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Chapter IX, Grand Gulch Settlement Patterns

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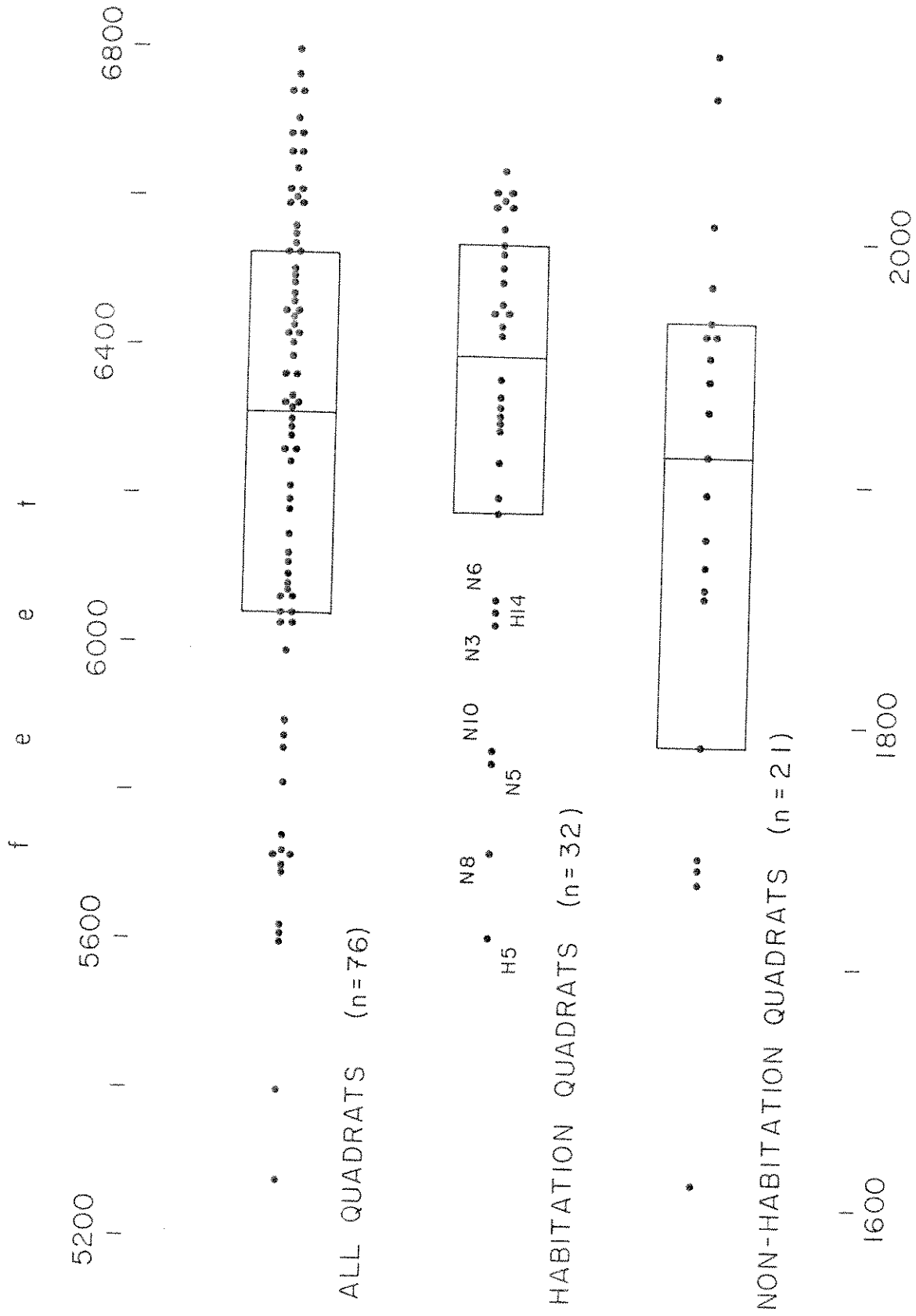


Figure IX-1

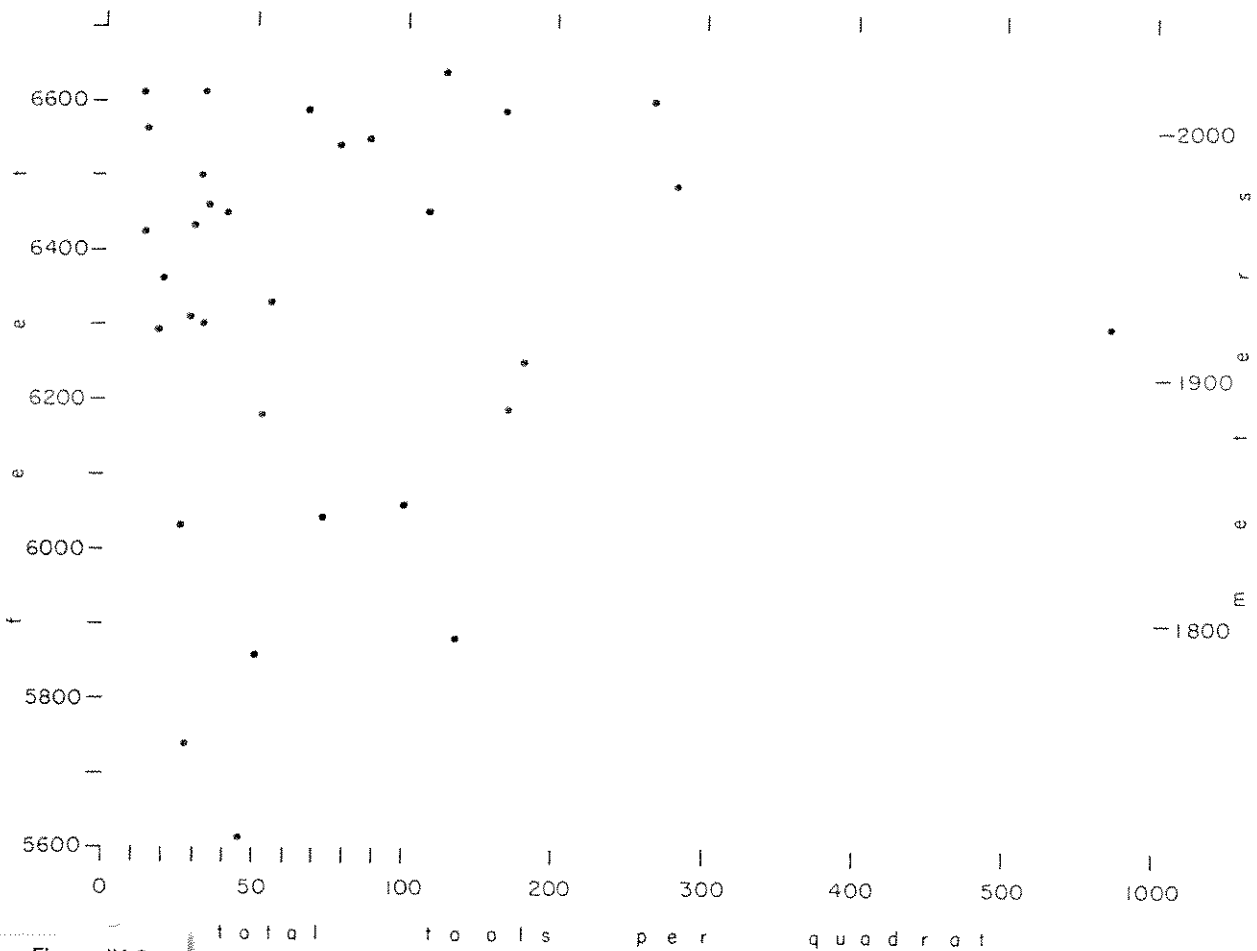


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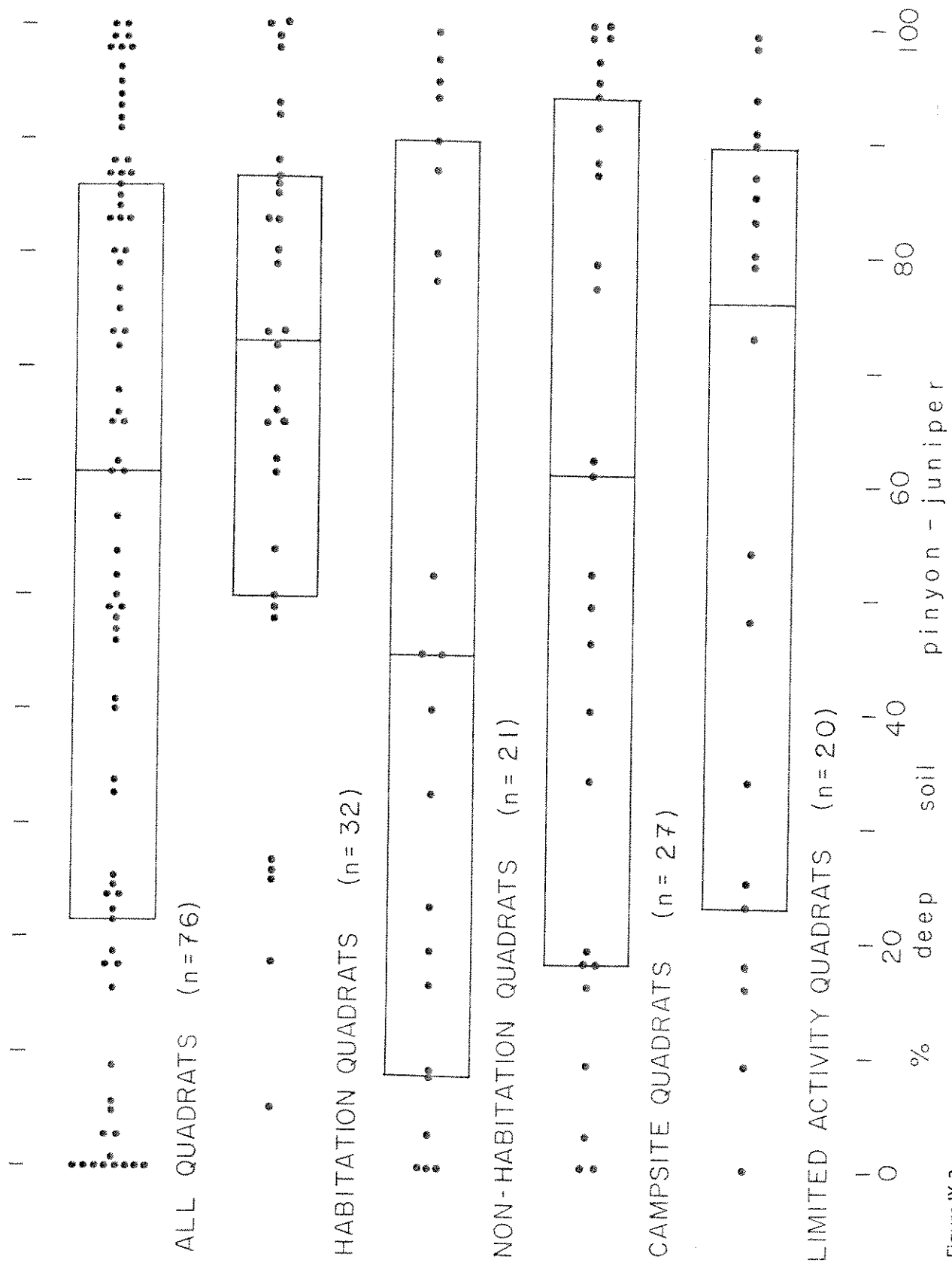


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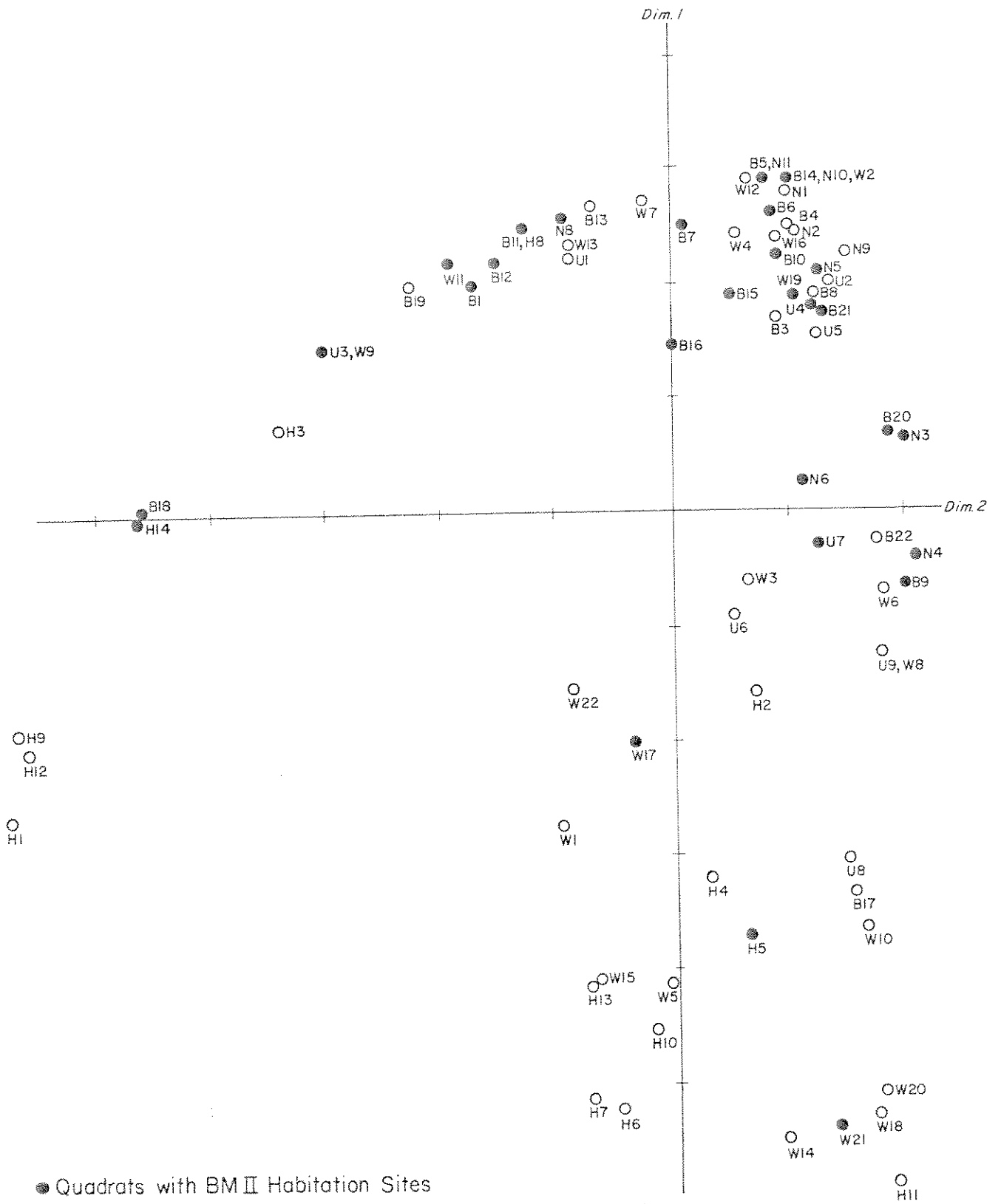
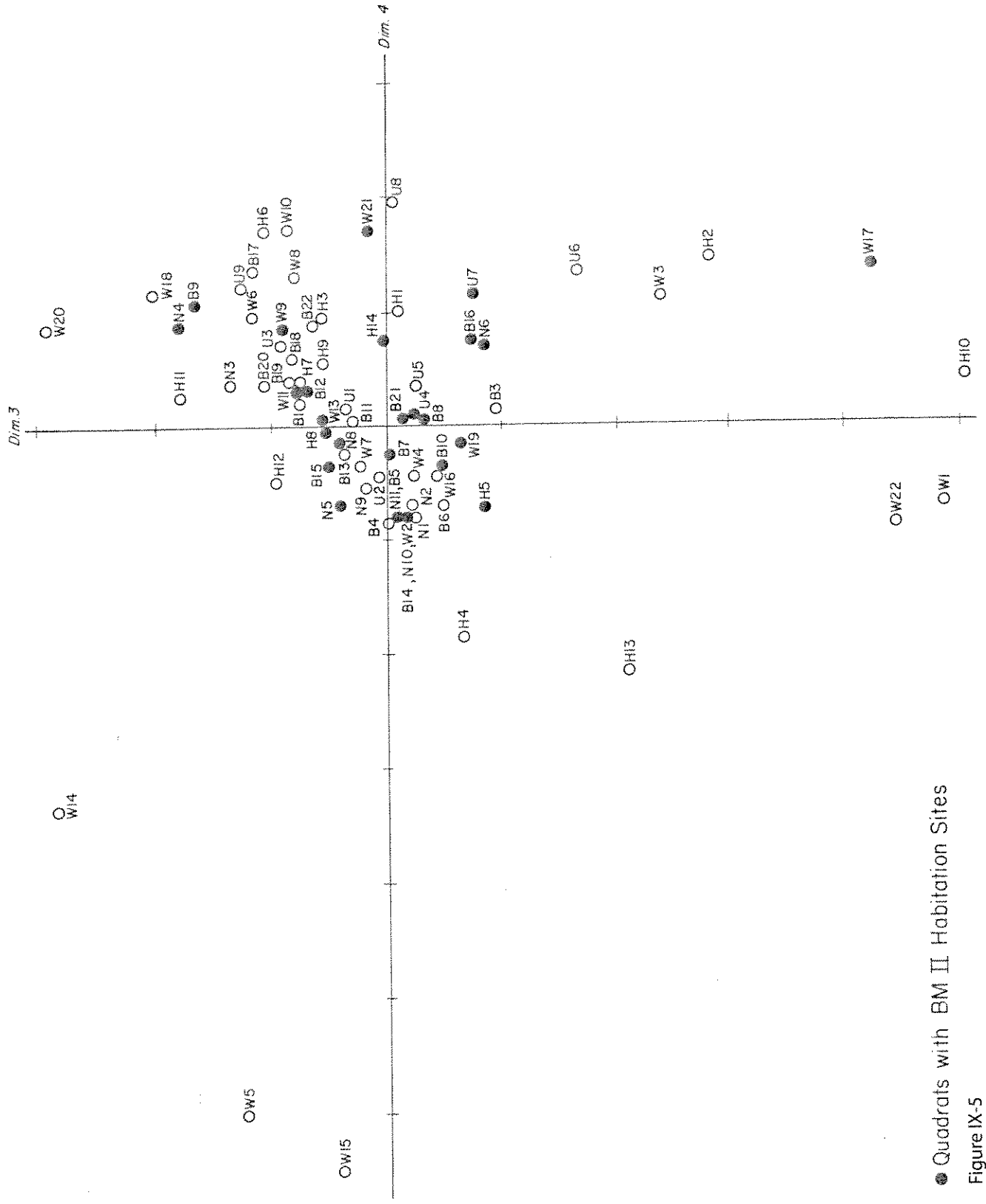


Figure IX-4



● Quadrats with BM II Habitation Sites
 Figure IX-5

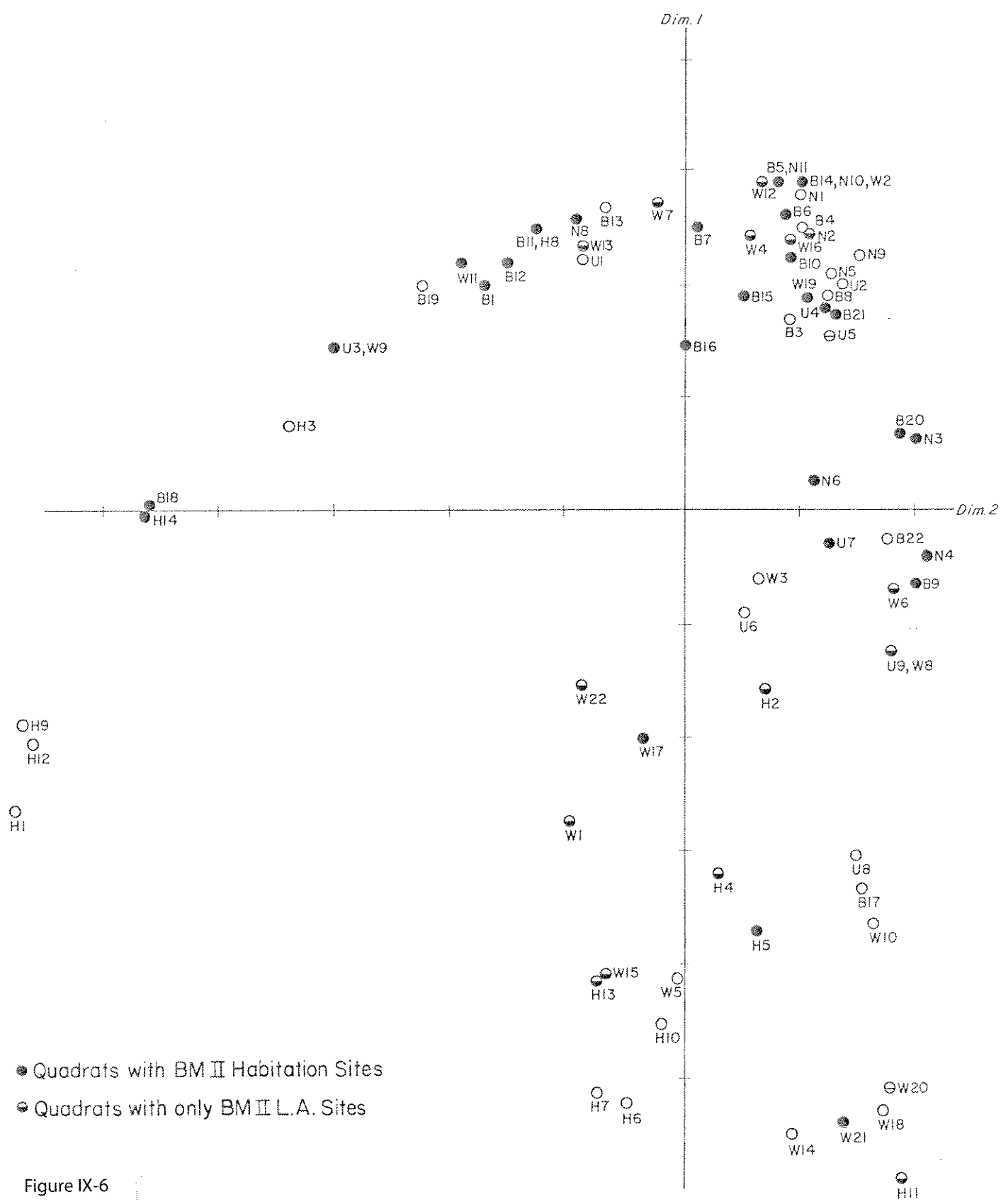
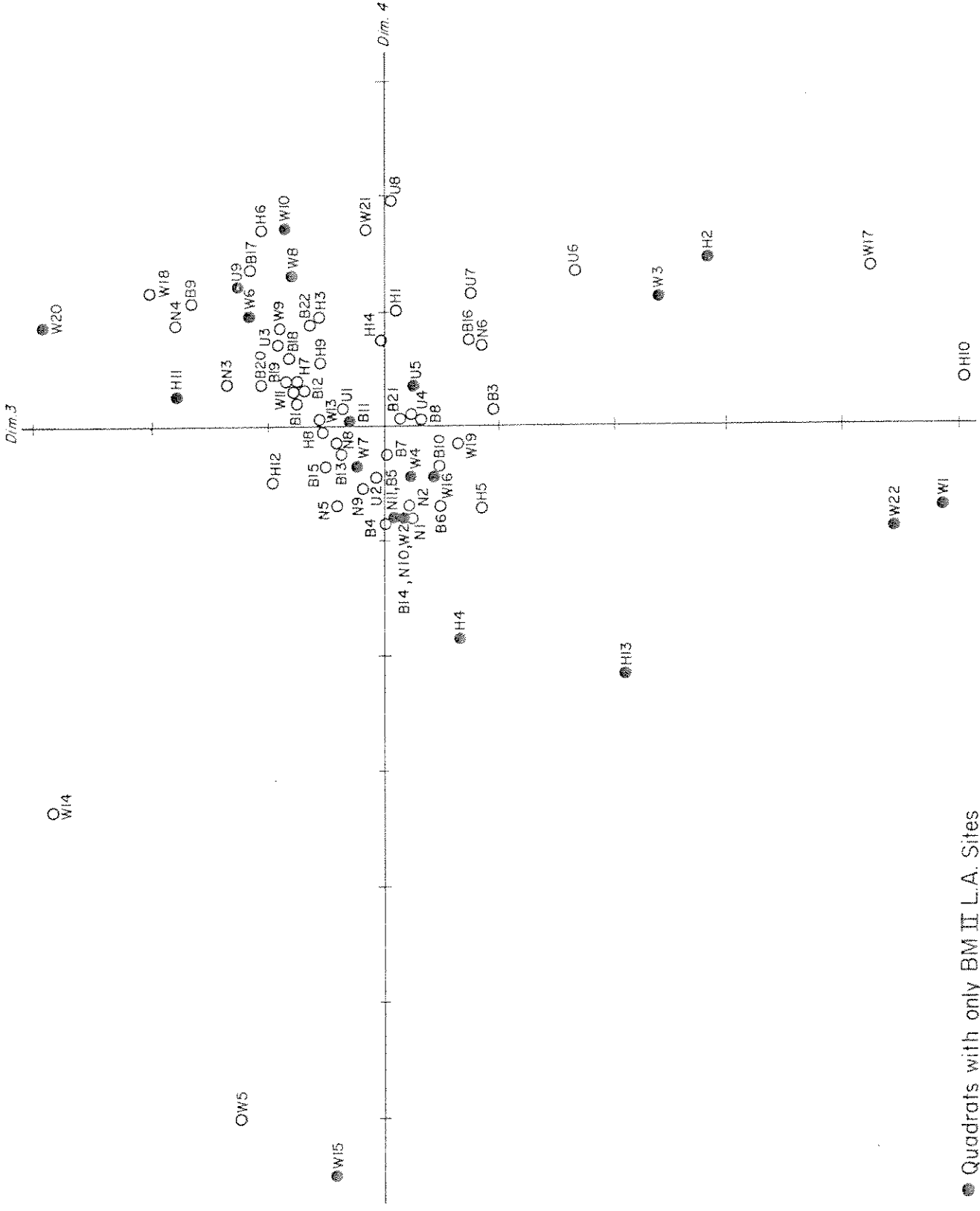


Figure IX-6



● Quadrats with only BM II L.A. Sites

Figure IX-7

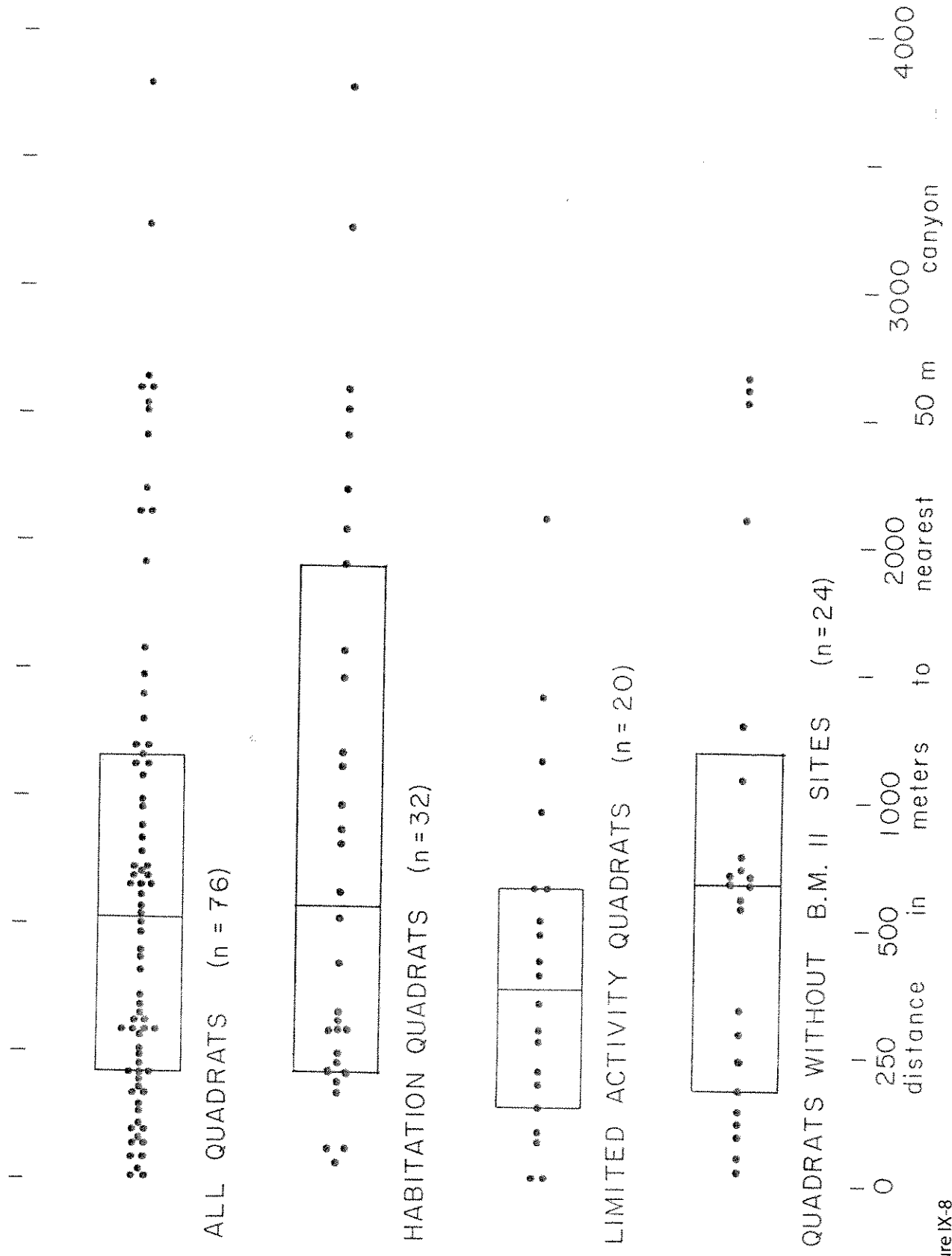
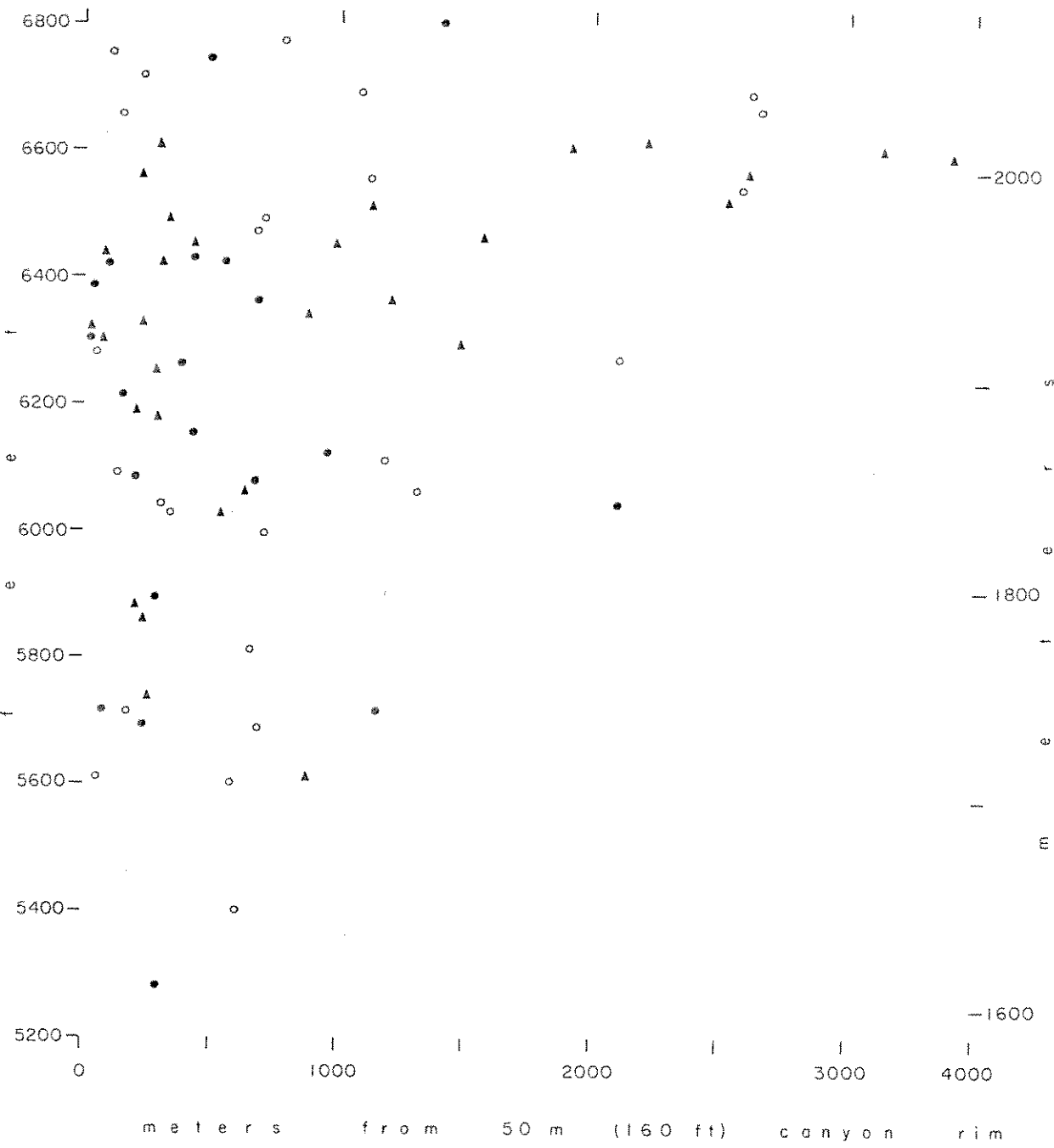
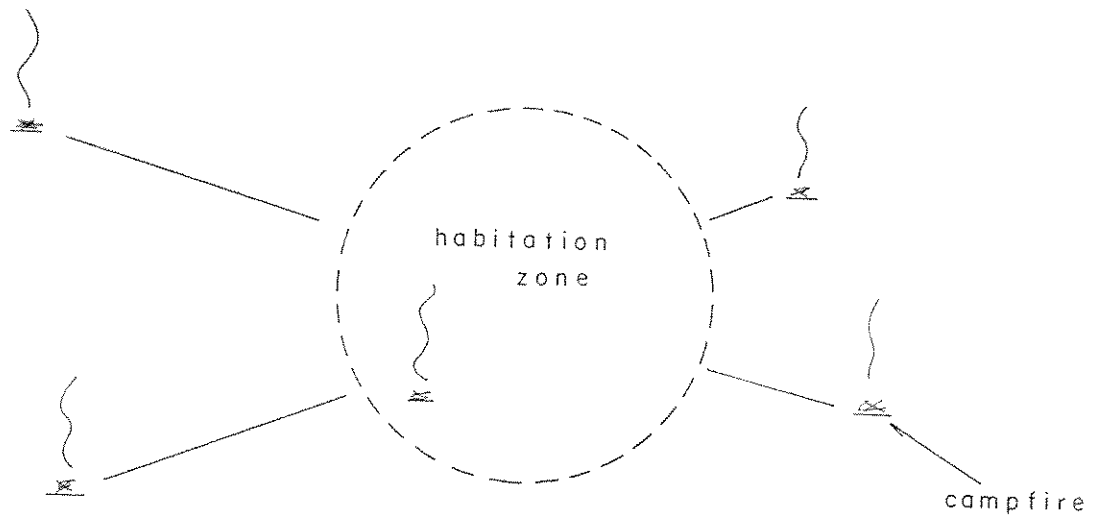


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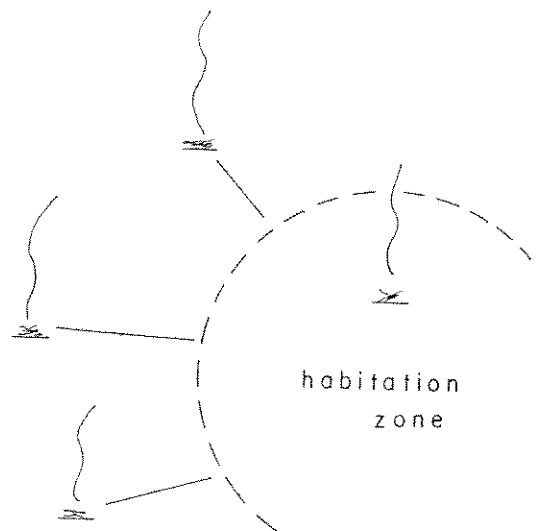
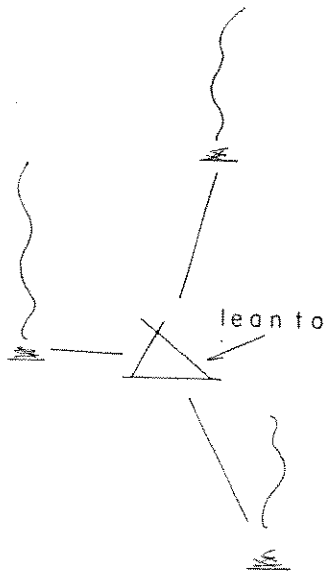


- ▲ quadrat with BM habitation site
- quadrat with BM non-habitation site
- empty quadrat

Figure IX-9



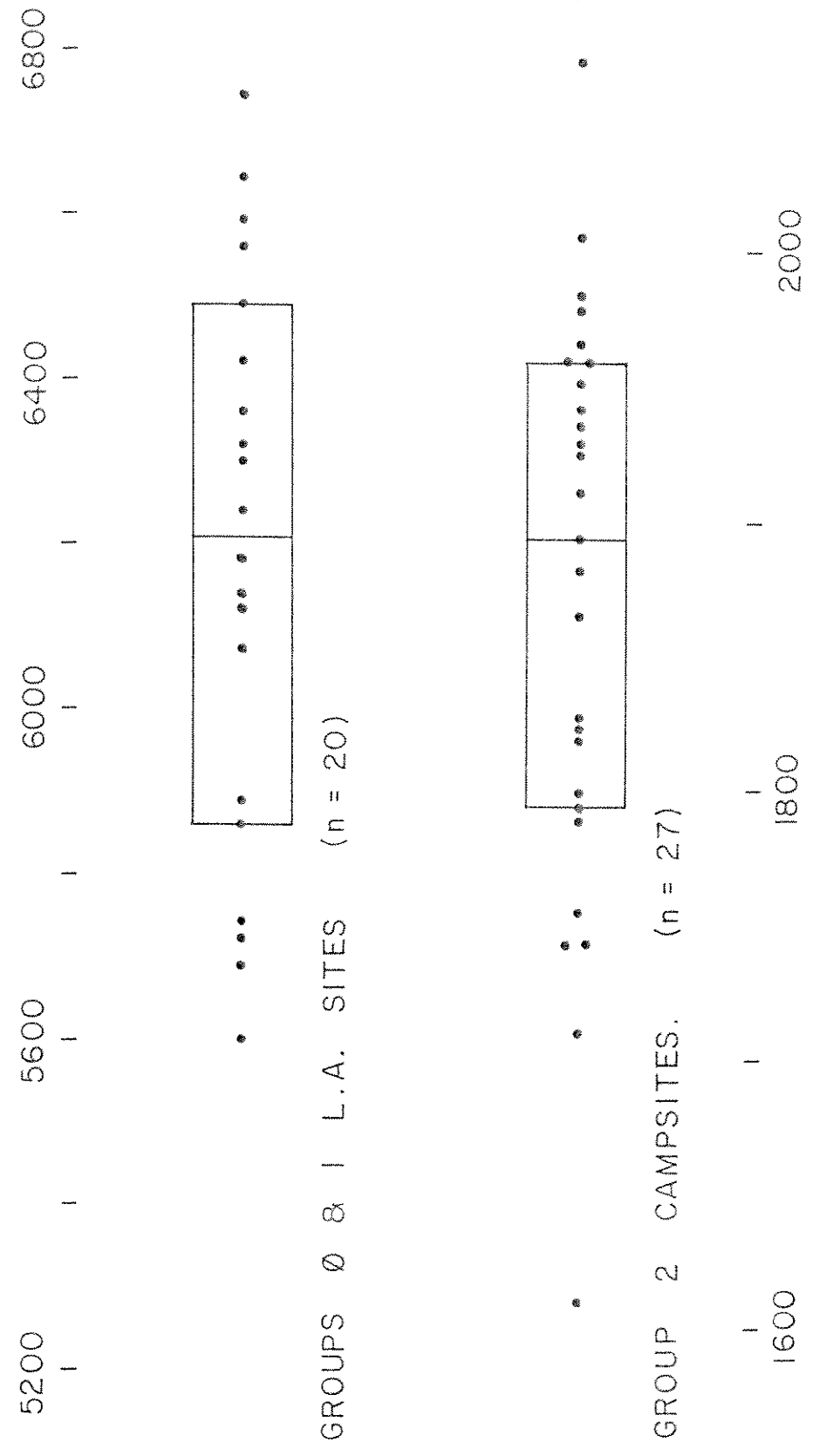
Group 0 - 1 hunting sites



Group 2 hunting sites

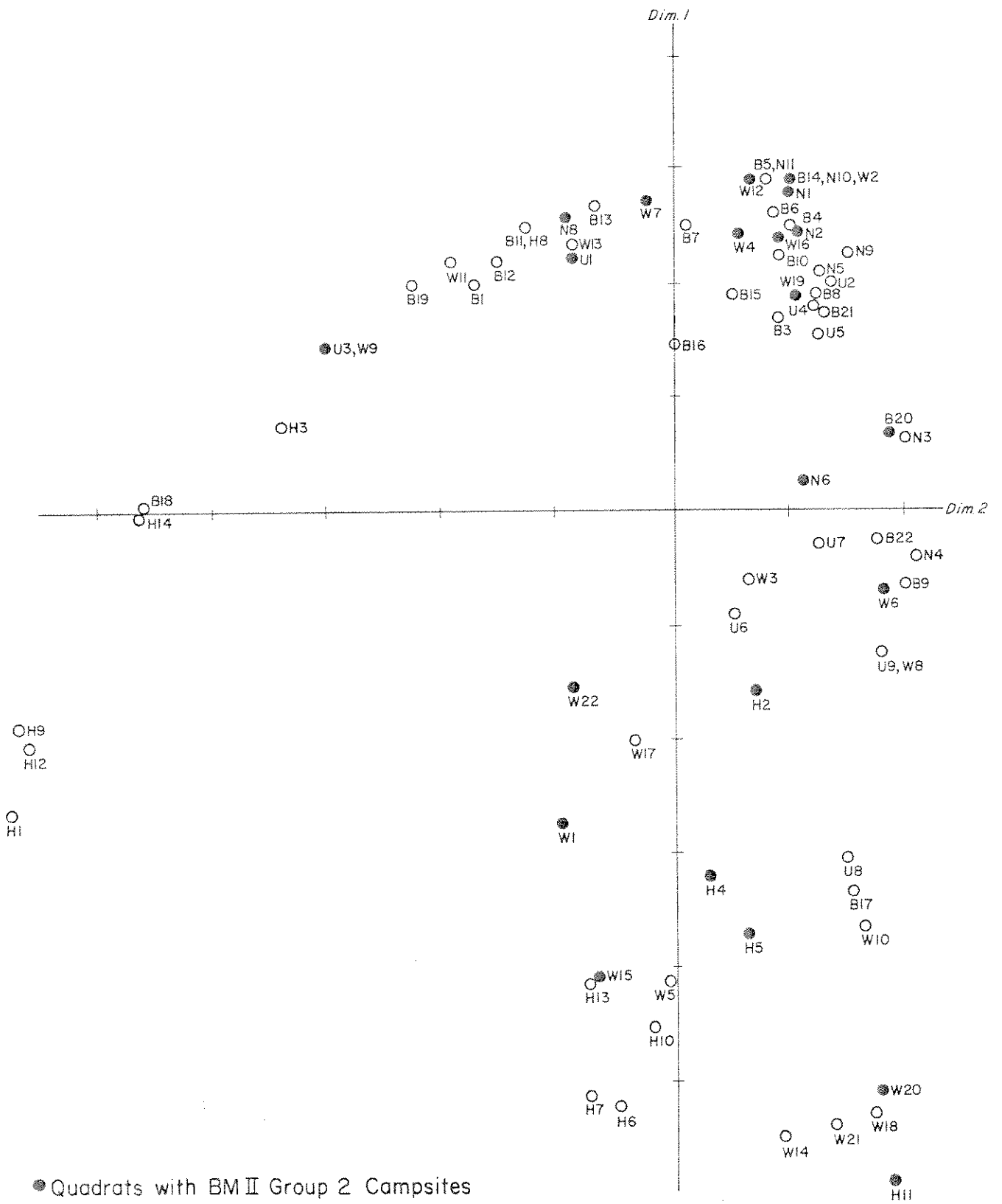
Figure IX-12

f e e t



m e t e r s

Figure IX-13





● Quadrats with BM II Group 2 Composites
 Figure IX-15

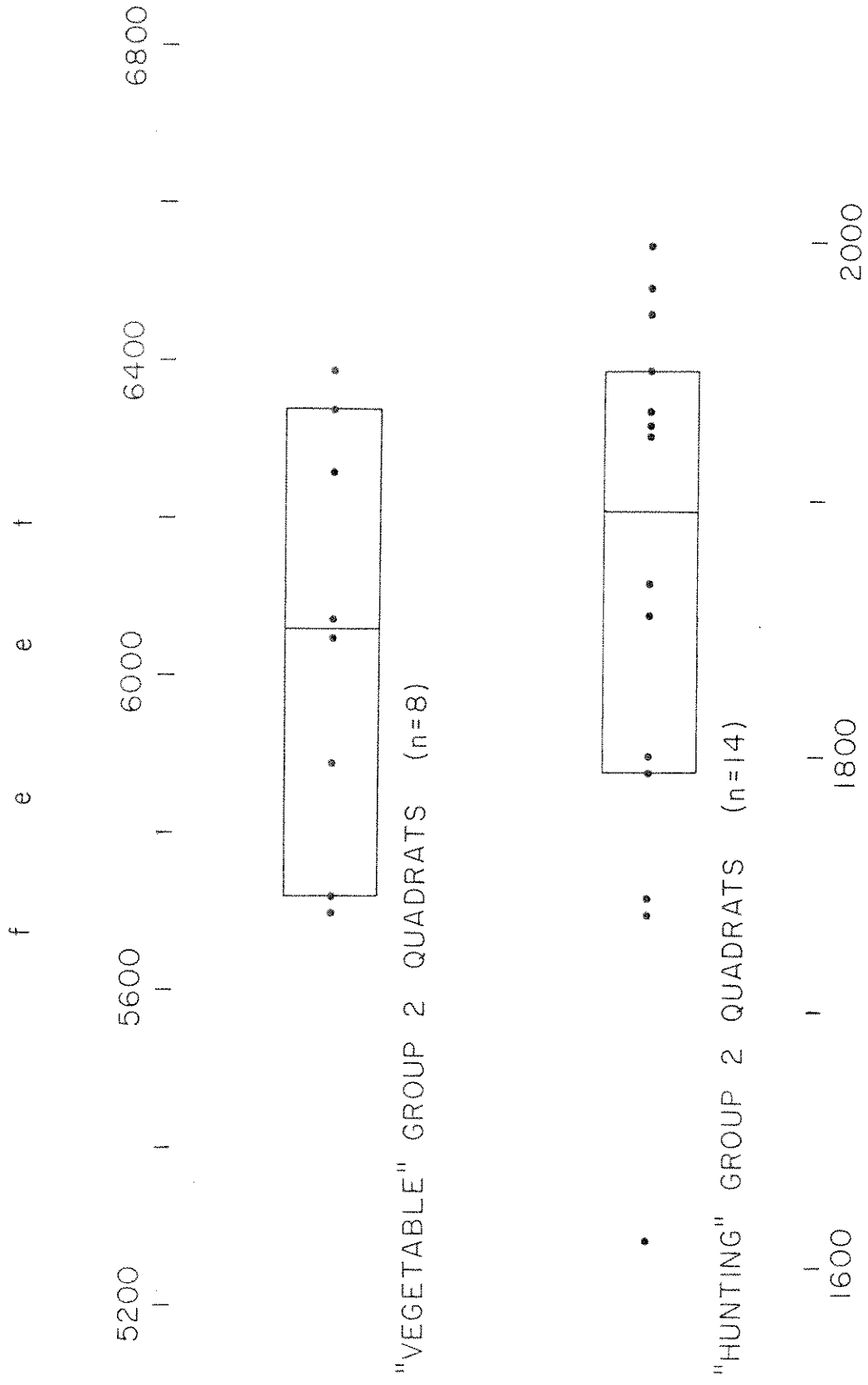


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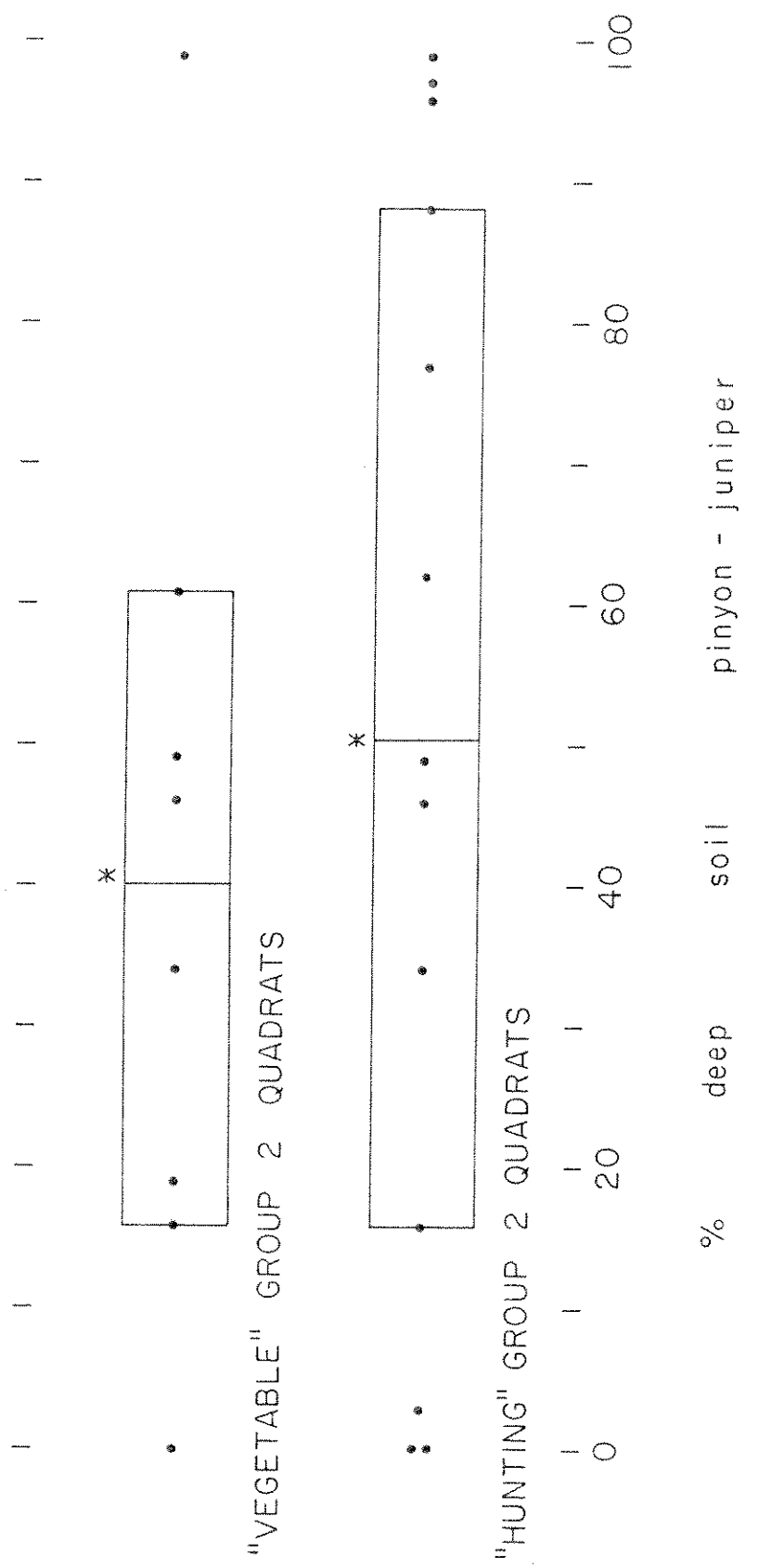


Figure IX-17 * = mean

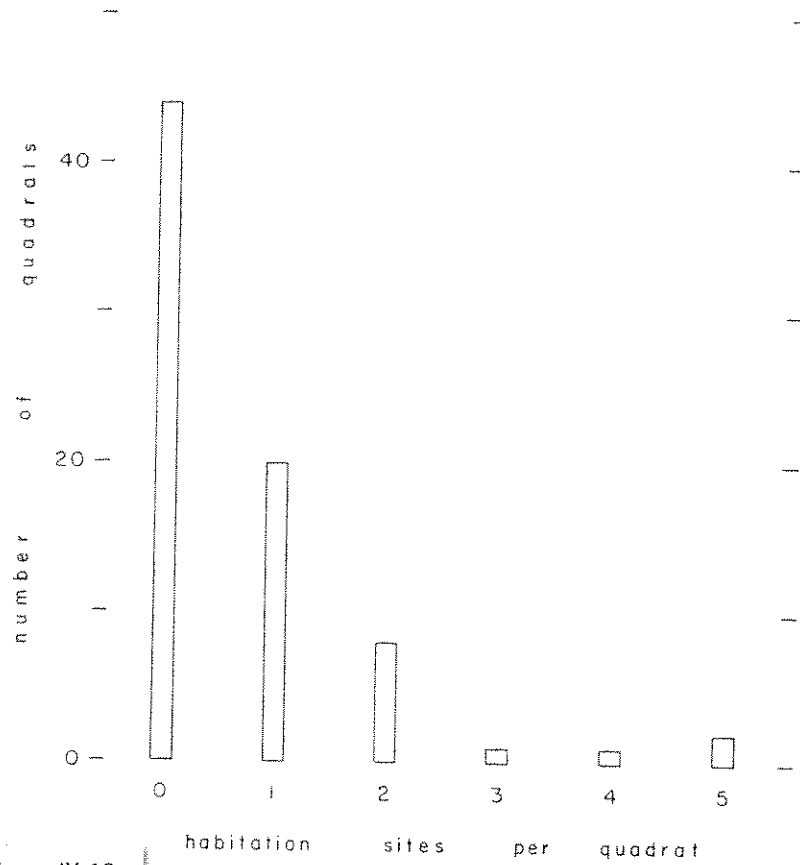


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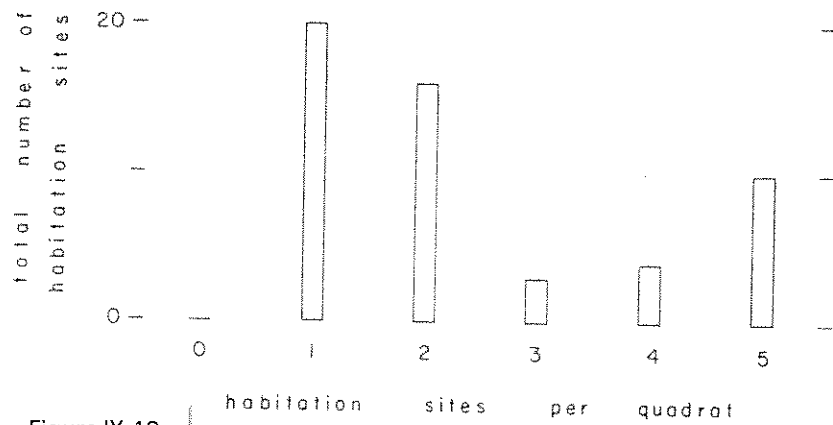


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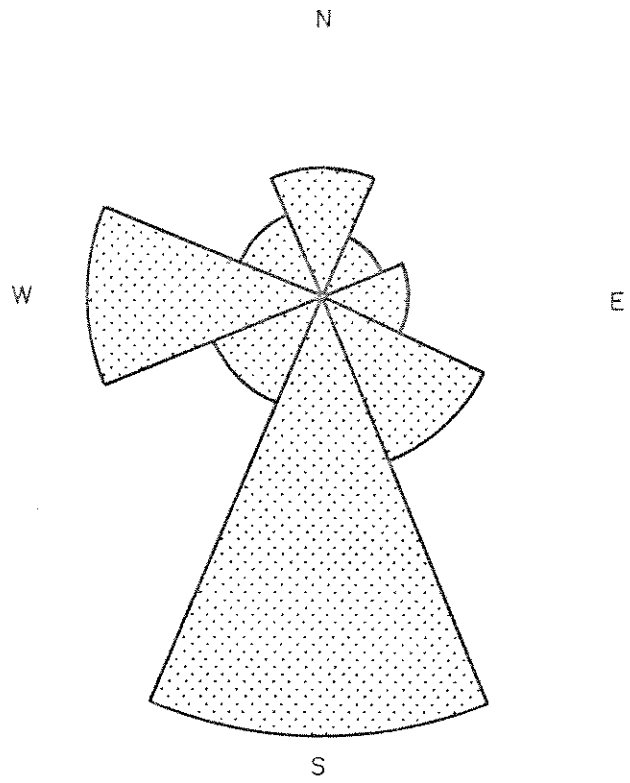


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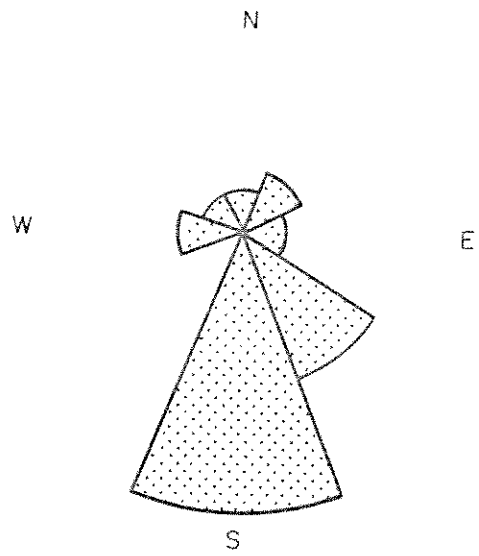


Figure IX-21



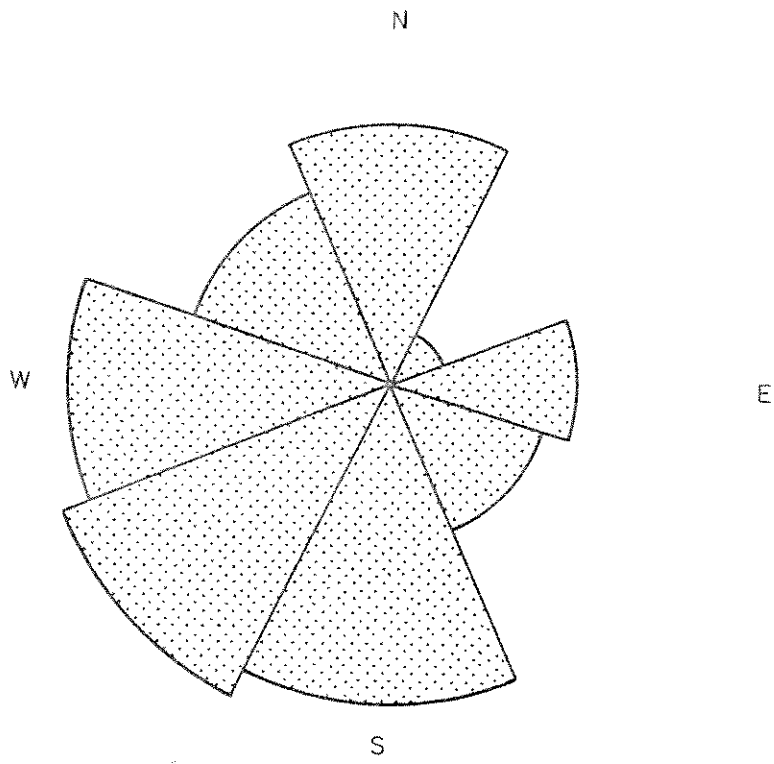


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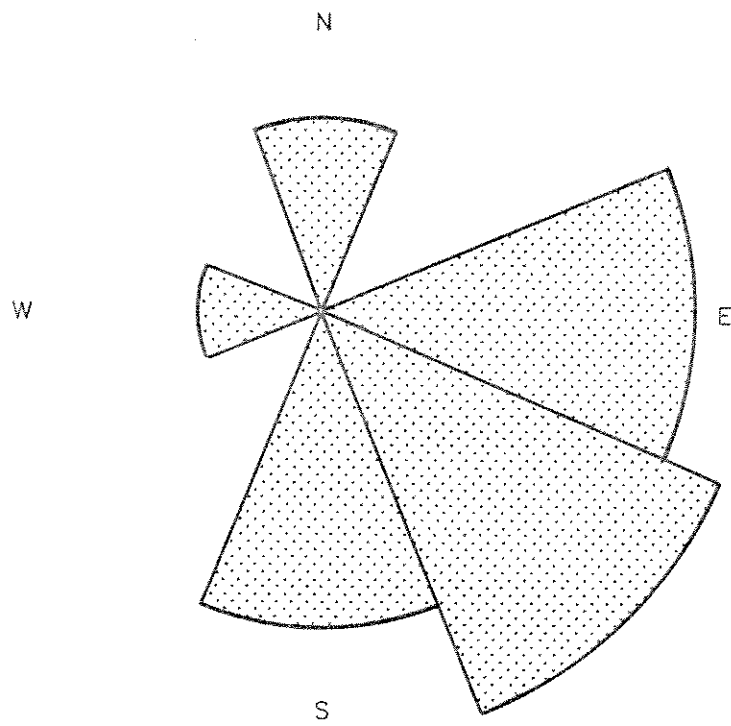


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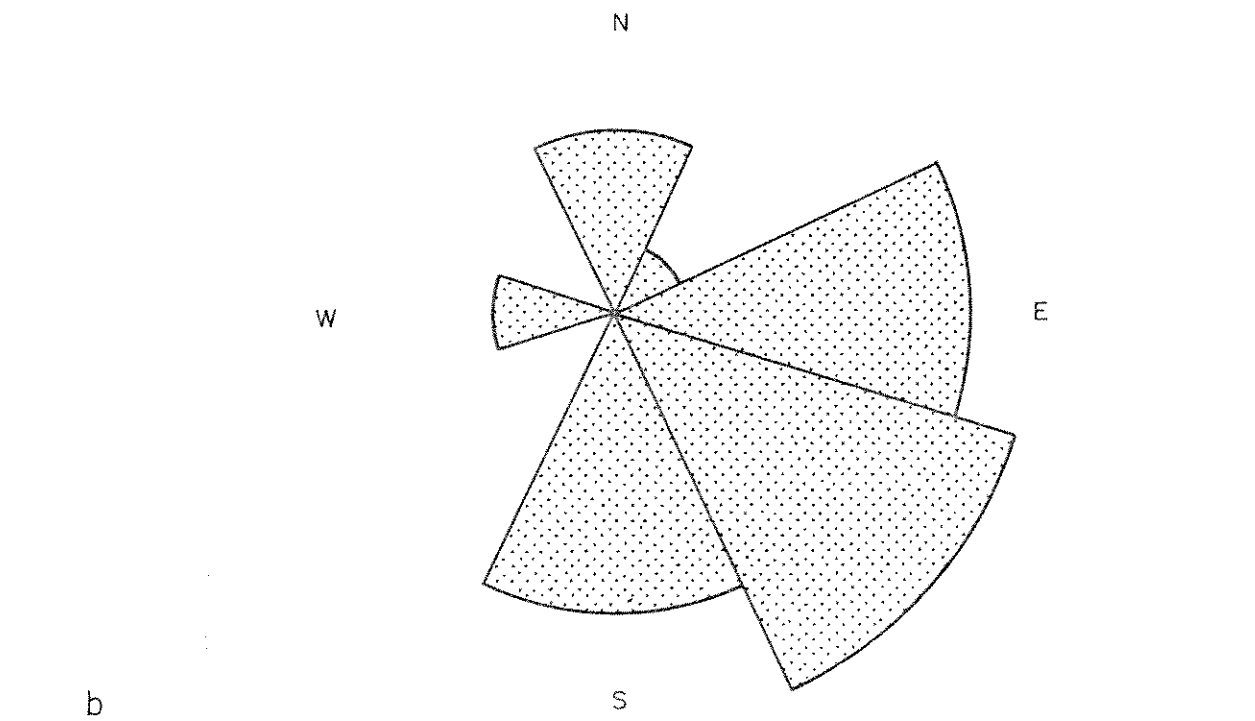
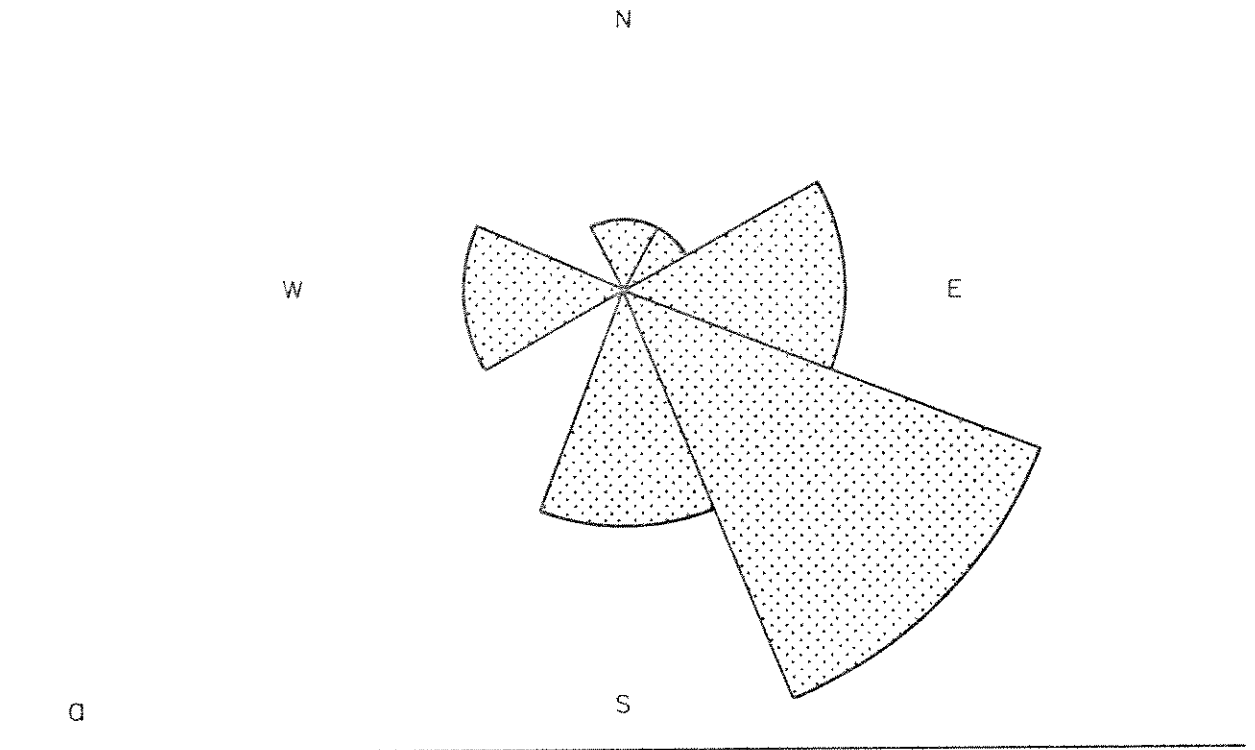


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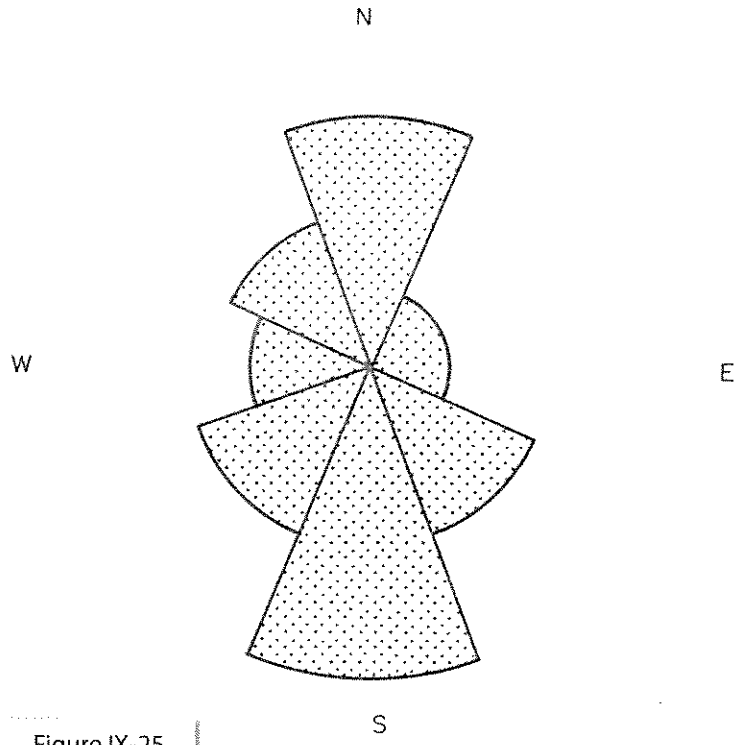
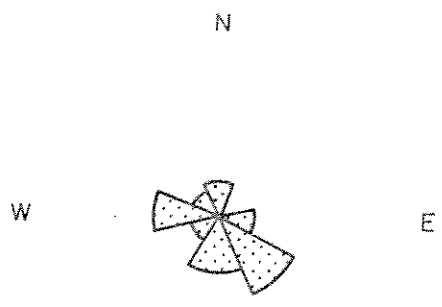
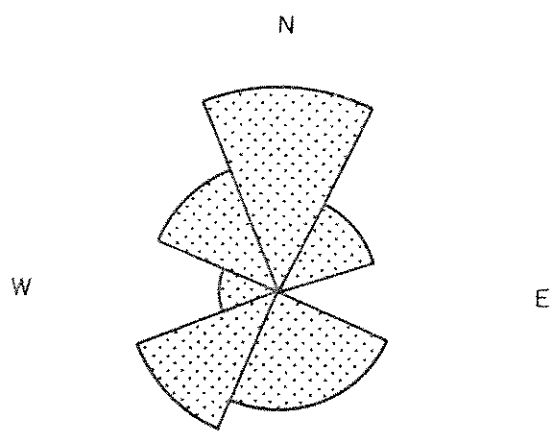


Figure IX-25

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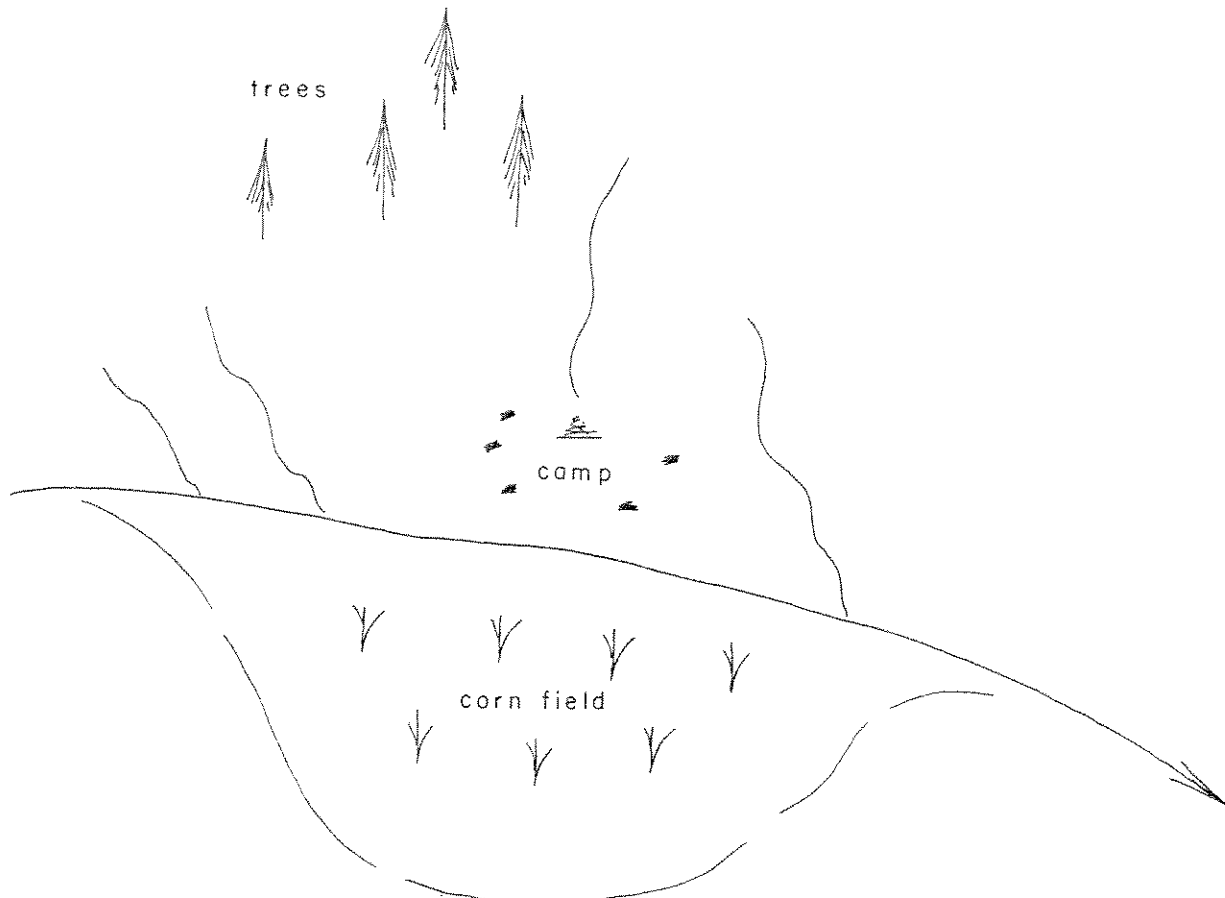


a) "vegetable" campsites



b) "hunting" campsites

Figure IX-26



fields (northeast exposure) and field stations (southeast exposure) located on east facing draws

Figure IX-27

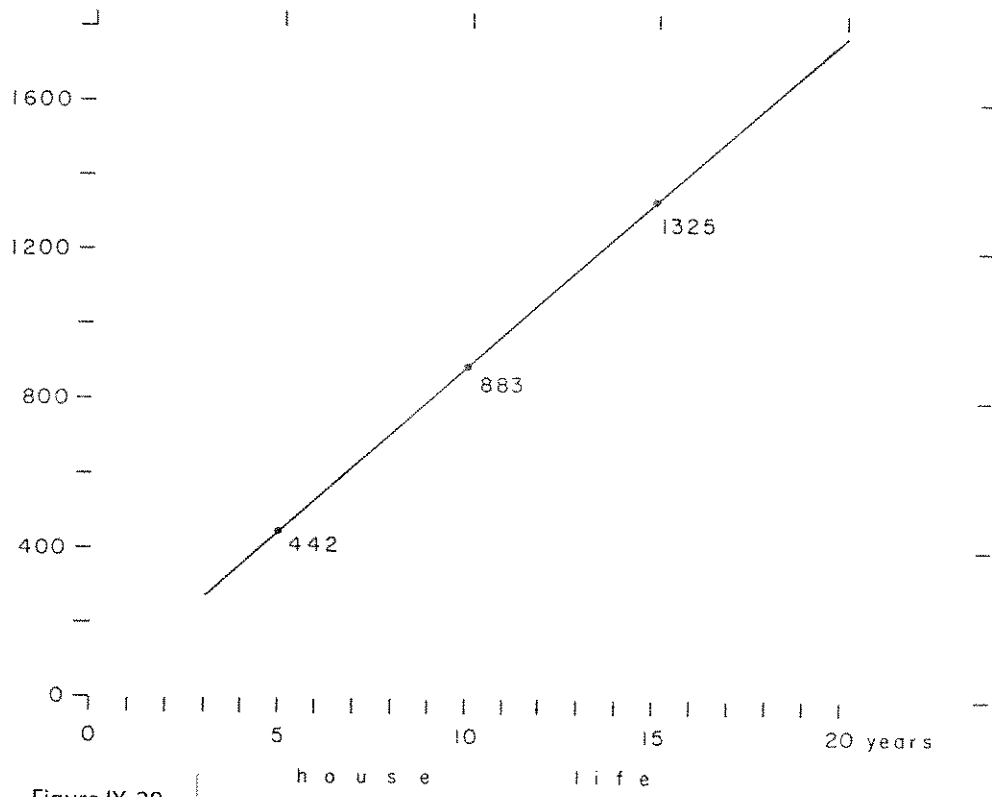


Figure IX-28

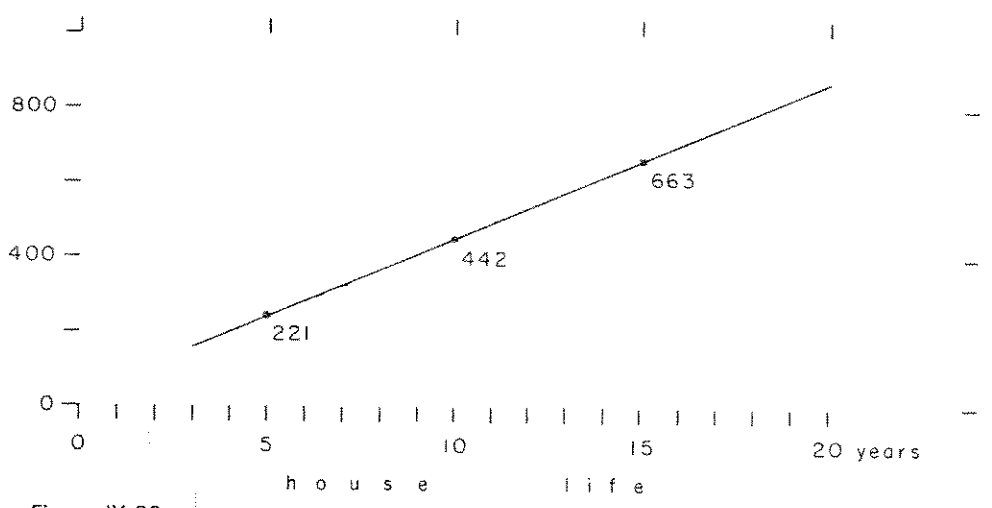


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TABLE IX-1
 QUADRAT ELEVATION
 POPULATION PARAMETERS, GRAND GULCH PHASE

<u>CLASS</u>	<u>RANGE</u>	<u>INTERQUARTILE</u>		
		<u>RANGE</u>	<u>MEDIAN</u>	<u>MEAN</u>
ALL (N=76)	1609-2073 (5280-6800)	1840-1989 (6040-6525)	1925 (6315)	1874m 6249 Ft)
HABITATION (N=32)	1709-2024 (5605-6640)	1884-1994 (6180-6540)	1948 (6390)	1926 (6319 Ft)
WITH NON- HABITATION SITES (N=21)	1609-2073 (5280-6800)	1795-1961 (5890-6435)	1900 (6235)	1888m (6194 Ft)
LIMITED ACTIVITY (GROUPS 0 and 1) (N=20)	1709-2055 (5605-6740)	1786-1978 (5860-6490)	1894 (6213)	1885 (6184 Ft)
CAMPSITE (GROUP 2) (N=27)	1609-2073 (5280-6800)	1792-1956 (5880-6418)	1887 (6190)	1873 (6145 Ft)
ALL QUADRATS WITHOUT HABITATIONS (N=44)	1609-2073 (5280-6800)	1795-1989 (5890-6525)	1900 (6235)	1889 (6197 Ft)

TABLE IX-2

DIFFERENCES IN DISPERSIONS OF ELEVATION
 BETWEEN HABITATION AND NONHABITATION
 QUADRATS (BASKETMAKER II)

a) Habitation Quartiles

	<u>1887 m</u> (6190 ft)	<u>1993 m</u> (6540 ft)
<u>NON-HABITATION</u> <u>QUADRATS (N=44)</u>		
Observed	21	13
Expected	11	21

Nonhabitation Quadrats
 Chi Square = 12.32
 with 2 d.f., signif. at .01

b) Nonhabitation "Quintiles" (20%)

<u>HABITATION</u> <u>QUADRATS (N=32)</u>	<u>Less than 1742 m</u> (5715 ft)	<u>More than 2030 m</u> (6660 ft)
Observed	1	0
Expected	6	6

Chi Square = 10.167
 1 d.f., signif. at .01

TABLE IX-3

DIFFERENCES IN DISPERSIONS OF ELEVATION BETWEEN LIMITED ACTIVITY
AND HABITATION QUADRATS. (BASKETMAKER II)

a) HABITATION QUARTILES

	1887 m (6190 ft.)		1993 m (6540 ft.)	
<u>LIMITED ACTIVITY QUADRATS (n=21)</u>				
observed	9		9	3
expected	5		11	5

Chi square = 4.364
with 2 d.f. not significant at the .05 level

b) NON-HABITATION QUARTILES

	1796 m (5890 ft.)		1962 m (6435 ft.)	
<u>HABITATION QUADRATS (n=32)</u>				
observed	4		14	14
expected	8		16	8

Chi square = 6.75
with 2 d.f. significant at the .05 level

TABLE IX-4

ELEVATION AND PERCENT DENSE PINYON-JUNIPER COVERAGE
FOR "HUNTING" AND "VEGETABLE FOOD PROCESSING"
CAMPSITE QUADRATS.

ELEVATION

	<u>RANGE</u>	<u>INTERQUARTILE RANGE</u>	<u>MEDIAN</u>	<u>MEAN</u>
"HUNTING" (n=14)	1610 - 1997m (5280-6550 ft.)	1793 - 1950m (5880-6395 ft.)	1894m (6213 ft.)	1862m (6108 ft.)
"VEGETABLE" (n=8)	1741 - 1950m (5710-6395 ft.)	1769 - 1920m (5803-6298 ft.)	1849m (6065 ft.)	1846m (6054 ft.)

PERCENT DENSE PINYON-JUNIPER COVERAGE

	<u>RANGE</u>	<u>INTERQUARTILE RANGE</u>	<u>MEDIAN</u>	<u>MEAN</u>
"HUNTING" (n=14)	0 - 99%	16 - 88%	51%	51.1%
"VEGETABLE" (n=8)	0 - 99%	18 - 55%	40%	40.5%

TABLE IX-5

FIT OF POISSON DISTRIBUTION WITH HABITATION
 QUADRAT DISTRIBUTION
 (400 Meter Quadrats)

<u>Class</u>	<u>Observed</u>	<u>Poisson</u>
0	44	37.84
1	20	26.39
2	8	9.20
3	1	2.14
4	1	.373
≥ 5	2	.0588

Lambda=.6974
 Variance=1.184

chi square=3.4998
 d.f.=2

TABLE IX-6

FIT OF NEGATIVE BINOMIAL DISTRIBUTION WITH
 HABITATION QUADRAT DISTRIBUTION
 (400 Meter Quadrats)

<u>Class</u>	<u>Observed</u>	<u>Negative Binomial</u>
0	44	44.79
1	20	18.38
2	8	7.55
3	1	3.106
4	1	1.277
≥ 5	2	.897

Mean=.6974
 Variance=1.185
 k (by moments)=.9979

chi square=.494
 d.f.=1
 prob.=.45

TABLE IX-7

FIT OF POISSON DISTRIBUTION WITH ARTIFICIAL
200 METER QUADRATS (HABITATION SITES)

<u>Class</u>	<u>Observed</u>	<u>Poisson</u>
0	260	255.36
1	36	44.52
2	7	3.88
3	1	.2255
Lambda=.1743	chi square=5.254	
Variance=.2097	d.f.=1	
	~ prob.=.05	

TABLE IX-8

FIT OF NEGATIVE BINOMIAL DISTRIBUTION WITH ARTIFICIAL
200 METER QUADRATS (HABITATION SITES)

<u>Class</u>	<u>Observed</u>	<u>Negative Binomial</u>
0	260	259.38
1	36	37.590
2	7	5.896
3	1	1.134
Mean=.1743	chi square=.2913	
Variance=.2097	d.f.=1	
k̄ (by moments)=.858759	~ prob.=.60	