

TABLE 6

BROCKS FARM

SPECIES' FREQUENCIES FOR THE LITTERED PLOT 1988-1996

Surveyors	SJL SAB	SJL CPB SAB	SJL CPB JC	SJL RDP	SJL MB	SJL JC MB PE	SJL MB CP	SJL LW	SJL CD CP
Date of survey (all May)	17 18	18	16	13 14	20	19	25	19	14 15
Number of quadrats	50	108	108	108	108	108	108	108	108
SPECIES	FREQUENCIES (%)								
	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>Trees and shrubs</i>									
Calluna vulgaris	-	-	-	-	-	1	-	-	-
Crataegus monogyna	-	4	-	1	-	-	-	-	-
Quercus sp	-	-	-	-	1	1	-	-	-
Rubus fruticosus agg	-	2	-	-	-	-	1	-	-
Ulex europaeus	-	3	21	23	22	17	10	6	12
<i>Grasses</i>									
Agrostis canina	4	-	-	-	-	-	-	-	-
Agrostis capillaris	80	76	87	80	72	88	80	74	77
Agrostis stolonifera	-	-	3	-	-	-	-	-	-
Anthoxanthum odoratum	38	24	23	9	36	47	58	75	44
Arrhenatherum elatius	1	-	-	-	-	-	-	-	-
Cynosurus cristatus	-	-	-	-	-	3	3	16	19
Dactylis glomerata	8	-	-	-	-	1	-	-	1
Danthonia decumbens	-	3	19	75	75	59	42	49	54
Festuca rubra	70	6	19	22	33	57	48	74	77
Holcus lanatus	42	44	48	33	57	64	56	68	47
Holcus mollis	-	-	-	-	7	3	8	11	9
Molinia caerulea	2	-	-	-	-	-	-	-	-
Poa pratensis/humilis	16	4	2	-	-	6	13	6	-
Poa trivialis	2	-	-	-	-	-	-	-	-
<i>Sedges and Rushes</i>									
Carex caryophyllea	6	5	14	7	10	9	18	21	16
Carex viridula ssp oedocarpa	-	-	-	-	-	2	-	6	-
Carex flacca	14	2	13	12	19	25	20	39	39
Carex hirta	-	1	3	-	-	-	-	1	1
Carex panicea	10	4	2	10	6	6	20	12	9
Carex pulicaris	-	-	-	-	-	1	-	-	1
Isolepis setacea	-	33	19	3	-	1	1	-	-
Juncus acutiflorus	32	33	46	43	39	52	69	64	69
Juncus articulatus	6	-	-	-	-	-	-	-	-
Juncus bufonius	-	79	2	7	8	-	2	-	-
Juncus conglomeratus	-	-	-	-	-	3	1	4	1
Juncus effusus	-	-	5	-	1	1	-	1	1
Luzula campestris	20	19	1	2	8	6	13	12	12

TABLE 6 (continued)

SPECIES	FREQUENCIES (%)								
	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>Forbs</i>									
<i>Achillea millefolium</i>	2	-	-	-	1	-	3	4	1
<i>Ajuga reptans</i>	14	3	-	-	1	1	1	3	1
<i>Anagallis arvensis</i>	-	30	4	2	2	2	4	-	-
<i>Bellis perennis</i>	-	-	1	-	4	-	-	-	1
<i>Cardamine pratensis</i>	-	-	-	-	-	-	1	1	1
<i>Centaurea nigra</i>	36	16	29	30	35	38	41	55	47
<i>Centaureum erythraea</i>	-	-	3	5	1	-	-	-	-
<i>Cerastium fontanum</i>	2	10	1	-	-	2	5	-	1
<i>Cirsium arvense</i>	4	-	-	-	-	-	-	-	-
<i>Cirsium palustre</i>	-	7	2	1	-	1	-	-	-
<i>Dactylorhiza praetermissa</i>	4	1	-	-	1	-	2	3	-
<i>Galium palustre</i>	4	8	-	-	-	-	1	1	-
<i>Hypericum humifusum</i>	-	-	6	-	-	-	-	-	-
<i>Hypericum pulchrum</i>	-	3	-	-	-	-	-	-	-
<i>Hypericum tetrapterum</i>	4	-	-	-	-	-	-	-	-
<i>Hypochaeris radicata</i>	2	1	16	9	19	24	23	29	29
<i>Lathyrus pratensis</i>	4	-	-	-	-	1	-	-	-
<i>Leontodon saxatilis</i>	-	4	11	25	35	36	50	55	44
<i>Leucanthemum vulgare</i>	-	10	16	20	26	42	43	47	41
<i>Lotus corniculatus</i>	30	49	31	25	53	54	53	60	56
<i>Lotus pedunculatus</i>	12	-	9	9	8	6	19	21	3
<i>Mentha aquatica</i>	-	-	1	-	1	-	2	2	-
<i>Montia fontana</i>	-	5	-	3	-	-	1	-	1
<i>Oenanthe pimpinelloides</i>	-	3	-	-	1	-	4	6	4
<i>Orchis morio</i>	-	-	-	-	1	-	1	1	6
<i>Plantago lanceolata</i>	52	40	61	77	75	79	68	70	47
<i>Polygala vulgaris</i>	-	-	-	-	-	-	-	-	1
<i>Potentilla erecta</i>	12	3	3	2	5	-	1	6	-
<i>Potentilla reptans</i>	6	13	13	3	6	12	19	22	14
<i>Prunella vulgaris</i>	4	15	19	36	68	69	73	64	33
<i>Pulicaria dysenterica</i>	38	28	22	16	18	19	19	24	19
<i>Ranunculus acris</i>	38	29	19	6	3	13	19	36	38
<i>Ranunculus bulbosus</i>	30	1	-	-	6	1	2	4	4
<i>Ranunculus flammula</i>	-	1	-	-	-	-	-	-	-
<i>Ranunculus repens</i>	20	42	-	-	-	3	2	6	1
<i>Rumex acetosa</i>	22	14	7	2	4	6	12	12	8
<i>Rumex acetosella</i>	-	-	1	-	-	-	-	-	-
<i>Sagina procumbens</i>	-	-	1	2	2	1	-	-	-
<i>Senecio erucifolius</i>	-	1	-	1	-	-	-	-	-
<i>Senecio jacobaea</i>	6	2	2	2	2	1	1	-	1
<i>Stachys arvensis</i>	-	1	-	-	-	-	-	-	-
<i>Stellaria graminea</i>	6	-	-	-	-	-	-	-	-
<i>Stellaria holostea</i>	-	1	-	-	-	-	-	-	-
<i>Stellaria uliginosa</i>	2	-	-	-	-	-	-	-	-
<i>Succisa pratensis</i>	14	3	2	2	6	2	2	7	1
<i>Taraxacum sp</i>	10	3	3	6	5	4	5	6	9
<i>Trifolium dubium</i>	-	2	2	1	-	1	-	1	-
<i>Trifolium pratense</i>	4	3	-	-	1	2	2	5	2
<i>Trifolium repens</i>	-	6	1	-	2	3	2	6	2
<i>Veronica serpyllifolia</i>	2	-	-	-	-	-	-	-	-
<i>Vicia cracca</i>	4	-	1	-	1	-	-	-	-
<i>Viola riviniana</i>	-	1	-	-	-	-	-	-	-
Bare ground	14	100	85	73	45	61	62	50	52
Mean no. of spp/sample	7.1	7.0	6.2	6.2	7.7	8.7	9.3	11.8	9.7

Sampling density was less in 1988 than in following years, as in that year the whole of the donor field was sampled, and only half the quadrats (50) occurred within the block subsequently moved to become the littered area (part of which formed the sample plot).

TABLE 7 (continued)

BROCKS FARM - FIBS ANALYSIS, LITTERED PLOT 1988-1996

ATTRIBUTE	YEAR									1988-96 change
	1988	1989	1990	1991	1992	1993	1994	1995	1996	
VEGETATIVE SPREAD										
Monocarpic	1	17	2	3	2	1	1	0	0	-1
Patch <100mm	37	30	39	47	49	47	46	49	50	13
100-250	16	14	15	14	19	18	19	17	13	-3
251-1000	36	19	26	25	20	24	22	24	25	-11
>1000	10	14	14	12	10	10	12	11	12	2
REGENERATIVE STRATEGY										
Persistent seed bank	83	90	85	87	85	83	82	79	76	-7
Numerous widely dispersed seeds	8	7	9	10	10	10	11	11	12	4
Vegetative fragments important	7	9	3	2	3	3	4	5	4	-3
SEED WEIGHT										
Minute	1	5	3	1	0	0	0	0	1	0
<0.2mg	25	33	30	26	20	20	20	16	29	-6
0.2-0.5	19	20	24	20	26	28	31	32	27	8
0.51-1.0	20	11	15	26	29	27	24	26	28	8
1.01-2.0	22	21	22	22	20	19	20	19	19	-3
2.01-10.0	12	9	5	5	5	5	5	6	5	-6
>10.0	1	0	0	0	0	0	0	0	0	-1
POLYCARPIC PERENNIALS	99	75	92	92	94	95	93	95	95	-4
FLOWERING TIME										
Jan-Feb	0	0	0	0	0	0	0	0	0	0
March	3	4	4	5	5	3	3	2	4	1
April	14	12	16	15	16	16	16	15	12	-2
May	36	29	12	11	11	15	15	18	21	-15
June	37	41	50	46	51	51	51	51	47	10
July	5	7	12	20	15	13	12	11	14	9
August	5	4	4	3	2	2	2	2	2	-3
September	0	0	0	0	0	0	0	0	0	0
Oct-Dec	0	0	0	0	0	0	0	0	0	0
GEOGRAPHICAL RESTRICTION										
(A) LATITUDINAL										
Northern	0	0	0	0	0	0	0	0	0	0
Slight northern	0	0	0	0	0	0	0	0	0	0
No latitudinal restriction	54	57	43	42	44	49	48	46	46	-8
Slight southern	36	27	42	48	47	43	39	42	44	8
Southern	9	11	12	10	9	9	12	12	10	1

TABLE 7 (continued)**BROCKS FARM - FIBS ANALYSIS, LITTERED PLOT 1988-1996**

ATTRIBUTE	YEAR									1988-96 change
	1988	1989	1990	1991	1992	1993	1994	1995	1996	
(B) LONGITUDINAL										
Western	6	2	5	5	5	4	5	5	5	-1
Slight western	5	5	7	7	5	6	7	6	8	3
No longitudinal restriction	90	88	85	87	90	90	88	89	87	-3
Slight eastern	0	0	0	0	0	0	0	0	0	0
Eastern	0	0	0	0	0	0	0	0	0	0
PRESENT STATUS (GB)										
Decreasing	62	48	57	55	54	57	58	61	65	3
Uncertain	19	14	12	13	14	13	16	17	16	-3
Increasing	19	38	31	32	32	29	26	23	19	0

FIGURES

Species-richness (mean no. spp/RM-Q) on SSSI and turf transplant

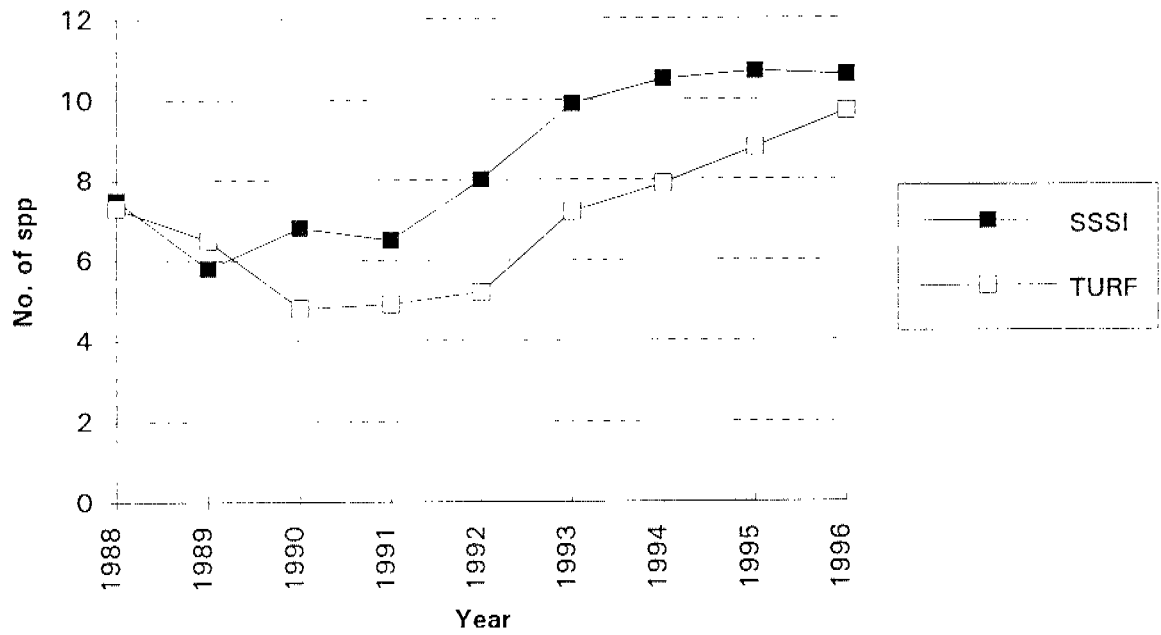


FIGURE 1

Number of species per RM-Q (1996)

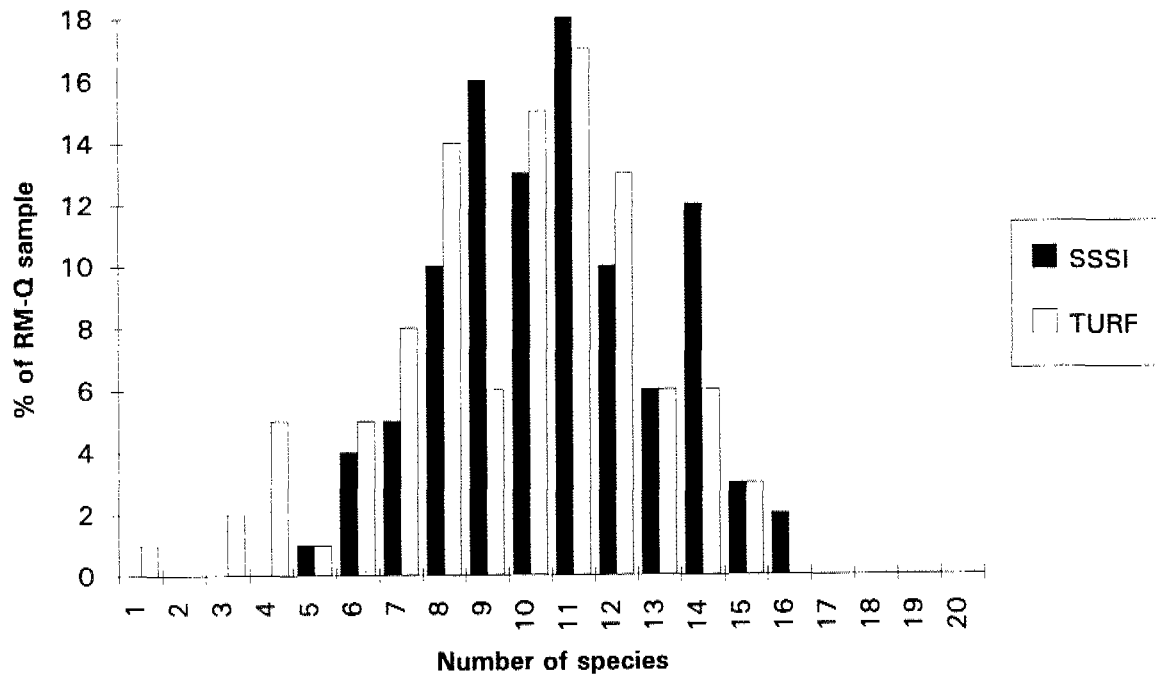


FIGURE 2

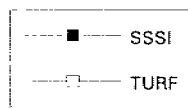
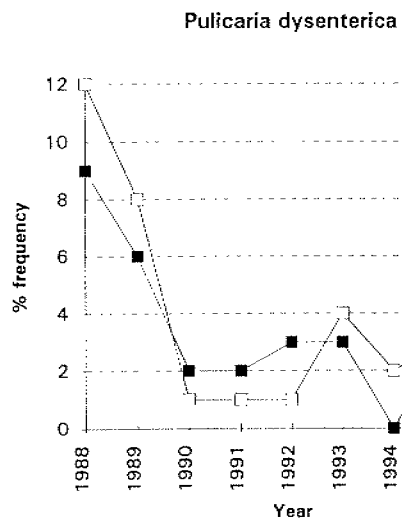
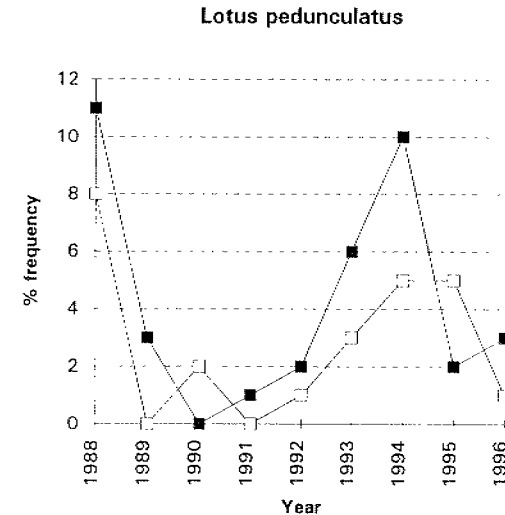
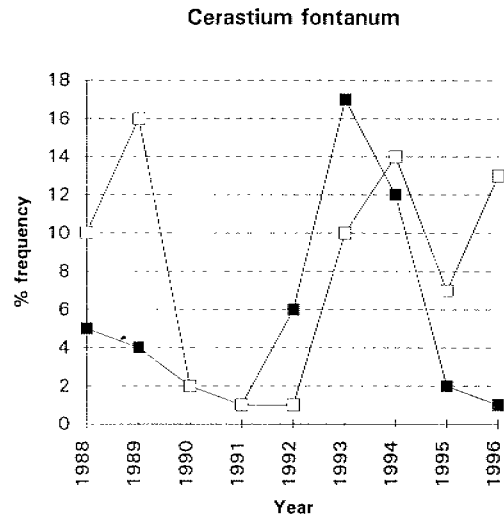
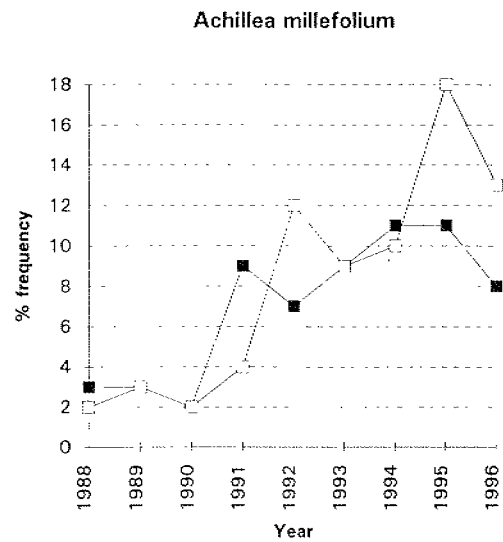


FIGURE 3

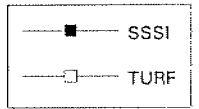
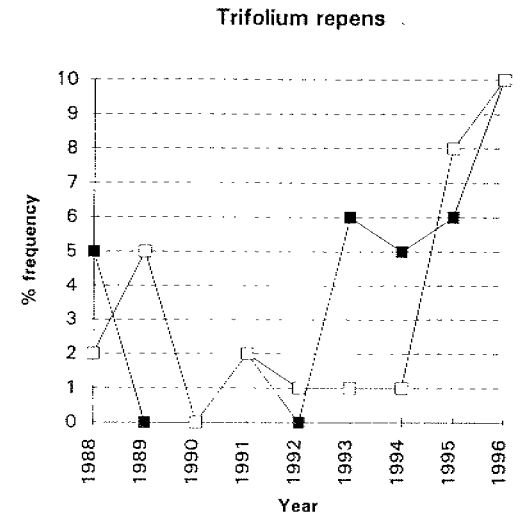
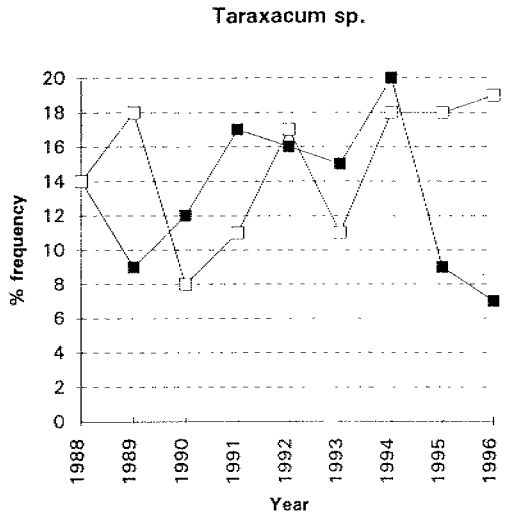
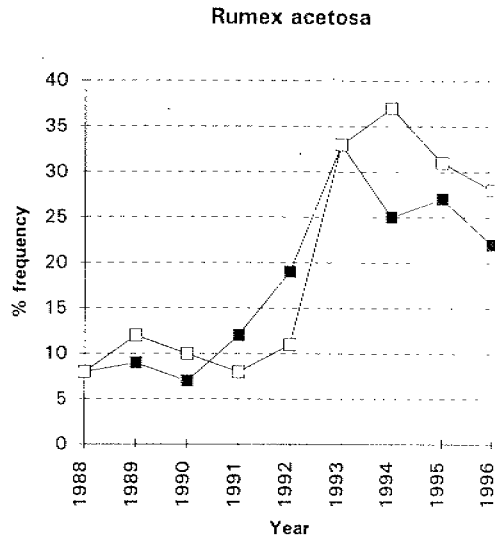


FIGURE 3 contd.

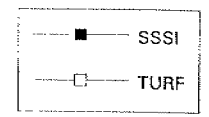
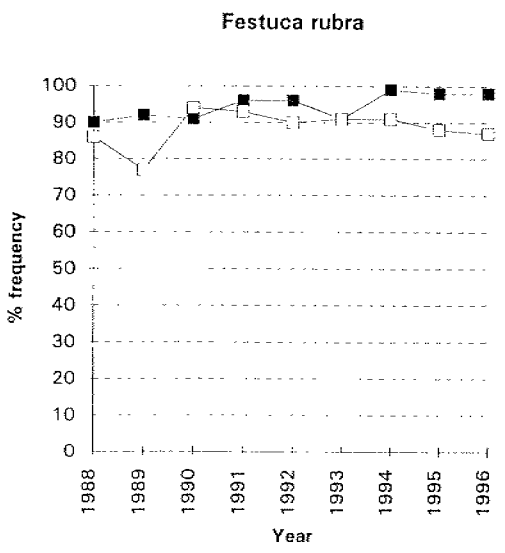
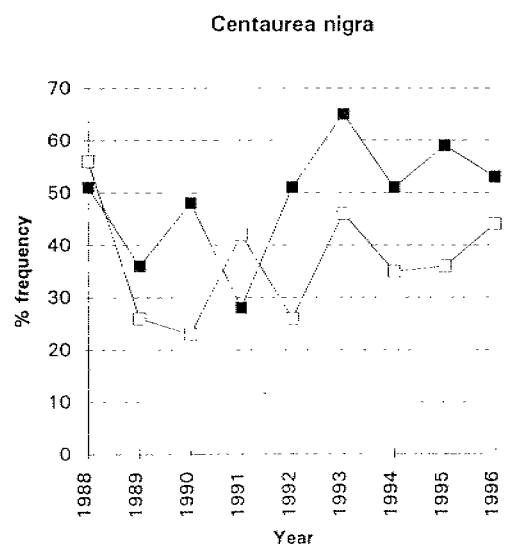
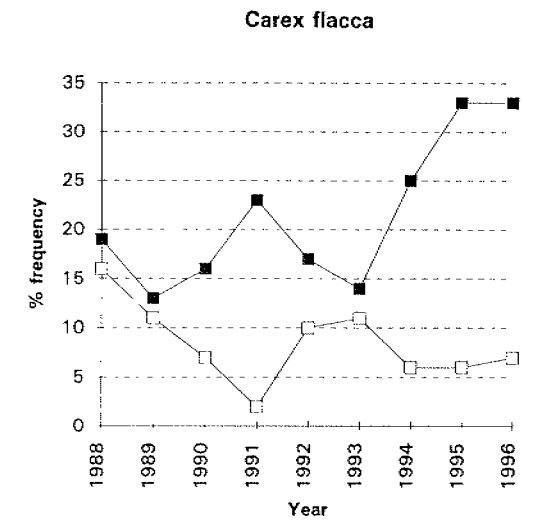
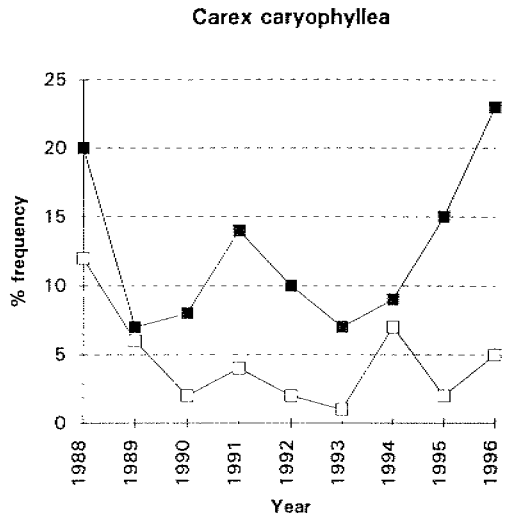
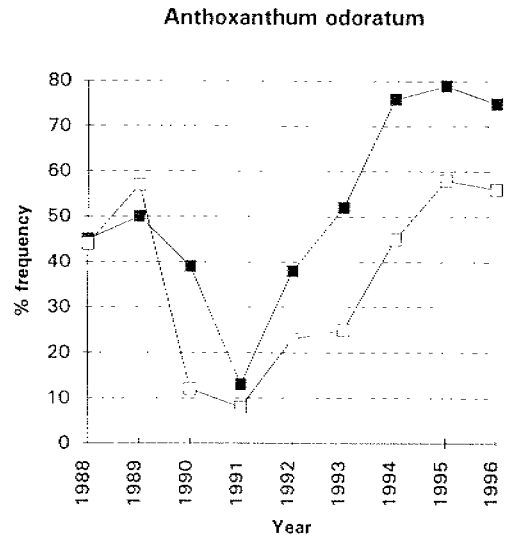
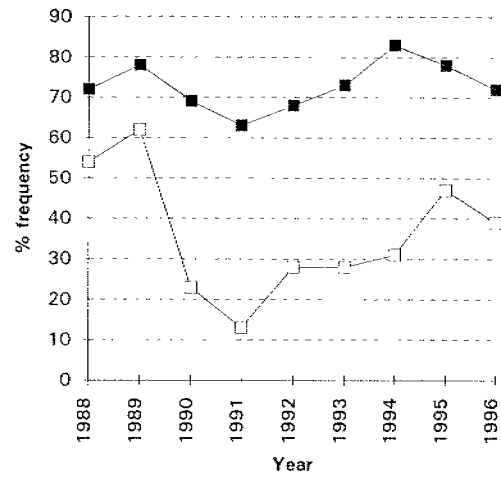
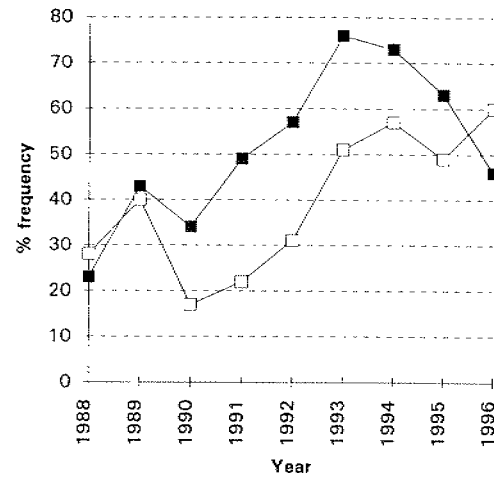


FIGURE 4

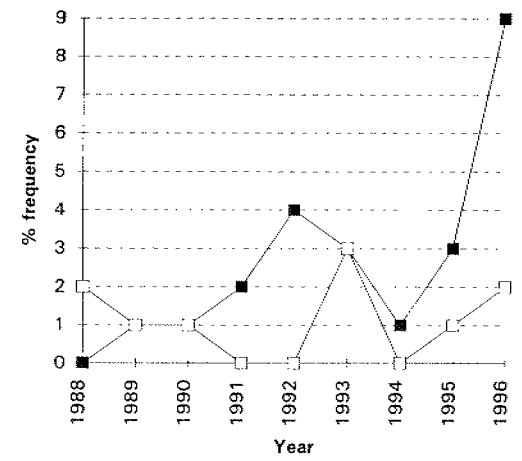
Lotus corniculatus



Luzula campestris



Orchis morio



Ranunculus acris

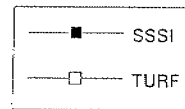
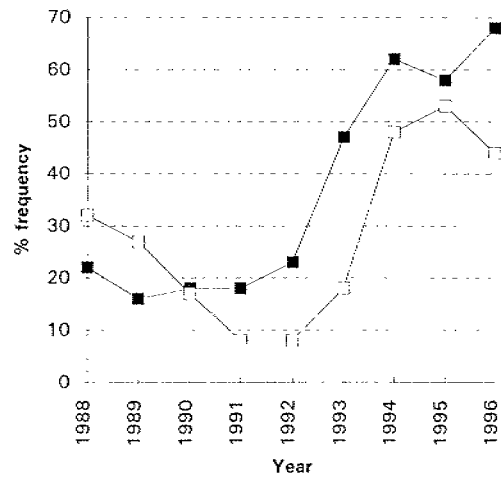


FIGURE 4 contd.

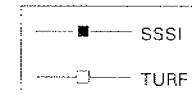
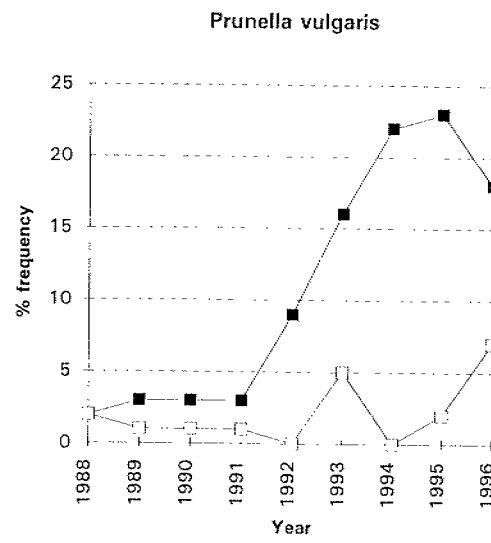
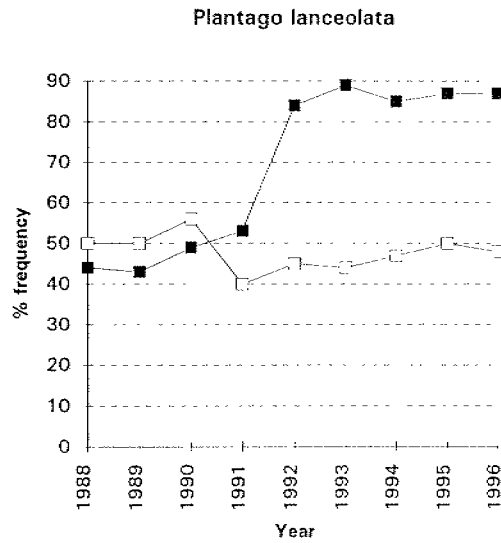
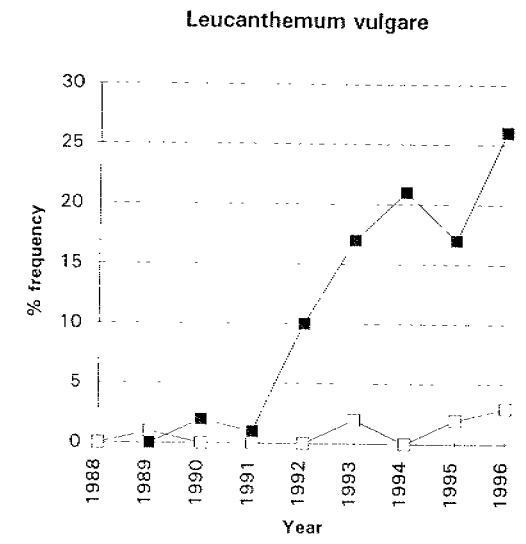
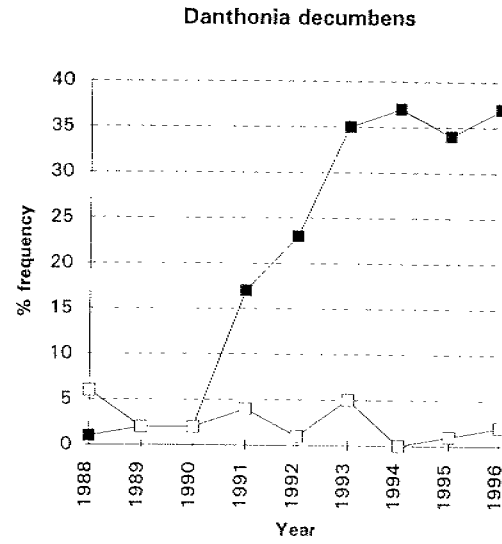
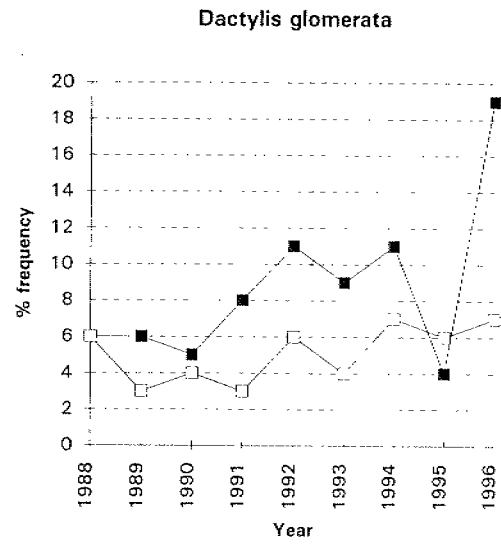
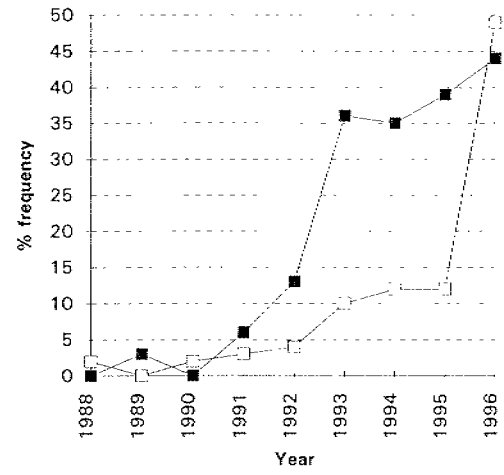


FIGURE 5

Hypochaeris radicata



Trifolium pratense

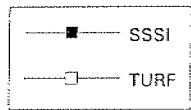
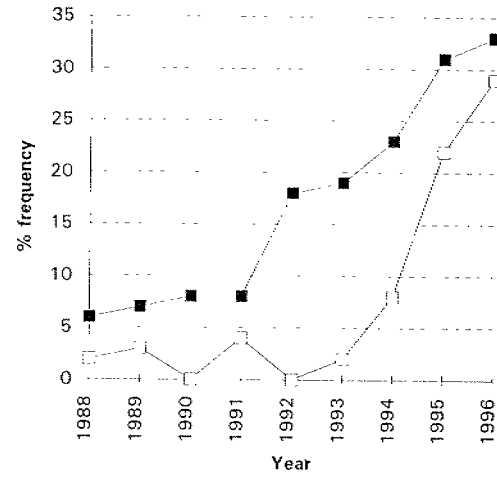


FIGURE 6

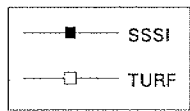
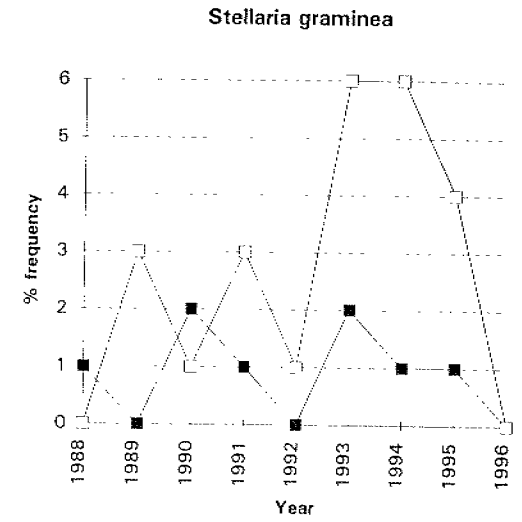
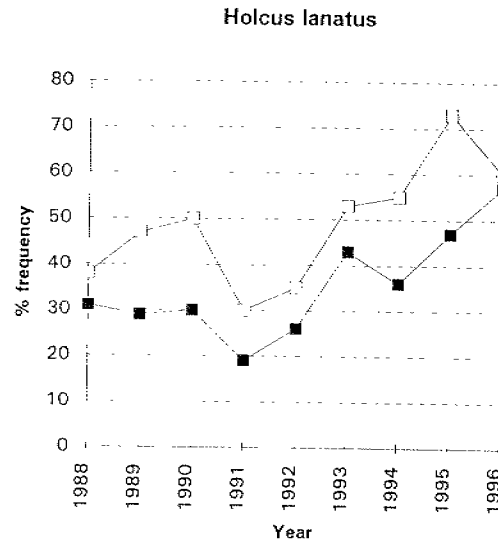
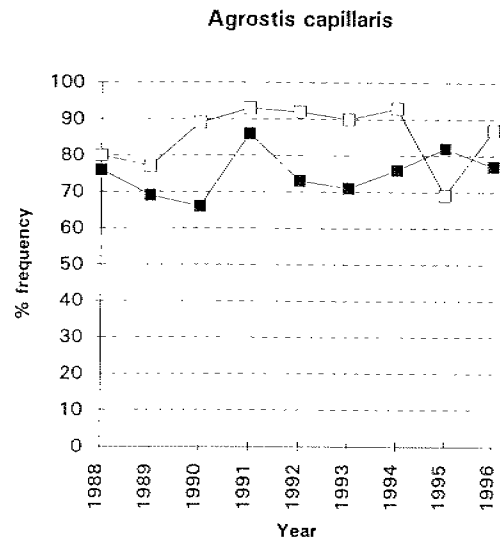


FIGURE 7

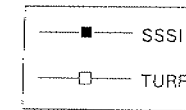
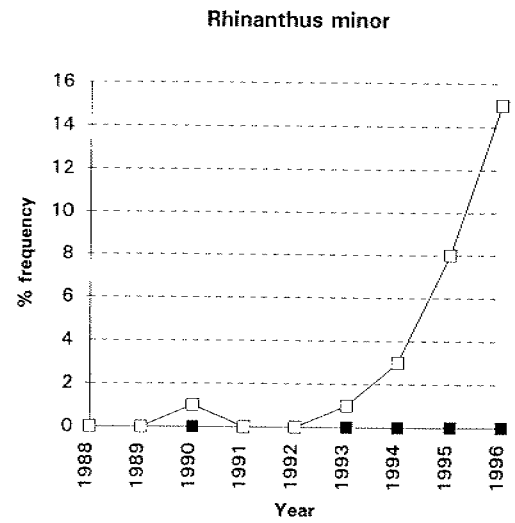
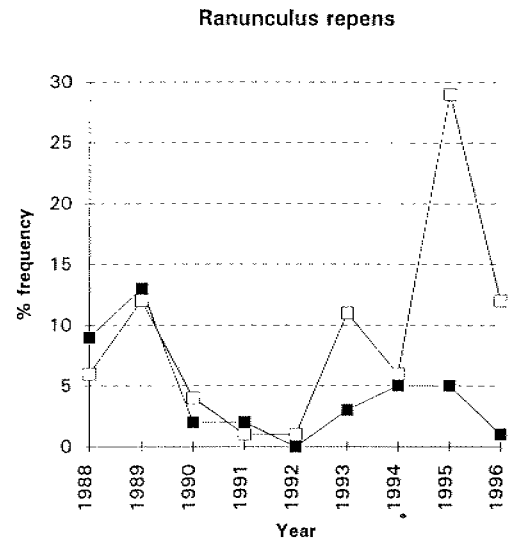
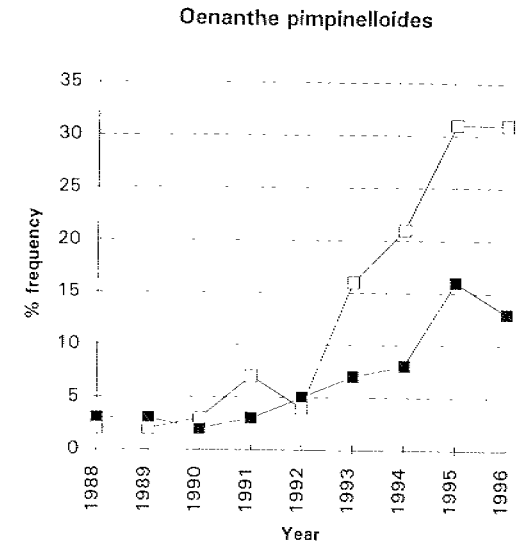
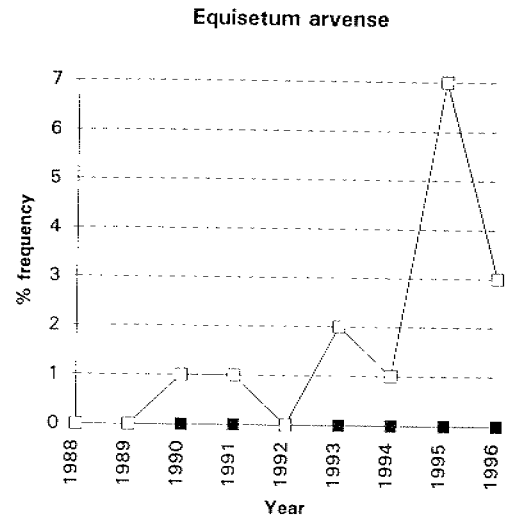
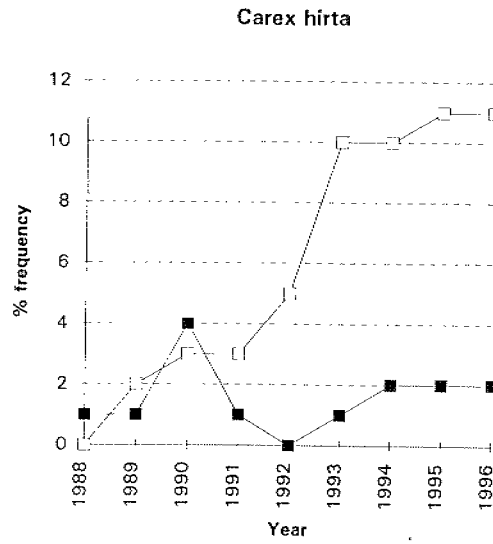


FIGURE 8

Representation of stress-tolerators in SSSI and turf transplant

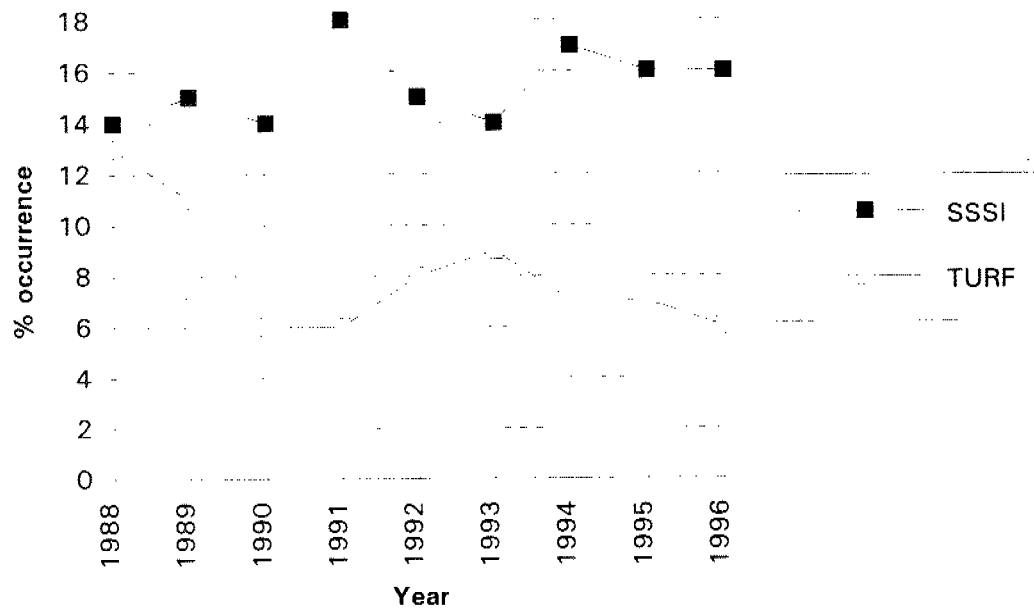


FIGURE 9

Representation of species typically associated with species-rich grassland (> 18 spp/m²)

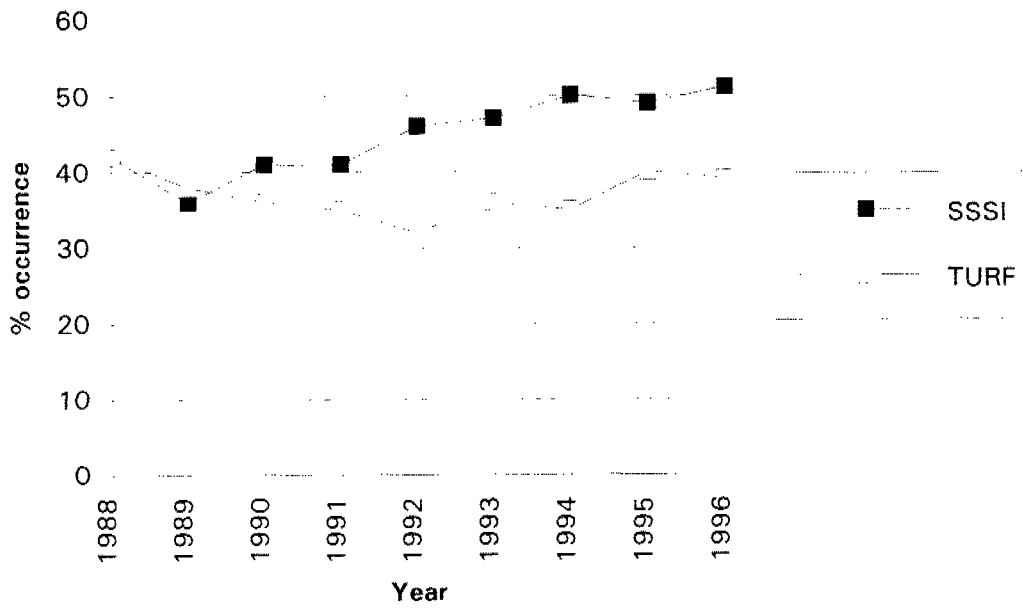


FIGURE 10

Summed frequencies for MG5c preferentials

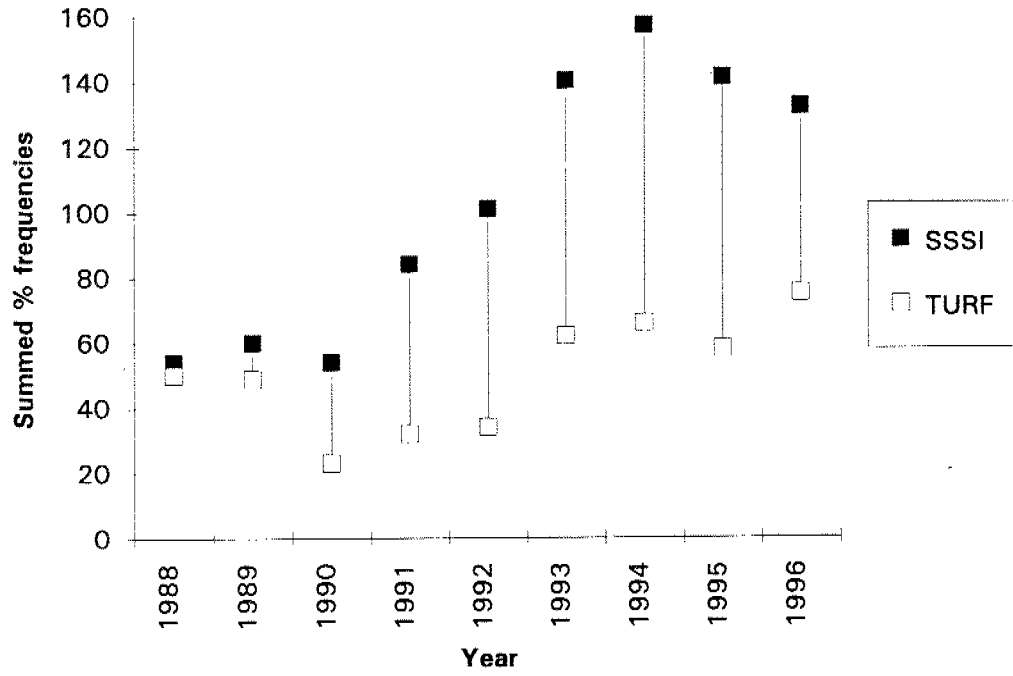


FIGURE 11

Summed frequencies for MG5 constants

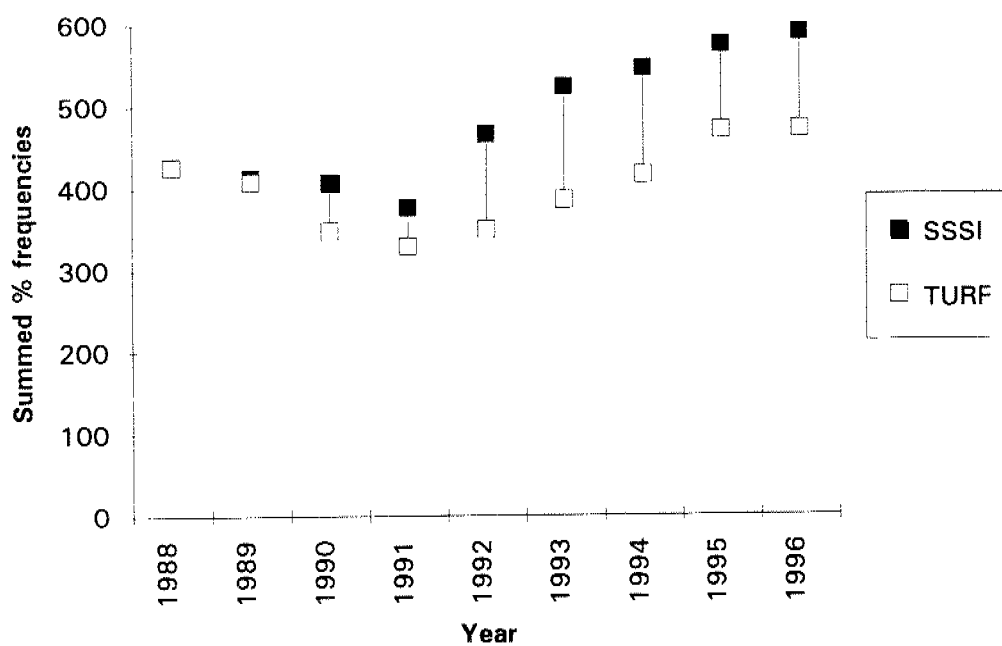


FIGURE 12

Summed frequencies for MG6 constants and MG6b preferentials

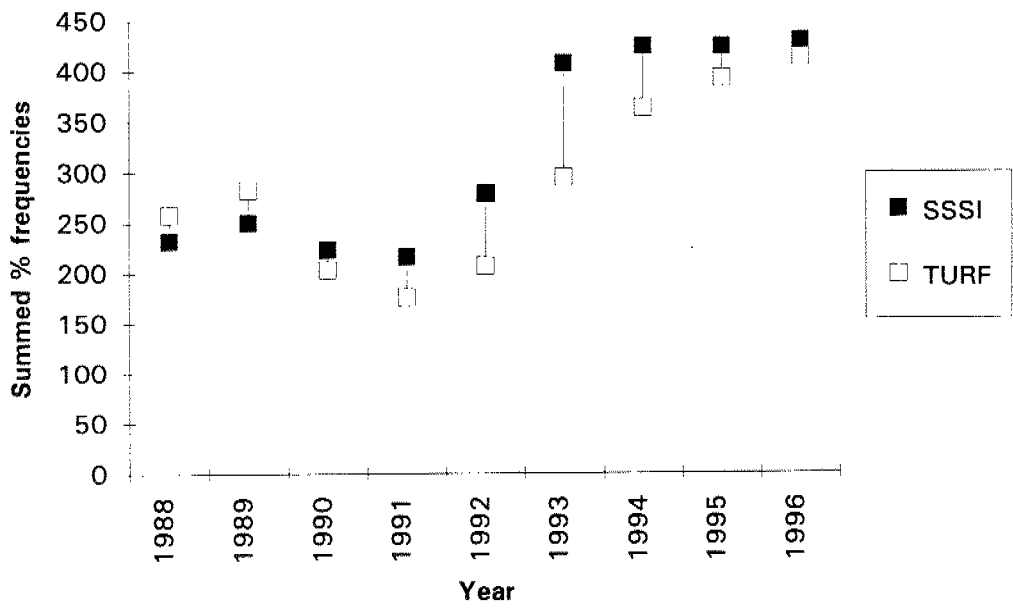


FIGURE 13

Species-richness (mean no. spp/RM-Q) on SSSI and littered plot

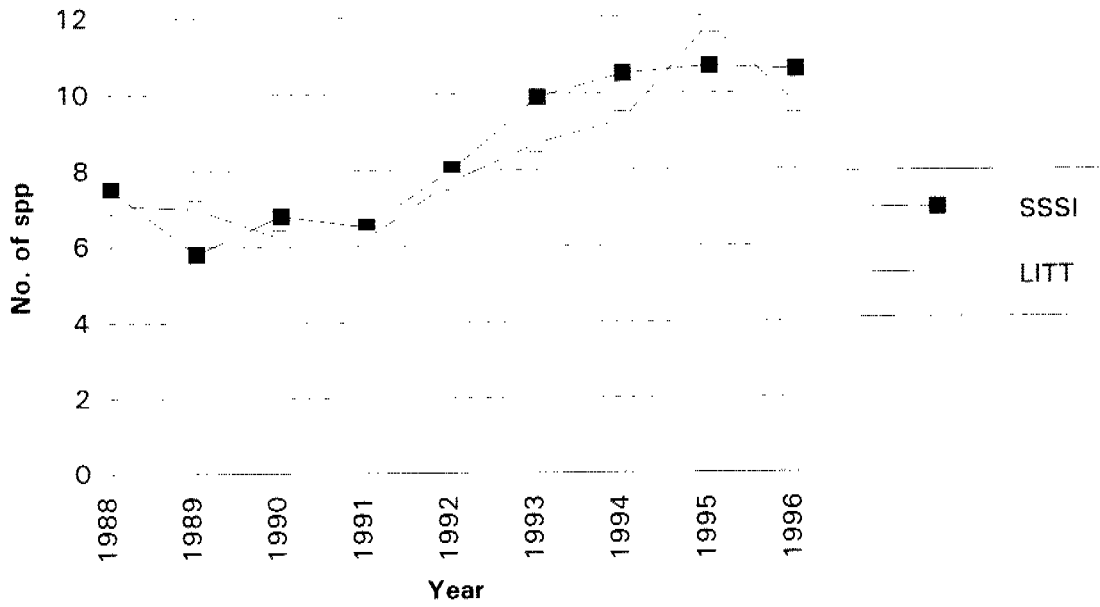


FIGURE 14