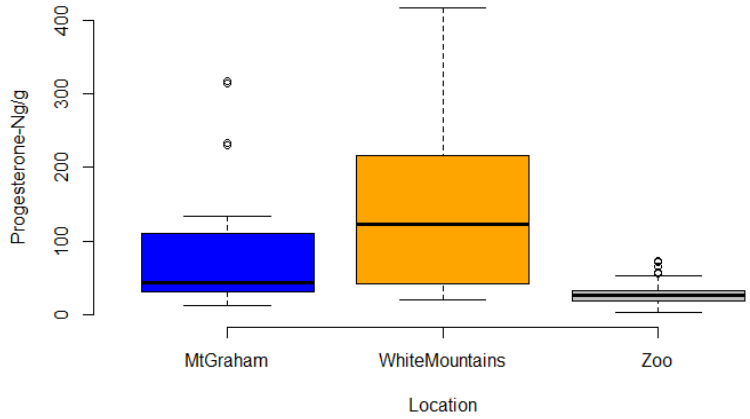
Red squirrel analysis

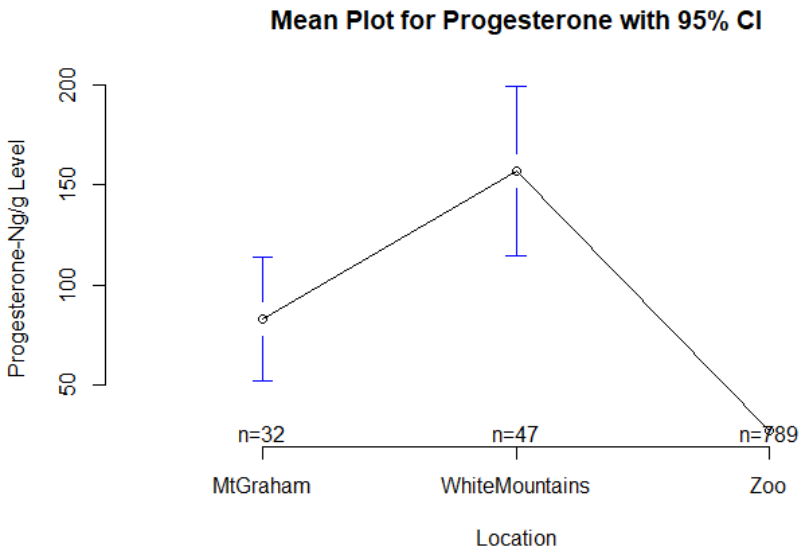
Location	N_Prog	Mean Prog-ng/g	SD Prog-ng/g	Max/min	AOV Prog F-val	N_Est	Mean Est-ng/g	SD Est-ng/g	Max/min	AOV Est-F-val	N-Cort Ng/g	Mean Cort-ng/g	Sd Cort-ng/g	Max/min	AOV Cort F-val
Mt. Graham	47	83.0	86.7	317/na		45	155	183	1013/na		47	68.6	43.5	184/9.79	
White Mountain	66	157	145	532/na		66	376	596	3525/na		66	155	181	895/17.4	62.91 <2e-16
Phoenix Zoo	935	27	10.1	73.4/na	279.5 Pr<2e-16	935	103	56.4	433/na	74.31 Pr<2e-16	935	52	59	1084/na	
Season															
Fall	135	28.4	27.9	317	5.532 Pr>0.000917	135	112	63.6	433	6.507 Pr>0.000235	135	44.6	51.8	592/na	3.742 Pr>0.0108
Spring	354	31.7	22.6	229		354	98.2	54.9	329		354	57.6	47.8	612/na	
Summer	275	36.6	58.8	485		275	118	135	1188		275	70.6	90.2	1084/na	
Winter	284	47.1	71.9	532		284	160	288	3525		284	57.1	97.3	893/1.75	

Location	N-Test	MeanTest-ng/g	SdTest ng/g	MAX/min	AOV Test F-val
Mt. Graham	47	127	65.9	270/na	
White Mountain	66	112	104	327/na	
Phoenix Zoo	935	93.1	30.1	236/na	2.095 p 0.13
Season					
Fall	153	NA	NA	Na/NA	0.005 Pr> 0.946
Spring	354	103	38.4	236/Na	
Summer	275	104	69.1	327/Na	
Winter	284	Na	Na	NA/Na	

Mean progesterone values of *in situ* red squirrels vs. Zoo Squirrels:

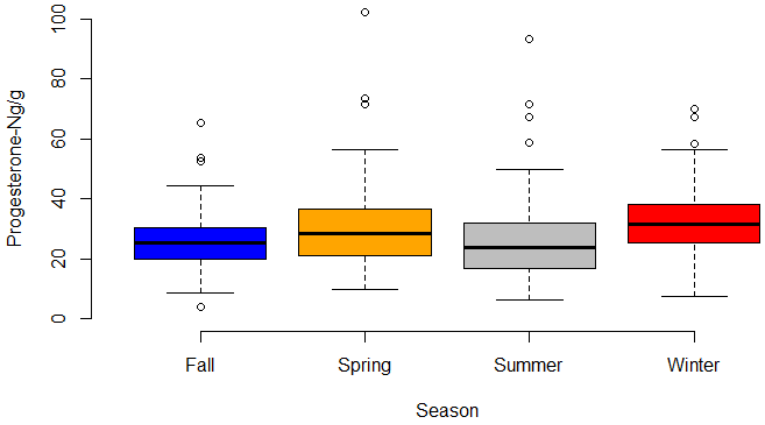
Mt. Graham =86.7 ng/g – Max/min317/na, White mt.157ng/g – Max/min,532/na, Zoo=27ng/g – max/min, 433/na

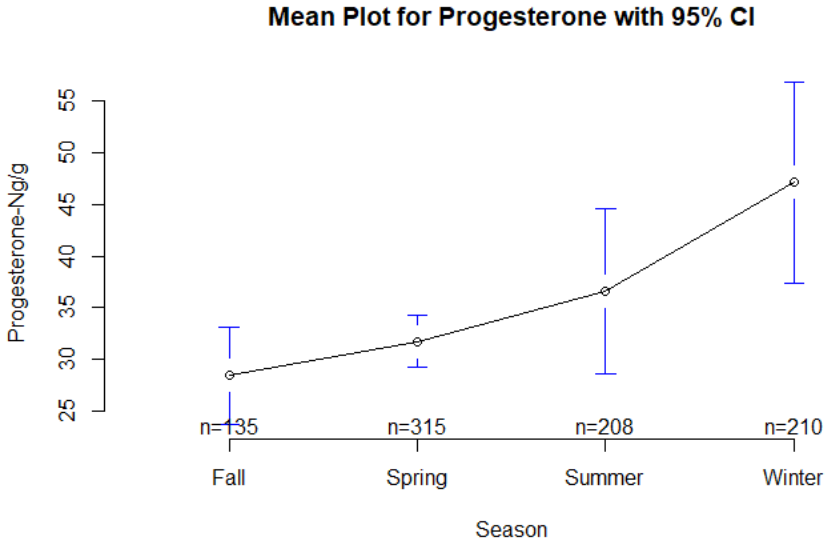




Mean progesterone values for Zoo Mt. Graham red squirrels are significantly lower than that of in situ MGRS and WMRS – F=279.5 Pr<2e-16

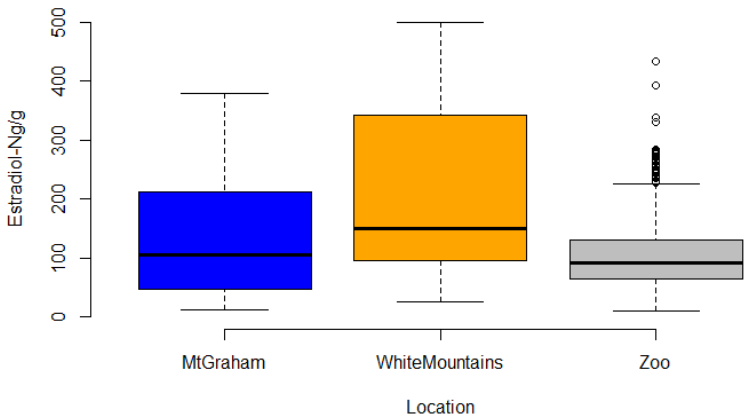
Mean Progesterone values by season of both in situ and ex situ red squirrels:
Fall 28.4ng/g-Max-317, Spring, 31.7ng/g-Max-229, Summer, 36.6 ng/g-Max 485, Winter 47.1ng/g-Max 532

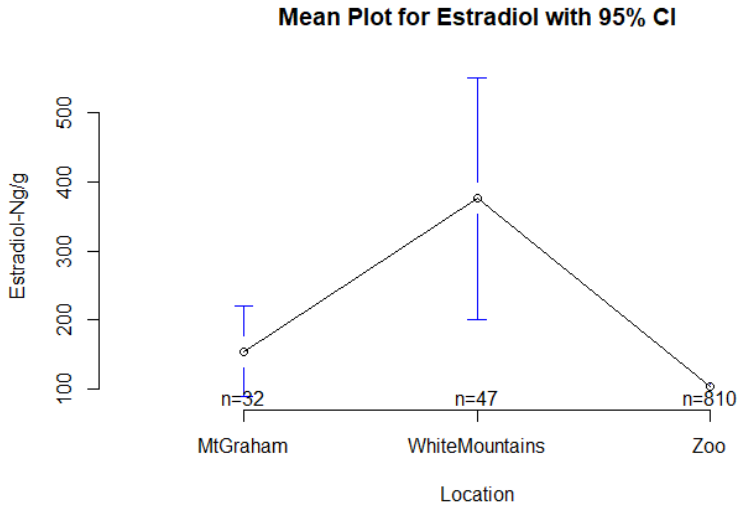




Mean progesterone values are ? F 5.532 Pr>0.000917

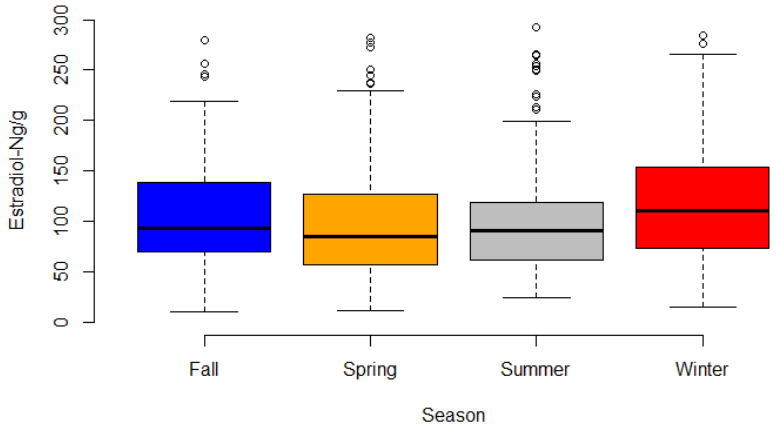
Mean estradiol values of *in situ* red squirrels vs. Zoo Squirrels: Mt. Graham =155 ng/g-Max,1013, White mt.376ng/g-3525, Zoo=103ng/g-Max,433

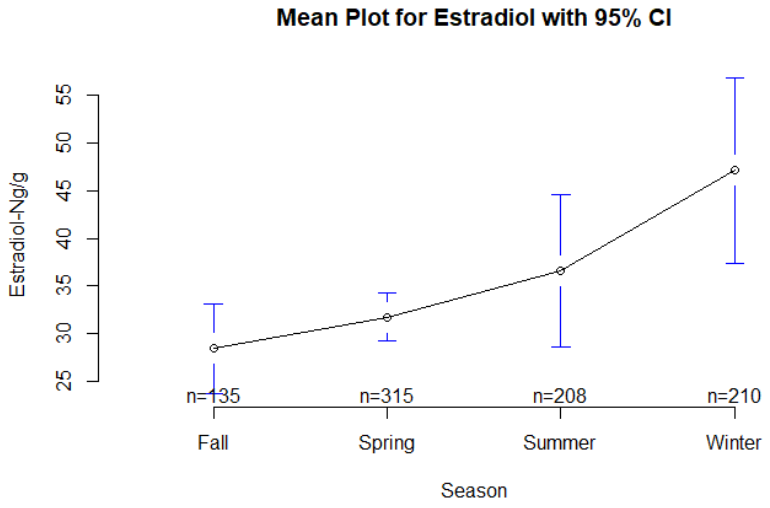




Mean estradiol values for Zoo Mt. Graham red squirrels are significantly lower than that of in situ MGRS and WMRS – F=74.31, Pr<2e-16

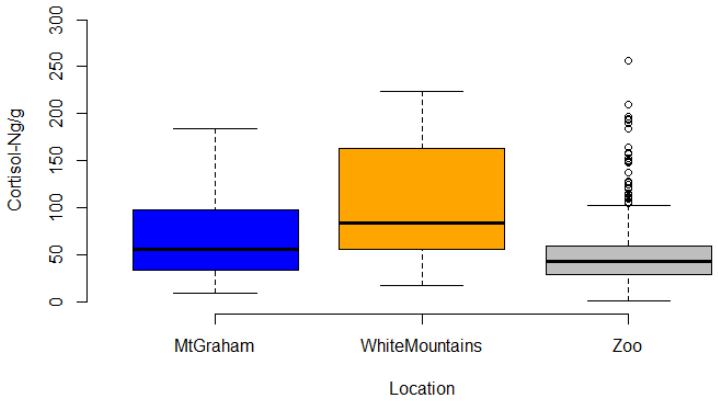
Mean Estradiol values by season of both *in situ* and *ex situ* red squirrels:
Fall 112ng/g-Max/minn-433/na, Spring, 98.2ng/g-Max/min-329/na, Summer, 118 ng/g-Max./min 1188/na, Winter 160ng/g-Max/min, 3525/na

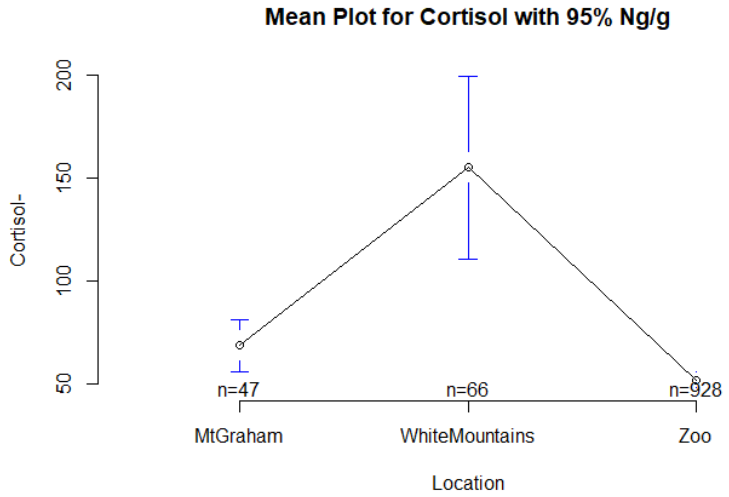




Mean estradiol values for Zoo, and in situ red squirrels by season are (not?)significantly different – F=6.507, Pr>0.000235

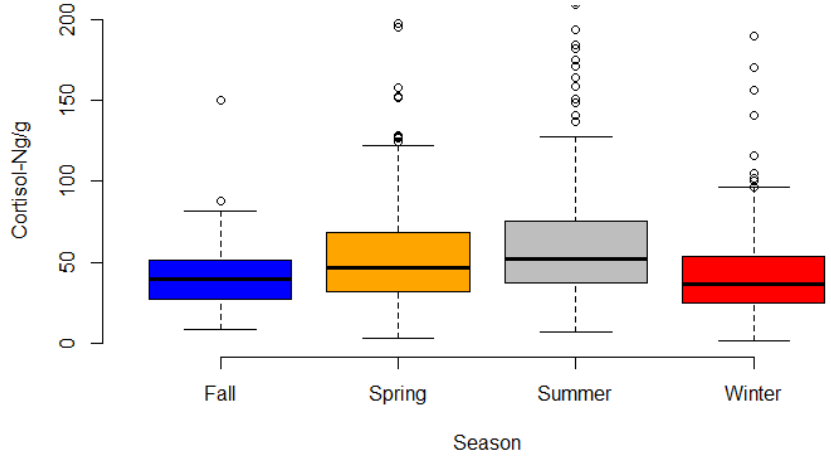
Mean cortisol values of in situ red squirrels vs. Zoo Squirrels:
Mt. Graham =68.6 ng/g-Max/min,184/9.79, White mt.155ng/g-Max/min,895/17.4, Zoo=935ng/g-Max,1084/na

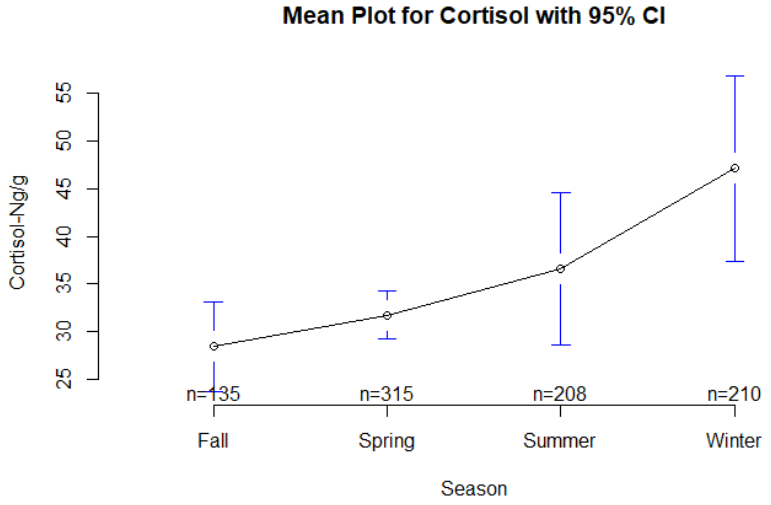




Mean cortisol levels of Zoo MGRS are significantly higher than in situ red squirrels F=62.91 Pr <2e-16

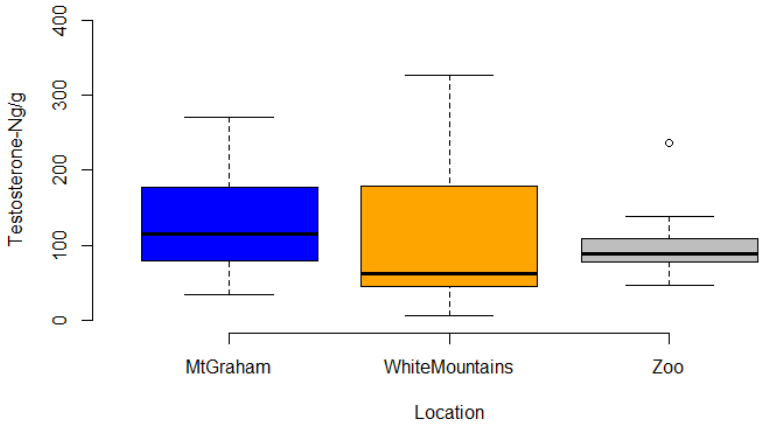
Mean cortisol values by season of both *in situ* and *ex situ* red squirrels:
Fall 44.6ng/g-Max-592/na, Spring, 57.6ng/g-Max-612/na, Summer, 70.6 ng/g-Max 1084/na, Winter 57.1ng/g-Max 893/1.75

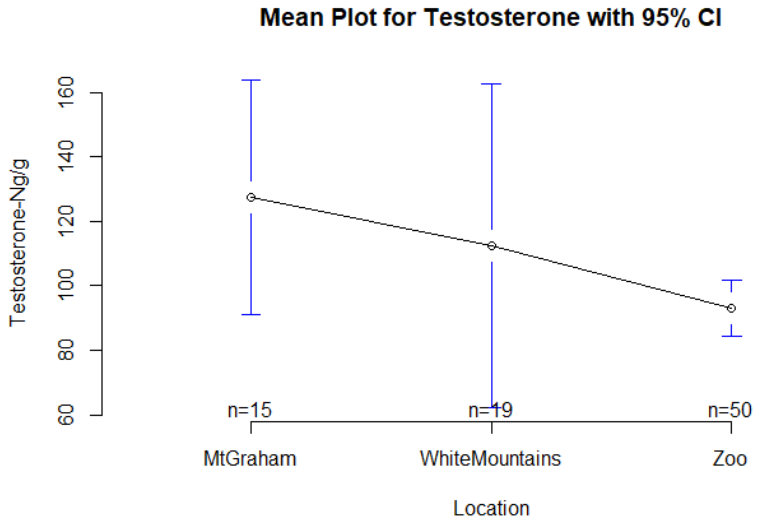




Mean cortisol values for Zoo, and in situ red squirrels by season are (not?)significantly different – F=3.742, pr>0.0108

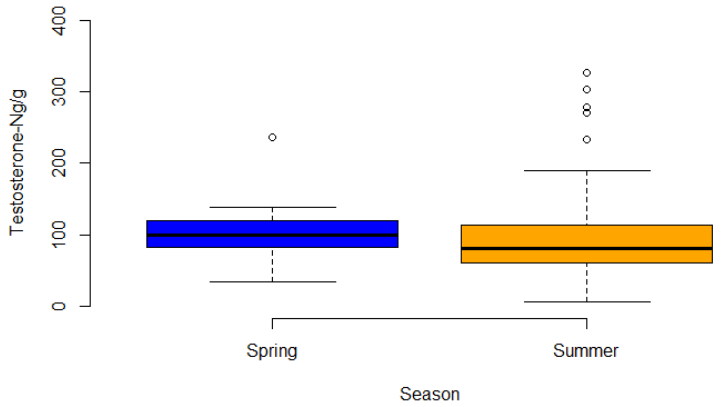
Mean testosterone values of in situ red squirrels vs. Zoo Squirrels:
Mt. Graham =127 ng/g-Max/min,270/na, White Mt.=112ng/g-Max/min,327/na, Zoo=93.1ng/g-Max,236/na

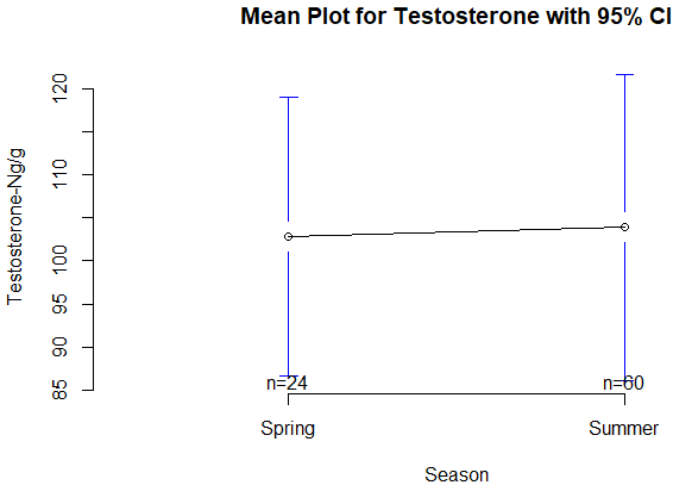




Mean testosterone values for Zoo and in situ red squirrels are (not?)significantly different – F= 2.095 Pr> p 0.13

Mean testosterone values by season of both *in situ* and *ex situ* red squirrels:
Fall - na, Spring, 103ng/g-Max-236/na, Summer, 104 ng/g-Max 327/na, Winter-na





Mean testosterone values by season for Zoo, and in situ red squirrels are (not?)significantly F=0.005 Pr> 0.946