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Behavioural adaptations in South African Galagos

Harcourt, Caroline Susan

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Appendix 8[1]

Statistical Tables for Chapter Four.

Table 1. One-way ANOVA of insect foraging in each hour of the night in summer by G. crassicaudatus.

Source	SS	df	MS	F
Between hours	3780,5	9	420,1	3,68*
Within hours	6842,7	60	114,0	
Total	10623,2	69		

Table 2. One-way ANOVA of gum feeding in each hour of the night in winter by G. crassicaudatus.

Source	SS	df	MS	F
Between hours	1673,3	11	152,1	3,96*
Within hours	2763,4	72	38,4	
Total	4436,7	83		

[1] In this appendix significance levels are denoted by asterisks for ANOVAs.

* $p<0,05$

** $p<0,01$

Appendix 8[1]

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* $p<0,05$

** $p<0,01$

Table 3. *Duncans Multiple Range for insect foraging in each hour in summer by* G. crassicaudatus. Values underlines are significant at the p 0,01 level. Those asterisked are significant at the p<0,05 level.

Hour	1	10	7	3	4	6	2	9	5	8
$\bar{x}$	5,00	6,17	18,17	18,71	22,00	22,17	23,57	25,67	25,67	26,00
5,00	X	1,17	13,17*	13,71*	17,00	17,17	18,57	20,67	20,67	21,00
6,16		X	12,00*	12,54*	15,83	16,00	17,40	19,50	19,50	19,83
18,17			X	0,54	3,83	4,00	5,40	7,50	7,50	7,83
22,00				X	3,29	3,45	4,86	6,96	6,96	7,29
22,17					X	0,17	1,53	3,67	3,67	4,00
23,57						X	1,40	3,50	3,50	3,83
25,67							X	2,10	2,10	2,43
25,67								X	0,00	0,33
26,00									X	0,33
										X

Table 3. *Duncans Multiple Range for insect foraging in each hour in summer by* G. crassicaudatus. *Values underlines are significant at the p 0,01 level. Those asterisked are significant at the p<0,05 level.*

Hour	1	10	7	3	4	6	2	9	5	8
$\bar{X}$	5,00	6,17	18,17	18,71	22,00	22,17	23,57	25,67	25,67	26,00
5,00	X	1,17	13,17*	13,71*	17,00	17,17	18,57	20,67	20,67	21,00
6,16		X	12,00*	12,54*	15,83	16,00	17,40	19,50	19,50	19,83
18,17			X	0,54	3,83	4,00	5,40	7,50	7,50	7,83
22,00				X	3,29	3,45	4,86	6,96	6,96	7,29
22,17					X	0,17	1,53	3,67	3,67	4,00
23,57						X	1,40	3,50	3,50	3,83
25,67							X	2,10	2,10	2,43
25,67								X	0,00	0,33
26,00									X	0,33
										X

Table 4. *Duncans Multiple Range for gum feeding in each hour in winter by* G. crassicaudatus. *Values underlined are significantly different at the p<0,01 level.*

Hour	10	12	7	9	11	5	6	4	3	8	2	1
$\bar{x}$	2,71	2,86	3,86	5,00	5,29	6,00	7,29	7,86	8,14	8,57	9,00	20,29
2,71	X	0,15	1,15	2,29	2,58	3,29	4,58	5,15	5,43	5,86	6,29	17,58
2,86		X	1,00	2,14	2,43	3,14	4,43	5,00	5,28	5,17	6,14	17,43
3,86			X	1,14	1,43	2,14	3,43	4,00	4,28	4,71	5,14	16,43
5,00				X	0,29	1,00	2,29	2,86	3,14	3,57	4,00	15,29
5,29					X	0,71	2,00	2,57	2,85	3,28	3,71	15,00
6,00						X	1,29	1,86	2,14	2,56	3,00	14,29
7,29							X	0,57	0,85	1,28	1,71	13,00
7,86								X	0,28	0,71	1,14	12,43
8,14									X	0,43	0,86	12,15
8,57										X	0,43	11,72
9,00											X	11,29
20,29												X

Table 5. One-way ANOVA of distance travelled per hour by *G. crassicaudatus* in summer.

Source	SS	df	MS	F
Between hours	236596,54	9	26288,50	6,76**
Within hours	194452,96	50	3889,06	
Total	431049,50	59		

Table 6. One-way ANOVA of distance travelled per hour by *G. senegalensis* in summer.

Source	SS	df	MS	F
Between hours	89827,72	8	11228,47	3,03**
Within hours	166799,48	45	3706,66	
Total	256627,20	53		

Table 7. One-way ANOVA of distance travelled per hour by *G. crassicaudatus* in winter.

Source	SS	df	MS	F
Between hours	672939,51	9	74771,06	16,33**
Within hours	239066,52	49	4878,91	
Total	912006,03	58		

Table 8. One-way ANOVA of distance travelled per hour by *G. senegalensis* in winter.

Source	mSS	df	MS	F
Between hours	133782,07	11	121620,10	21,96**
Within hours	337778,33	60	5537,35	
Total	1675599,40	71		

Table 9. *Duncan Multiple Range for distance travelled in each hour by G. crassicaudatus in summer. Values underlined are significant at p 0,01 and those asterisked are significant at the p<0,05 level.*

Hour	9	4	6	7	3	5	8	10	2	1
$\bar{x}$	60,83	91,67	91,92	96,92	105,00	119,17	123,33	132,58	150,42	157,08
60,83	X	30,84	31,09	36,09	44,17	58,34	62,50	71,75	89,59	96,25
91,67		X	0,25	5,25	13,33	27,50	31,66	40,91	58,75	65,41
91,92			X	5,00	13,08	27,25	31,41	40,66	58,50	65,16
96,92				X	8,08	22,25	26,41	35,66	53,50	60,16
105,00					X	14,17	18,33	27,58	45,42	52,08
119,17						X	4,16	13,41	31,25	37,91
123,33							X	9,25	27,09	33,75
132,58								X	17,84	24,50
150,42									X	6,66
157,08										X

Table 10. *Duncan Multiple Range for distance travelled in each hour by* G. senegalensis *in summer. Values underlined are significant at the p 0,01 level and those asterisked at the p<0,05 level.*

Hour	3	7	5	4	9	6	8	2	1
$\bar{X}$	71,33	76,00	86,00	92,83	105,67	112,33	116,00	154,33	207,67
71,33	X	4,67	14,67	21,50	34,34	41,00	44,67	83,00	136,34
76,00		X	10,00	16,83	29,67	36,33	40,00	78,33	131,67
86,00			X	6,83	19,67	26,33	30,00	68,33	121,67
92,83				X	12,84	19,50	23,17	61,50	114,84
105,67					X	6,66	10,33	49,66	102,00
112,33						X	3,67	42,00	95,34*
116,00							X	38,33	91,67*
154,33								X	53,34
207,67									X

Table 11. Duncan Multiple Range for distance travelled in each hour by G. crassicaudatus in winter. Significance notation is the same as earlier Multiple Range tests.

Hour	6	7	8	10	9	2	5	11	4	12	3	1
$\bar{X}$	52,75	64,00	82,50	89,17	100,83	105,42	106,67	123,33	156,25	205,00	209,17	252,08
52,75	X	11,25	29,75	36,42	48,08	52,67	53,92	70,58	103,50	152,25	156,42	199,33
64,00		X	18,50	25,17	36,83	41,42	42,67	59,33	94,25	141,00	145,17	188,08
82,50			X	6,67	18,33	22;92	24,17	40,83	73,75	122,50*	126,67*	169,58
89,17				X	11,66	16,25	17,50	34,16	67,08	115,83*	120,00*	162,91
100,83					X	4,59	5,84	22,50	55,42	104,17	108,34	151,25
105,42						X	1,25	17,91	50,83	99,58	103,75	146,66
106,67							X	16,66	49,58	98,33	102,50	145,41
123,33								X	32,92	81,67	85,84	128,75
156,25									X	48,75	52,92	95,83
205,00										X	4,17	47,08
209,17											X	42,91
252,08												X

Table 12. Duncan Multiple Range for distance travelled in each hour by G. senegalensis in winter. Significance notation was the same as earlier Multiple Range tests.

Hour	6	8	7	5	9	4	11	3	12	10	2	1
$\bar{X}$	82,67	100,67	104,67	120,33	121,33	126,00	130,33	147,33	154,00	158,40	179,00	248,17
82,67	X	18,00	22,00	37,66	38,66	43,33	47,66	64,66	71,33	75,73	96,33	165,50
100,67		X	4,00	19,66	20,66	25,33	29,66	46,66	53,33	57,73	78,33	147,50
104,67			X	15,66	16,66	21,33	25,66	42,66	49,33	53,73	74,33	143,50
120,33				X	1,00	5,67	10,00	27,00	33,67	38,07	58,67	127,84
121,33					X	4,67	9,00	26,00	32,67	37,07	57,67	126,84
126,00						X	4,33	21,33	28,00	32,40	53,00	122,17
130,33							X	17,00	23,67	28,07	48,67	117,84
147,33								X	6,67	11,07	31,67	100,84
154,00									X	4,40	25,00	94,17
158,40										X	20,60	89,77
179,00											X	69,11
248,17												X

Table 13. **Two-way ANOVA for moving with species and season 'treatments'.**

Source	SS	df	MS	F
Season	228,48	1	228,48	42,79**
Species	0,65	1	0,65	0,12
Season & Species	10,68	1	10,68	2,00
Within	106,71	20	5,34	
Total	346,52	23		

Table 14. **Two-way ANOVA for gum foraging with species and season 'treatments'.**

Source	SS	df	MS	F
Season	433,50	1	433,50	122,11**
Species	6,00	1	6,00	1,69
Season & Species	13,50	1	13,50	3,80
Within	71,00	20	3,55	
Total	524,00	23		

Table 12. Duncan Multiple Range for distance travelled in each hour by G. senegalensis in winter. Significance notation was the same as earlier Multiple Range tests.

Hour	6	8	7	5	9	4	11	3	12	10	2	1
$\bar{X}$	82,67	100,67	104,67	120,33	121,33	126,00	130,33	147,33	154,00	158,40	179,00	248,17
82,67	X	18,00	22,00	37,66	38,66	43,33	47,66	64,66	71,33	75,73	96,33	165,50
100,67		X	4,00	19,66	20,66	25,33	29,66	46,66	53,33	57,73	78,33	147,50
104,67			X	15,66	16,66	21,33	25,66	42,66	49,33	53,73	74,33	143,50
120,33				X	1,00	5,67	10,00	27,00	33,67	38,07	58,67	127,84
121,33					X	4,67	9,00	26,00	32,67	37,07	57,67	126,84
126,00						X	4,33	21,33	28,00	32,40	53,00	122,17
130,33							X	17,00	23,67	28,07	48,67	117,84*
147,33								X	6,67	11,07	31,67	100,84*
154,00									X	4,40	25,00	94,17
158,40										X	20,60	89,77
179,00											X	69,11
248,17												X

Table 13. Two-way ANOVA for moving with species and season 'treatments'.

Source	SS	df	MS	F
Season	228,48	1	228,48	42,79**
Species	0,65	1	0,65	0,12
Season & Species	10,68	1	10,68	2,00
Within	106,71	20	5,34	
Total	346,52	23		

Table 14. Two-way ANOVA for gum foraging with species and season 'treatments'.

Source	SS	df	MS	F
Season	433,50	1	433,50	122,11**
Species	6,00	1	6,00	1,69
Season & Species	13,50	1	13,50	3,80
Within	71,00	20	3,55	
Total	524,00	23		

Table 15. Two-way ANOVA for resting with species and season 'treatments'.

Source	SS	df	MS	F
Season	70,18	1	70,18	2,00
Species	35,64	1	35,64	1,00
Season & Species	273,36	1	273,36	7,68*
Within	703,22	20	35,61	
Total	1082,40	23		

Table 16. Two-way ANOVA for autogrooming with species and season 'treatments'.

Source	SS	df	MS	F
Season	45,36	1	45,36	6,89*
Species	14,98	1	14,98	2,28
Season & Species	245,70	1	245,70	37,34**
Within	131,52	20	6,58	
Total	437,56	23		

Table 17. Two-way ANOVA for allogrooming with species and season 'treatments'.

Source	SS	df	MS	F
Season	100,92	1	100,92	105,13**
Species	32,64	1	32,64	34,00**
Season & Species	92,16	1	92,16	96,00**
Within	19,18	20	0,96	
Total	244,90	23		

Table 18. Two-way ANOVA for insect foraging with species and seasons 'treatments'.

Source	SS	df	MS	F
Season	2205,00	1	2205,00	76,29**
Species	1,50	1	1,50	0,05
Season & Species	448,46	1	448,46	16,90**
Within	578,02	20	28,90	
Total	3232,98	23		

Table 19. Two-way ANOVA for gum feeding with species and seasons 'treatments'.

Source	SS	df	MS	F
Season	817,20	1	817,20	117,92**
Species	73,08	1	73,08	10,55**
Season & Species	66,72	1	66,72	9,63**
Within	138,72	20	6,93	
Total	1095,72	23		

Appendix 9. Statistical tables for Chapter 5.

Table 1. Quadrat analyses for G. senegalensis in summer

Activity	$\bar{x}$	s^2	$s^2/\bar{x}$	df	Z	P
Travel	3,59	16,32	4,54	196	65,17	<0,001
Rest	5,63	103,77	18,42	196	22,36	<0,001
Move	1,69	11,44	6,77	196	31,69	<0,001
Autogroom	2,04	35,21	17,30	196	30,46	<0,001
Allogroom	0,23	1,55	6,45	196	62,53	<0,001
Insect-forage	3,41	47,58	13,97	196	54,18	<0,001
Insect-feed	0,19	0,44	2,33	196	10,40	<0,001
Gum-forage	0,24	2,06	8,45	196	37,73	<0,001
Gum-feed	0,54	6,73	12,46	196	50,06	<0,001
Urine-wash	0,08	0,18	2,34	196	10,46	<0,001

Table 2. Quadrat analyses for G. senegalensis in winter

Activity	$\bar{x}$	s^2	$s^2/\bar{x}$	df	Z	P
Travel	7,47	449,87	60,22	163	127,51	<0,001
Rest	4,32	31,97	7,4	163	32,95	<0,001
Move	0,32	0,82	2,57	163	11,99	<0,001
Autogroom	1,76	35,28	20,04	163	65,91	<0,001
Allogroom	0,04	0,12	2,94	163	14,09	<0,001
Insect-forage	3,02	381,81	126,40	163	192,85	<0,001
Insect-feed	0,22	1,35	6,14	163	28,41	<0,001
Gum-forage	2,57	52,27	20,36	163	66,57	<0,001
Gum-feed	4,23	103,59	24,49	163	74,76	<0,001
Urine-wash	0,21	0,45	2,15	163	9,43	<0,001

Table 3. Quadrat Analyses for G. crassicaudatus in summer

Activity	$\bar{x}$	s^2	$s^2/\bar{x}$	df	Z	P
Travel	3,42	12,76	3,73	185	17,89	< 0,001
Rest	5,00	41,92	8,38	185	36,44	< 0,001
Move	1,31	4,01	3,06	185	14,37	< 0,001
Autogroom	1,48	10,21	6,90	185	31,28	< 0,001
Allogroom	0,46	2,18	4,78	185	22,80	< 0,001
Insect-forage	5,75	290,25	50,50	185	117,44	< 0,001
Insect-feed	0,17	0,39	2,28	185	9,77	< 0,001
Gum-forage	0,43	1,48	3,44	185	16,41	< 0,001
Gum-feed	0,61	4,11	6,77	185	30,77	< 0,001
Urine-wash	0,12	0,18	1,49	185	4,24	< 0,001

Table 4. Quadrat analyses for G. crassicaudatus in winter

Activity	$\bar{x}$	s^2	$s^2/\bar{x}$	df	Z	P
Travel	4,54	39,66	8,73	166	35,58	< 0,001
Rest	9,97	696,60	69,87	166	134,06	< 0,001
Move	0,53	2,31	4,34	166	19,69	< 0,001
Autogroom	4,80	121,42	25,28	166	73,37	< 0,001
Allogroom	0,96	8,25	8,61	166	35,20	< 0,001
Insect-forage	0,38	1,84	4,87	166	21,98	< 0,001
Insect-feed	0,02	0,02	0,99	166	0,14	N.S.
Gum-forage	2,15	28,74	13,37	166	48,38	< 0,001
Gum-feed	3,37	129,45	38,47	166	94,76	< 0,001
Urine-wash	0,14	0,69	4,80	166	21,68	< 0,001