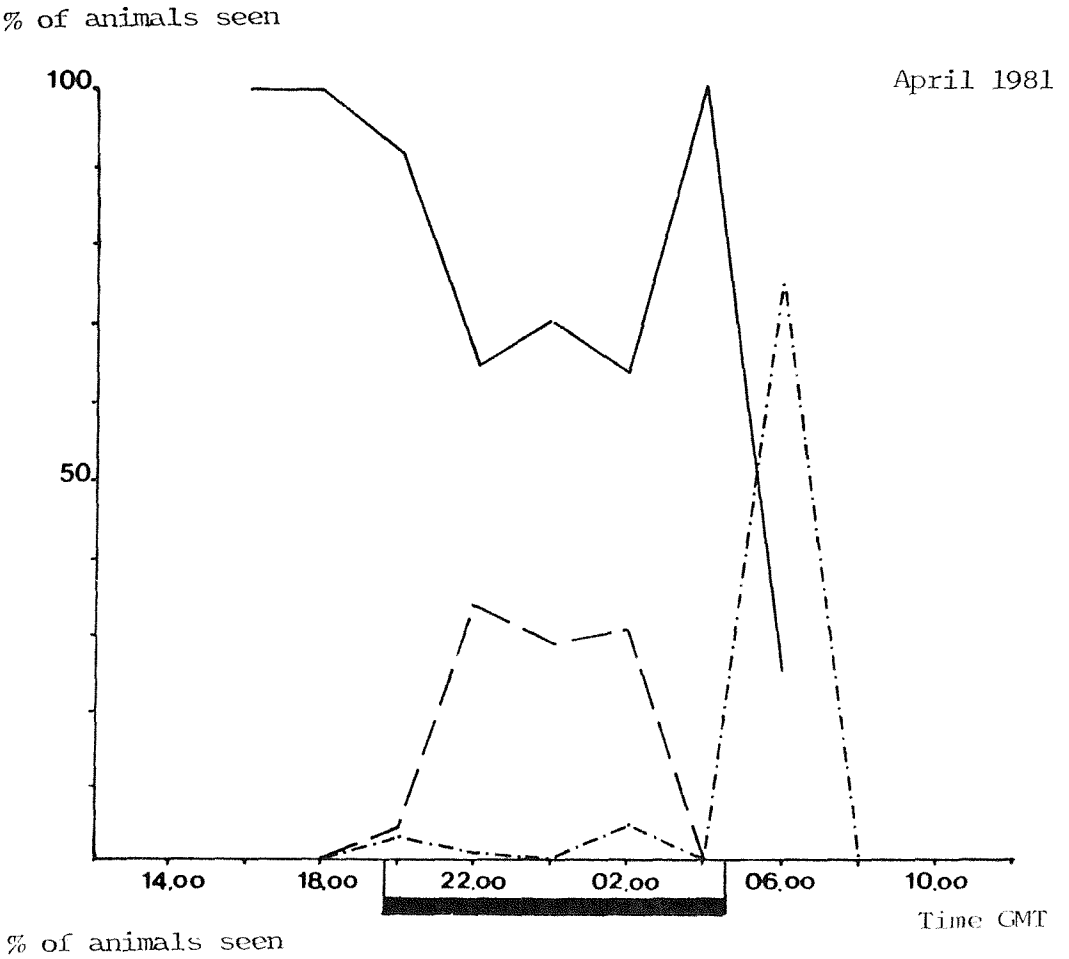


Figure 3:17 continued

Activity rhythms in Purbeck



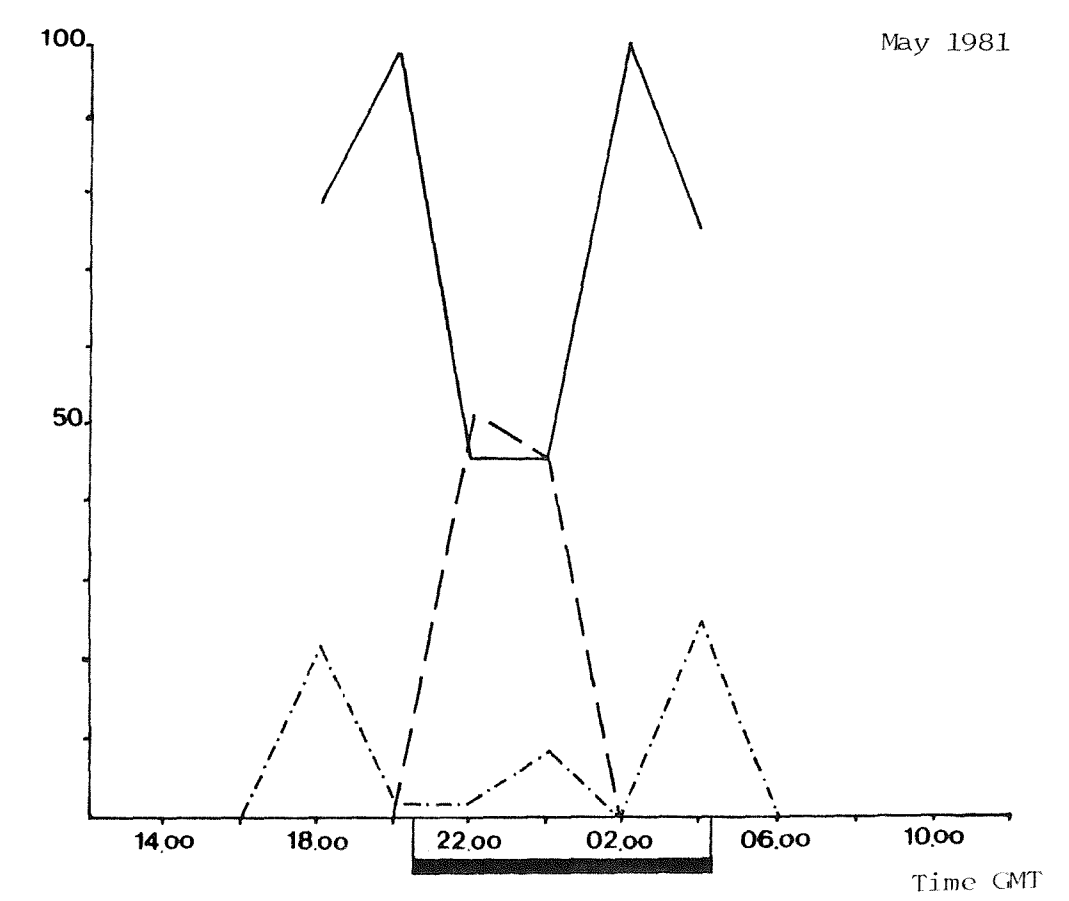
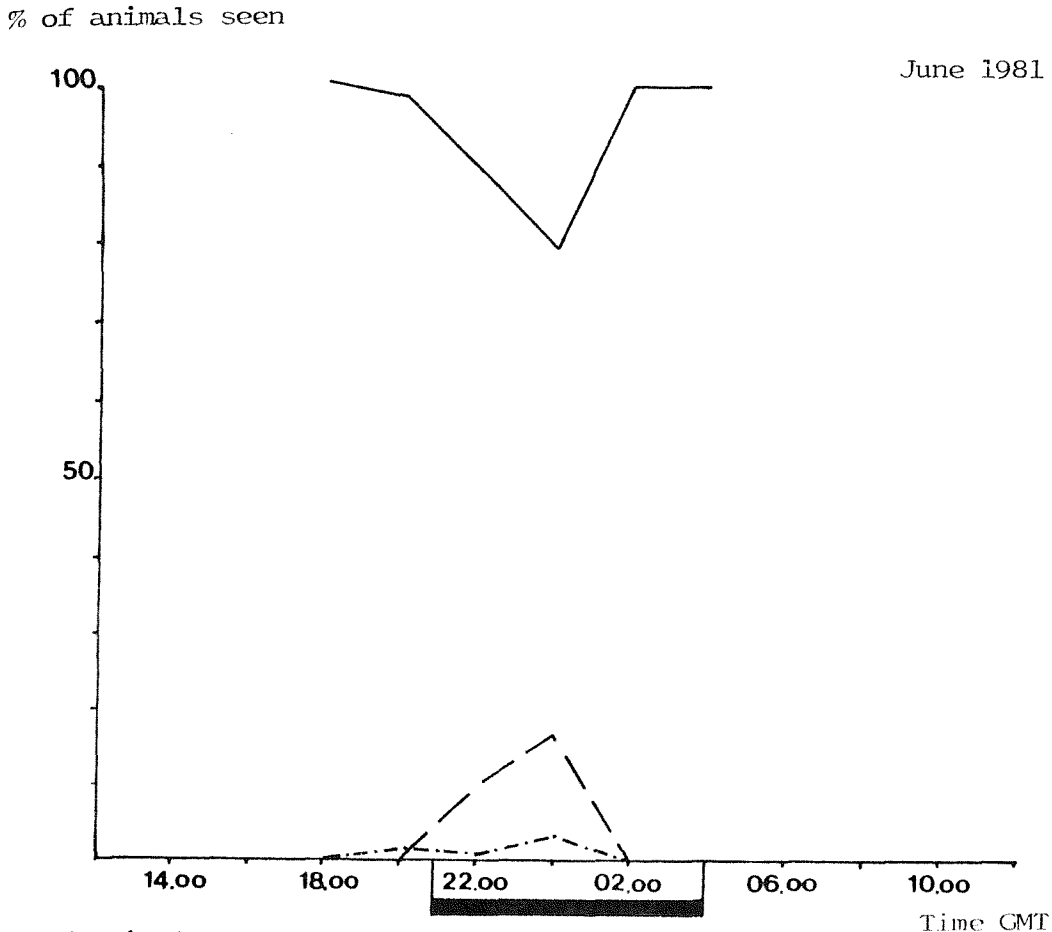


Figure 3:17 continued

Activity rhythms in Purbeck



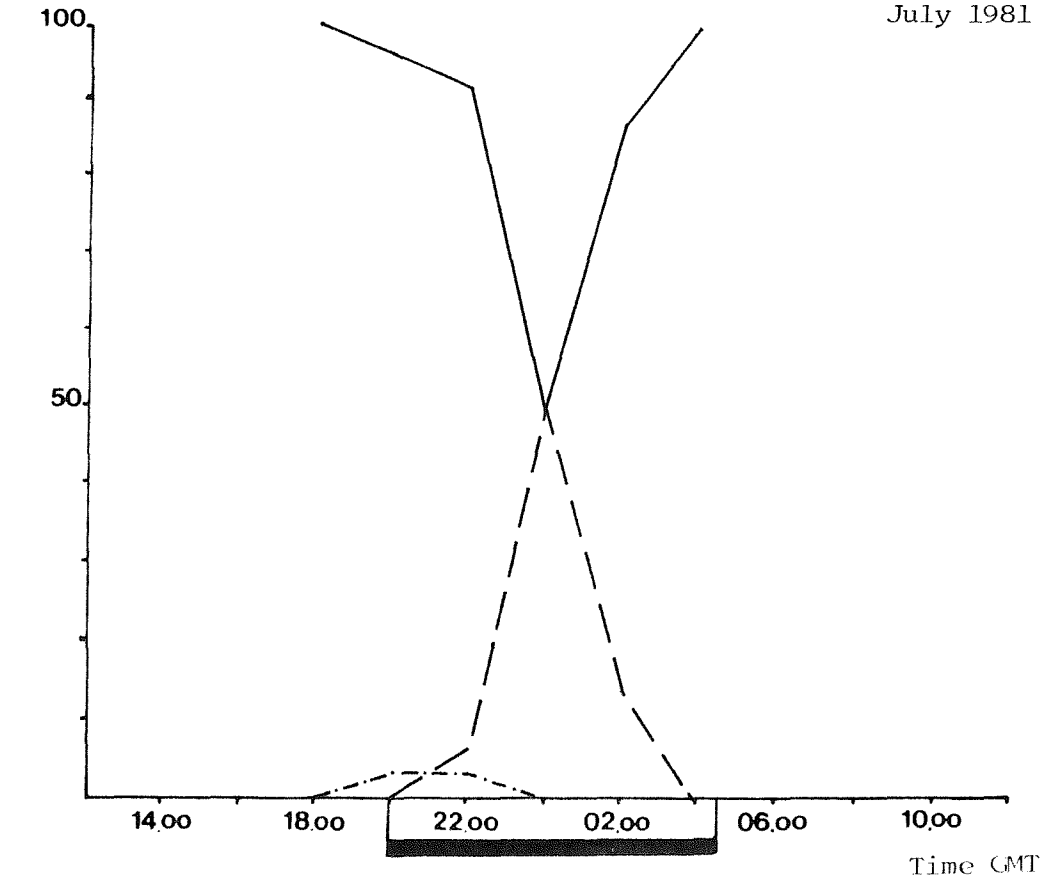
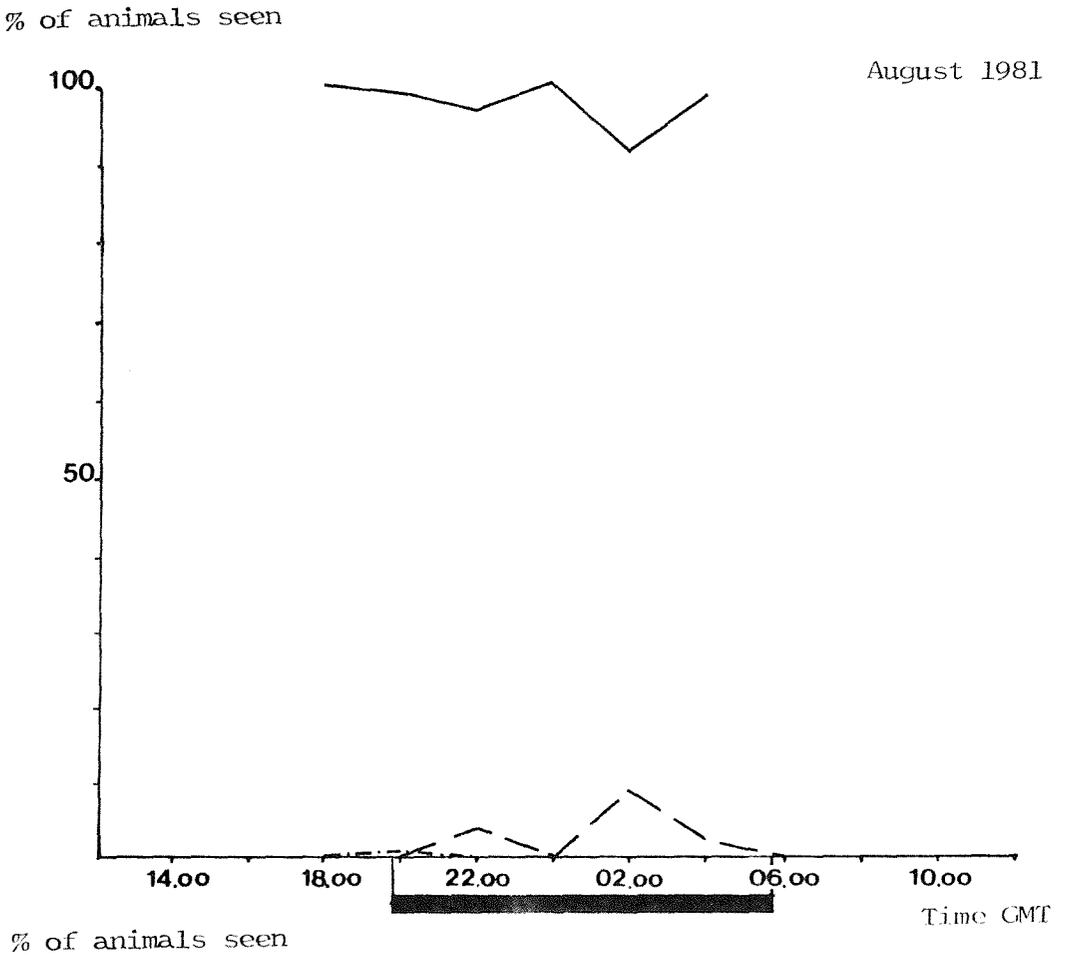
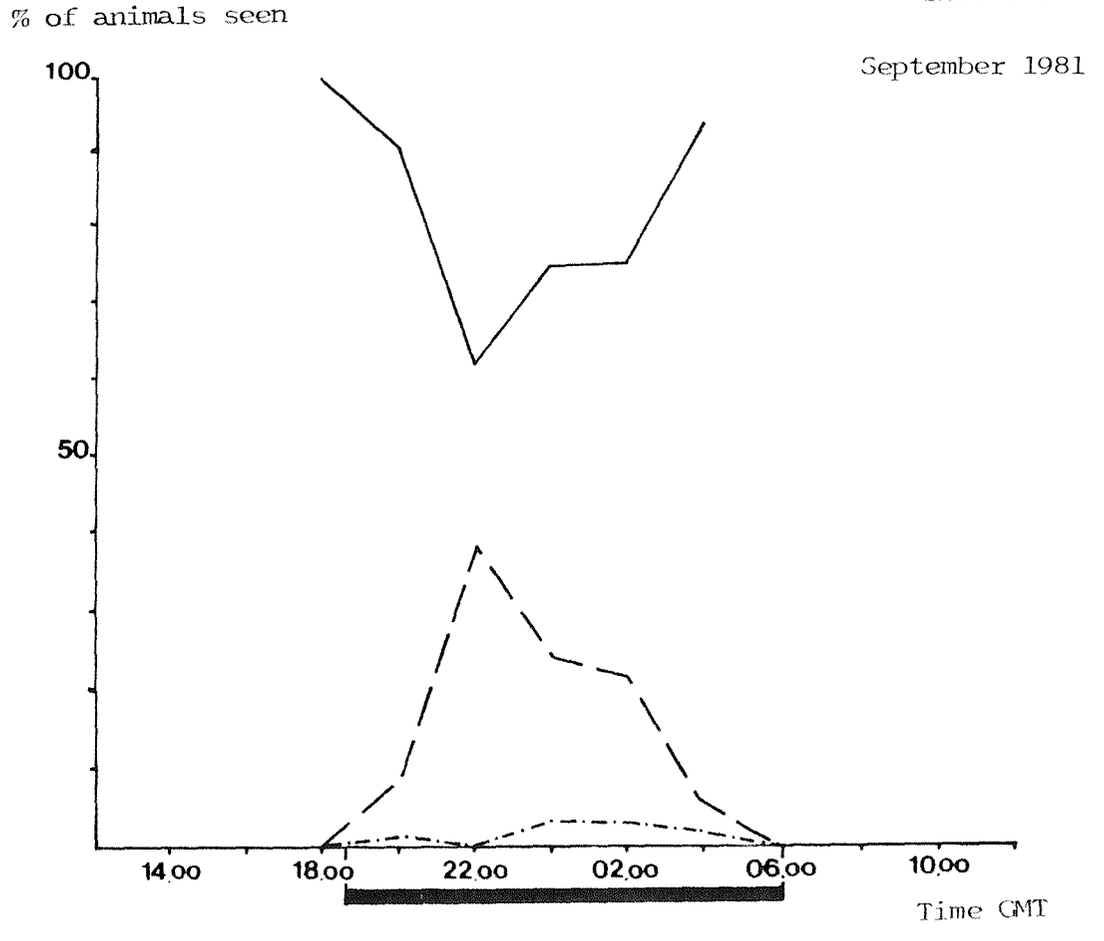


Figure 3:17 continued

Activity rhythms in Purbeck





C H A P T E R F O U R

Diet

Key:

A	Acorns
C	*Calluna vulgaris*
L	Leaves
G	Grass: of all species
N	Needles
I	*Ilex aquifolium*
U	*Ulex europaeus*
B	Bark

FIGURE 4:1

New Forest sika deer winter diet from rumen analysis

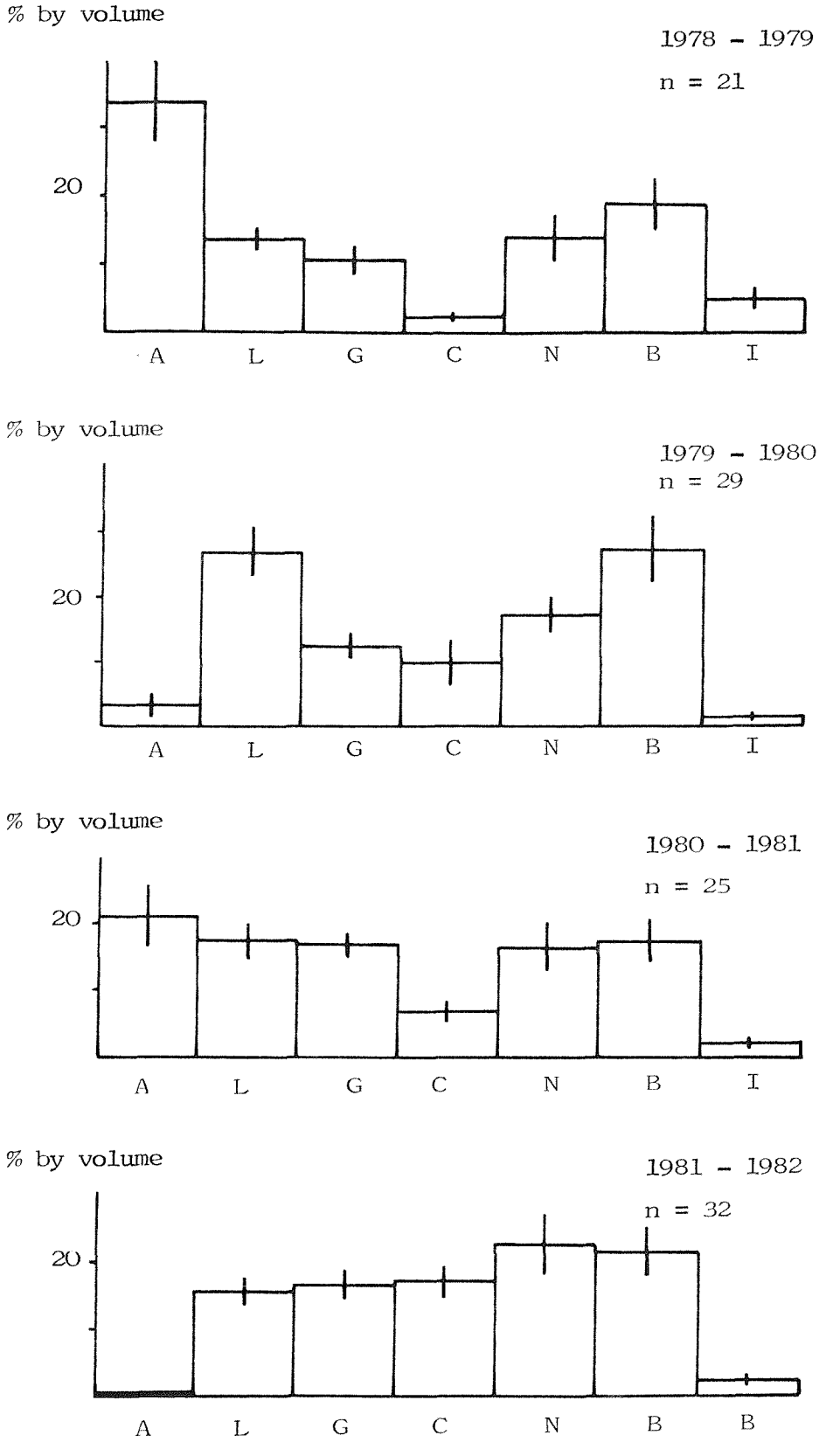


FIGURE 4:2

New Forest winter diet from rumen analysis 1978 - 1979

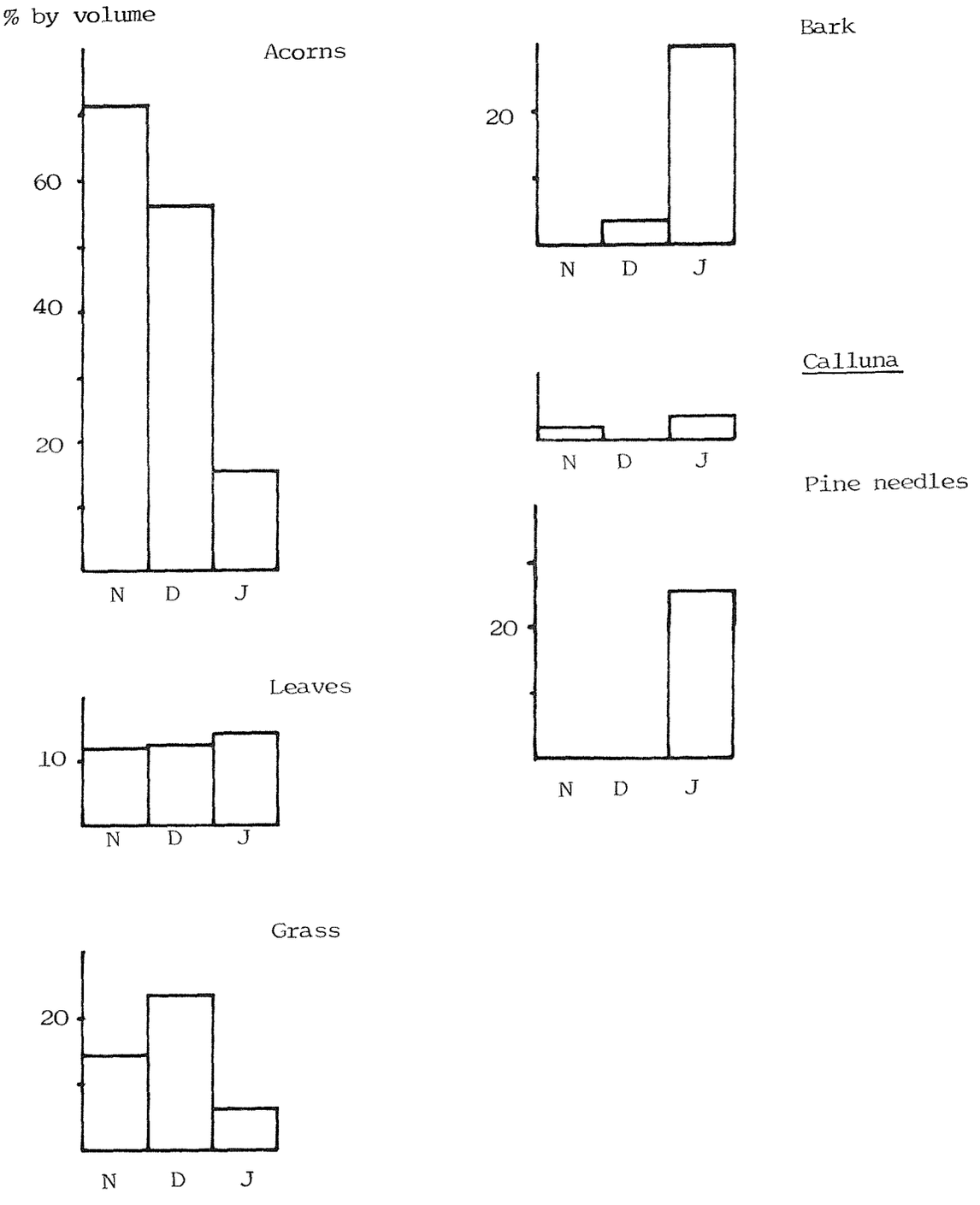


FIGURE 4:3

New Forest winter diet from rumen analysis 1979 - 1980

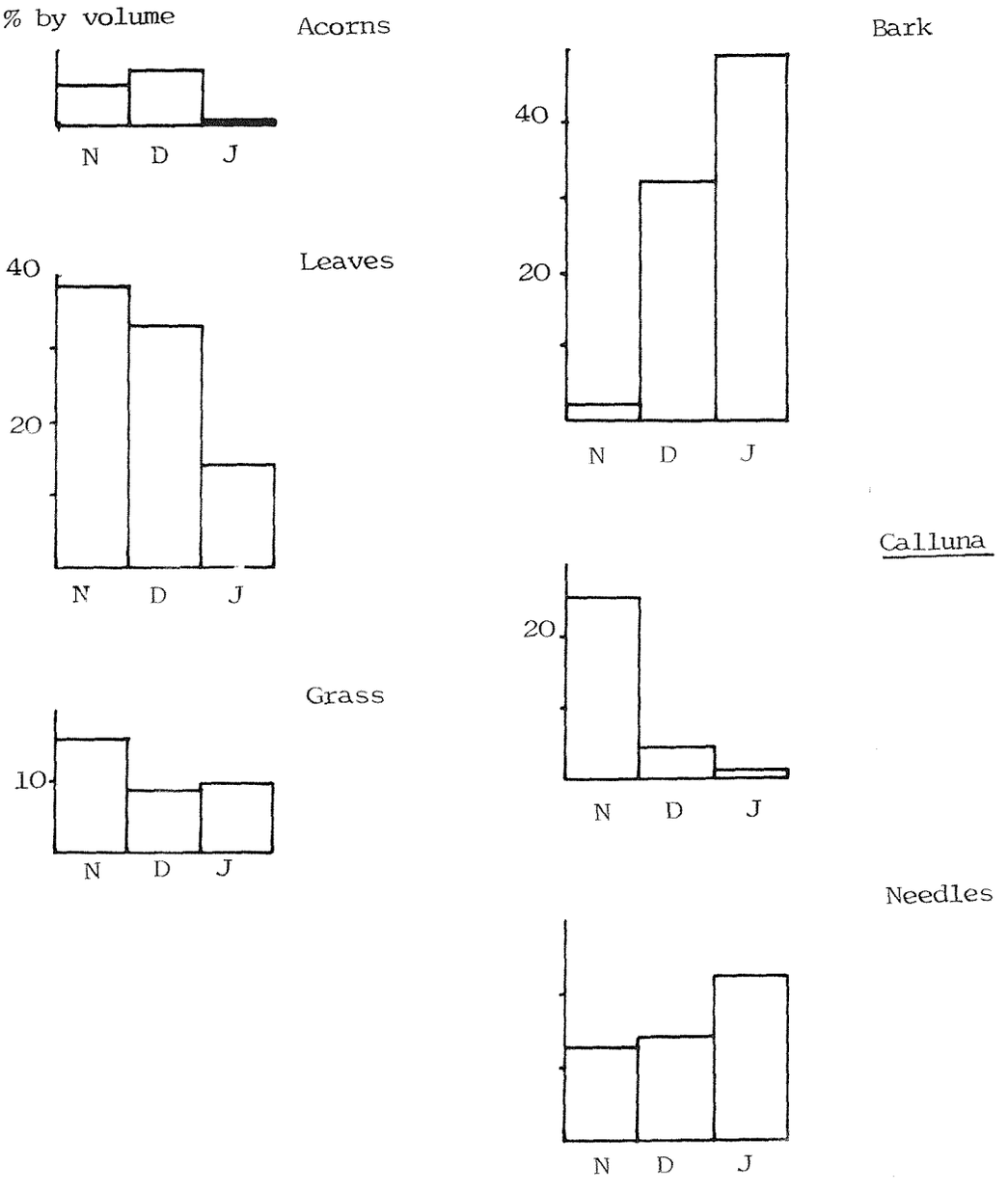


FIGURE 4:4

New Forest winter diet from rumen analysis 1980 - 1981

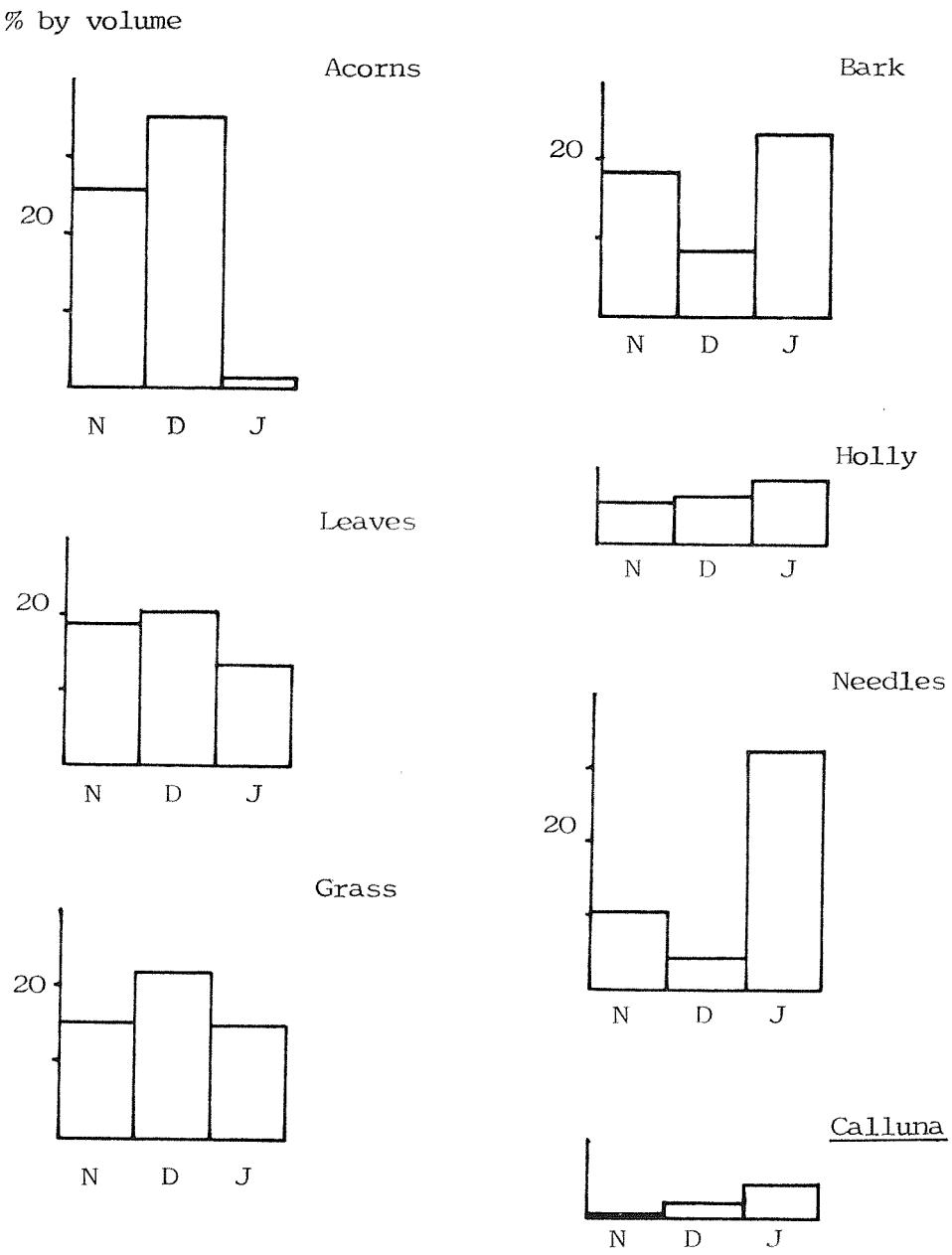
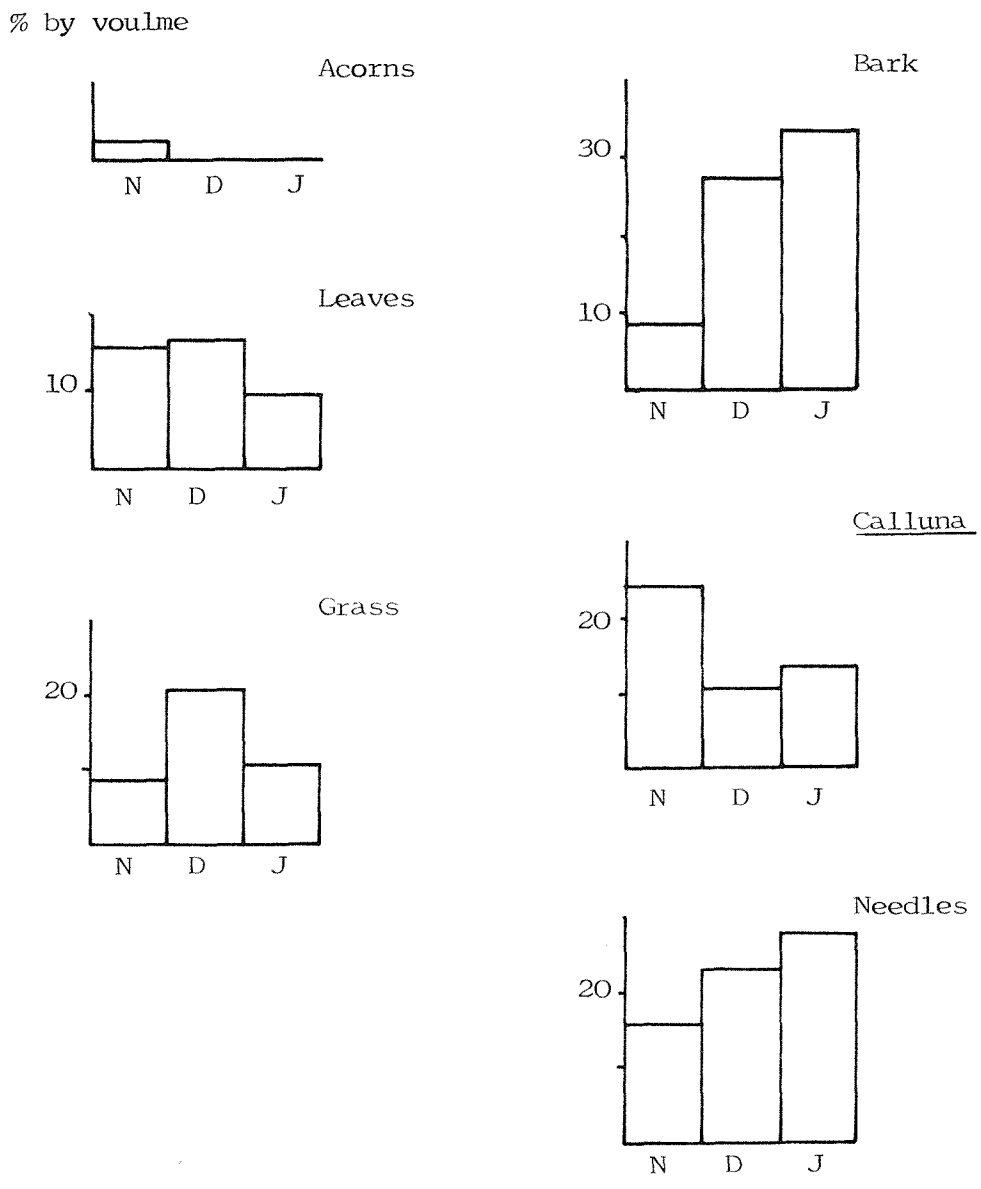


FIGURE 4:5

New Forest winter diet from rumen analysis 1981 - 1982



Key:

A	Acorns
C	*Calluna vulgaris*
L	Leaves
G	Grass: of all species
N	Needles
I	*Ilex aquifolium*
U	*Ulex europaeus*
B	Bark

FIGURE 4:6

Wareham sika deer winter diet from rumen analysis

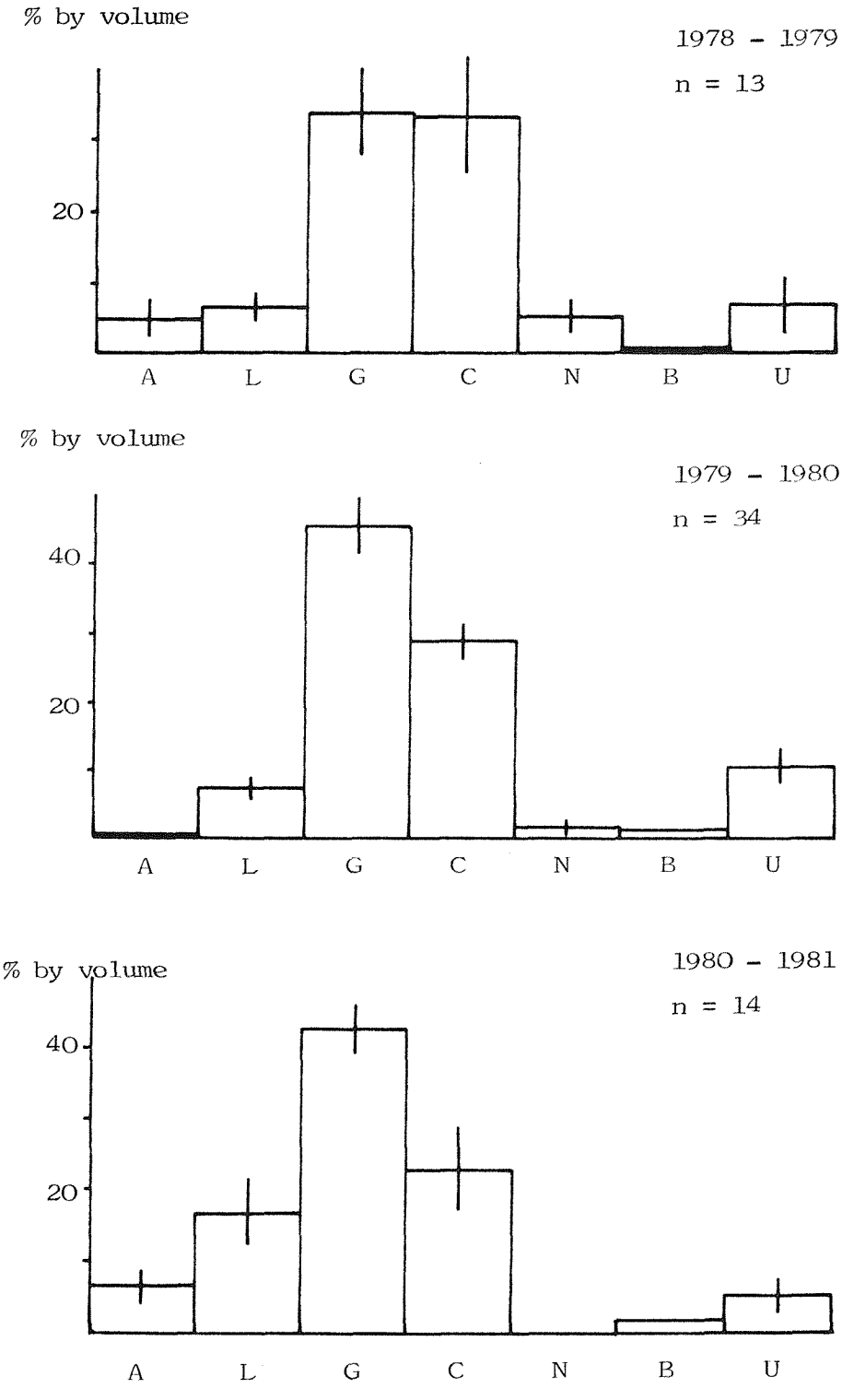


FIGURE 4:7

Wareham sika deer winter diet from rumen analysis 1978 - 1979

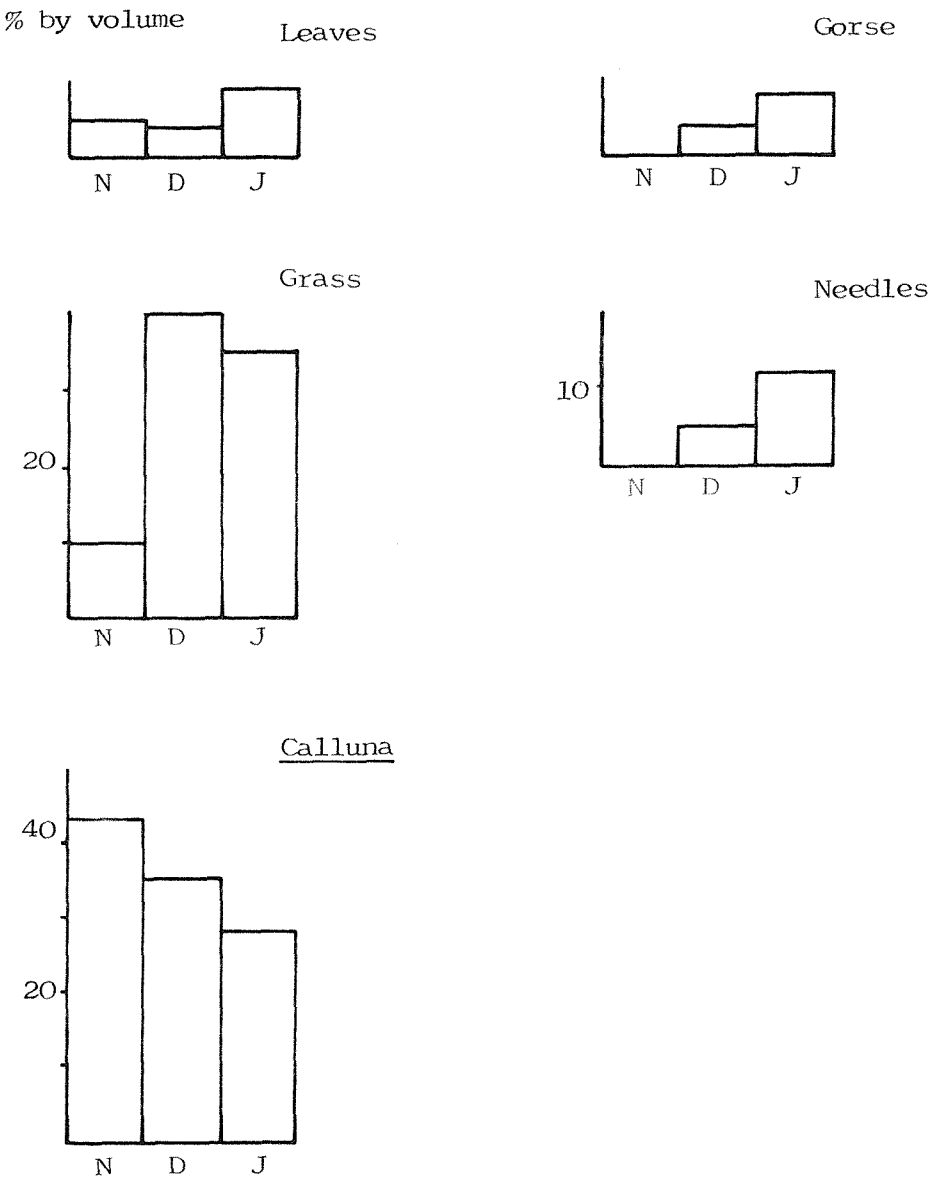


FIGURE 4:8

Wareham sika deer winter diet from rumen analysis 1979 - 1980

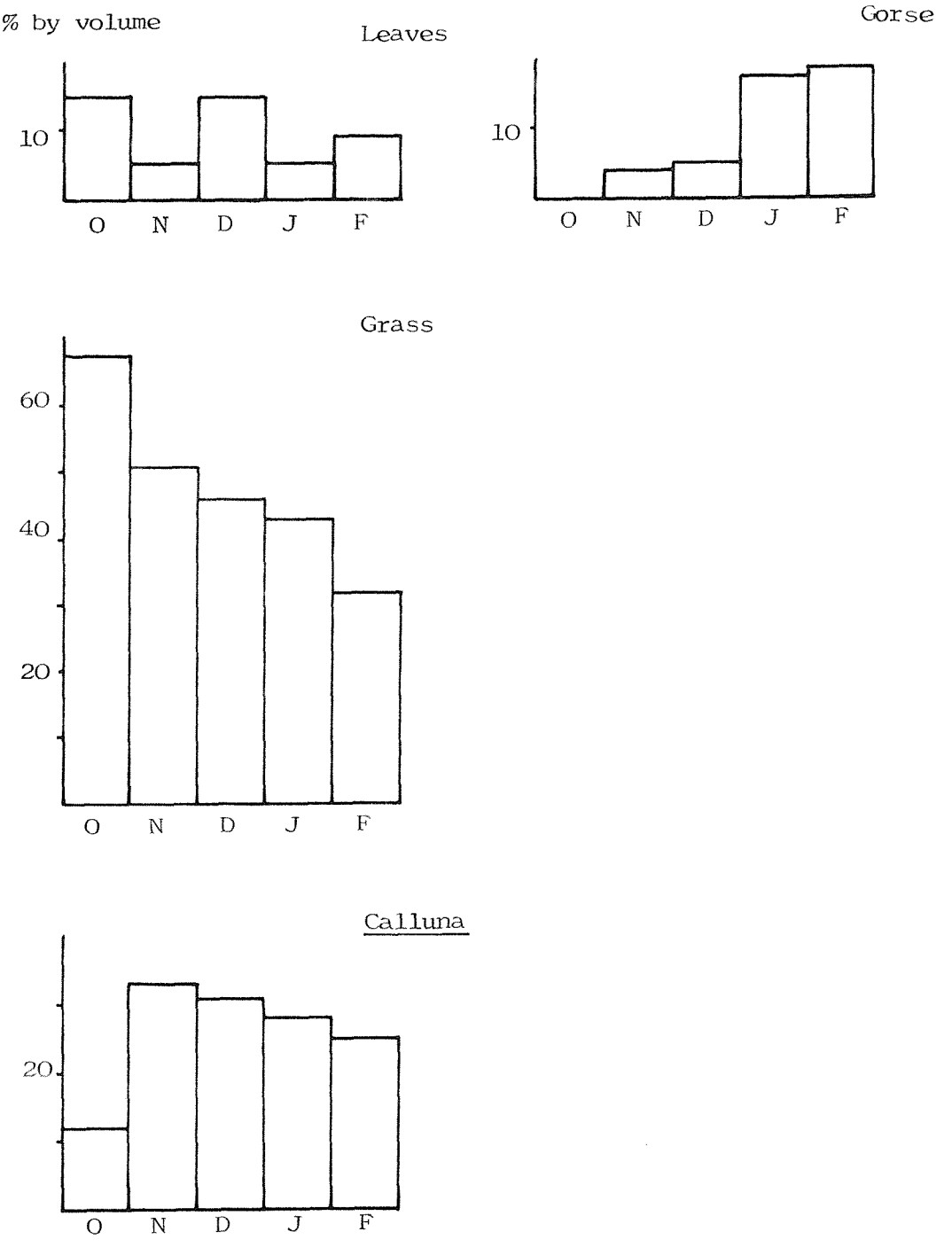


FIGURE 4:9

Wareham sika deer winter diet from rumen analysis 1980 - 1981

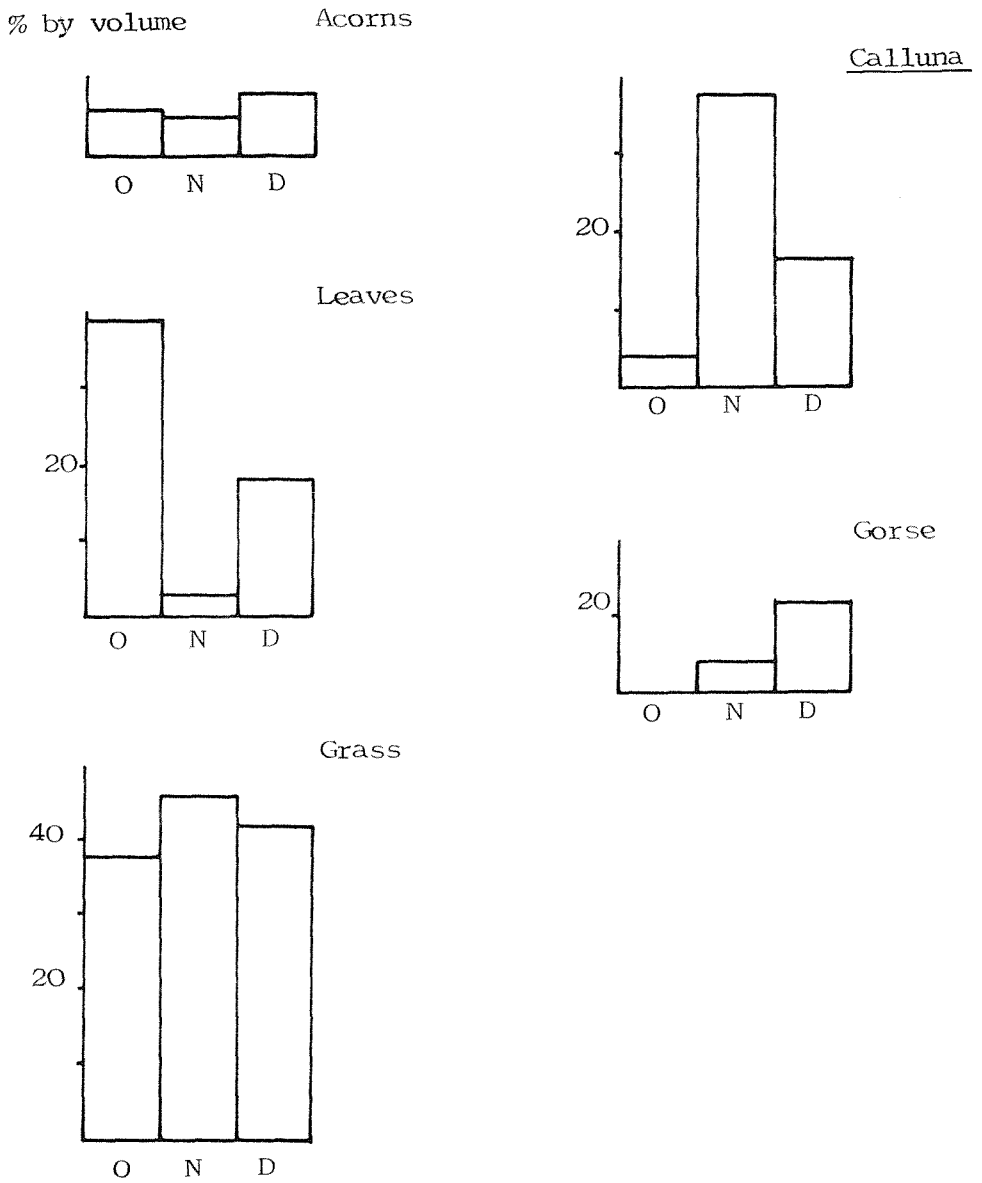


FIGURE 4:9

Wareham sika deer winter diet from rumen analysis 1980 - 1981

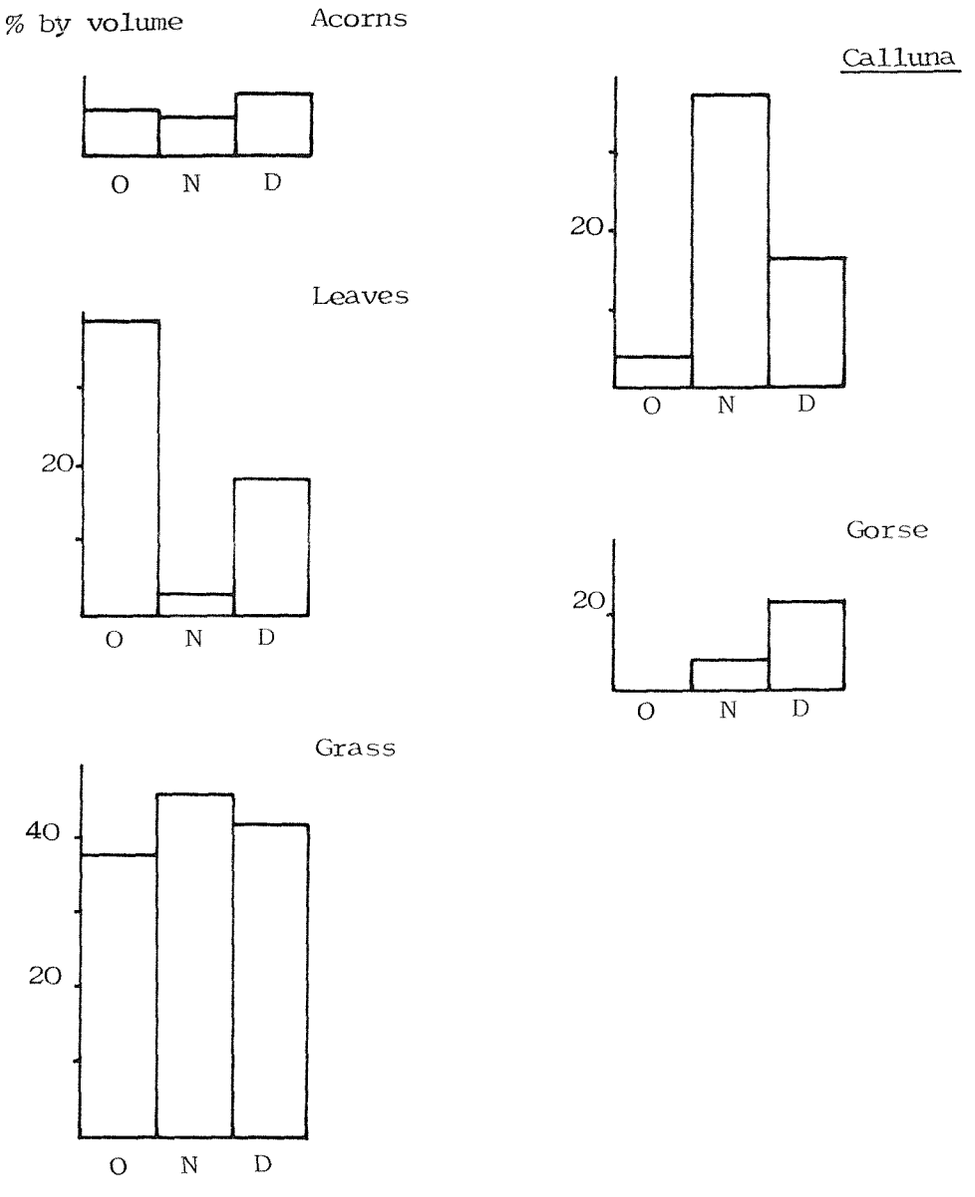
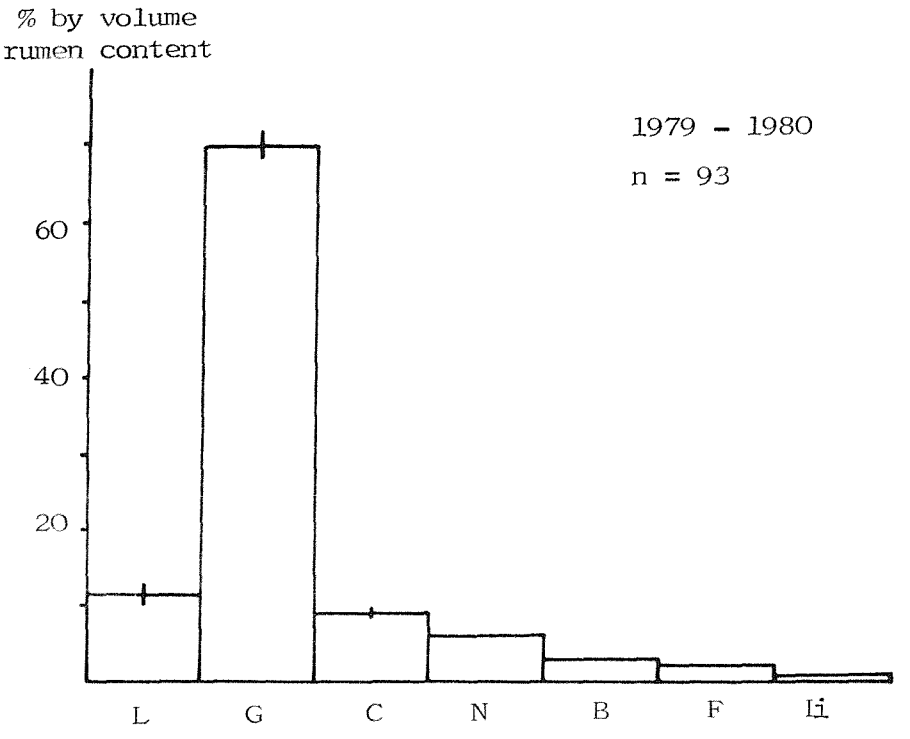
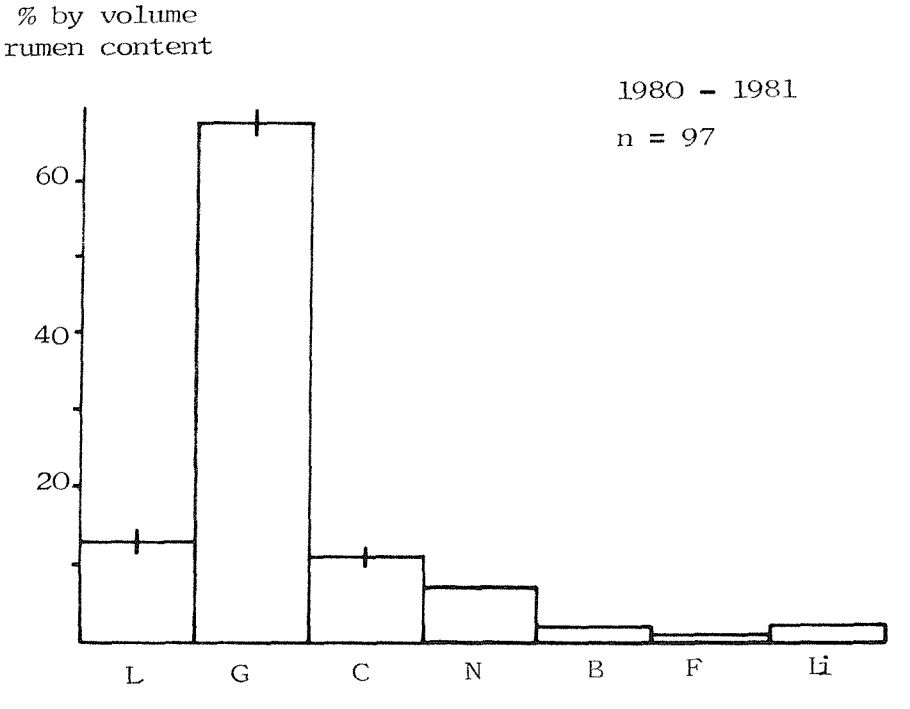


FIGURE 4:10

Winter diet of sika deer in Scotland





L Leaves G Grass C Calluna N Needles

B Bark F Fungi Li Lichen

FIGURE 4:11

Monthly diet in the New Forest

from faecal analysis

October 1979 - March 1980

	Oct	Nov	Dec	Jan	Feb	Mar
Acorn	4.5	16.9	15.6	11.0	8.3	2.1
Call	21.5	23.6	23.4	24.2	15.7	29.7
Pine	12.6	9.6	22.1	21.4	23.1	22.8
Ilex	0	0	0.8	2.3	3.9	1.0
Ulex	1.1	7.0	4.0	8.7	18.8	8.3
A.t.	5.3	0.8	2.7	1.2	2.0	4.6
A.s.	10.2	9.2	7.0	4.3	4.1	8.9
Mol	7.3	0.9	0.6	0.3	0.5	0.9
T.g.	29.6	22.7	23.2	15.8	17.9	22.2
T.l.	22.9	14.6	8.8	8.9	13.5	9.5

All values in % by particle count

Key

Call	Calluna
A.t.	Agrostis tenuis
A.s.	Agrostis setacea
Mol	Molinia
T.g.	Total grass
T.l.	Total leaves

FIGURE 4:11 cont.

Monthly diet in the New Forest

from faecal analysis

April 1980 - September 1980

	Apr	May	Jun	Jul	Aug	Sep
Acorn	0	0	0	0	0	0
Call	20.7	33.1	38.8	36.7	33.0	33.6
Pine	15.0	4.4	0	1.0	1.1	0
Ilex	1.1	1.6	0.7	0.5	1.9	2.9
Ulex	8.1	5.1	6.7	3.0	2.5	5.1
A.t.	6.6	9.2	8.8	9.4	12.1	17.8
A.s.	21.1	13.9	14.2	13.8	17.1	5.7
Mol	4.7	5.9	3.7	3.7	6.0	0.8
T.g.	40.9	39.6	34.9	42.7	50.1	36.8
T.l.	11.4	13.9	16.5	14.3	10.8	21.6

All values are in % by particle count.

FIGURE 4:11 cont.

Monthly diet in the New Forest

from faecal analysis

October 1980 - March 1981

	Oct	Nov	Dec	Jan	Feb	Mar *
Acorn	6.9	10.9	2.7	0.5	0	
Call	25.1	24.0	26.6	25.3	30.0	
Pine	0.7	6.4	10.2	19.0	15.0	
Ilex	3.8	1.3	0.8	0.6	1.6	
Ulex	6.0	7.8	6.8	5.5	8.6	
A.t.	12.4	15.0	5.9	3.9	8.0	
A.s.	9.4	9.0	12.0	12.1	10.7	
Mol	1.3	0.2	0.1	0.3	0.1	
T.g.	32.5	32.9	30.3	34.0	32.9	
T.l.	26.8	14.1	18.8	12.7	10.4	

All values are in % by particle count

Key

Call	Calluna
A.t.	Agrostis tenuis
A.s.	Agrostis setacea
Mol	Molinia
T.g.	Total grass
T.l.	Total leaves

* Foot and mouth restrictions halted the collection of faeces for two months; the cumulative result is given for those months in April 1981.

FIGURE 4:11 cont.

Monthly diet in the New Forest

from faecal analysis

April 1981 - September 1981

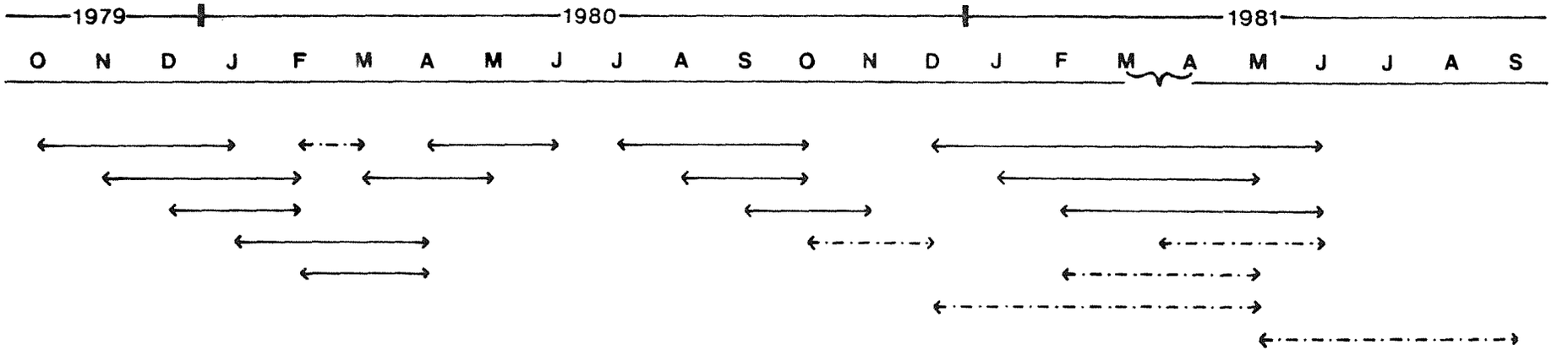
	Apr	May	Jun	Jul	Aug	Sep
Acorn	0	0	0	0	0	0
Call	26.4	38.0	34.9	33.8	26.1	20.0
Pine	10.5	1.1	0.3	0.1	1.9	0.5
Ilex	1.9	1.1	0.9	1.1	0.7	0.1
Ulex	6.0	6.9	3.2	8.3	9.3	8.7
A.t.	8.6	4.9	5.7	4.6	9.8	8.9
A.s.	12.0	10.6	10.0	7.6	9.5	17.5
Mol	4.2	6.9	10.5	6.8	7.0	8.9
T.g.	38.6	36.2	45.9	36.2	49.1	51.9
T.l.	15.2	14.0	12.6	18.3	10.4	16.6

All values are in % by particle count

FIGURE 4:11a

Statistical comparison between monthly diet

New Forest faecal analysis



⟷ Significantly different p=0.01

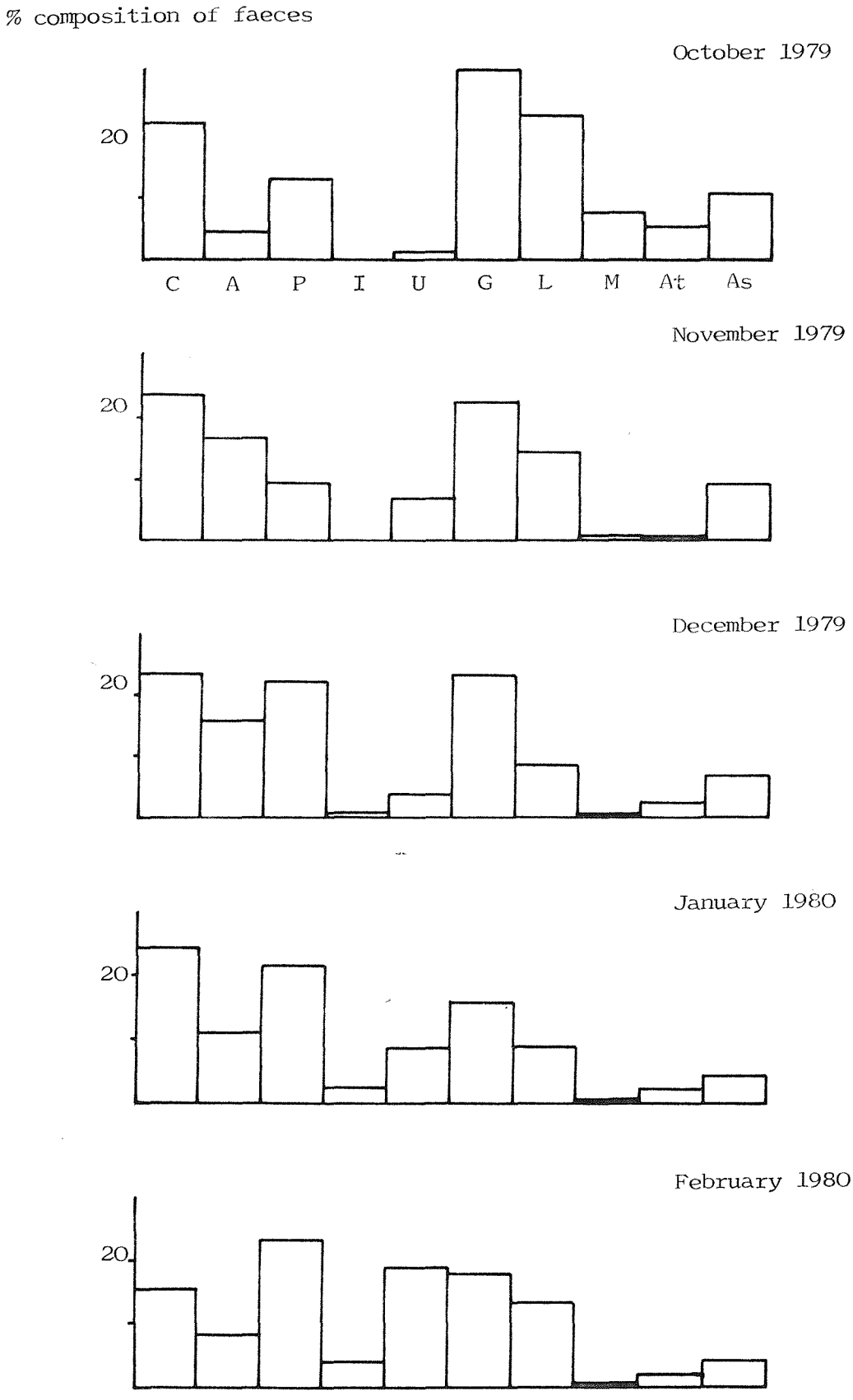
⟷ Significantly different p=0.05

Key:

C	Calluna vulgaris
A	Acorns
P	Pine
I	Ilex aquifolium
U	Ulex europaeus
G	Grass; all species
L	Leaves
M	Molinia caerulea
At	Agrostis tenuis
As	Agrostis setacea

FIGURE 4:12

Monthly diet of sika deer in the New Forest from faecal analysis



Key:

C	*Calluna vulgaris*
A	Acorns
P	Pine
I	*Ilex aquifolium*
U	*Ulex europaeus*
G	Grass; all species
L	Leaves
M	*Molinia caerulea*
At	*Agrostis tenuis*
As	*Agrostis setacea*

FIGURE 4:12 continued

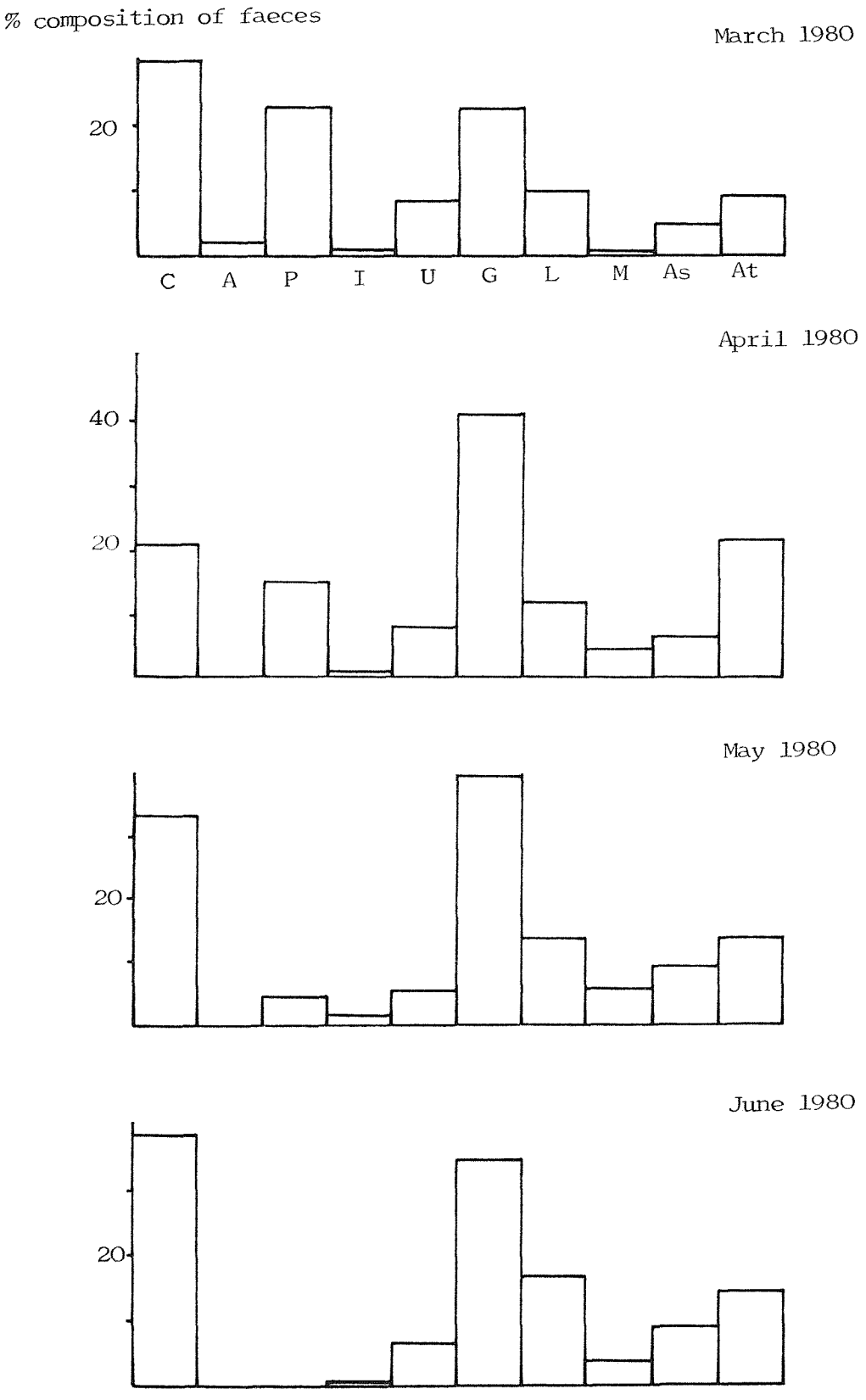
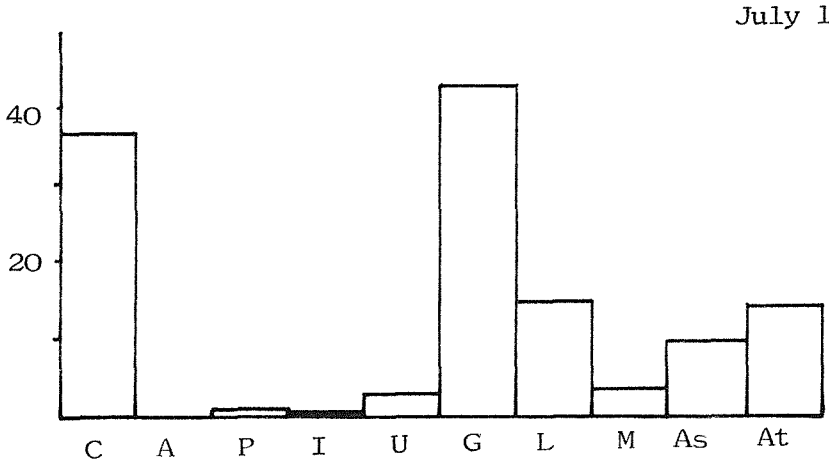


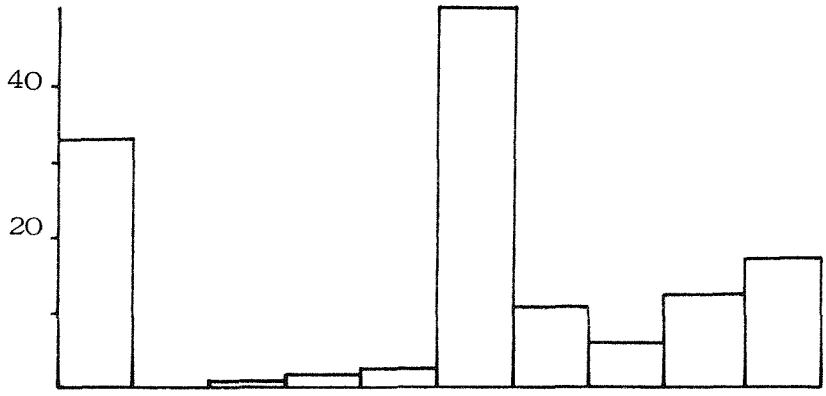
FIGURE 4:12 continued

% composition of faeces

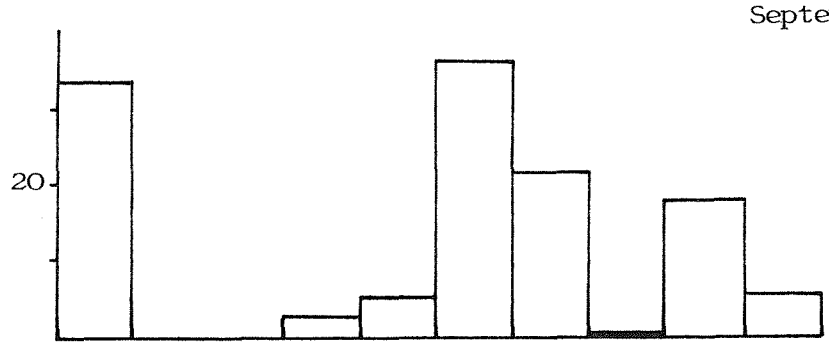
July 1980



August 1980



September 1980



October 1980

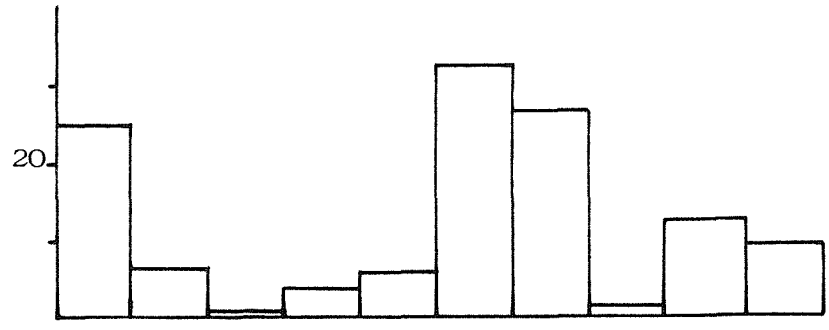
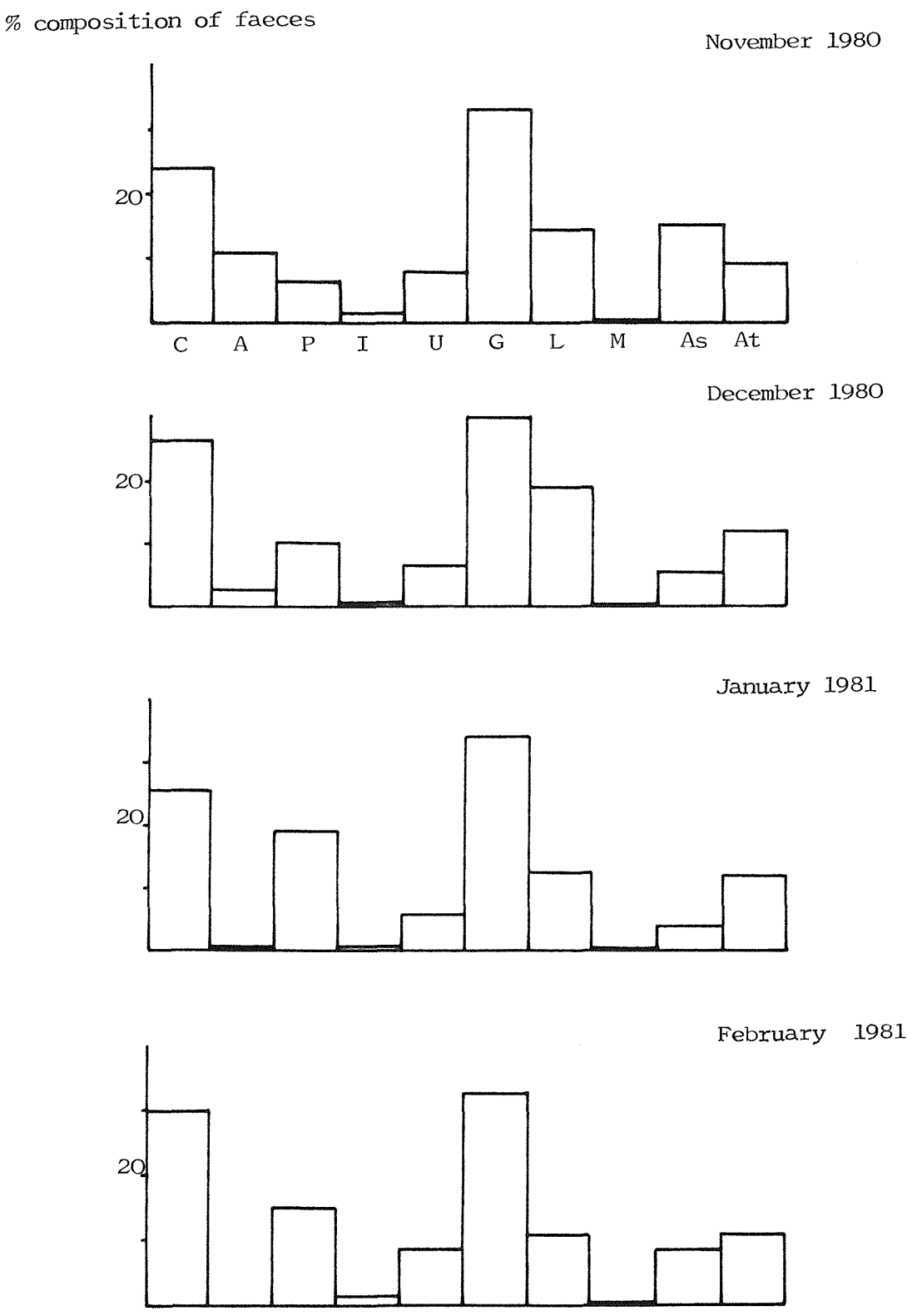


FIGURE 4:12 continued



Key:

C	Calluna vulgaris
A	Acorns
P	Pine
I	Ilex aquifolium
U	Ulex europaeus
G	Grass; all species
L	Leaves
M	Molinia caerulea
At	Agrostis tenuis
As	Agrostis setacea

FIGURE 4:12 continued

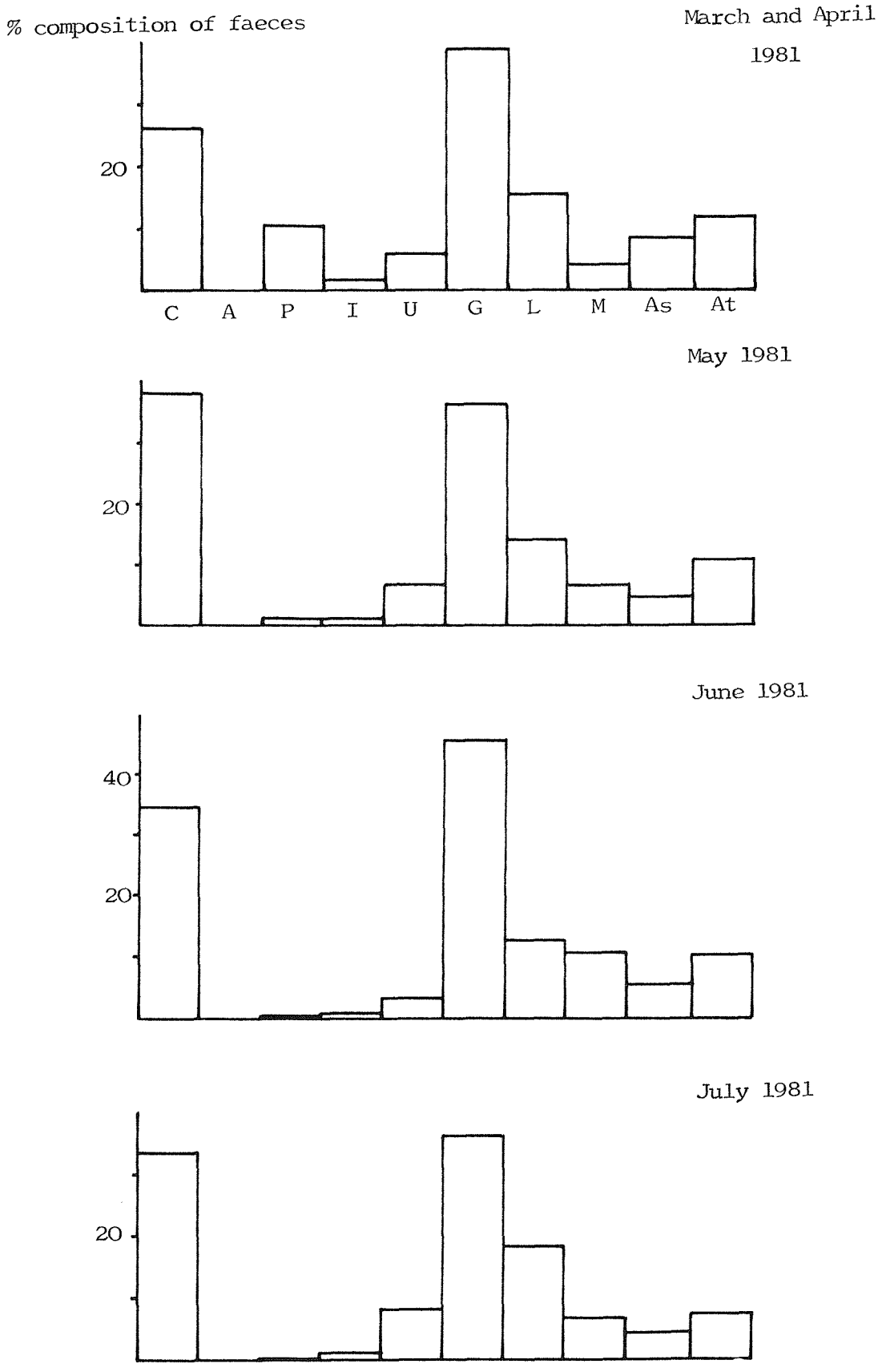
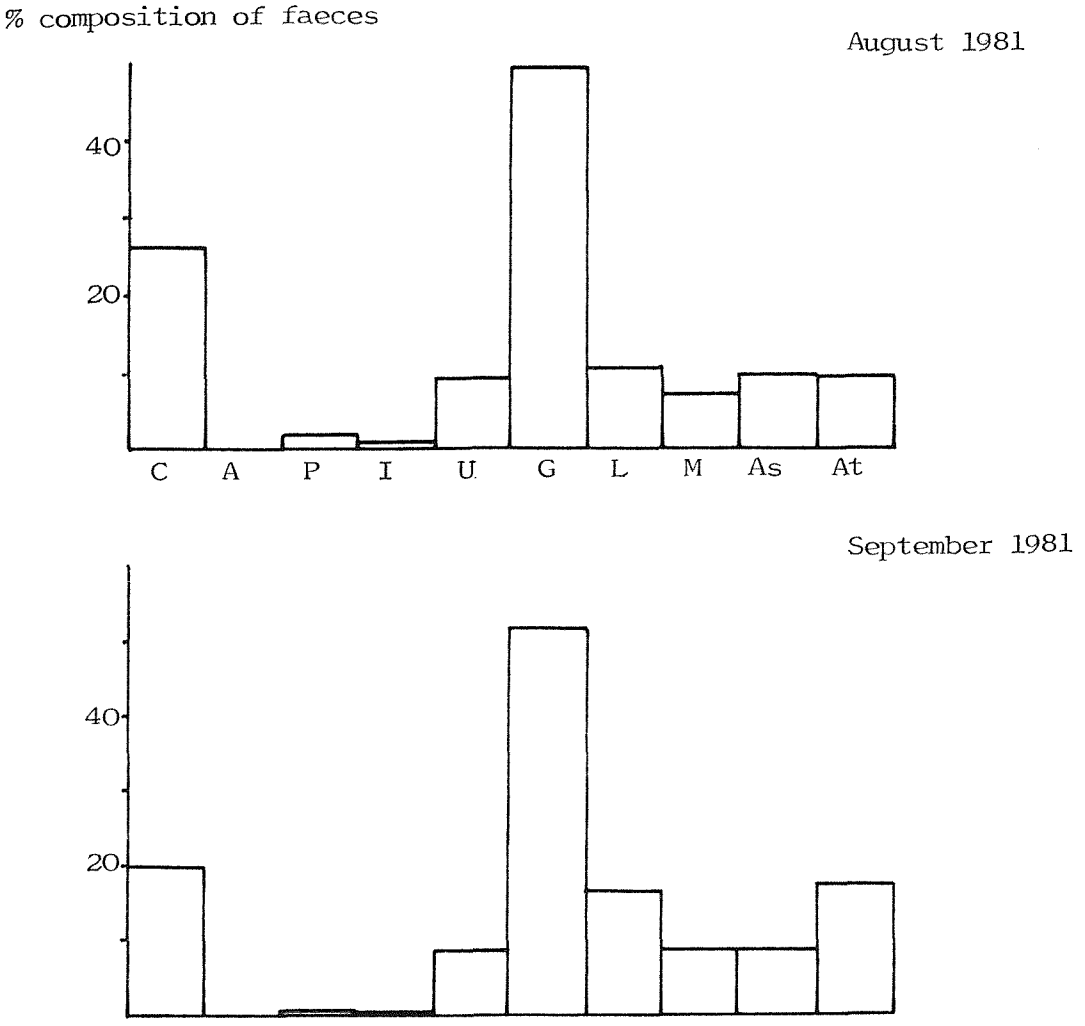


FIGURE 4:12 continued



Key:

A	Acorns
C	*Calluna vulgaris*
L	Leaves
G	Grass: of all species
N	Needles
I	*Ilex aquifolium*
U	*Ulex europaeus*

FIGURE 4:13

Seasonal diet of sika deer in
the New Forest from faecal analysis

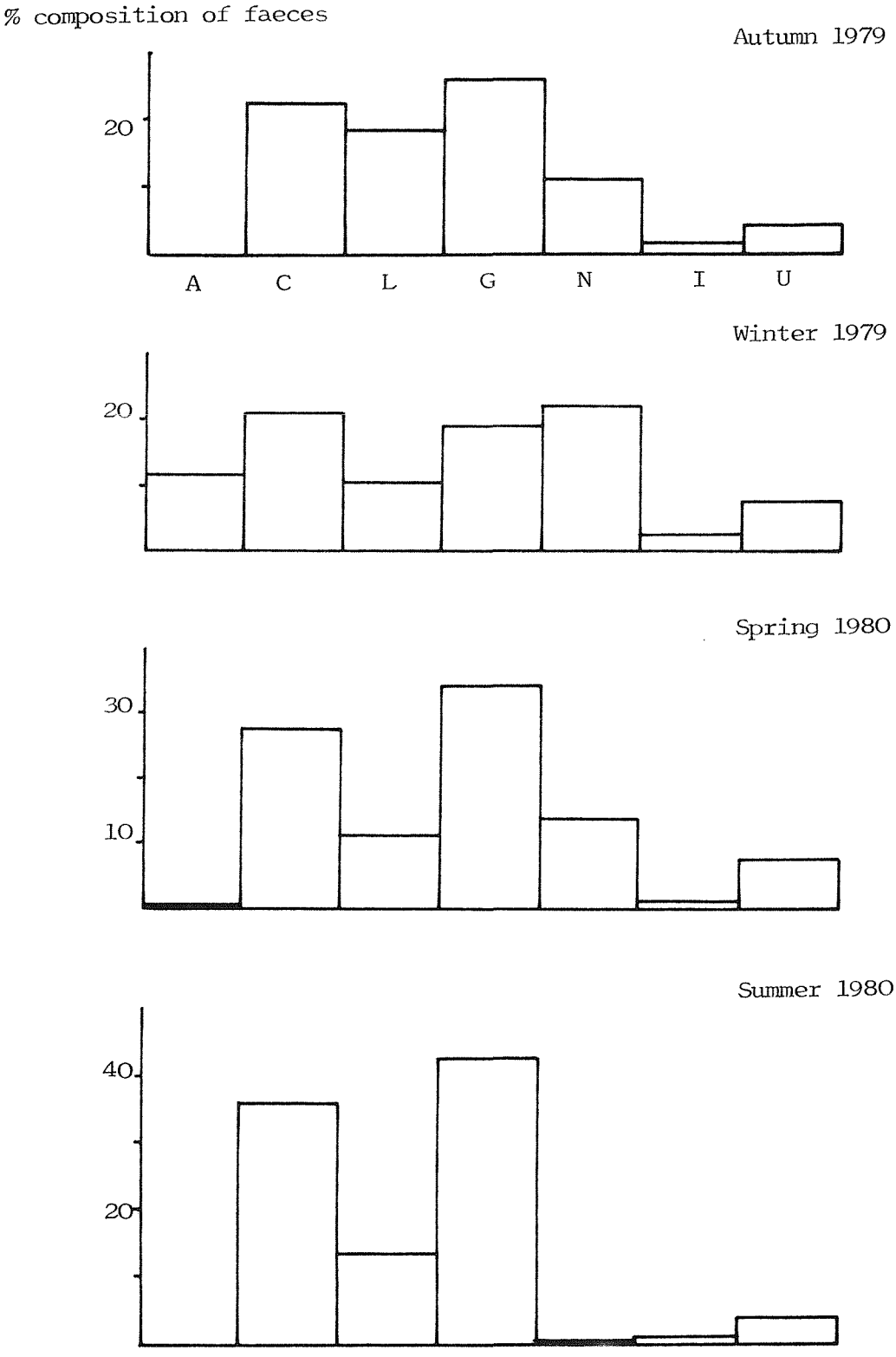


FIGURE 4:13 continued

Seasonal diet of sika deer in the New Forest from faecal analysis

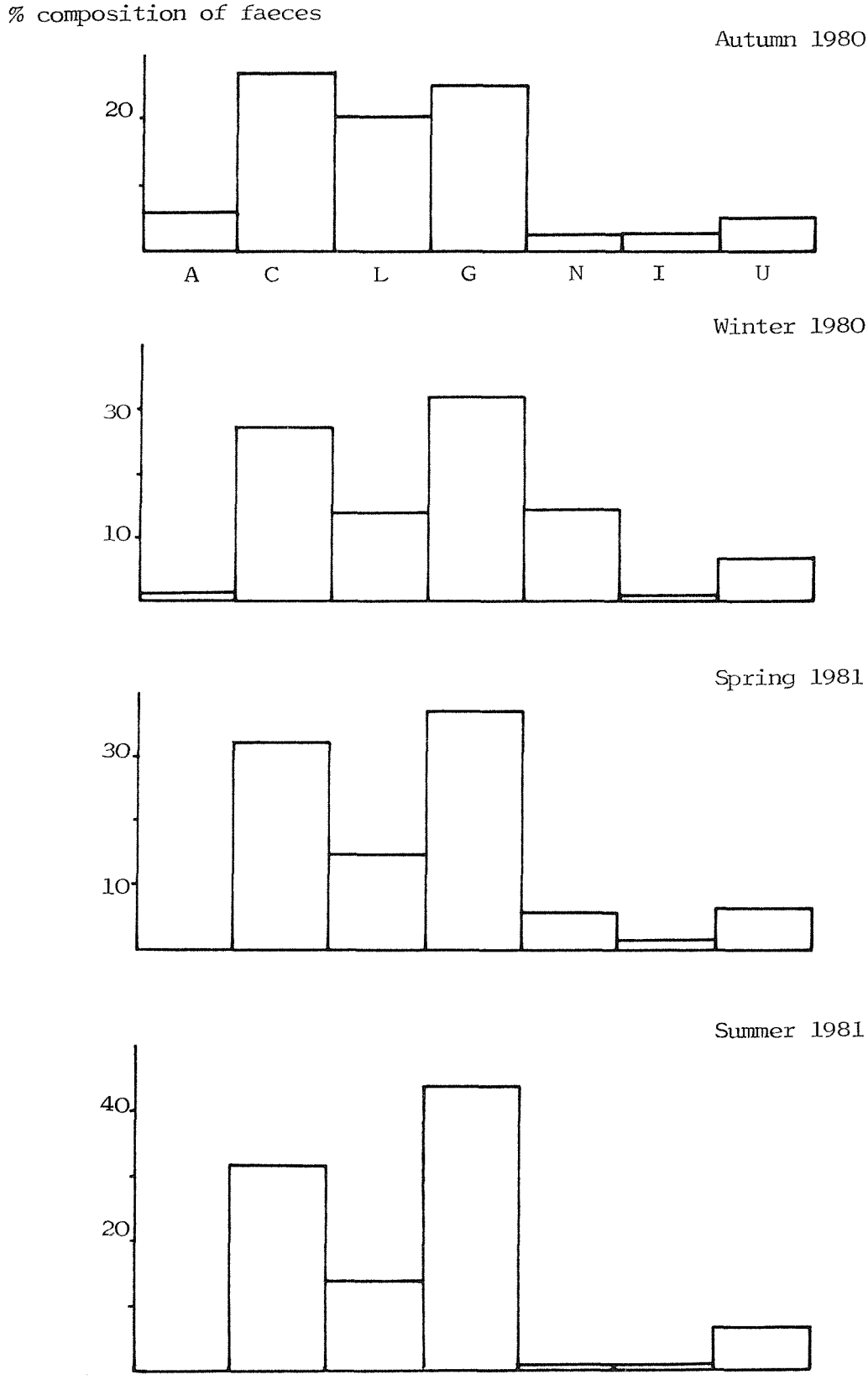
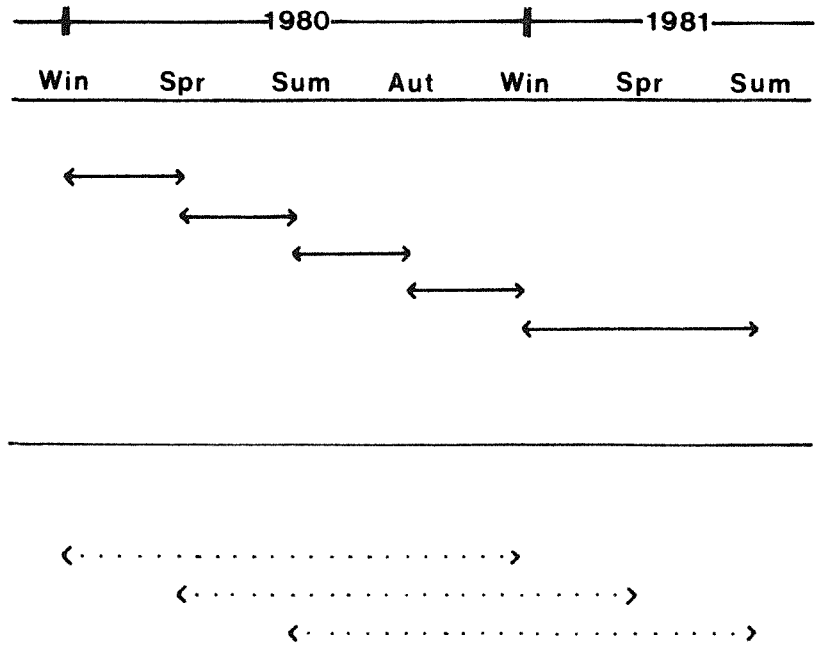


FIGURE 4:14

Statistical comparison of seasonal diets in the New Forest from faecal analysis



⟷ Significantly different (p = 0.01)

‹.....› Not significant

FIGURE 4:15

Monthly diet at Wareham from faecal analysis

September 1980 - February 1981

	Sep	Oct	Nov	Dec	Jan	Feb
Call	56.1	42.6	41.4	46.1	54.8	45.6
Pine	0.8	1.4	0.8	0.4	5.1	6.0
Ulex	4.9	3.0	9.5	8.5	5.8	7.0
A.t.	1.2	2.8	2.2	1.8	0.4	3.8
A.s.	11.1	21.8	20.0	14.8	15.1	13.9
Mol	0.3	3.2	1.7	0.6	0.1	0.4
T.g.	30.3	45.0	37.9	31.8	29.6	36.8
T.l.	5.1	5.2	3.6	2.9	1.1	0.9

All values are in % by particle count

Key

Call	Calluna
A.t.	Agrostis tenuis
A.s.	Agrostis setacea
Mol	Molinia
T.g.	Total grass
T.l.	Total leaves

FIGURE 4:15 cont.

Monthly diet at Wareham from faecal analysis

March 1981 - August 1981

	Mar	Apr	May	Jun	Jul	Aug
Call	46.6	*	46.6	52.3	51.6	42.4
Pine	3.8		1.2	0	0.4	0
Ulex	8.0		7.0	6.9	7.8	7.4
A.t.	1.5		2.9	1.0	1.3	3.8
A.s.	12.9		18.2	20.1	16.6	20.3
Mol	2.5		3.6	2.6	2.3	4.1
T.g.	37.6		40.6	36.3	38.1	47.8
T.l.	0.9		1.6	2.9	1.8	0.8

All values are in % by particle count

* Footand mouth restrictions halted the collection of faeces for a month. The data given here is for the two months together.

Key:

C	Calluna vulgaris
A	Acorns
P	Pine
I	Ilex aquifolium
U	Ulex europaeus
G	Grass; all species
L	Leaves
M	Molinia caerulea
At	Agrostis tenuis
As	Agrostis setacea

FIGURE 4.16

Monthly diet of sika deer at Wareham from faecal analysis

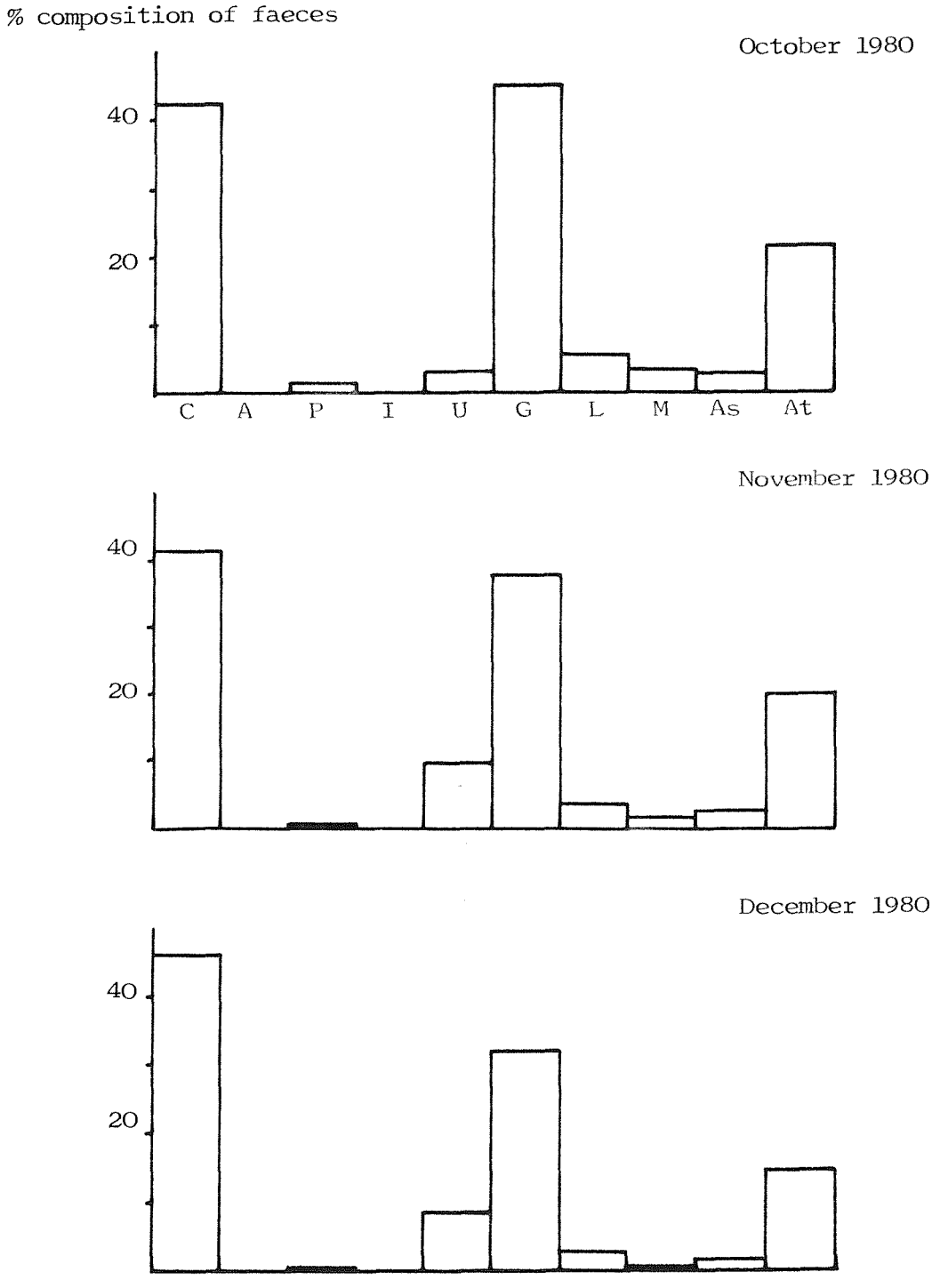
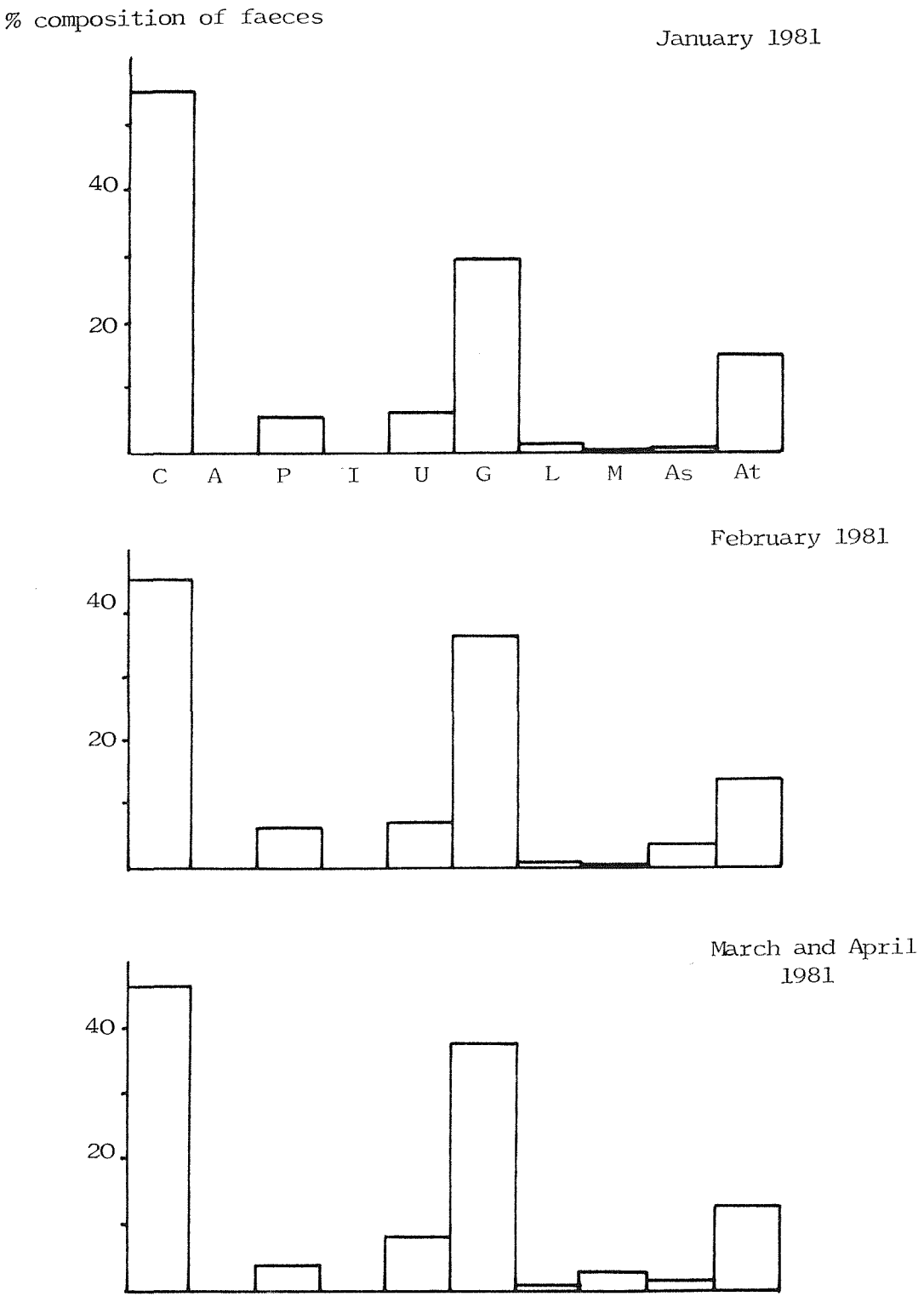


FIGURE 4:16 continued

Monthly diet of sika deer at Wareham from faecal analysis



Key:

C	Calluna vulgaris
A	Acorns
P	Pine
I	Ilex aquifolium
U	Ulex europaeus
G	Grass; all species
L	Leaves
M	Molinia caerulea
At	Agrostis tenuis
As	Agrostis setacea

FIGURE 4:16 continued

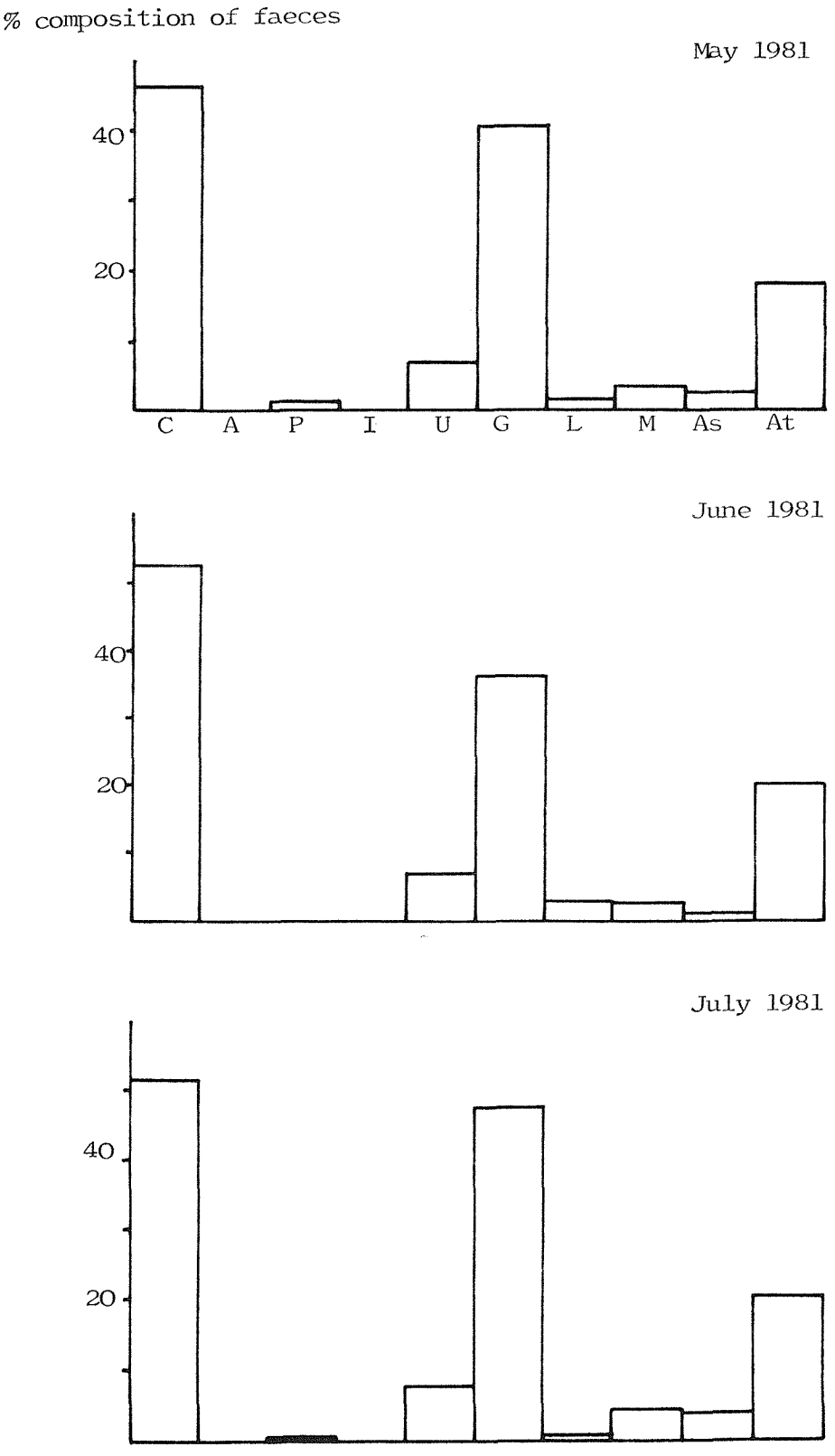
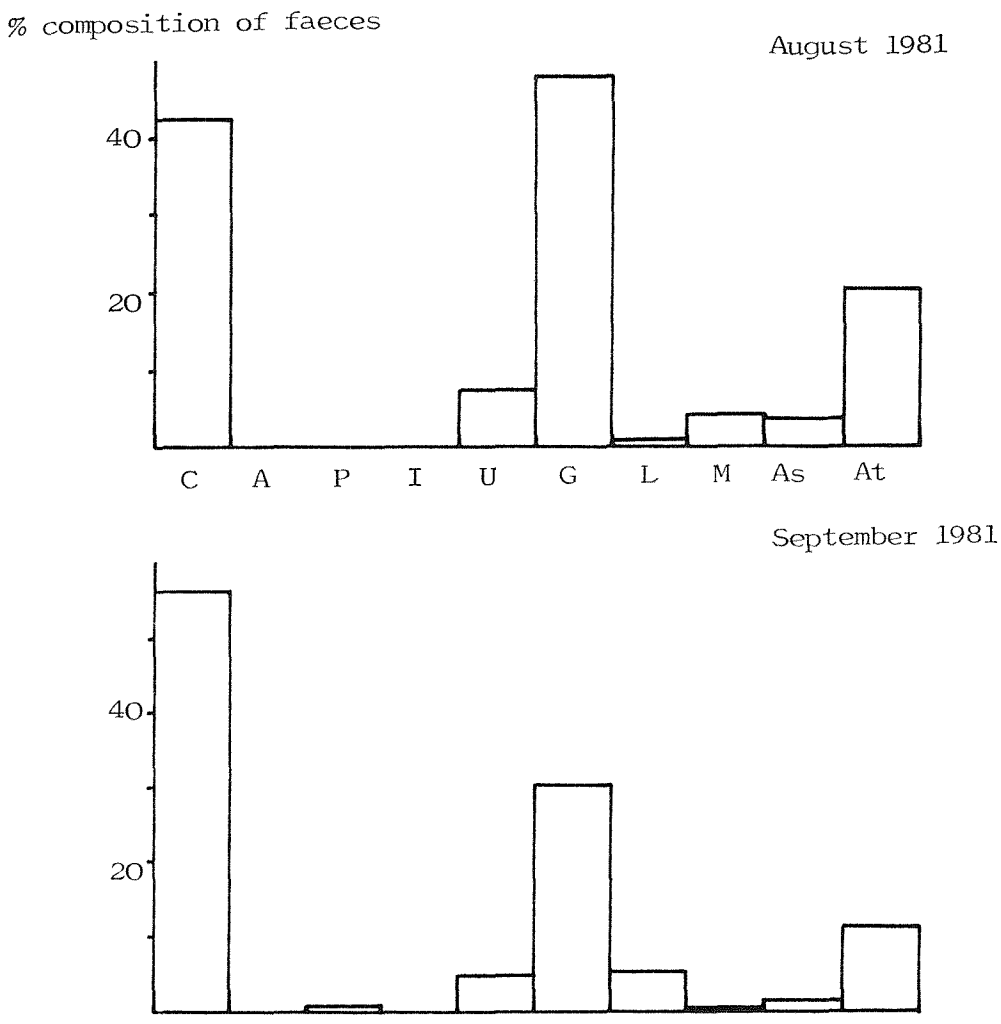


FIGURE 4:16 continued



Key:

C	*Calluna vulgaris*
A	Acorns
P	Pine
I	*Ilex aquifolium*
U	*Ulex europaeus*
G	Grass; all species
L	Leaves
M	*Molinia caerulea*
At	*Agrostis tenuis*
As	*Agrostis setacea*

FIGURE 4:17

Seasonal diet of sika deer at Wareham from faecal analysis

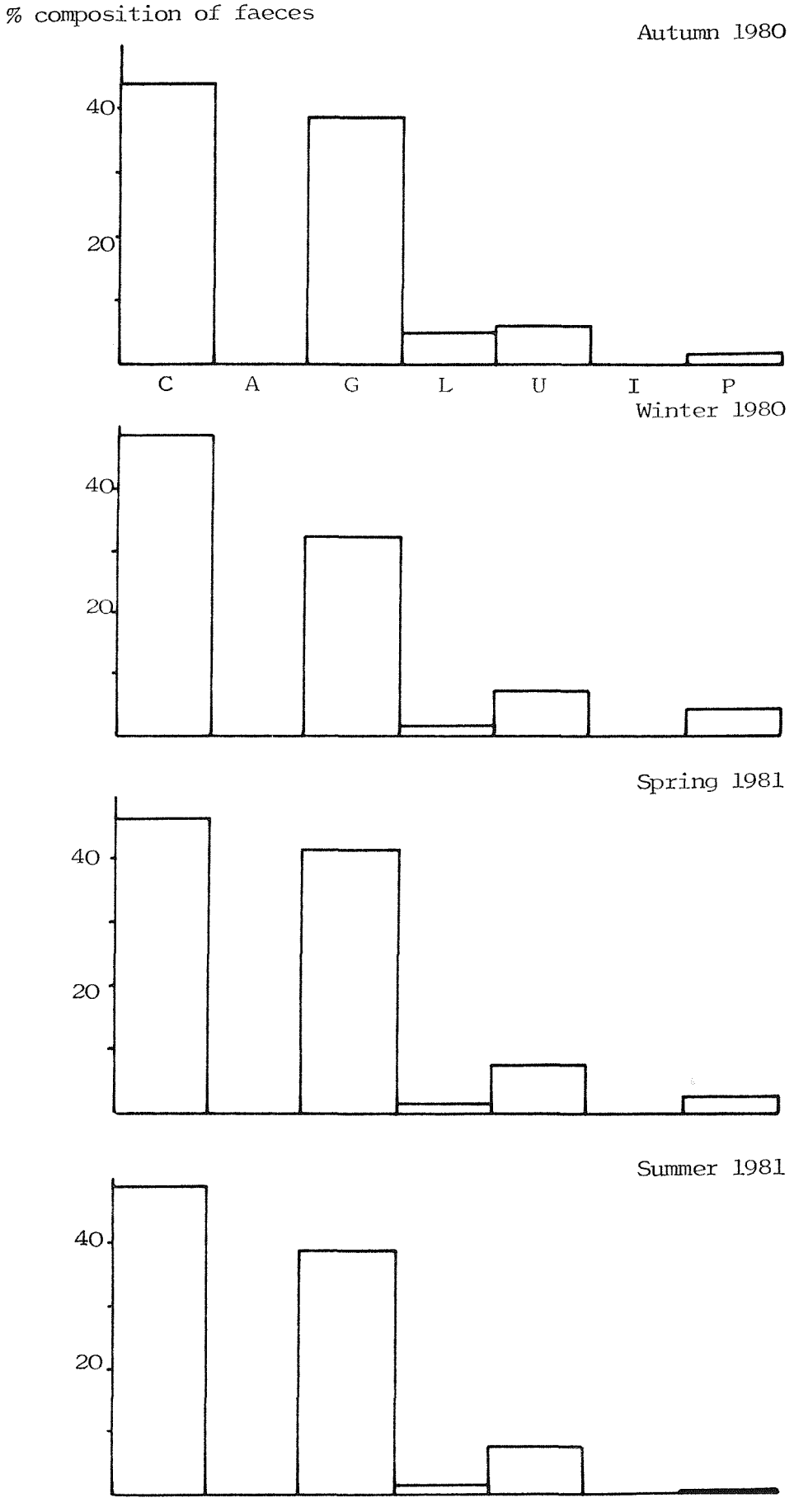


FIGURE 4:18

Seasonal grass intake from
New Forest faecal analysis

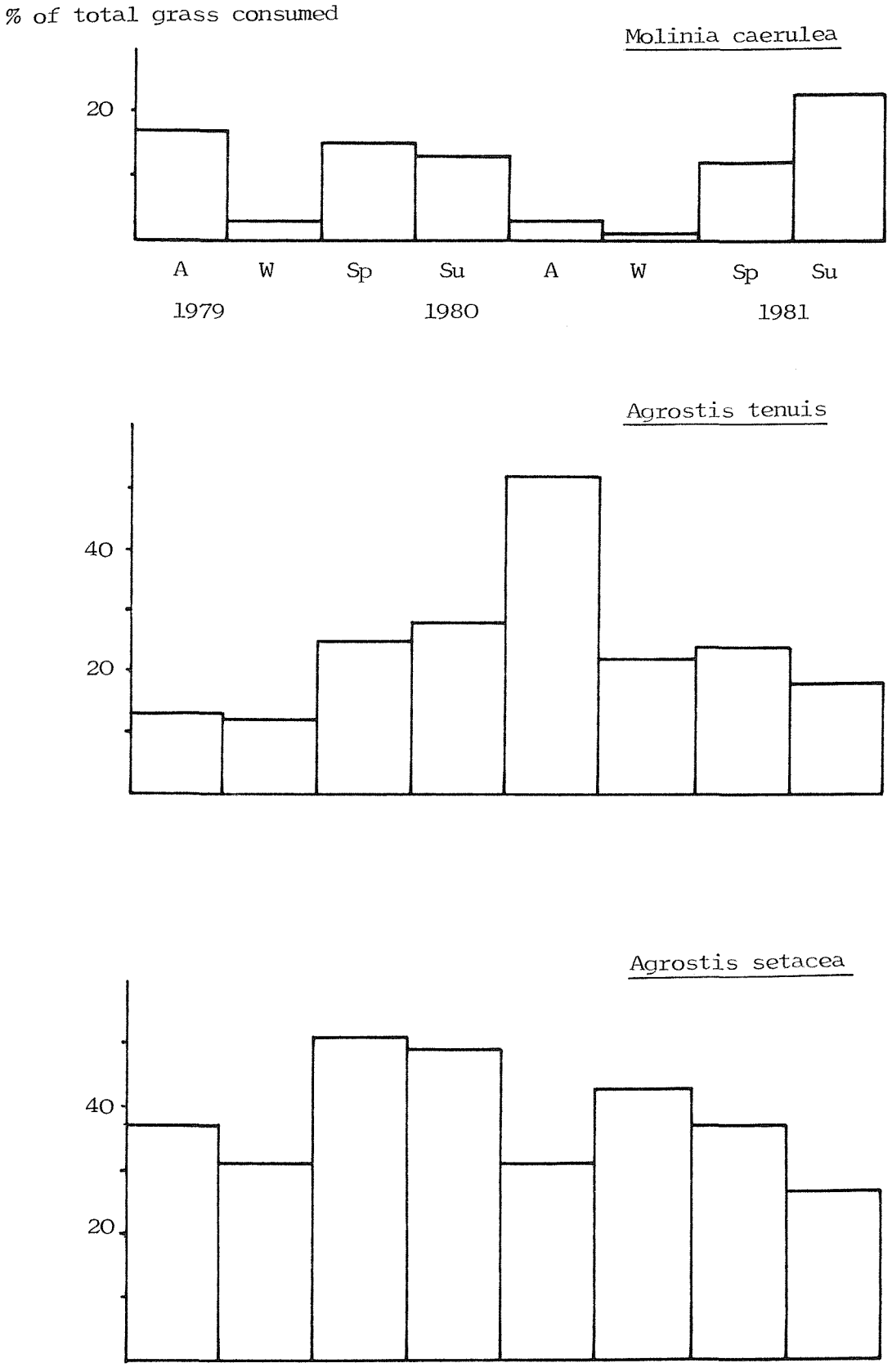


FIGURE 4:19

Seasonal grass intake from

Wareham faecal analysis

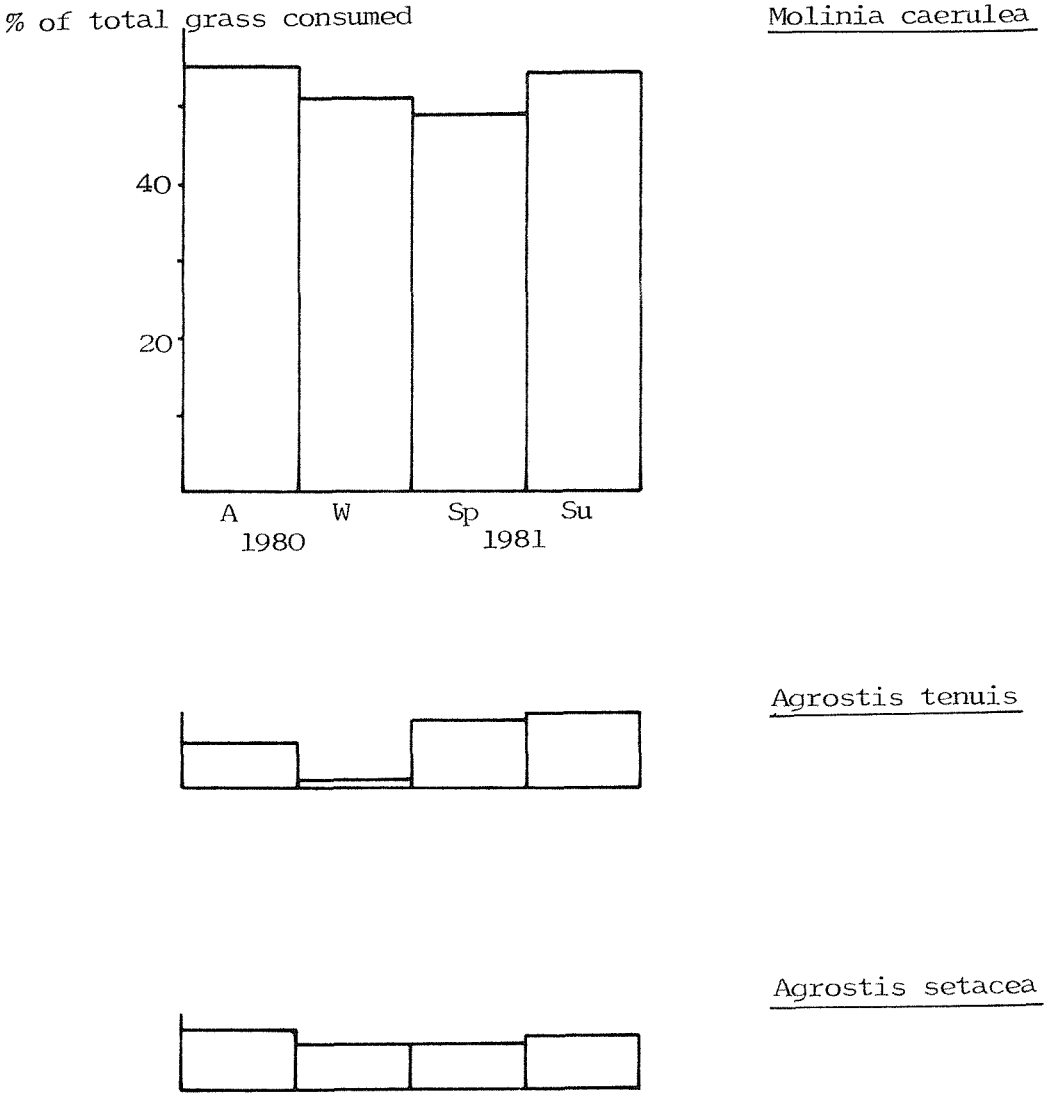


FIGURE 4:20

Rectal : ruminal regressions:

New Forest

of the form y = mx + c

	c	m	N	r
Acorns	11.00	2.17	40	0.74**
Leaves	16.63	0.22	71	0.07
Grass	5.49	0.3	73	0.15
Calluna	-6.09	0.63	50	0.29*
Ilex	5.26	-0.95	39	-0.14
Pine	6.43	0.92	62	0.49**

* p= 0.05
** p= 0.01

FIGURE 4:21

Rectal : ruminal regressions:

Wareham

of the form y = mx + c

	c	m	N	r
Acorns	3.1	2.4	19	0.64**
Leaves	-15.2	2.87	60	0.58**
Grass	8.36	0.94	60	0.43**
Calluna	38.37	-0.02	56	-0.04
Ulex	7.27	0.72	39	0.22
Pine	-3.32	1.67	25	0.67 **

FIGURE 4:22

New Forest in vitro digestibilities
1981

	Jan	Feb	Mar	Apr	May	Jun
A.s.		(19.45)	(13.41)		(31.17)	29.60
A.t.	(23.3	(21.90)	(21.00)	(20.10)	(36.15)	23.65
Molinia	(14.28)	(14.30)	(16,28)	(18.25)	(50.93)	29.88
Betula						27.20
Fagus					(47.4)	26.34
Quercus					(59.98)	47.10
Salix						26.50
Calluna				(35.37)		26.05
Ilex	(64.12)	(59.85)	(55.57)	(54.95)	(54.33)	41.88
Pine						36.39
Rubus						26.50
Ulex	(38.39)	(35.99)	(33.60)	(35.15)	(36.20)	(46.11)

Key

A.s. Agrostis setacea

A.t. Agrostis tenuis

Values in parenthesis are derived from Putman et al. 1981

FIGURE 4:22 cont.

New Forest in vitro digestibilities

1981

	Jul	Aug	Sep	Oct	Nov	Dec
A.s.	30.67*	31.75	23.65*	15.55	15.38	19.54
A.t.	30.36	18.25	22.50*	26.75	21.31	
Molinia	25.02	25.50	23.95	23.40	14.39	5.48
Betula	30.04	21.58	18.12	26.9	18.68	
Fagus	21.33	30.30	22.04	18.10	7.89	
Quercus	31.21	25.40	20.23	26.90	24.94	
Salix	27.19	33.20	33.10	29.69	26.28	36.11
Calluna	35.13	30.57	24.80	19.89	21.74	18.17
Ilex	49.63	42.65*	35.56	21.26	42.65	51.57
Pine	22.14	12.30	18.60	23.20	15.69	18.68
Rubus	34.94	35.92	30.50	26.18	39.00*	51.81
Ulex	(55.52)	(48.86)	(42.20)	(39.62)	(32.04)	(38.24)

Values in parenthesis are from Putman et al. 1981

* estimated value.

FIGURE 4:23

New Forest cellwall digestibilities

1981

	Jan	Feb	Mar	Apr	May	Jun
A.s.		(13.03)	(7.13)		(24.53)	22.98
A.t.	(16.82)	(15.44)	(14.56)	(13.68)	(29.04)	17.16
Molinia	(7.98)	(8.00)	(9.94)	(11.87)	(43.89)	23.26
T. grass	12.61	12.16	10.54	12.78	32.49	21.13
Betula						20.64
Fagus					(40.43)	19.79
Quercus					(52.75)	40.13
Salix						19.96
T. leaves					46.59	25.12
Calluna				(28.64)		19.51
Ilex	(53.67)	(51.69)	(49.71)	(49.42)	(49.14)	(43.37)
Pine						29.64
Rubus						19.95
Ulex	(31.60)	(29.25)	(26.91)	(28.43)	(29.45)	(39.16)

Values in parenthesis are derived from Putman et al. 1981

Key

A.s. Agrostis setacea

A.t. Agrostis tenuis

FIGURE 4:23 cont.

New Forest cellwall digestibilities

1981

	Jul	Aug	Sep	Oct	Nov	Dec
A.s.	24.04*	25.09	17.16	9.22	9.05	13.13
A.t.	23.73	11.87	16.03	20.20	14.87	
Molinia	18.50	18.97	17.45	16.91	8.09	0
T. grass	22.09	18.64	16.88	15.44	10.67	
Betula	23.42	15.13	11.74	20.34	12.29	
Fagus	14.89	23.67	15.58	11.72	1.72	
Quercus	24.57	18.87	13.81	20.34	18.42	
Salix	20.63	26.52	26.42	23.08	19.74	29.37
T. leaves	20.88	21.05	16.89	18.87	13.04	
Calluna	28.41	23.94	18.29	13.47	15.29	11.79
Ilex	46.96	43.73*	28.83	14.82	43.73	47.86
Pine	15.68	6.04	12.21	16.72	9.36	12.29
Rubus	28.22	29.18	23.87	19.64	32.20*	47.97
Ulex	(49.69)	(46.61)	(43.52)	(42.33)	(25.38)	(31.45)

Values in parenthesis are derived from Putman et al. 1981.

* estimated value

FIGURE 4:24

Monthly diet from faecal analysis
after correction by
cell wall digestibility
New Forest

October 1979 - March 1980

	Oct	Nov	Dec	Jan	Feb	Mar
Acorn	9.7	31.1	28.7	22.6	16.1	6.7
Call	21.4	22.1	19.7	23.3	14.3	31.0
Pine	11.7	7.9	18.8	20.0	21.0	23.6
Ilex	1.6	3.3	1.1	3.1	5.3	1.5
Ulex	1.5	7.6	5.3	9.9	20.9	10.6
A.t.	6.6	0.9	3.3	1.4	2.4	5.3
A.s.	11.2	10.1	5.1	4.9	9.9	25.5
Mol	8.8	0.9	0.6	0.3	0.5	1.0
T.g.	28.7	18.9	13.4	14.1	20.2	41.7
T.l.	19.2	9.8	7.6	7.5	8.5	9.5

All values are in % by particle count
corrected by CWD

Key

Call	Calluna	Mol	Molinia
A.t.	Agrostis tenuis	T.g.	Total grass
A.s.	Agrostis setacea	T.l.	Total leaves

FIGURE 4:24 cont.

Monthly diet from faecal analysis
after correction by
cell wall digestibility
New Forest
April 1980 - September 1980

	Apr	May	Jun	Jul	Aug	Sep
Acorn	0	0	0	0	0	0
Call	20.1	29.9	38.6	39.4	34.4	34.2
Pine	15.4	3.8	0	0.9	1.0	0.1
Ilex	1.6	2.1	1.0	0.7	2.4	3.4
Ulex	10.1	5.5	7.6	3.2	3.5	6.2
A.t.	7.6	13.0	10.6	12.3	13.7	21.2
A.s.	25.5	18.4	18.4	18.2	22.8	6.9
Mol	5.3	10.4	4.8	4.5	7.4	1.0
T.g.	41.7	48.5	36.0	42.5	49.7	37.4
T.l.	9.5	10.1	16.9	12.8	8.7	18.6

All values are in % by particle count
corrected by CWD

FIGURE 4:24 cont.

Monthly diet from faecal analysis
after correction by
cell wall digestibility
New Forest
October 1980 - March 1981

	Oct	Nov	Dec	Jan	Feb	Mar*
Acorn	13.7	20.6	5.7	0.9	0	
Call	23.9	22.0	25.7	25.3	30.5	
Pine	0.6	5.5	9.8	19.1	15.2	
Ilex	4.6	1.6	1.3	0.9	2.3	
Ulex	2.5	8.7	10.3	6.9	10.6	
A.t.	15.5	17.6	7.2	4.6	9.5	
A.s.	11.8	9.9	13.8	14.3	12.7	
Mol	1.6	0.2	0.1	0.3	0.1	
T.g.	31.7	28.9	28.6	35.1	32.6	
T.l.	22.8	12.7	18.1	17.2	21.5	

All values are in % by particle count
corrected by CWD

Foot and mouth restrictions halted the collection of faeces so March data is missing and that given for April 1981 is March and April combined.

FIGURE 4:24 cont.

Monthly diet from faecal analysis

after correction by

cell wall digestibility

New Forest

April 1981 - September 1981

	Apr	May	Jun	Jul	Aug	Sep
Acorn	0	0	0	0	0	0
Call	27.4	34.4	35.2	36.9	27.0	20.0
Pine	10.9	0.9	0.4	0.1	1.7	0.5
Ilex	2.8	1.4	1.3	1.6	1.0	0.1
Ulex	7.7	7.5	3.7	9.7	12.8	10.5
A.t.	10.0	6.9	6.9	6.0	11.1	10.6
A.s.	13.9	14.0	12.9	9.8	12.7	21.1
Mol	4.7	12.1	13.7	8.3	8.6	10.8
T.g.	38.3	44.5	47.0	35.9	48.2	53.3
T.l.	12.9	11.0	12.5	16.4	8.2	14.7

All values are in % particle count

corrected by CWD

Key

Call	Calluna	Mol	Molinia
A.t.	Agrostis tenuis	T.g.	Total grass
A.s.	Agrostis setacea	T.l.	Total leaves

FIGURE 4:25

Seasonal diet in the New Forest

faecal analysis results corrected by CWD

	Call	Acorn	Grass	Leaves	Ulex	Ilex	Pine
Autumn 1979							
Mean	21.1	20.4	23.8	14.5	4.5	2.5	9.8
s.e.	2.6	4.3	2.3	2.7	1.4	0.6	2.1
Winter							
Mean	19.1	22.5	15.5	7.6	12.1	3.2	20.0
s.e.	2.0	1.8	1.1	0.7	2.3	1.1	2.0
Spring 1980							
Mean	27.3	1.6	36.8	9.4	8.8	1.7	14.2
s.e.	2.5	0.9	3.6	1.0	1.5	0.4	3.3
Summer							
Mean	37.5	0	42.7	12.9	5.6	2.0	0.7
s.e.	1.4	0	2.1	1.5	1.3	0.6	0.2
Autumn							
Mean	26.7	11.4	32.7	18.0	5.8	3.2	2.1
s.e.	1.9	2.9	2.4	1.7	1.1	0.6	0.8
Winter							
Mean	27.2	2.3	32.1	12.7	9.3	1.5	14.8
s.e.	1.1	0.9	1.1	1.5	0.8	0.5	1.5

All values are in % by particle count

FIGURE 4:25 cont.

Seasonal diet in the New Forest.

Faecal analysis results corrected by CWD

	Call	Acorn	Grass	Leaves	Ulex	Ilex	Pine
Spring 1981							
Mean	30.1	0	41.4	12.0	7.6	2.2	5.9
s.e.	2.1	0	2.9	1.2	0.7	0.6	3.1
Summer							
Mean	33.0	0	43.7	12.4	8.5	1.3	0.7
s.e.	2.0	0	2.8	1.3	1.4	0.3	0.3

All values are in % by particle count

FIGURE 4:26

Wareham forage in vitro digestibility 1981

	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A.s.	16.63	14.19	15.54	16.00	17.89	12.70	20.45
A.t.	37.38	35.64*	33.89*	32.15*	30.40	30.60	28.13
Molinia		31.67	26.26	24.31	21.00	6.15	12.71
T. grass	27.01	27.17	25.23	24.15	23.10	16.48	20.43
Betula	18.19	29.96	22.24	27.94	28.82	23.60	19.01
Quercus	32.39	27.91	25.87	31.84*	37.84		
Salix	19.66	24.09	24.60	25.05*	25.50	21.97	
T. leaves	23.41	27.32	24.24	28.28	30.72	22.79	19.01
Calluna	26.77	33.50	23.13	25.34	18.25	17.21	24.09
Ilex	35.84	49.85	42.66	44.64	40.53	33.22	51.88
Myrica		23.12	14.04	15.97*	17.86	17.65	
Pine		18.52	22.39	22.69	17.17	18.56	22.35
Rubus	32.39	37.86	34.88	32.63	23.47	38.48	59.81
Ulex	26.46	35.13	33.07	39.04	41.39	38.20	42.10

Key

A.s. Agrostis setacea

A.t. Agrostis tenuis

* estimated value

FIGURE 4:27

Wareham forage cell wall digestibility

1981

	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A.s.	10.28	7.89	9.13	9.66	11.51	6.43	14.12
A.t.	30.61	28.90	27.20	25.49	23.78	23.97	21.54
Molinia		25.02	19.71	17.81	14.50	10.47*	6.44
T. grass	20.45	20.60	18.68	17.65	16.60	13.62*	14.03
Betula	11.81	23.34	15.78	21.34	22.22	17.11*	12.61
Quercus	25.72	21.33	19.34	25.18*	31.06		
Salix	13.25	17.59	18.09	18.53*	18.97	15.52	
T. leaves	16.93	20.75	17.74	21.68	24.08	16.32	12.61
Calluna	20.22	26.81	16.65	18.81	11.87	10.85	17.59
Ilex	29.10	47.06	43.73	44.65	42.75	26.53	48.00
Myrica		16.64	7.74	9.63*	11.48	11.28	
Pine		12.13	15.93	16.22	10.81	12.17	15.88
Rubus	25.80	31.08	28.16	25.96	16.98	41.69	51.67
Ulex	19.91	28.41	26.39	32.24	34.54	31.42	43.52

Key

A.s. Agrostis setacea

A.t. Agrostis tenuis

* estimated value

FIGURE 4:28

Monthly diet from faecal analysis

after correction by

cell wall digestibility

Wareham

September 1980 - February 1981

	Sep	Oct	Nov	Dec	Jan	Feb
Call	49.7	42.6	43.9	49.0	55.1	47.1
Pine	1.6	1.8	0.9	0.4	6.3	6.3
Ulex	5.8	4.4	12.0	13.3	7.5	9.0
A.t.	1.6	3.7	2.9	2.3	0.5	4.5
A.s.	12.3	24.6	21.4	18.9	17.9	16.5
Mol	0.4	3.7	1.9	0.6	0.1	0.4
T.g.	36.9	45.7	39.1	34.1	29.7	36.8
T.l.	5.7	5.5	4.0	3.2	1.4	0.9

All values are in % by particle count

corrected by CWD

Key

Call	Calluna
A.t.	Agrostis tenuis
A.s.	Agrostis setacea
Mol	Molinia
T.g.	Total grass
T.l.	Total leaves

FIGURE 4:28 cont.

Monthly diet from faecal analysis

after correction by

cell wall digestibility

Wareham

March 1981 - August 1981

	Mar	Apr	May	Jun	Jul	Aug
Call	47.4*		38.9	52.5	56.0	42.0
Pine	3.8		1.0	0	0.3	0
Ulex	5.0		6.3	7.8	8.5	10.4
A.t.	1.7		4.7	1.4	1.7	5.2
A.s.	14.8		29.6	22.4	18.0	22.3
Mol	2.9		5.9	3.2	3.1	5.1
T.g.	37.6		52.4	36.9	33.4	46.9
T.l.	0.9		1.36	2.8	1.8	0.8

All values are in % by particle count

corrected by CWD

* Foot and mouth restrictions halted the collection of faeces for a month. The data given here refers to both months together.

FIGURE 4:29

Seasonal diet at Wareham.

Faecal analysis results

Corrected by CWD

	Calluna	Grass	Leaves	Ulex	Pine
Autumn 1980					
Mean	45.8	38.9	5.1	7.7	1.4
s.e.	1.9	2.7	0.7	1.5	0.7
Winter					
Mean	50.8	33.2	1.8	9.8	4.5
s.e.	3.0	2.1	0.4	1.3	1.6
Spring 1981					
Mean	43.4	45.0	1.2	8.2	2.4
s.e.	3.1	4.8	0.3	1.9	1.1
Summer 1981					
Mean	50.2	39.1	1.8	8.9	0.1
s.e.	3.9	4.1	0.4	1.1	0.1

All values in % by particle count

FIGURE 4:30

Forage intake and availability correlations

New Forest

Autumn 1979	0.05	
Winter	0.01	
Spring 1980	0.05	
Summer	NS	
Autumn	NS	(NS*)
Winter	NS	(0.05*)
Spring 1981	0.05	
Summer	0.05	

* if acorns are excluded

Wareham

Autumn 1980	NS
Winter	NS
Spring 1981	0.05
Summer	NS

FIGURE 4:31

Nutrient values of New Forest forages

Species: *Agrostis setacea*

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	8.32	0.85	2.33	31.68	1.34	29.60
Jul	8.23*	0.93*	2.22*	26.82*	1.18*	30.70*
Aug	8.14	1.00	2.11	21.96	1.01	31.8
Sep	9.90*	0.85*	1.61*	21.02*	0.91*	23.70*
Oct	11.65	0.69	1.10	20.08	0.80	15.6
Nov	11.84	0.69	2.63	17.50	0.80	15.38
Dec	9.44	0.61	4.77	17.31	0.79	19.54

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Agrostis tenuis

Month	K	Mg	Ca	N	P	Dig.
Jan	(7.13)	(0.95)	(1.79)	(17.69)	(1.54)	(23.32)
Feb	(6.19)	(0.71)	(1.15)	(21.50)	(2.06)	(21.90)
Mar	(4.08)	(0.93)	(0.86)	(15.22)	(1.46)	(21.00)
Apr	(7.33)	(0.86)	(1.88)	(20.12)	(1.65)	(20.10)
May	(13.76)	(1.15)	(1.89)	(21.11)	(1.75)	(36.15)
Jun	8.32	0.85	2.33	31.68	1.34	23.65
Jul	8.23*	0.93*	2.22*	26.82*	1.18*	30.36*
Aug	8.14	1.00	2.11	21.96	1.01	18.30
Sep	9.90*	0.85*	1.61*	21.02*	0.91*	22.55*
Oct	11.65	0.69	1.10	20.08	0.80	26.80
Nov	11.84	0.69	2.63	17.50	0.80	21.26
Dec	9.44	0.61	4.77	17.31	0.79	

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Betula spp.

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	14.44	1.04	8.43	42.68	1.89	27.2
Jul	6.01	1.07	8.90	37.28	0.94	30.00
Aug	11.42	0.87	10.73	33.33	1.34	21.6
Sep	7.21*	1.49*	10.53*	22.64*	0.87*	18.12*
Oct	2.99	2.11	10.32	11.94	0.40	26.90
Nov	2.74*	1.34*	9.85*	14.66*	0.50*	18.68*
Dec						

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Calluna vulgaris

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	6.00	0.77	3.47	28.07	1.06	26.05
Jul	6.55	1.15	4.45	25.82	0.99	35.13
Aug	5.92	1.41	4.29	22.04	0.93	30.57
Sep	3.77	1.56	3.57	20.81	0.94	24.80
Oct	3.50	1.25	4.30	22.95	0.80	19.89
Nov	3.88	1.23	4.11	24.51	0.93	21.74
Dec	2.54	1.50	3.90	18.96	0.90	18.17

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Fagus sylvatica

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	5.42	0.87	3.20	29.04	1.03	26.34
Jul	3.82	1.21	4.58	27.03	1.21	21.33
Aug	7.56	0.97	8.90	29.00	0.95	30.30
Sep	4.52	0.71	4.54	33.46	1.08	22.04
Oct	4.69	1.34	10.08	23.18	0.89	18.10
Nov	3.65	0.86	7.21	12.46	0.50	7.89
Dec						

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Ilex aquifolium

Month	K	Mg	Ca	N	P	Dig.
Jan	(8.76)	(2.68)	(7.42)	(14.51)	(1.61)	(64.12)
Feb	(8.76)	(2.19)	(6.33)	(13.67)	(1.17)	(59.85*)
Mar	(7.94)	(2.32)	(7.75)	(15.11)	(1.18)	(55.57)
Apr	(11.23)	(1.68)	(5.31)	(12.94)	(1.31)	(54.95*)
May	(11.49)	(1.85)	(6.59)	(17.42)	(1.77)	(54.33)
Jun	17.98	1.24	4.48	39.24	2.76	41.88
Jul	11.72	1.75	6.88	34.65	0.79	49.6
Aug	11.06*	1.76*	6.89*	27.81*	0.90*	42.60*
Sep	10.41	1.76	6.90	20.96	1.00	35.60
Oct	8.68	2.32	8.96	17.29	0.94	21.30
Nov	9.02	2.04	11.39	18.83	1.09	42.66
Dec	8.97	2.25	13.18	15.56	0.97	51.57

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Molinia caerulea

Month	K	Mg	Ca	N	P	Dig.
Jan	(0.53)	(0.31)	(0.87)	(10.80)	(0.35)	(14.28)
Feb	(0.59)	(0.19)	(0.32)	(8.19)	(0.47)	(14.30)
Mar	(0.53)	(0.12)	(0.17)	(12.55)	(1.03)	(16.28)
Apr	(28.57)	(0.89)	(0.40)	(31.31)	(3.40)	(18.25)
May	(24.45)	(0.97)	(0.63)	(26.53)	(2.53)	(50.93)
Jun	12.41	0.59	1.30	26.65	0.89	29.88
Jul	14.12	1.11	1.52	12.54	0.69	25.02
Aug	13.05	0.76	2.49	26.93	0.78	25.50
Sep	14.01	0.91	2.56	32.20	0.78	23.95
Oct	10.66	0.87	2.26	35.11	0.53	23.30
Nov	2.78	0.61	3.05	10.39	0.25	14.39
Dec	0.97	0.21	3.47	8.72	0.20	5.48

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Pinus nigra

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	7.27	0.58	3.23	38.23	1.32	36.30
Jul	4.8	0.82	6.03	15.38	0.99	22.14
Aug	4.20	0.70	3.44	18.04	0.75	12.3
Sep	6.80	0.64	5.32	17.77	0.94	18.60
Oct	10.95	1.16	11.29	24.88	1.14	23.20
Nov	3.61	0.75	8.23	15.04	0.89	15.69
Dec	3.56	0.55	6.41	14.85	0.58	18.68

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Quercus spp.

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	17.19	1.50	6.62	38.58	3.22	47.10
Jul	9.84	1.13	5.59	26.63	1.33	31.20
Aug	9.15	0.77	11.46	36.68	1.11	25.40
Sep	8.87	1.20	7.50	30.70	1.07	20.23
Oct	22.19	2.54	5.75	26.32	0.74	26.90
Nov	12.45	1.10	8.99	24.75	1.24	24.94
Dec						

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Rubus agg.

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	12.68	2.10	7.39	25.72	1.78	26.50
Jul	12.68	2.84	7.25	26.71	1.98	34.94
Aug	12.54	2.84	9.02	19.06	1.66	35.90
Sep	10.75	2.96	8.14	18.76	2.07	30.50
Oct	9.32	0.93	8.96	18.00	1.10	26.18
Nov	8.34*	1.67*	13.06*	20.09*	1.12*	39.00*
Dec	7.35	2.40	17.15	22.17	1.14	51.81

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Salix spp.

Month	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	14.73	1.27	5.53	35.11	2.18	26.5
Jul	19.35	2.98	7.56	32.80	1.64	27.19
Aug	12.81	1.23	8.47	30.97	1.25	33.20
Sep	10.06	1.36	9.39	23.18	1.33	33.10
Oct	4.66	2.36	12.56	15.69	1.08	29.69*
Nov	5.30	1.11	12.68	18.88	1.26	26.28
Dec	4.38	0.68	12.05	17.08	1.24	36.11

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: Ulex europaeus

Month	K	Mg	Ca	N	P	Dig.
Jan	(8.18)	(0.78)	(0.75)	(14.20)	(1.17)	(38.39)
Feb	(9.60)	(0.64)	(1.04)	(14.75)	(0.95)	(35.99)
Mar	(7.18)	(0.59)	(0.68)	(14.24)	(0.46)	(33.60)
Apr	(9.29)	(0.92)	(1.00)	(13.58)	(0.71)	(35.15)
May	(8.26)	(0.99)	(1.35)	(16.94)	(1.37)	(36.70)
Jun	(21.67)	(2.03)	(3.46)	(30.75)	(2.67)	(46.11)
Jul	(21.99)	(1.79)	(1.20)	(19.10)	(2.08)	(55.52)
Aug	(13.90)	(0.97)	(0.51)	(15.42)	(1.17)	(48.86)
Sep	(11.81)	(0.86)	(0.73)	(15.14)	(1.38)	(42.20)
Oct	(11.10)	(1.13)	(0.88)	(14.50)	(0.87)	(39.62)
Nov	(10.67)	(0.70)	(0.96)	(9.12)	(0.92)	(37.04)
Dec	(9.65)	(0.97)	(0.98)	(17.27)	(1.40)	(38.24)

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: "Grass"

Month	K	Mg	Ca	N	P	Dig.
Jan	(5.93)	(0.85)	(2.98)	(17.18)	(1.46)	(13.42)
Feb	(5.48)	(0.79)	(2.67)	(16.37)	(1.36)	(14.14)
Mar	(5.01)	(0.76)	(2.64)	(16.61)	(1.56)	(20.20)
Apr	(12.45)	(0.96)	(3.12)	(21.91)	(2.74)	(41.66)
May	(15.40)	(1.12)	(3.74)	(20.78)	(2.02)	(48.54)
Jun	16.75	0.77	2.56	29.34	1.18	21.14
Jul	15.99	1.01	2.27	21.80	0.99	22.09
Aug	15.76	0.74	3.16	23.88	0.96	18.63
Sep	15.77	0.95	2.60	24.54	0.90	16.88
Oct	13.98	0.83	1.92	24.40	0.76	15.42
Nov	10.78	0.84	3.81	15.82	0.84	10.83
Dec	6.51	0.41	4.10	13.11	0.50	9.70

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:31 cont.

Nutrient values of New Forest forages

Species: "Leaves"

Month	K	Mg	Ca	N	P	Dig.
Jan	(3.72)	(2.00)	(9.37)	(9.07)	(1.24)	(17.18)
Feb	(5.05)	(1.81)	(7.52)	(12.63)	(1.48)	(21.26)
Mar	(4.45)	(1.82)	(10.25)	(10.87)	(1.01)	(17.97)
Apr	(18.00)	(1.68)	(8.96)	(13.05)	(1.14)	(14.49)
May	(11.45)	(2.25)	(5.02)	(26.86)	(3.73)	(49.56)
Jun	16.11	1.36	6.23	34.23	2.20	24.38
Jul	12.93	1.85	6.78	30.09	1.42	19.29
Aug	13.25	1.34	9.72	30.70	1.26	20.87
Sep	10.35	1.54	8.02	25.75	1.28	18.28
Oct	10.96	1.86	9.53	16.88	0.84	15.54
Nov	7.98	1.22	10.36	18.17	0.92	18.34
Dec	4.57	1.21	12.19	17.06	0.86	24.24

All values are in mg gm^{-1}, digestibility in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32

Nutrient values of Wareham forages

Species: Agrostis setacea

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	11.81	0.92	2.68	19.55	0.68	16.63
Jul	4.47	0.40	4.51	8.18	0.20	14.19
Aug	9.34	0.51	2.05	15.53	0.25	15.45
Sep	7.45	0.74	3.33	9.73	2.63	16.00
Oct	6.22	0.63	1.66	14.97	0.65	17.90
Nov	3.31	0.45	3.84	10.59	0.44	12.70
Dec	5.38	0.55	2.75	16.35	0.45	20.55

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Agrostis tenuis

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	9.89	0.81	2.78	30.69	0.59	37.38
Jul						
Aug						
Sep						
Oct	9.97	1.02	4.57	13.67	0.34	30.40
Nov	12.38	1.18	4.77	13.05	0.44	30.60
Dec	8.66	1.06	6.75	28.91	1.55	28.13

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Betula

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	4.49	1.54	3.21	49.75	1.00	18.19
Jul	4.96	1.81	10.6	16.83	1.04	29.96
Aug	3.9	1.52	6.45	16.06	0.50	22.24
Sep	2.13	2.05	7.76	13.82	0.44	27.90
Oct	2.99	2.11	10.32	11.94	0.40	28.2
Nov	2.38	1.53	9.54	11.90	0.67	23.61*
Dec	1.77	0.94	8.76	11.86	0.94	19.01

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Calluna vulgaris

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	3.14	1.09	5.64	11.43	0.34	26.73
Jul	3.36	1.07	5.00	11.74	0.54	33.50
Aug	3.9	1.95	5.15	10.33	0.34	23.13
Sep	4.66	1.40	5.66	13.73	0.98	25.34
Oct	2.64	0.91	3.68	15.10	0.54	18.46
Nov	2.05	2.25	6.53	8.81	0.20	17.20
Dec	1.77	1.02	3.52	9.62	0.20	24.09

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Holcus lanatus

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	12.61	0.85	5.75	19.86	1.49	38.34
Jul	8.85	0.60	6.50	10.20	0.40	32.43
Aug						
Sep						
Oct	6.04	0.70	6.10	14.27	1.82	26.80
Nov	7.08*	0.87*	5.41*	16.41*	1.51*	28.57*
Dec	8.11	1.04	4.71	18.61	12.07	30.33

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: *Ilex aquifolium*

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	10.34	1.64	4.71	26.79	1.34	35.84
Jul	9.03	1.29	7.55	15.87	0.79	49.85
Aug	0.83	2.08	7.36	16.40	0.70	42.66
Sep	5.56	2.27	7.31	17.38	0.79	44.6
Oct	5.26	1.71	11.05	12.81	0.94	40.50
Nov	5.73	2.91	7.97	17.11	0.84	33.20
Dec	4.26	1.75	8.47	13.99	0.45	51.88

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Molinia caerulea

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun						
Jul	7.00	1.31	2.10	15.84	0.40	31.67
Aug	7.91	0.90	5.04	28.95	0.64	26.26
Sep	3.61	0.71	2.82	20.62	0.86	24.3
Oct	3.49	1.39	2.62	10.43	0.43	21.00
Nov	0.62	0.45	1.65	5.47	0.12	6.20
Dec	0.58	0.40	1.70	5.70	0.12	12.71

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Myrica gale

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	8.65	1.25	4.02	34.86	1.54	5.44
Jul	4.75	1.23	4.17	26.53	0.95	23.12
Aug	5.45	0.78	3.99	24.70	0.59	14.04
Sep	4.40*	1.11*	5.89*	16.06*	0.36*	15.97*
Oct	2.78	1.43	7.78	7.42	0.12	17.90
Nov	2.54	0.83	5.41	15.78	0.45	17.70
Dec						

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Pinus nigra

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	3.91	0.87	2.08	9.86	0.69	
Jul	3.31	0.64	5.30	9.59	0.49	18.52
Aug	2.97	0.77	3.18	10.12	0.59	23.39
Sep	2.14	0.79	2.74	10.91	1.74	22.70
Oct	2.72	0.91	3.45	13.67	0.55	17.20
Nov	2.39	0.80	3.69	7.70	0.35	18.6
Dec	3.06	0.74	1.45	11.41	0.55	22.35

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: *Quercus* sp.

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	6.62	1.75	4.94	26.73	1.49	32.39
Jul	5.52	1.74	5.54	19.23	1.28	27.91
Aug	8.14	1.33	5.72	17.02	1.41	25.87
Sep	6.37*	1.26*	6.17*	12.64*	0.83*	31.84*
Oct	4.59	1.19	6.61	8.25	0.25	37.8
Nov						
Dec						

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Rubus agg.

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	8.50	2.40	2.96	23.51	1.81	32.39
Jul	13.55	2.82	3.44	22.53	1.67	37.86
Aug	7.26	3.89	7.09	22.00	1.90	34.88
Sep	6.69	3.33	4.88	12.75	0.65	32.60
Oct	11.06	3.25	6.56	14.44	0.60	23.50
Nov	5.32	4.46	10.05	24.53	1.52	38.50
Dec	5.38	3.48	5.87	17.36	1.14	59.81

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Salix spp.

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	12.28	1.49	5.63	19.82	1.83	19.66
Jul	7.62	1.91	8.85	18.92	1.89	24.09
Aug	8.46	1.89	10.15	14.49	1.70	24.60
Sep	6.19*	1.99*	12.04*	14.21*	1.06*	25.05*
Oct	3.92	2.09	13.92	13.92	0.41	25.50
Nov	3.61	1.88	10.47	18.13	2.77	22.00
Dec	3.62	0.97	9.05	17.36	1.69	28.47

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: Ulex europaeus

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	6.60	0.56	4.58	37.58	0.85	26.46
Jul	5.47	0.76	5.26	26.39	0.68	35.13
Aug	5.06	1.56	3.61	17.11	0.49	33.07
Sep	5.94	1.67	3.22	10.22	0.25	39.00
Oct	3.01	1.51	3.82	18.07	0.59	41.40
Nov	3.64	1.91	3.05	21.91	0.55	38.20
Dec	3.67	1.99	2.88	19.08	0.60	42.2

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: "Grass"

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	14.29	0.86	3.74	23.37	0.92	24.13
Jul	8.47	0.77	4.37	14.63	0.33	21.89
Aug	10.78	0.71	3.55	22.24	0.45	19.99
Sep	6.91	0.73	2.24	15.18	1.75	18.26
Oct	8.04	0.94	3.74	13.34	0.82	17.51
Nov	7.31	0.74	3.92	12.48	0.63	15.72
Dec	7.10	0.76	3.98	17.39	0.83	16.45

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

Derived from A.setacea, A. tenuis, Holcus and Molinia.

FIGURE 4:32 cont.

Nutrient values of Wareham forages

Species: "Leaves"

Month:	K	Mg	Ca	N	P	Dig.
Jan						
Feb						
Mar						
Apr						
May						
Jun	10.04	1.69	4.15	30.93	1.53	19.15
Jul	9.10	1.90	6.52	20.81	1.37	22.00
Aug	8.30	1.88	6.68	18.85	1.22	17.83
Sep	6.37	1.95	7.35	13.90	0.67	20.12
Oct	6.34	2.01	9.04	14.05	1.07	20.14
Nov	4.33	2.33	8.87	17.59	1.35	18.98
Dec	4.49	1.80	7.89	15.53	1.26	28.73

All values are in mg gm^{-1}, digestibilities in %.

* estimated value

( ) from Putman et al. 1981.

Derived from the means of Myrica, Rubus, Salix, Betula and Quercus.

FIGURE 4:33

Forage intake and nutrient status correlations

New Forest: January - December 1980

	K	Ca	Mg	N	P	Dig
Grass	0.01	0.05	0.05	NS	NS	0.01
Leaves	0.05	NS	NS	NS	NS	NS
Calluna *	0.05	NS	NS	NS	0.01	0.01
Ilex	NS	NS	NS	NS	NS	NS
Ulex	NS	NS	-0.05	NS	NS	-0.05
Pine*	-0.01	NS	NS	-0.05	-0.01	NS

FIGURE 4:34

Forage intake and nutrient status correlations

New Forest: January - September 1981

	K	Ca	Mg	N	P	Dig
Grass	NS	0.01	NS	NS	NS	
Leaves	-0.05	0.05	NS	-0.05	NS	
Calluna		Insufficient data				
Ilex	NS	NS	NS	NS	NS	
Ulex	NS	NS	NS	NS	NS	
Pine		Insufficient data				

Dig Cell wall digestibility

FIGURE 4:35

Grass intake and nutrient status correlations

New Forest: January - December 1980

	K	Ca	Mg	N	P	Dig
Agrostis tenuis	0.05	NS	NS	NS	NS	0.05
Agrostis setacea	NS	NS	NS	NS	NS	0.05
Molinia	0.01	NS	0.05	0.01	0.01	0.05

New Forest: January - September 1981

	K	Ca	Mg	N	P	Dig
Agrostis tenuis	NS	NS	NS	NS	NS	NS
Agrostis setacea	NS	NS	NS	0.05	NS	NS
Molinia	0.05	NS	0.05	0.05	NS	0.01

Wareham: September 1980 - August 1981

	K	Ca	Mg	N	P	Dig
Agrostis tenuis	NS	NS	NS	NS	NS	NS
Agrostis setacea	NS	NS	NS	NS	NS	NS
Molinia	NS	NS	NS	NS	NS	NS

Dig Cell wall digestibility

C H A P T E R F I V E

Population structure

and

social organisation

FIGURE 5:1

Monthly population of sika deer in the New Forest

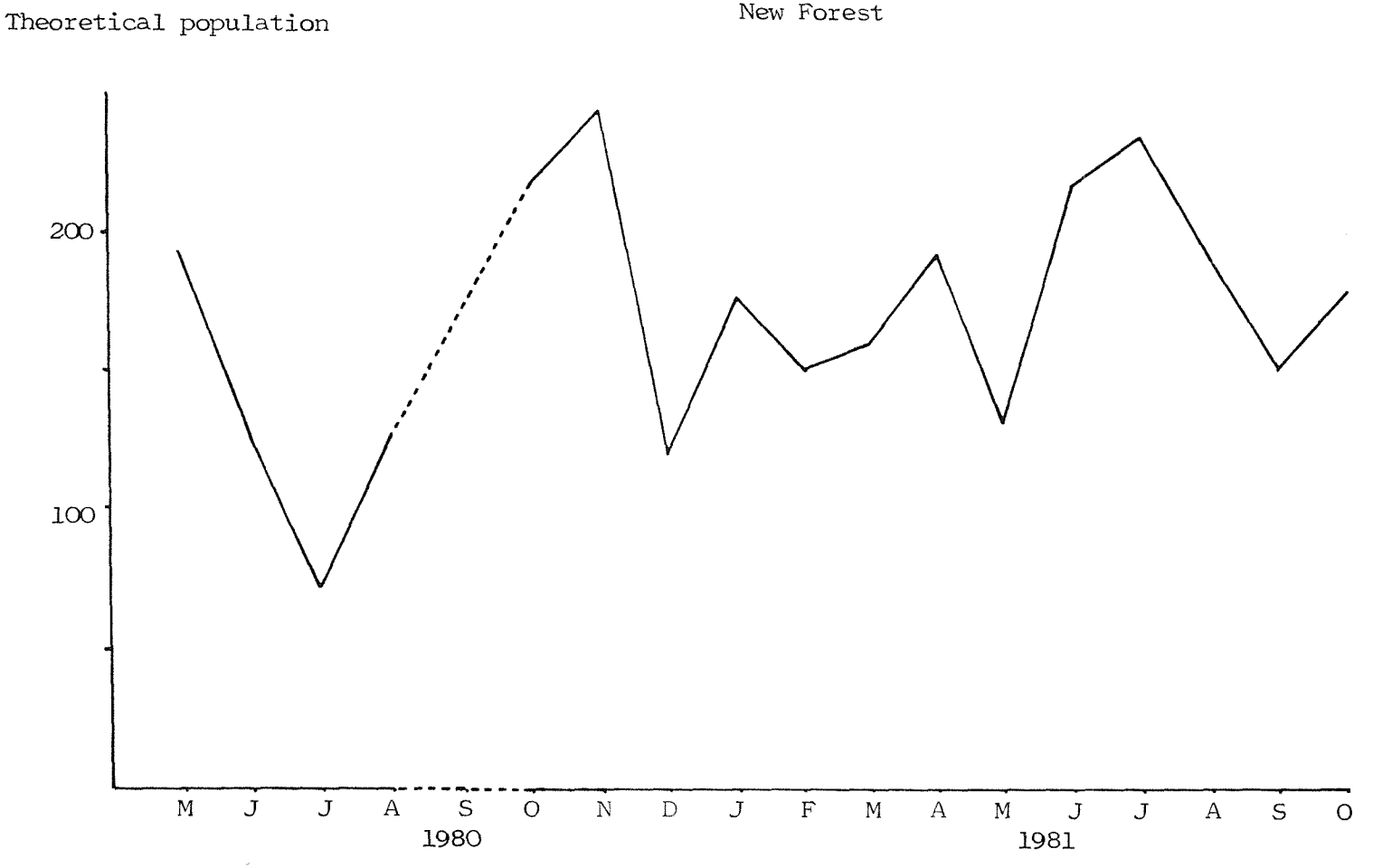


FIGURE 5:2

Seasonal population in the New Forest

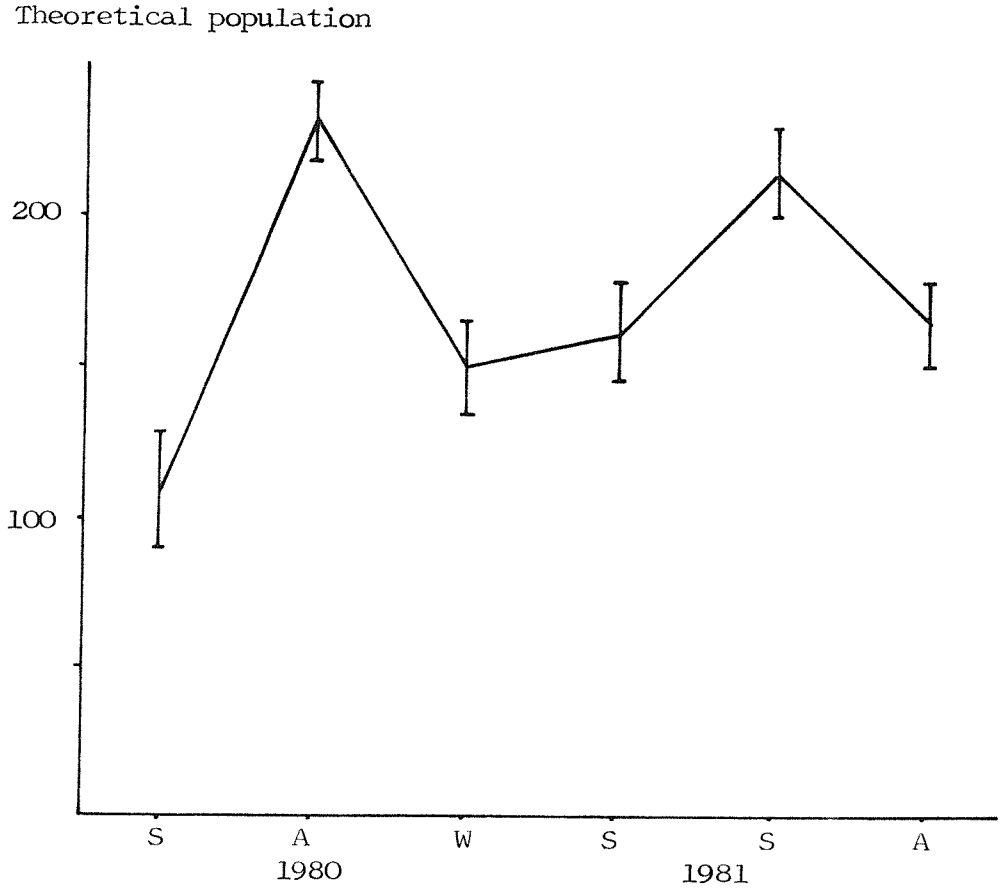


FIGURE 5:3

Theoretical monthly population at Purbeck

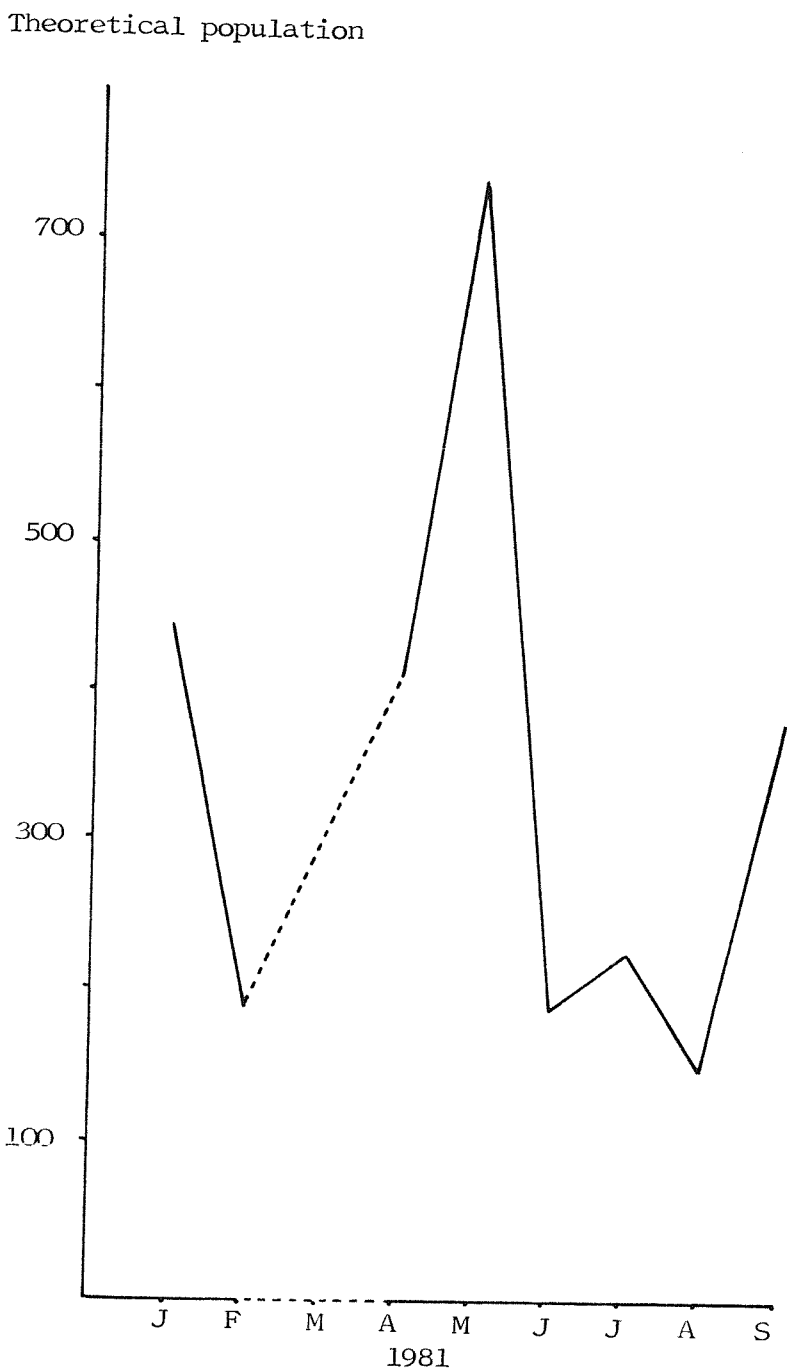


FIGURE 5:4

Seasonal population at Purbeck

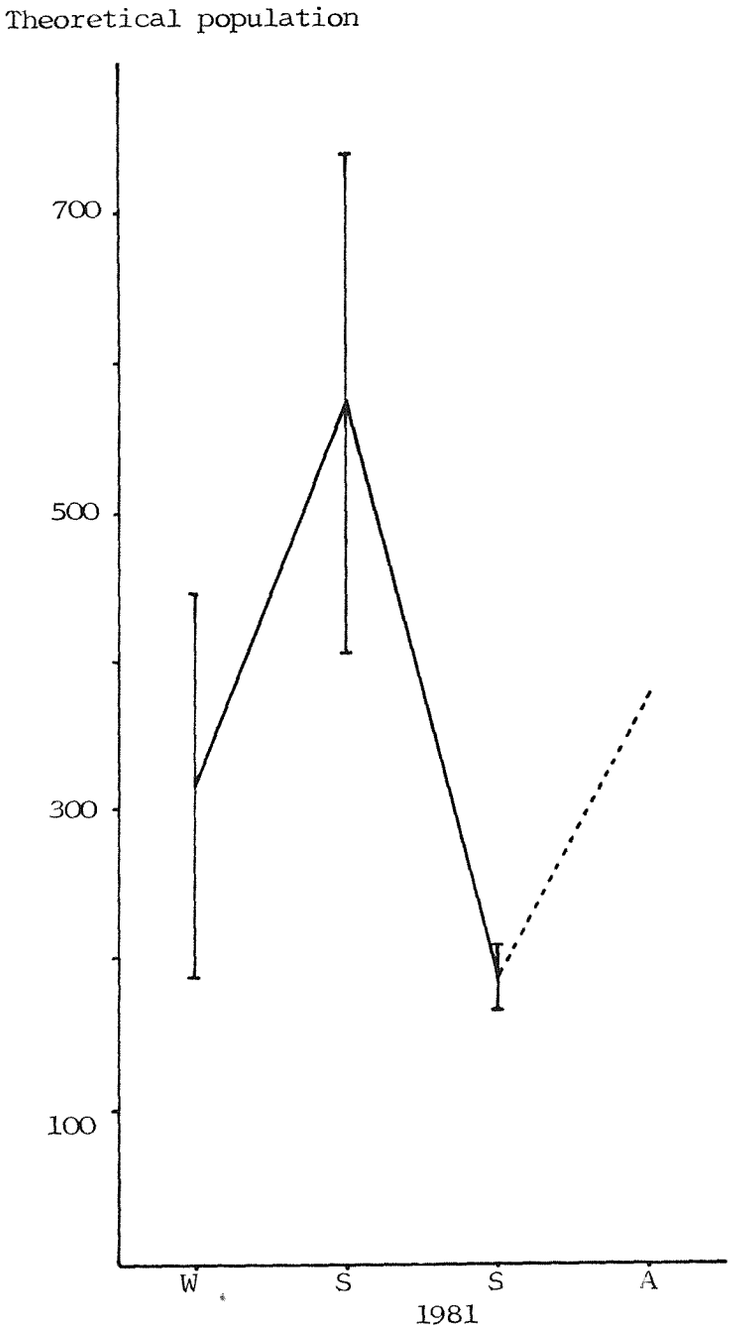


FIGURE 5:5

New Forest seasonal population structure

	Hind	Stag	Calf	Year	Brok	Y+B	Total
1980							
Spring							
N	123	2	26	4	0	4	155
%	79.4	1.3	16.8	2.6		2.6	
Summer							
N	236	3	30	24	2	26	295
%	80.0	1.0	10.2	8.1	0.7	8.8	
Autumn							
N	221	39	33	26	9	35	35
%	67.4	11.9	10.1	7.9	2.7	10.7	
Winter							
N	215	12	33	24	4	28	288
%	74.7	4.2	11.5	8.3	1.4	9.7	
1981							
Spring							
N	278	12	21	18	4	22	333
%	83.5	3.6	6.3	5.4	1.2	6.6	
Summer							
N	293	14	57	62	8	70	434
%	67.5	3.2	13.1	14.3	1.8	16.1	
Autumn							
N	201	51	80	20	9	29	361
%	55.7	14.1	22.2	5.5	2.5	8.0	

Key

Brok Brocket

Y + B Female yearling plus brocket

FIGURE 5:6

New Forest population structure

seasonal ratios

	H:C	H:Y	C:Y	H:S	H:fY
1980					
Spring	4.7:1	30.8:1	6.5:1	61.5:1	30.8:1
Summer	7.9:1	9.1:1	1.3:1	78.7:1	9.8:1
Autumn	6.7:1	6.3:1	1.3:1	5.7:1	8.5:1
Winter	6.5:1	7.7:1	1.4:1	18.0:1	8.9:1
1981					
Spring	13.2:1	12.6:1	1.2:1	23.2:1	15.4:1
Summer	5.1:1	4.2:1	0.9:1	21.0:1	4.7:1
Autumn	2.5:1	6.9:1	4.0:1	3.9:1	10.1:1

Key

H Hind

C Calf

Y Yearling (of both sexes)

S Stag

fY Female yearling

FIGURE 5:7

Purbeck seasonal population structure

	Hind	Stag	Calf	Year	Brok	Y+B	Total
1980 Winter							
N	17	1	7	2	0	2	27
%	63.0	4.0	26.0	7.0	0	7.0	
1981							
Spring							
N	15	0	2	0	1	1	18
%	83	0	11.1	0	5.6	5.6	
Summer							
N	30	1	7	4	0	4	42
%	71.0	2.4	17.0	9.5	0	4.5	
Autumn							
N	51	17	32	6	2	8	108
%	47.0	16.0	30.0	6.0	1.9	7.9	

Key

Brok Brocket - male yearling

Year Yearling

Y + B Female yearling plus male yearling

FIGURE 5:8

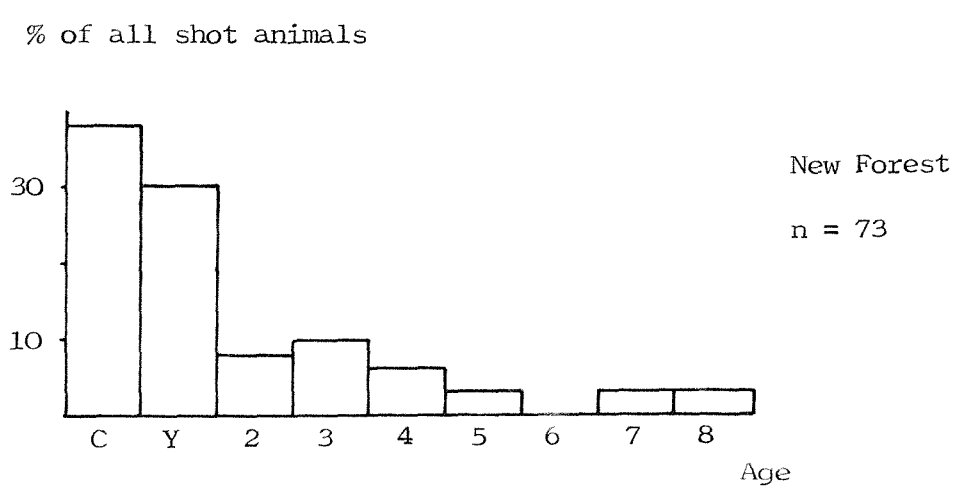
Purbeck population structure

seasonal ratios

	H:C	H:Y	C:Y	H:S
1980				
Winter	2.4:1	8.5:1	3.5:1	17.0:1
1981				
Spring	7.5:1	None identified		
Summer	4.3:1	7.5:1	1.8:1	30.0:1
Autumn	1.6:1	8.5:1	4.0:1	3.0:1

FIGURE 5:9

Age structure of the
culled population



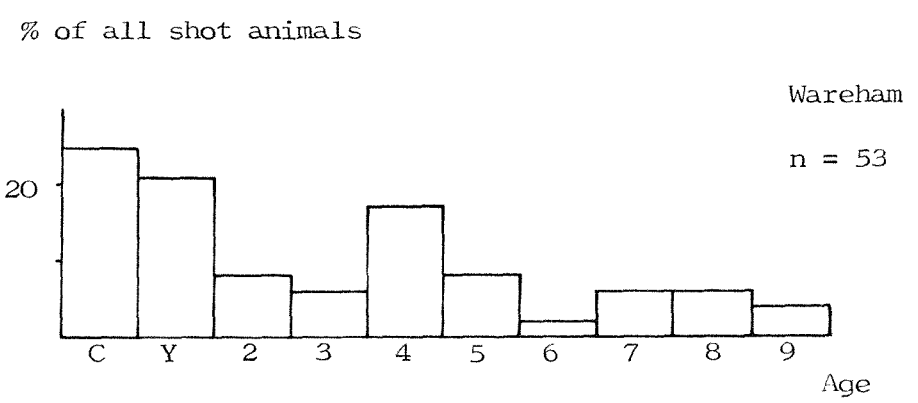
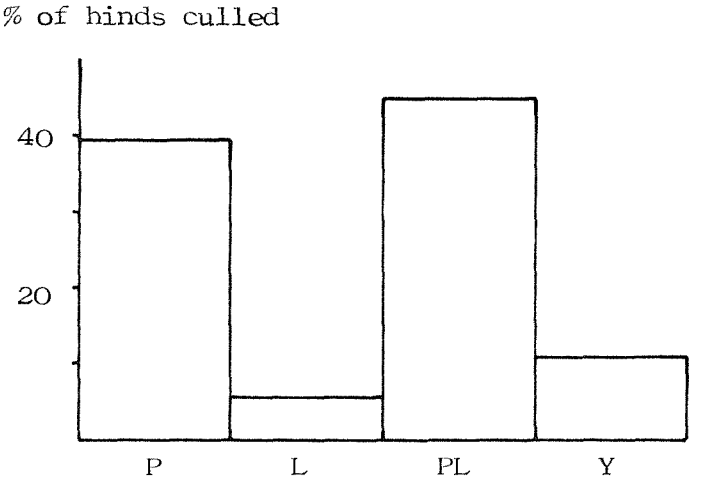


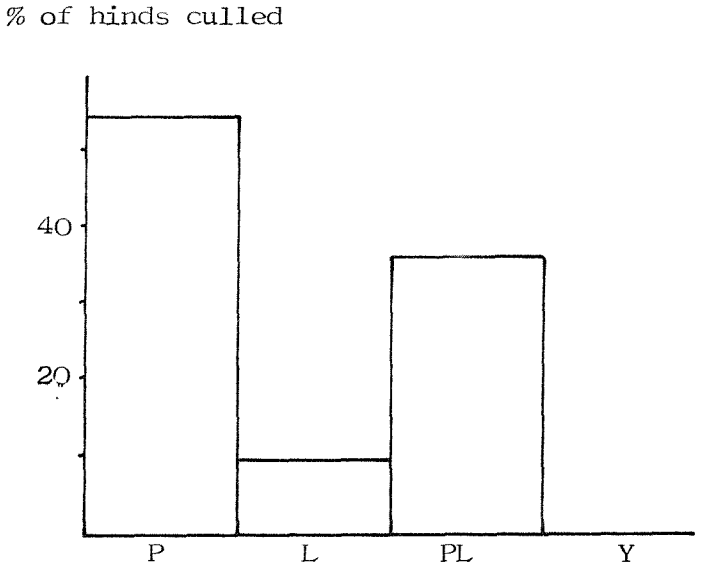
FIGURE 5:10

The reproductive performance of the female sika deer



New Forest

n = 38



Wareham

n = 31

P Pregnant L Lactating

PL Pregnant and lactating

Y "Yeld"

FIGURE 5:11

Reproductive status of hinds

at Wareham

Age	P	Pl	Y	L
$1\frac{1}{2}$	1	0	0	0
2	3	1	0	0
3	1	2	0	0
4	5	2	0	0
5	1	1	0	2
6	0	0	0	1
7	1	2	0	0
8	1	2	0	0
9	2	0	0	0

Key

P Pregnant

Pl Pregant and lactating

Y "Yeld" (apparently infertile)

L Lactating

FIGURE 5:12

Mean group size per month in the New Forest

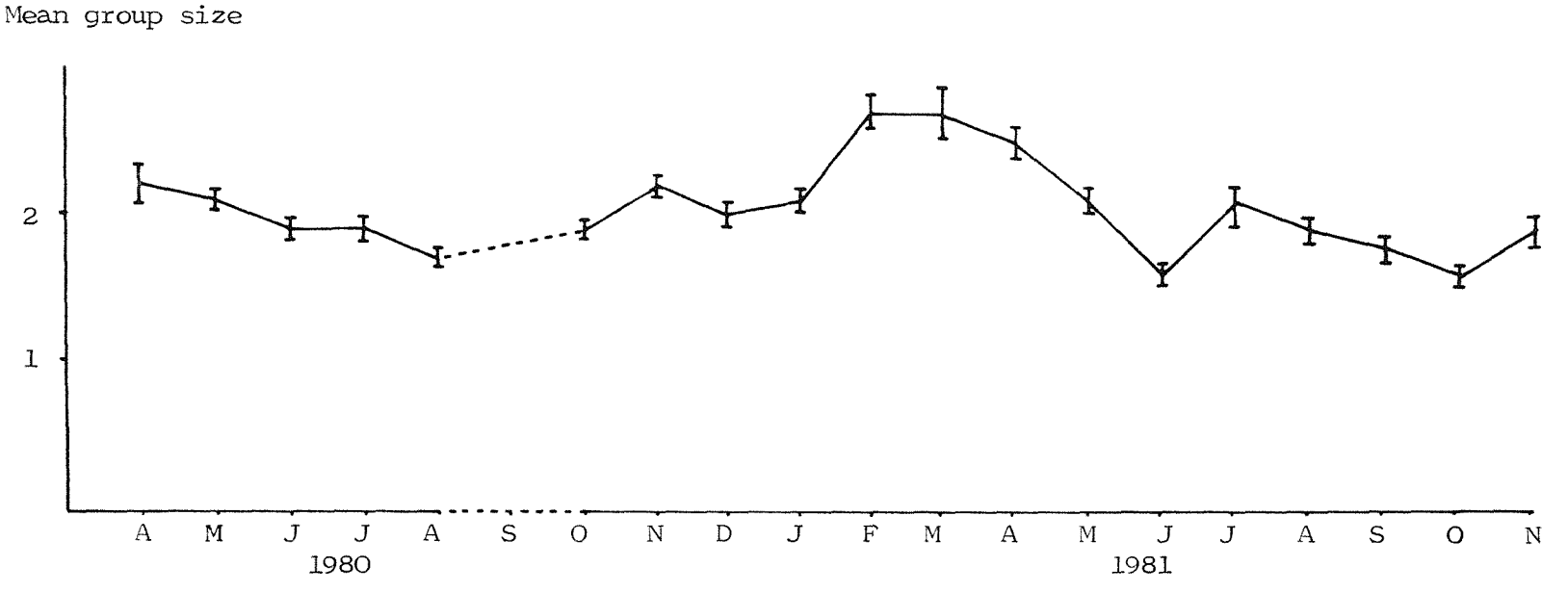


FIGURE 5:13

Mean group size per month at Purbeck

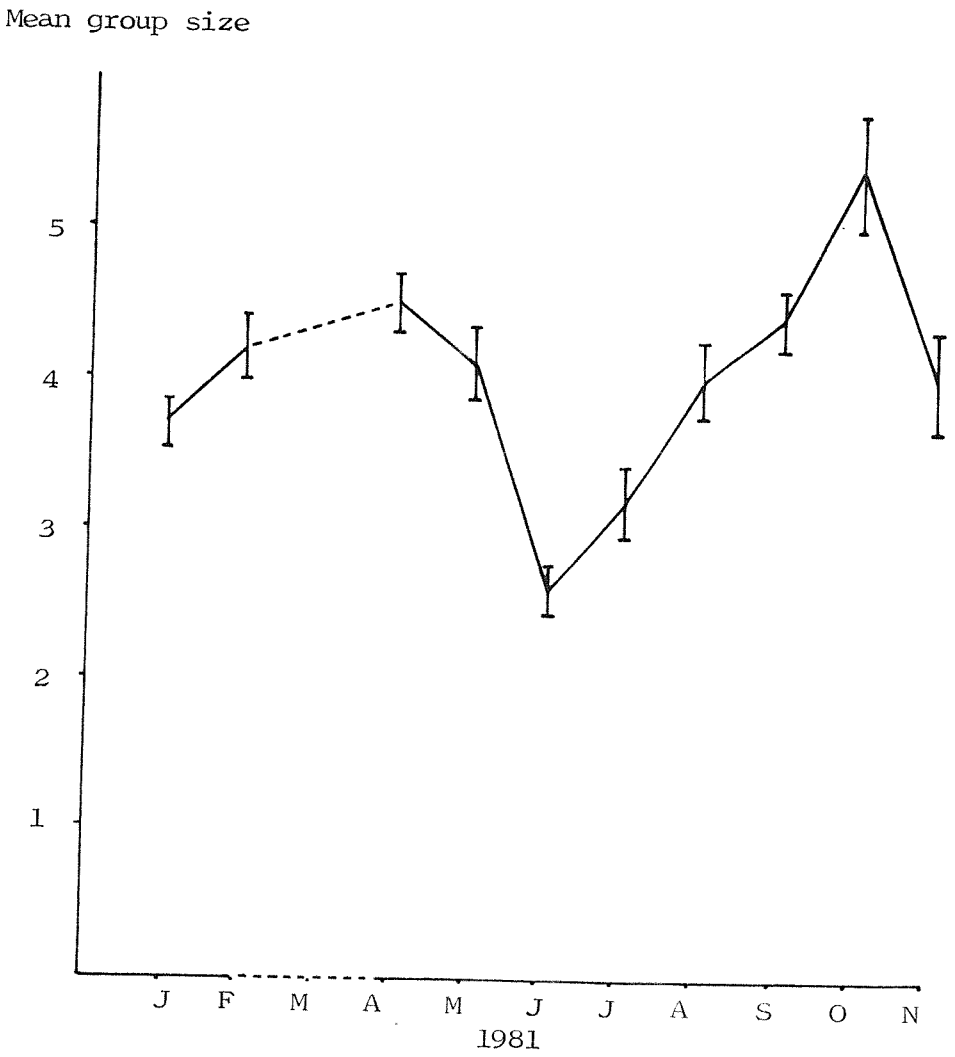


FIGURE 5:14

The effect of group composition on group size in the New Forest

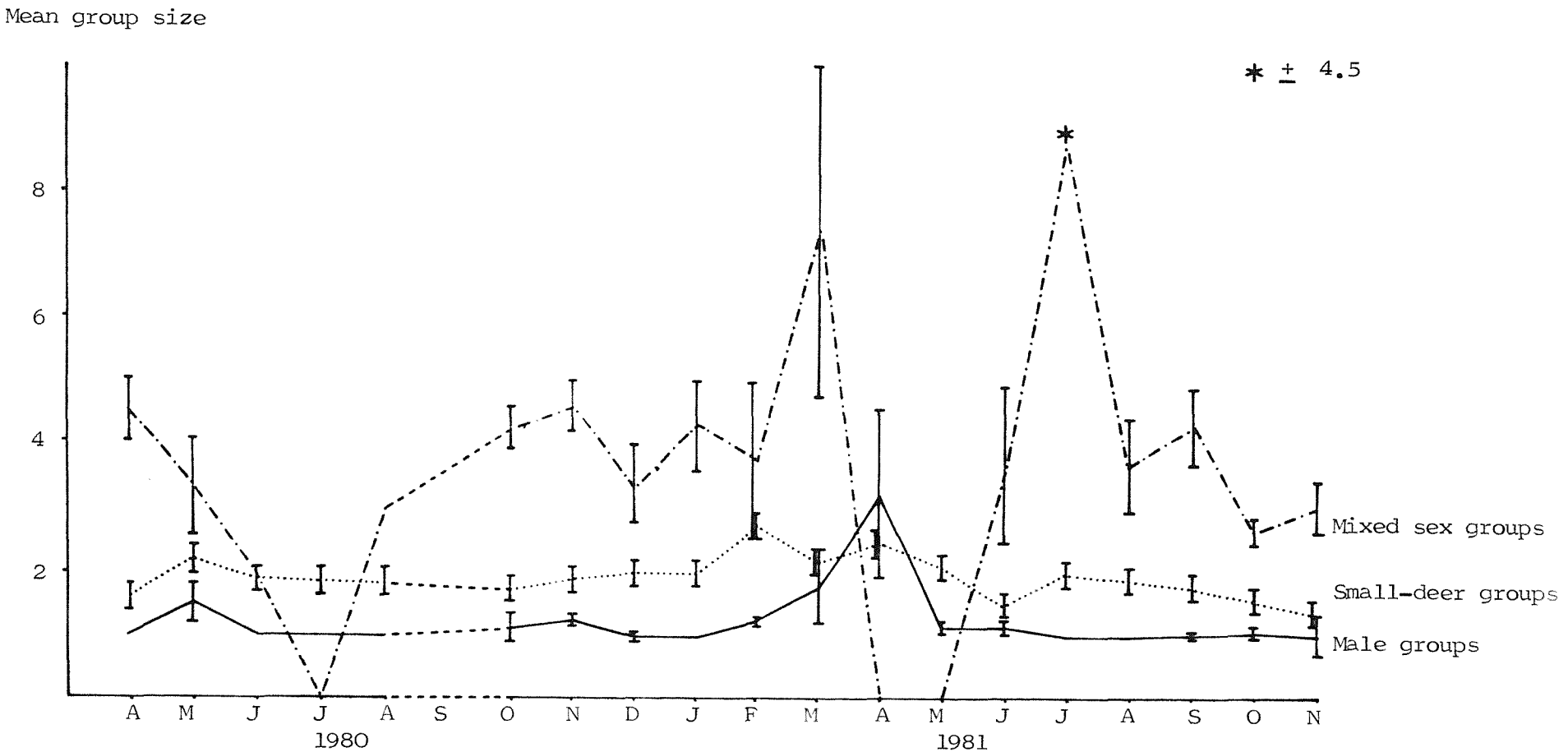


FIGURE 5:15a

Mean group size per month in

oak woods ; New Forest

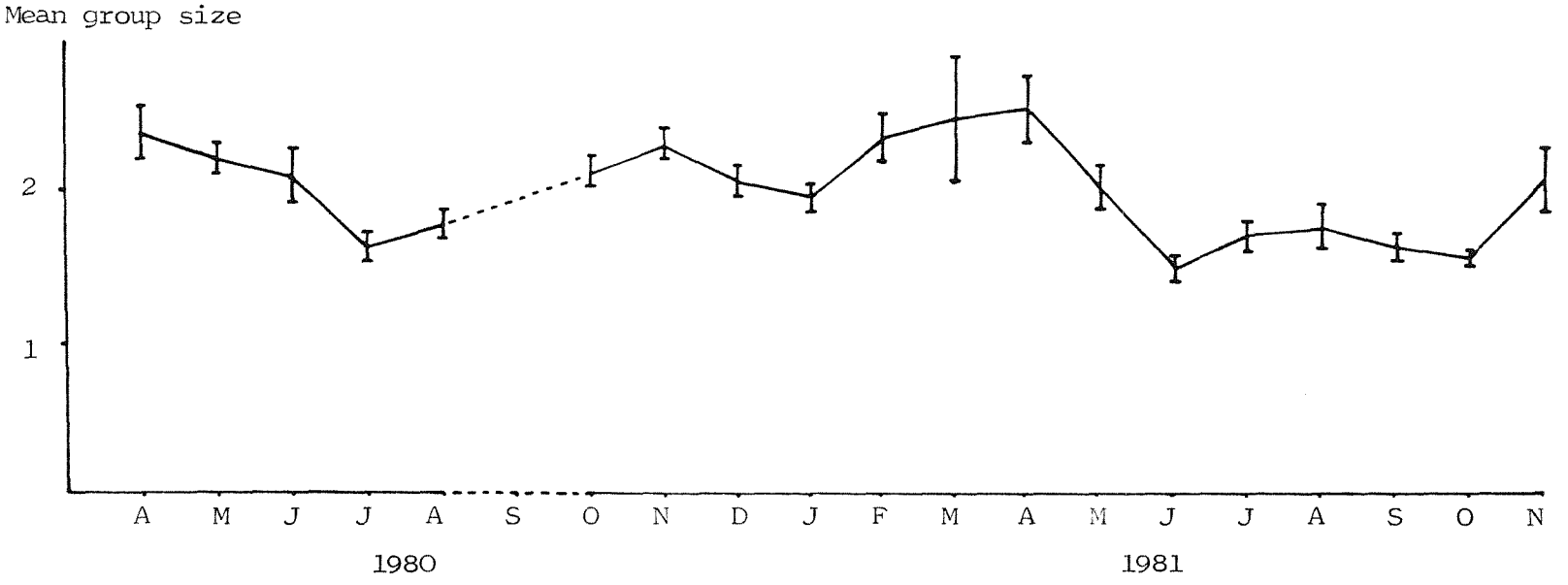


FIGURE 5:15b

Mean group size per month in prethicket ; New Forest

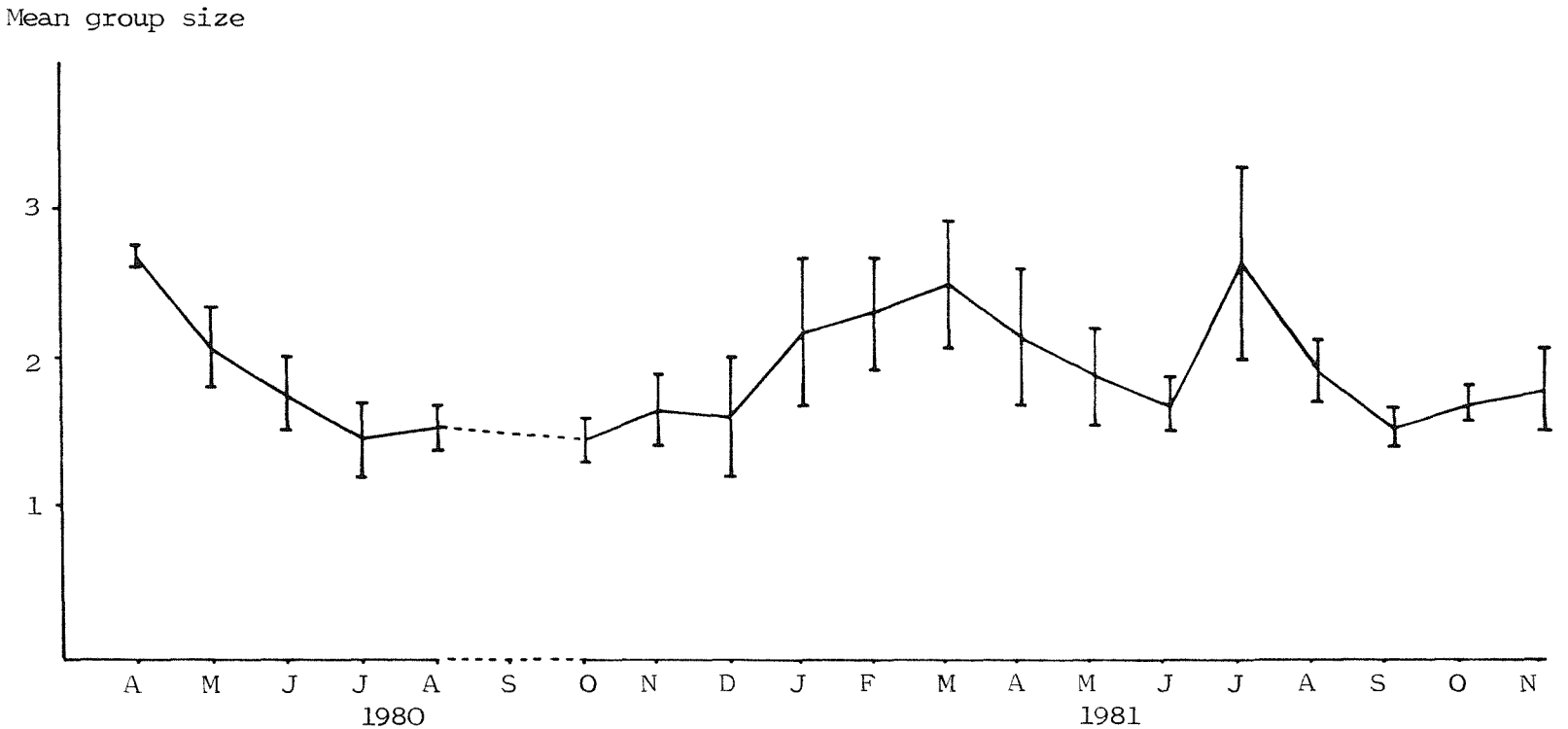


FIGURE 5.15c

Mean monthly group size in polestage ; New Forest

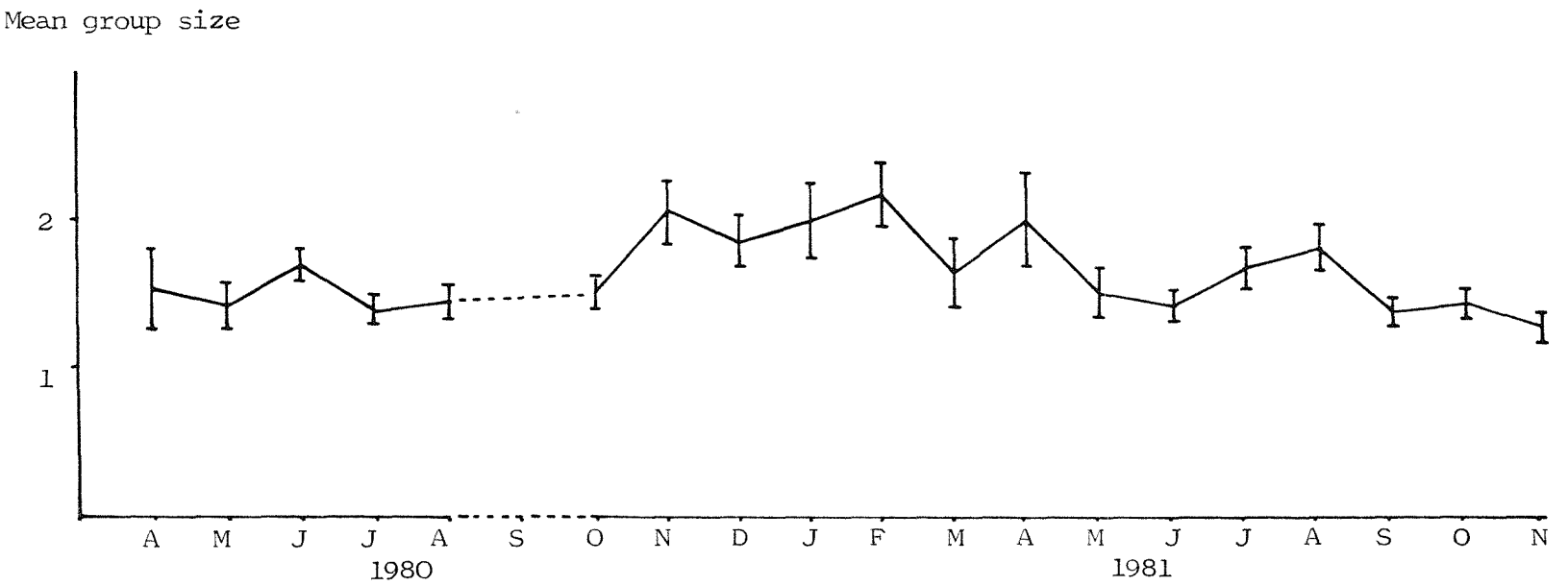


FIGURE 5:15d

Mean monthly group size in rides ; New Forest

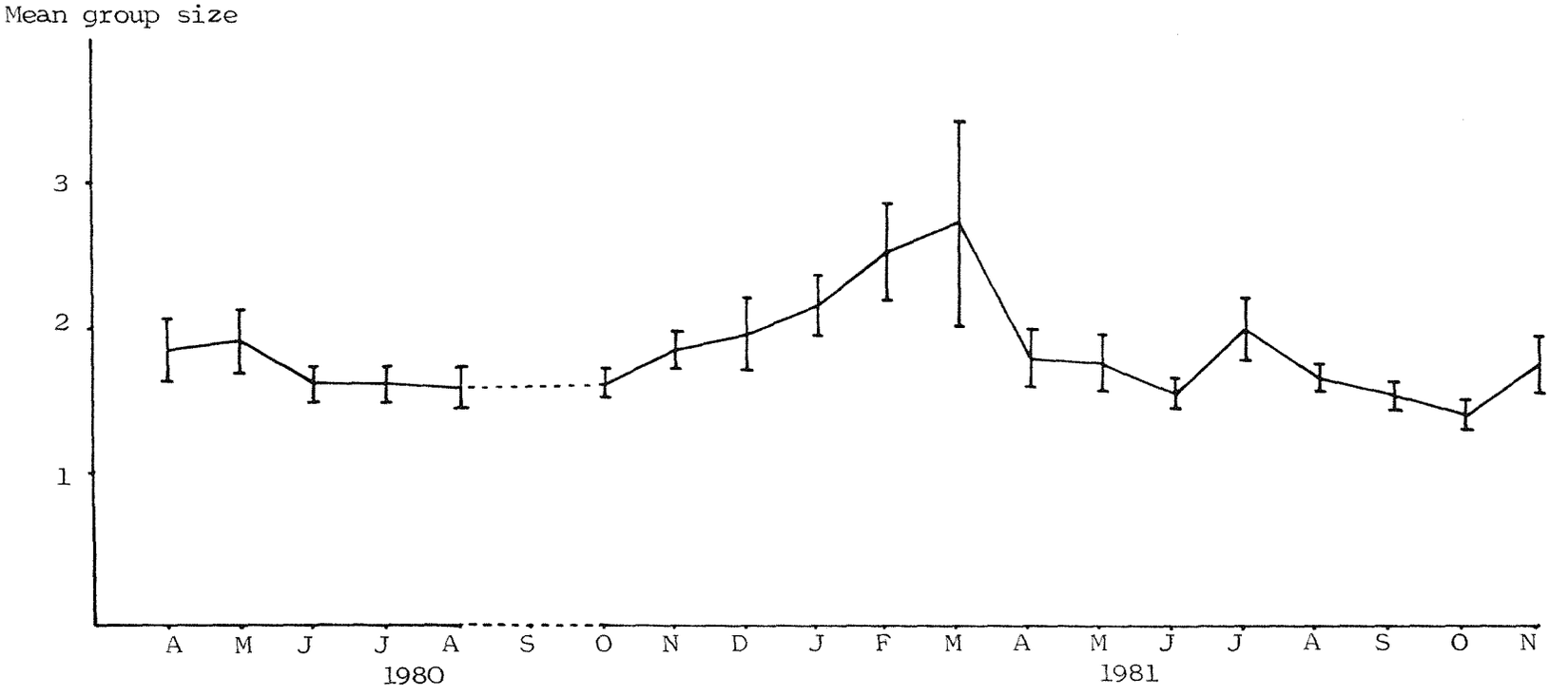


FIGURE 5:15e

Mean group size per month in
clear-felled areas : New Forest

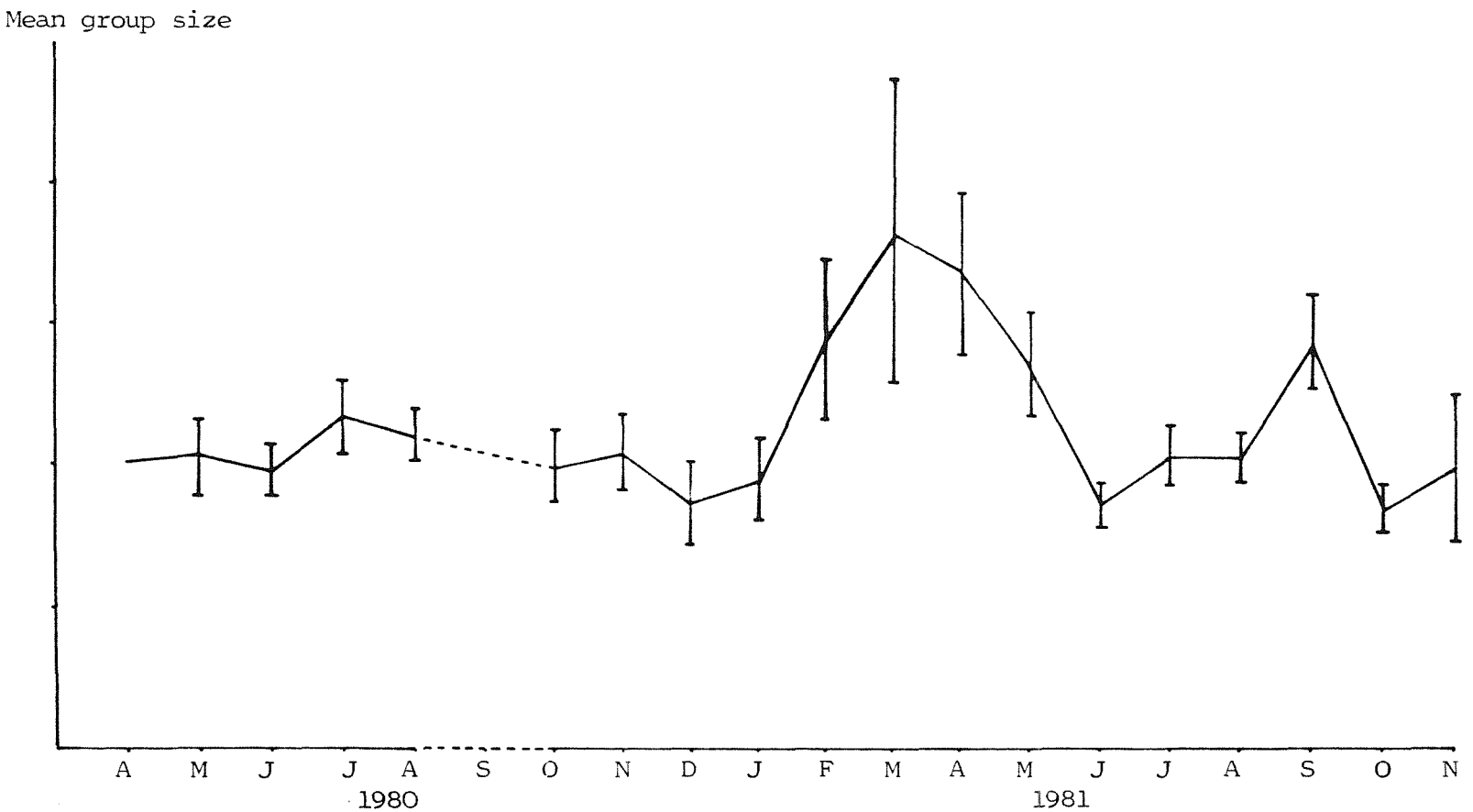


FIGURE 5:16a

Mean group size per month in fields and thicket : Purbeck

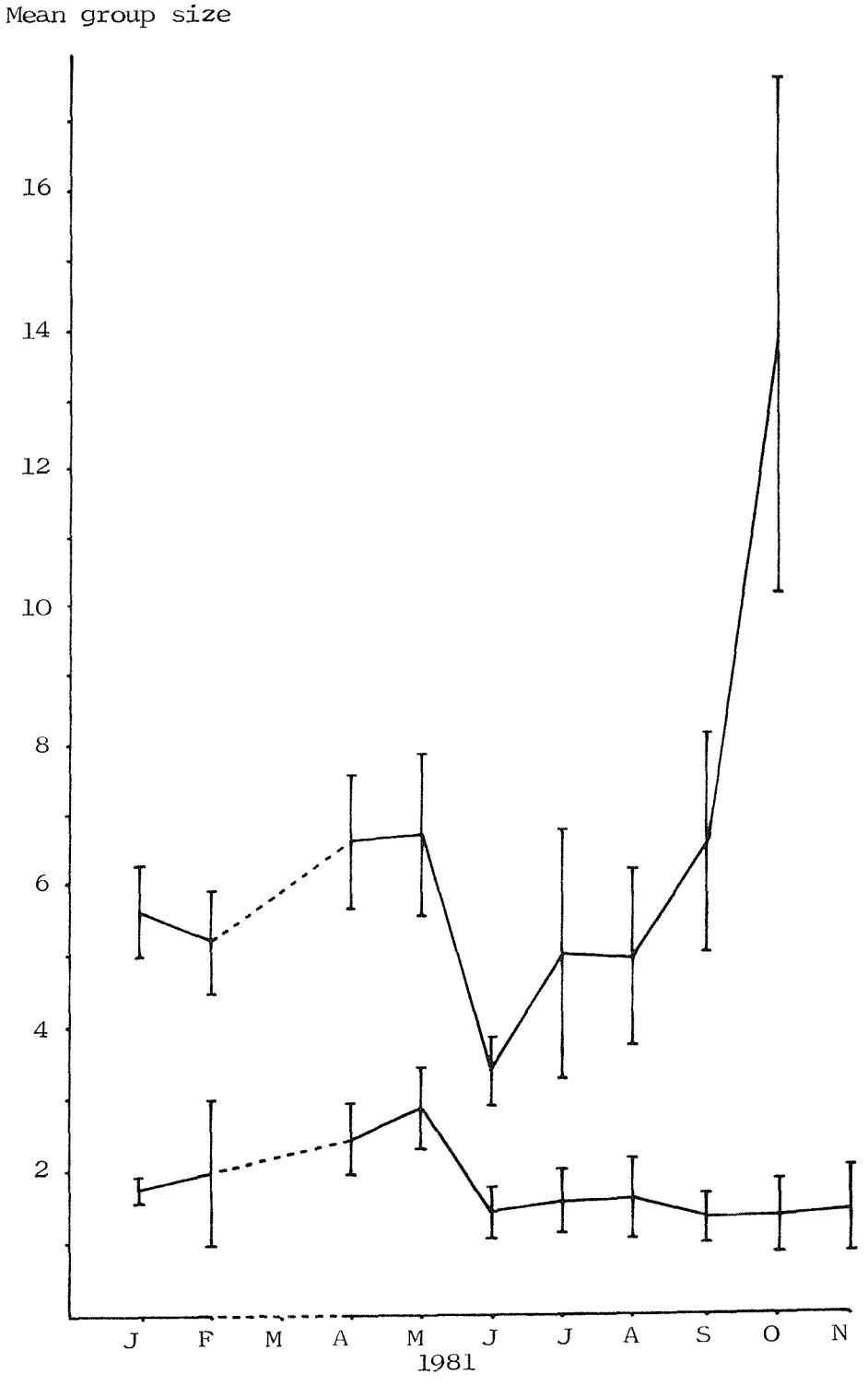


FIGURE 5:16b

Mean group size per month in saltmarsh and rides : Purbeck

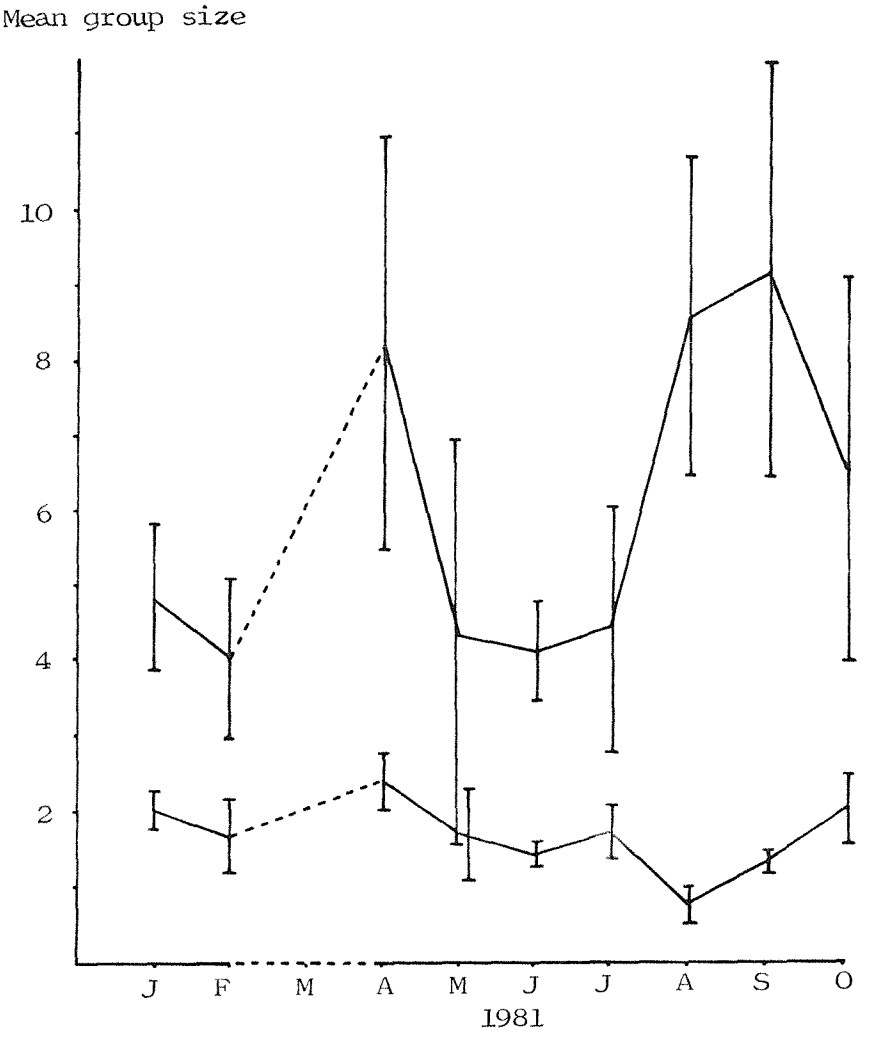
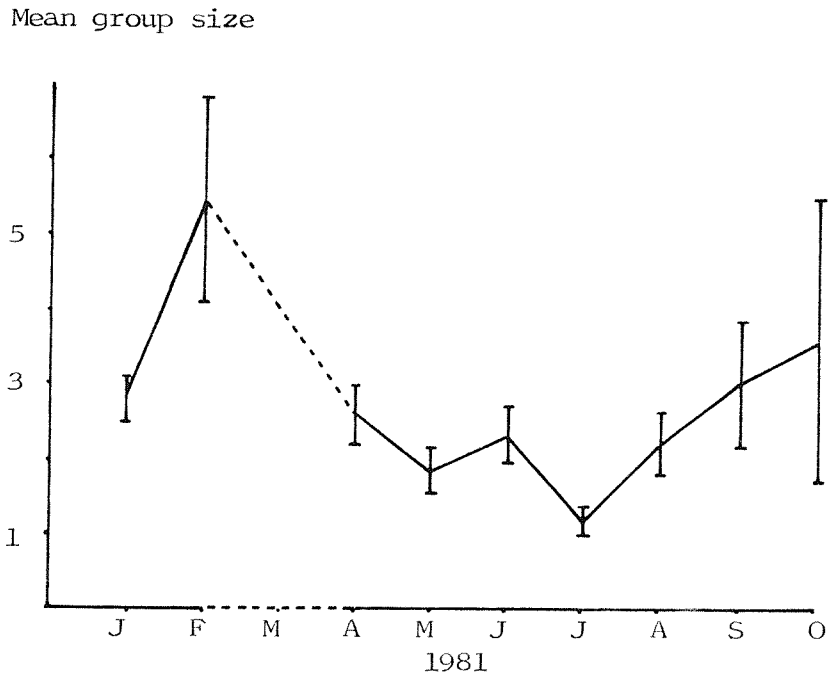


FIGURE 5:16e

Mean group size per month in
heath : Purbeck



C H A P T E R S I X

Social behaviour

FIGURE 6:1

Stag sightings
(animal number 16)

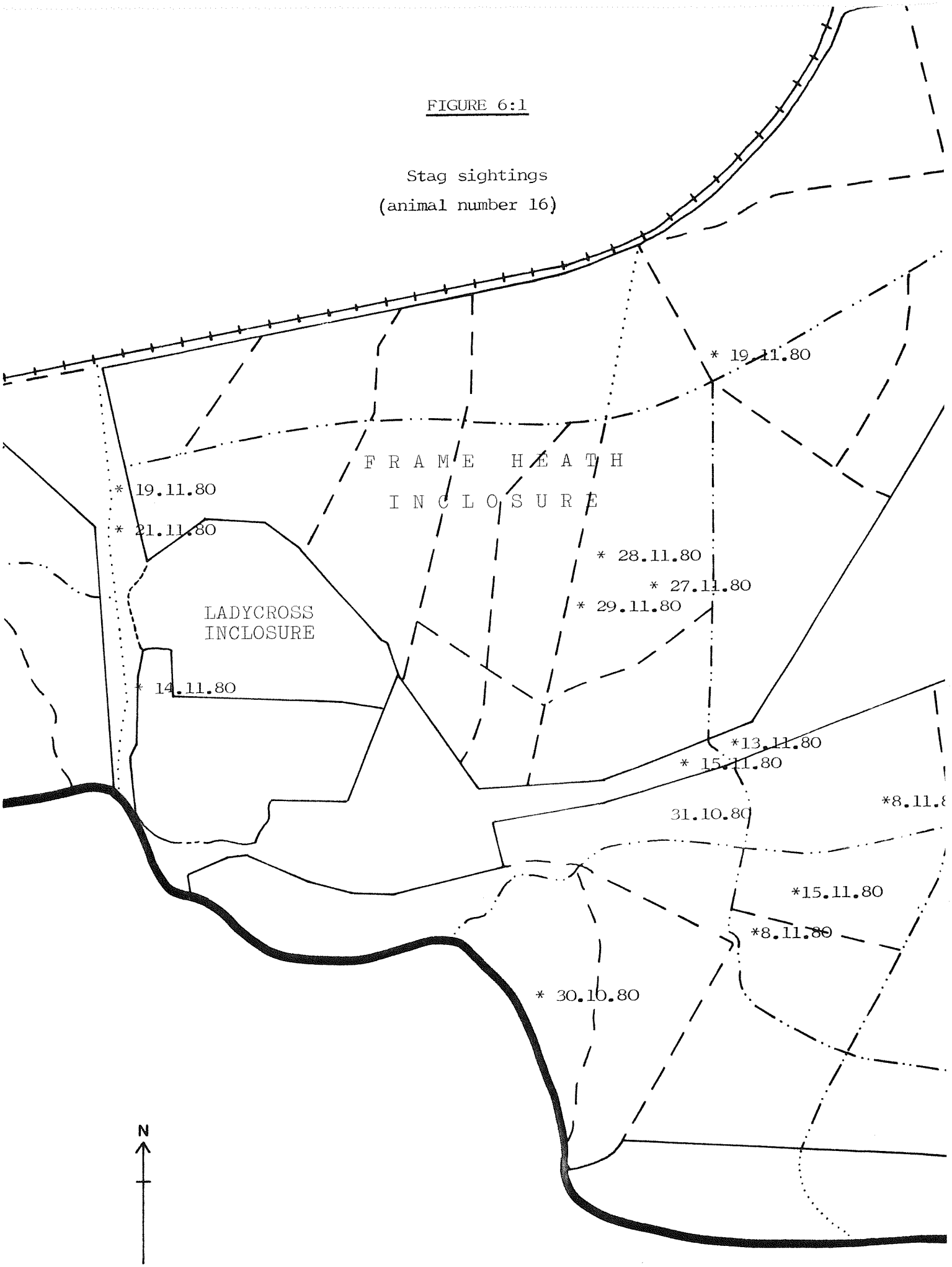


FIGURE 6:2

Stag sightings
(animal number 3)

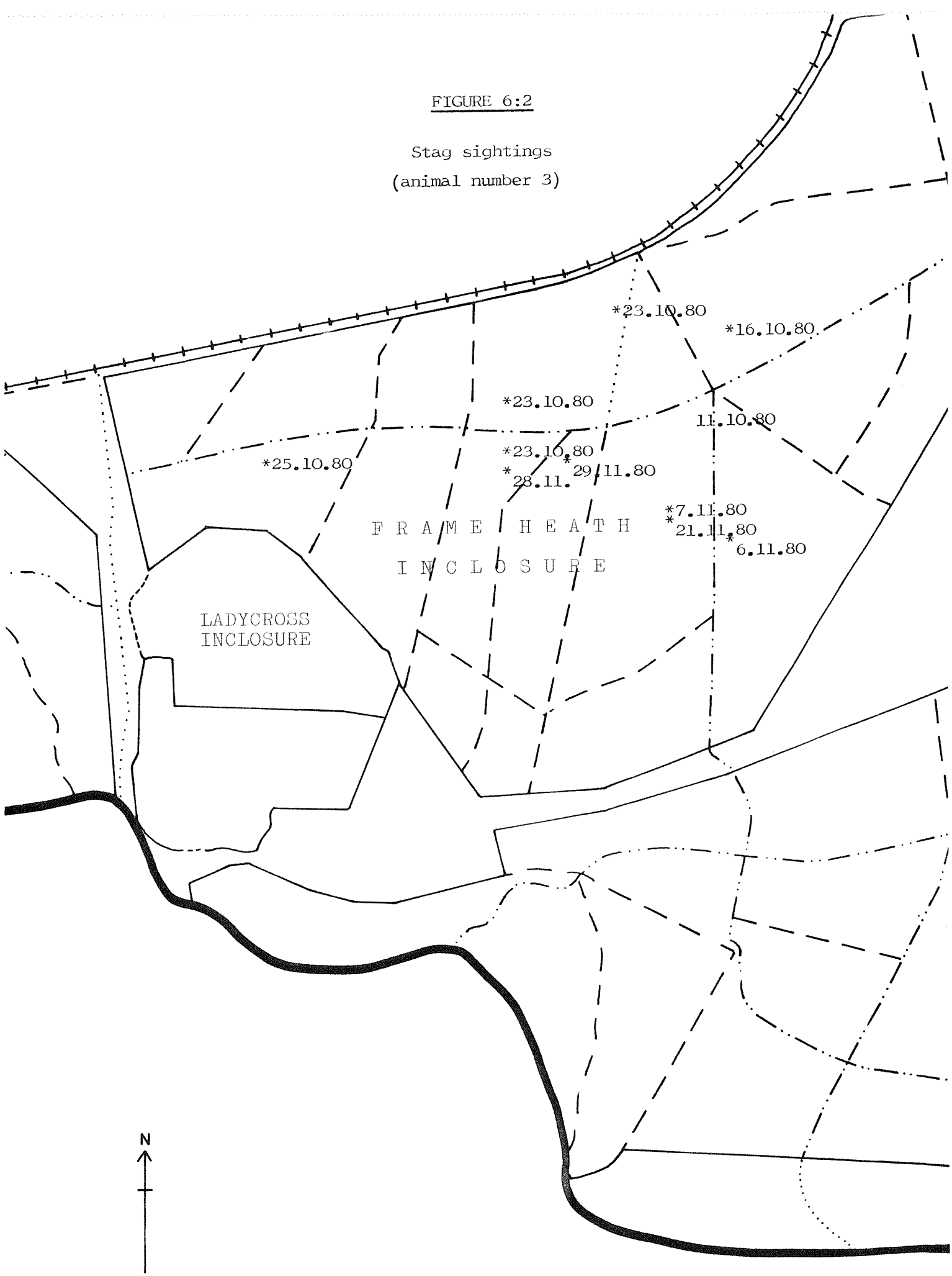


FIGURE 6:3

Stag sightings
(animal number 1)

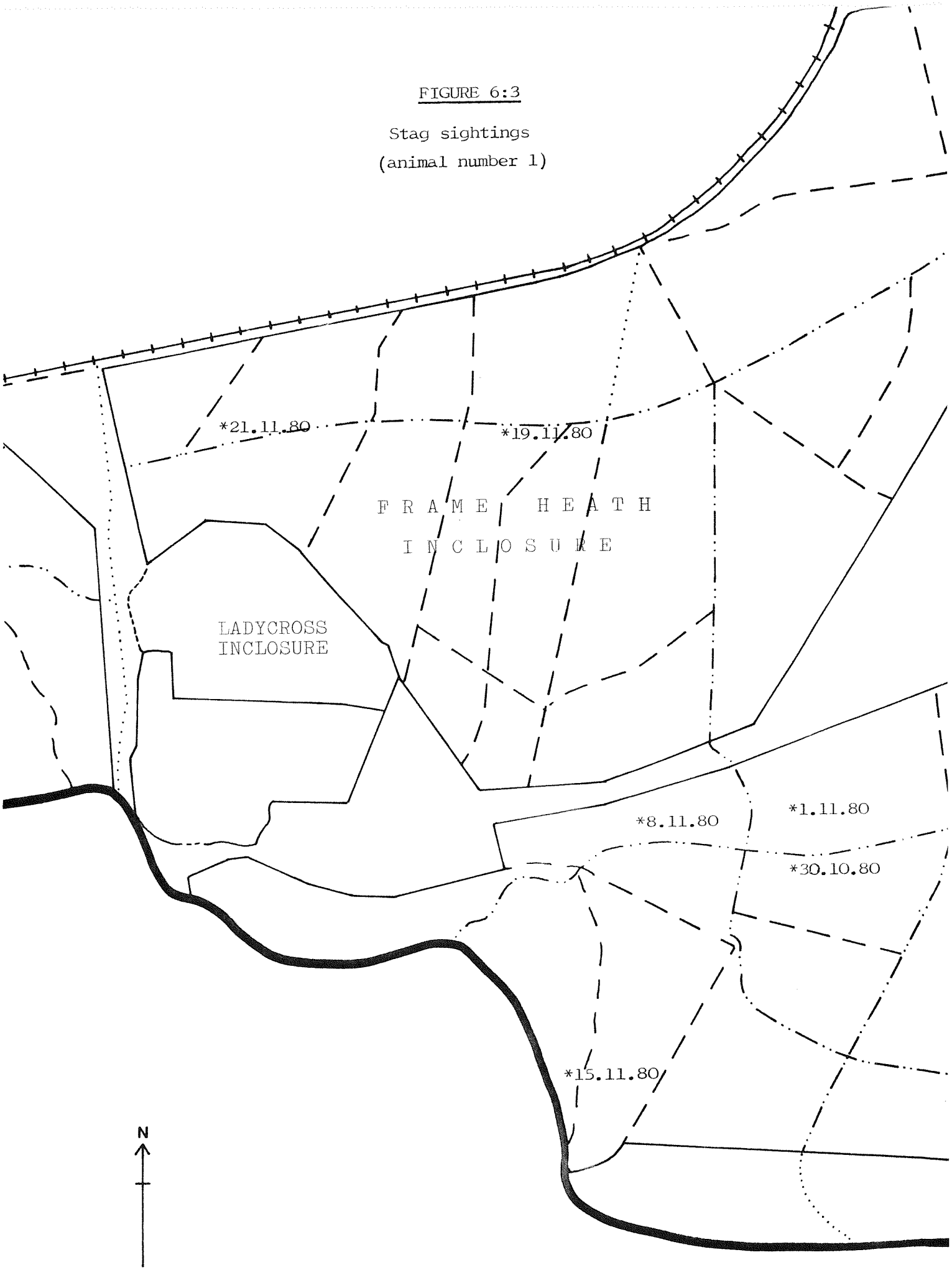


FIGURE 6:4

Stag sightings

(animal number 7)

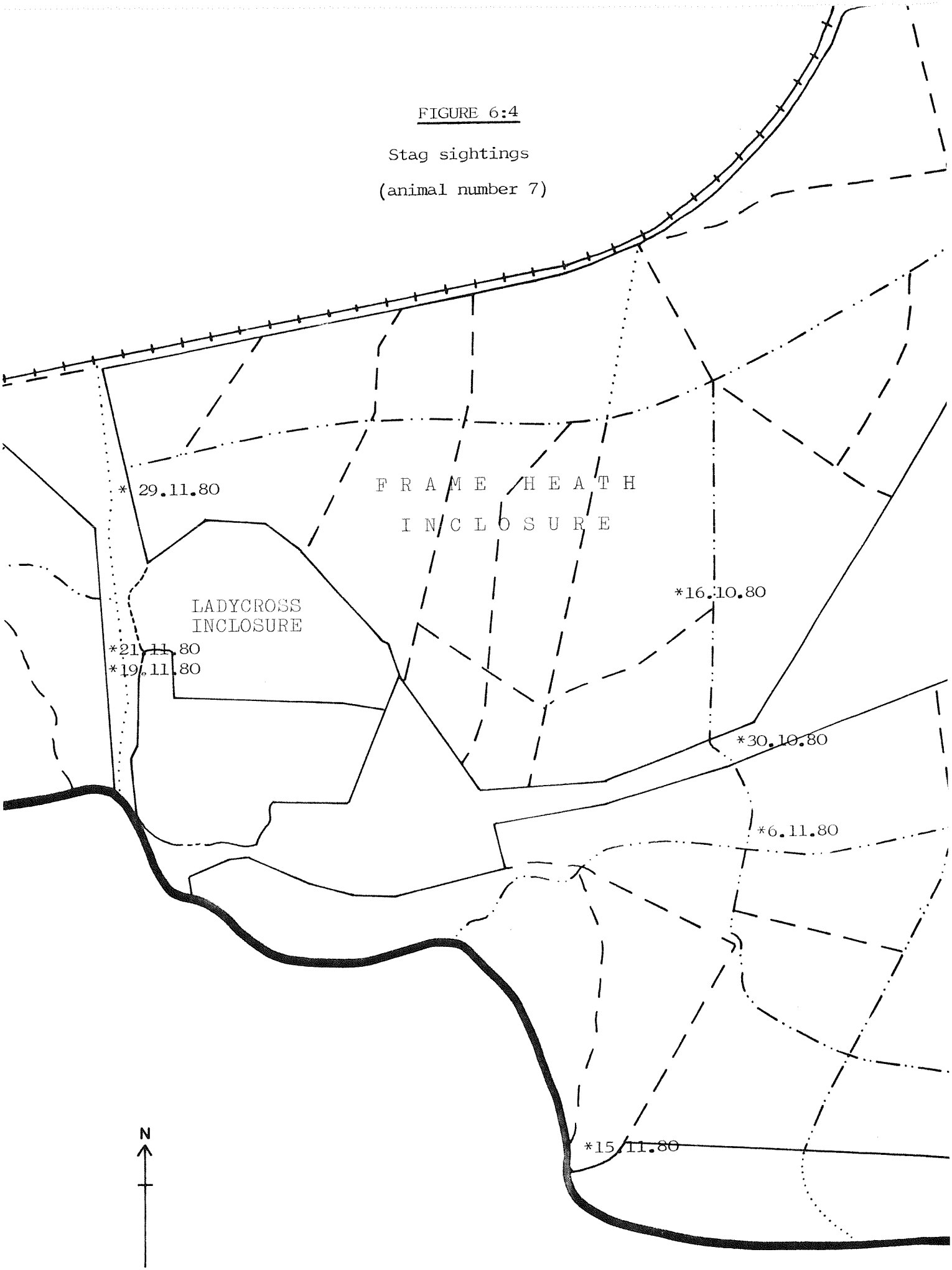


FIGURE 6:5

Stag sightings

(animal number 9)

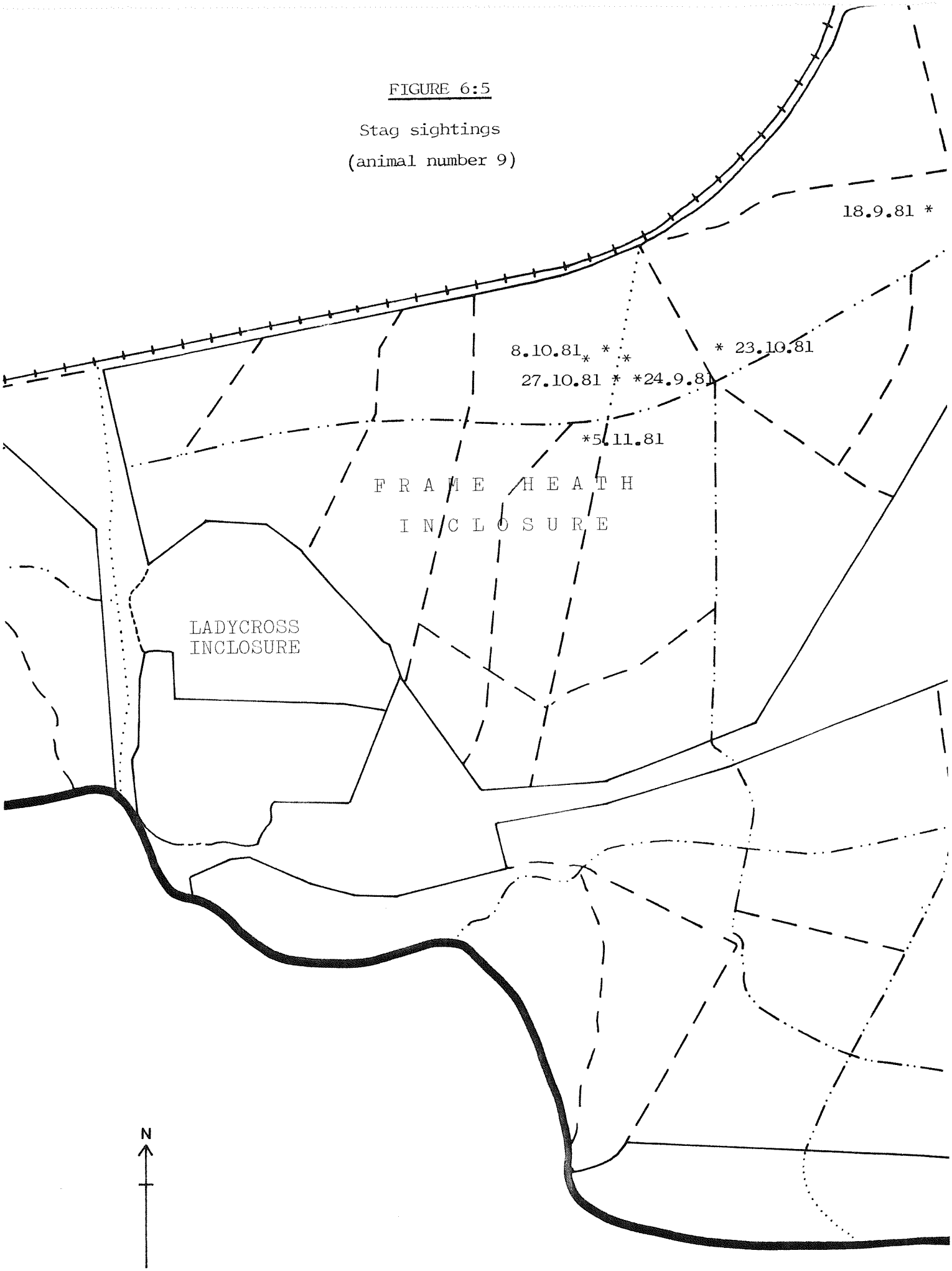


FIGURE 6:6

Stag sightings
(animal number 18)

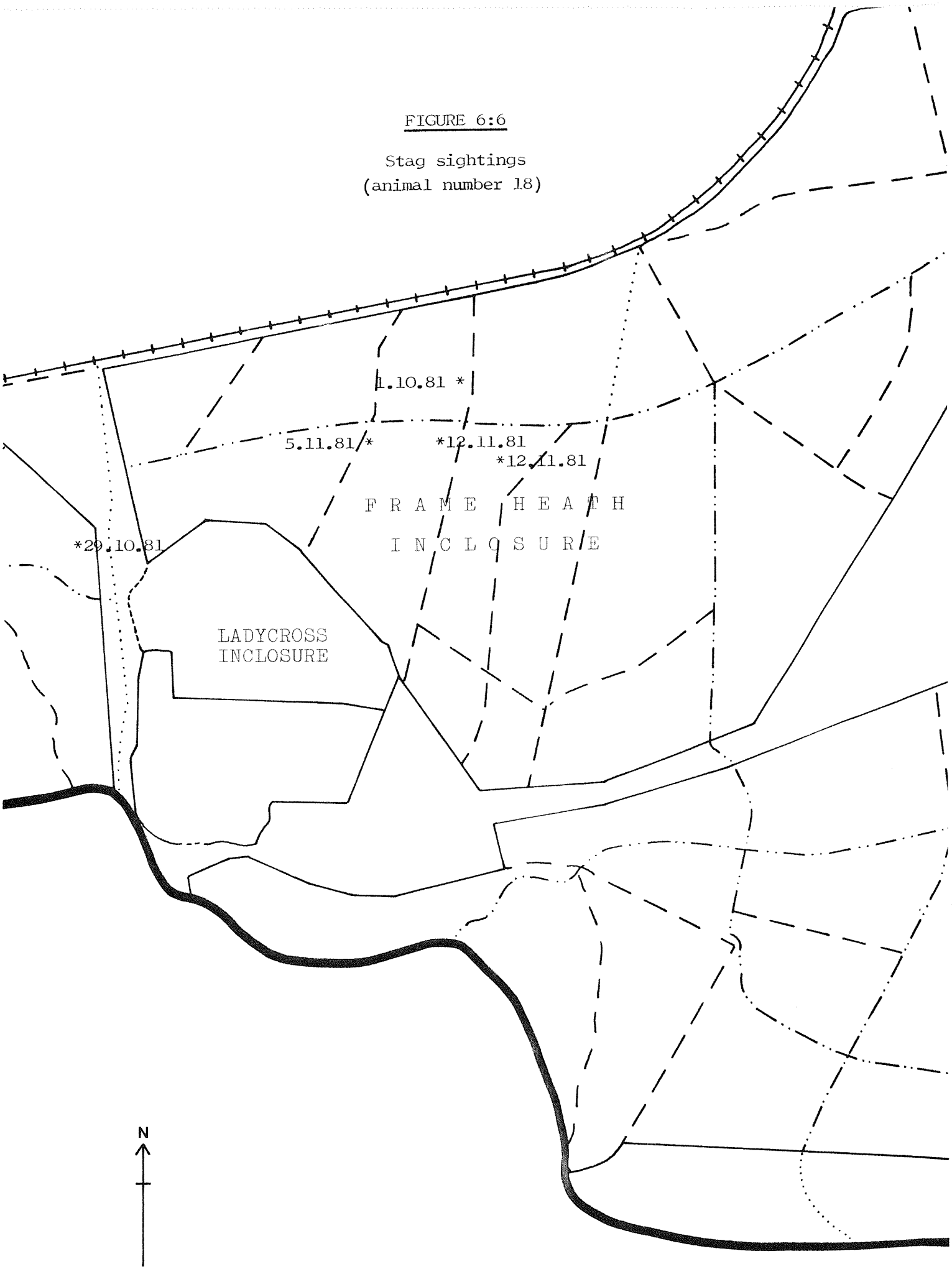


FIGURE 6:7

Stag sightings

(animal number 19)

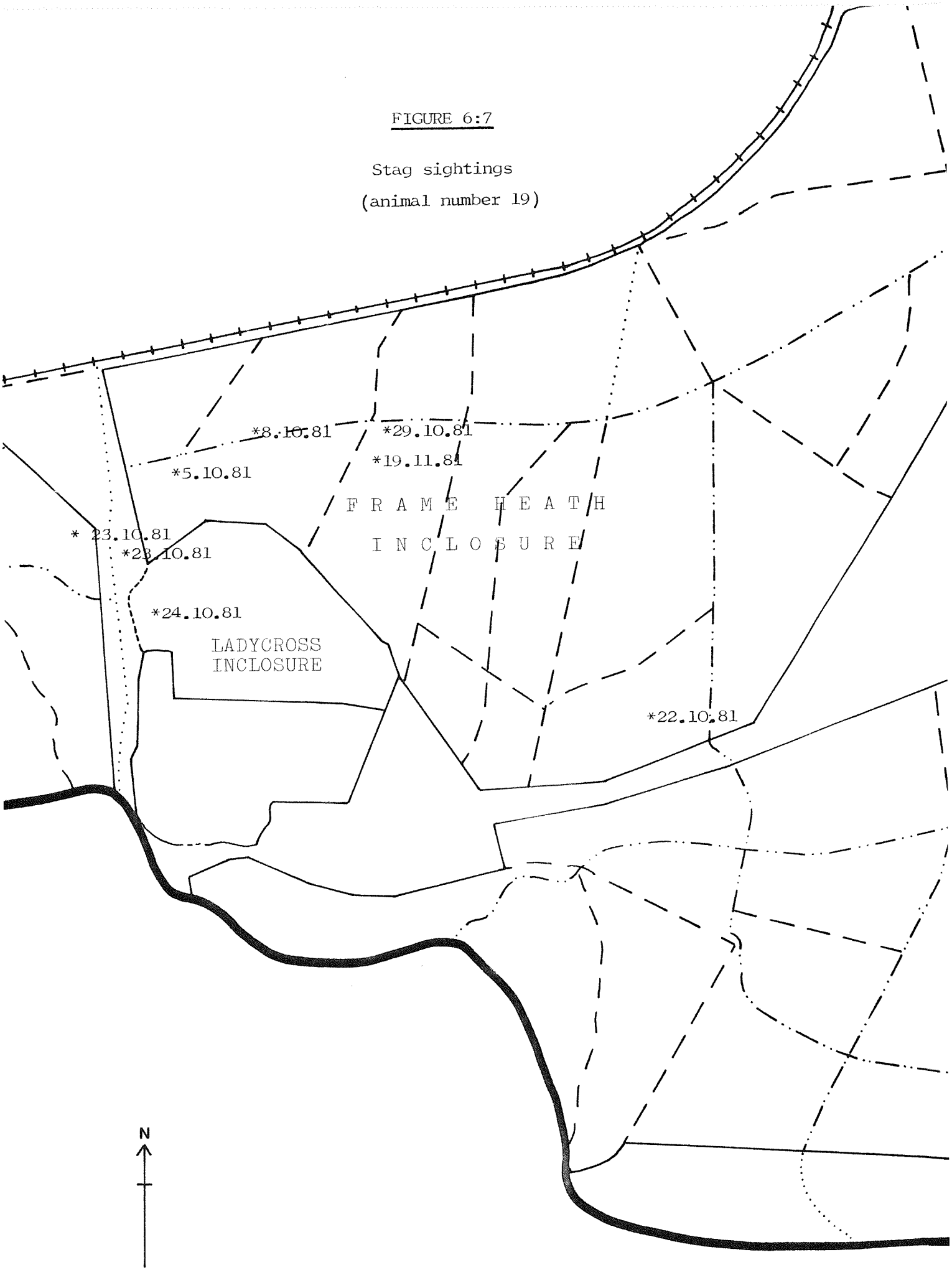


FIGURE 6:8

Stag sightings

(animal number 20)

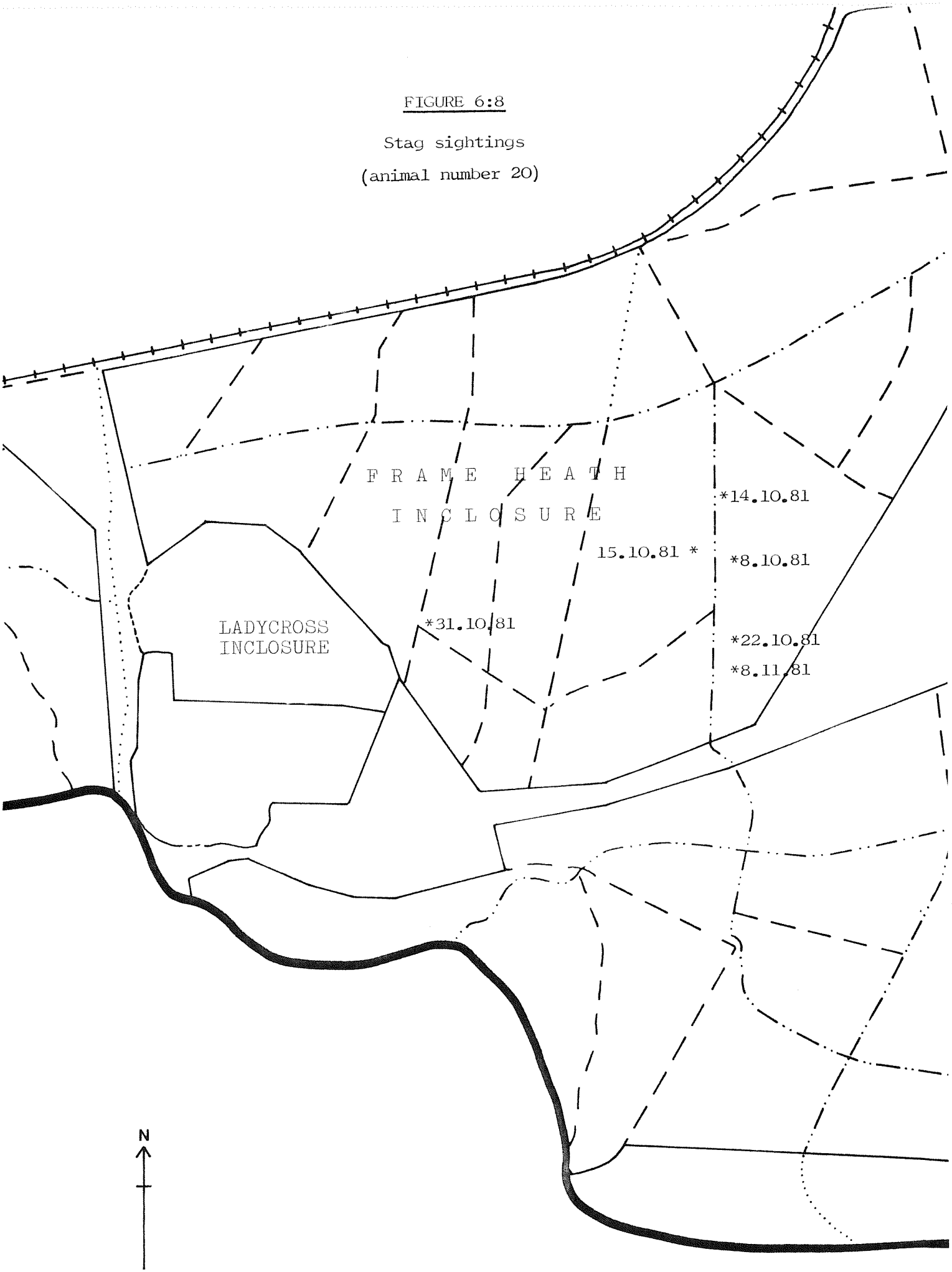


FIGURE 6:9

Stag sightings

(animal number 26)

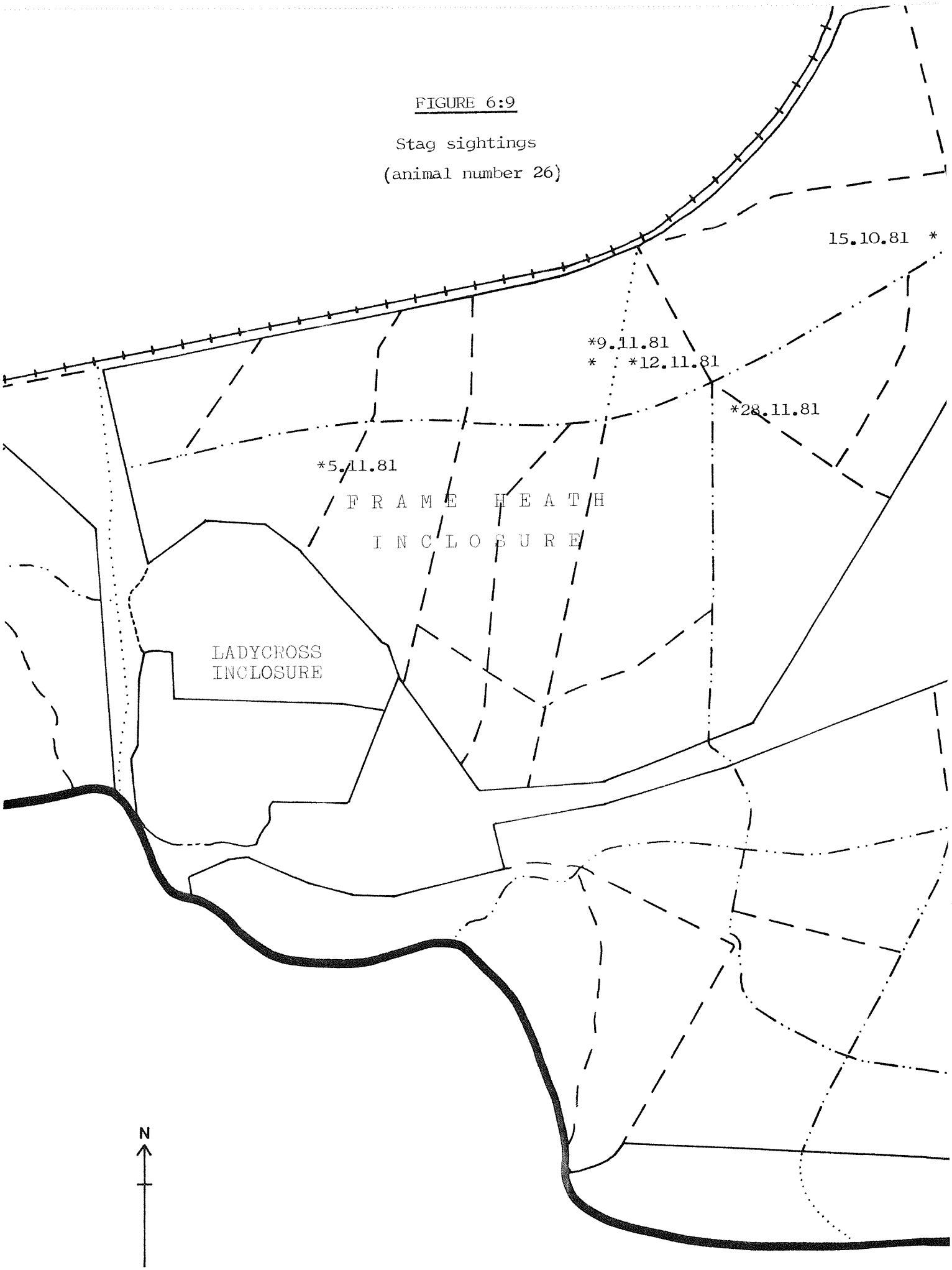


FIGURE 6.10

Stag ranges in the New Forest

superimposed

1981