

Table S1. Summary of monthly mean (\pm SEM) salivary and fecal glucocorticoid and salivary and fecal immunoglobulin A concentrations throughout the 1-year study in elephant camps offering saddle riding, bareback riding, or no riding.

Month	Saddle				Bareback				Non-ride			
	FGM (ng/g)	Salivary cortisol (ng/ml)	Fecal IgA (μ g/g)	Salivary IgA (μ g/ml)	FGM (ng/g)	Salivary cortisol (ng/ml)	Fecal IgA (μ g/g)	Salivary IgA (μ g/ml)	FGM (ng/g)	Salivary cortisol (ng/ml)	Fecal IgA (μ g/g)	Salivary IgA (μ g/ml)
January	53.10 \pm 4.82 (n=14)	1.26 \pm 0.15 (n=14)	0.82 \pm 0.27 (n=14)	4.62 \pm 0.52 (n=14)	75.48 \pm 9.64 (n=11)	0.56 \pm 0.06 (n=11)	1.65 \pm 0.26 (n=11)	6.05 \pm 0.42 (n=11)	61.64 \pm 4.10 (n=19)	1.67 \pm 0.17 (n=19)	0.93 \pm 0.23 (n=19)	6.33 \pm 0.61 (n=19)
February	25.75 \pm 5.25 (n=14)	1.36 \pm 0.17 (n=14)	1.47 \pm 0.37 (n=14)	5.38 \pm 0.57 (n=14)	48.48 \pm 3.38 (n=11)	1.19 \pm 0.18 (n=11)	2.46 \pm 0.39 (n=11)	5.97 \pm 0.75 (n=11)	35.26 \pm 2.89 (n=19)	1.70 \pm 0.13 (n=19)	0.97 \pm 0.22 (n=19)	5.99 \pm 0.58 (n=19)
March	22.37 \pm 2.51 (n=14)	1.15 \pm 0.40 (n=14)	0.83 \pm 0.24 (n=14)	4.10 \pm 0.64 (n=14)	33.08 \pm 5.51 (n=11)	0.29 \pm 0.09 (n=11)	2.59 \pm 0.33 (n=11)	4.46 \pm 0.58 (n=11)	25.51 \pm 2.92 (n=19)	0.81 \pm 0.14 (n=19)	1.18 \pm 0.24 (n=19)	4.97 \pm 0.52 (n=19)
April	24.47 \pm 2.00 (n=14)	0.69 \pm 0.08 (n=14)	1.66 \pm 0.48 (n=14)	3.81 \pm 0.77 (n=14)	38.14 \pm 3.47 (n=11)	0.36 \pm 0.09 (n=11)	5.22 \pm 0.57 (n=11)	4.63 \pm 0.56 (n=11)	34.20 \pm 4.16 (n=19)	0.85 \pm 0.09 (n=19)	0.38 \pm 0.13 (n=19)	6.78 \pm 0.86 (n=19)
May	25.89 \pm 2.17 (n=14)	1.30 \pm 0.16 (n=14)	0.97 \pm 0.24 (n=14)	5.18 \pm 0.96 (n=14)	27.16 \pm 2.71 (n=11)	0.53 \pm 0.07 (n=11)	1.77 \pm 0.25 (n=11)	6.74 \pm 0.85 (n=11)	38.79 \pm 4.01 (n=19)	0.71 \pm 0.07 (n=18)	0.94 \pm 0.28 (n=18)	7.21 \pm 0.71 (n=18)
June	21.72 \pm 1.81 (n=14)	0.76 \pm 0.05 (n=14)	0.59 \pm 0.20 (n=14)	9.33 \pm 1.47 (n=14)	24.07 \pm 1.98 (n=11)	0.58 \pm 0.07 (n=11)	3.45 \pm 0.64 (n=11)	8.82 \pm 1.70 (n=10)	28.09 \pm 1.66 (n=19)	0.74 \pm 0.04 (n=19)	1.48 \pm 0.36 (n=19)	7.33 \pm 1.09 (n=19)
July	22.53 \pm 2.30 (n=13)	0.99 \pm 0.18 (n=14)	0.58 \pm 0.14 (n=14)	8.96 \pm 3.56 (n=14)	21.13 \pm 1.46 (n=11)	0.47 \pm 0.05 (n=11)	0.88 \pm 0.30 (n=11)	13.47 \pm 3.18 (n=11)	32.31 \pm 1.87 (n=19)	0.64 \pm 0.05 (n=17)	0.55 \pm 0.15 (n=19)	7.71 \pm 1.63 (n=18)
August	24.94 \pm 2.43 (n=13)	0.47 \pm 0.09 (n=14)	0.71 \pm 0.14 (n=14)	9.83 \pm 2.64 (n=14)	28.84 \pm 3.72 (n=11)	0.31 \pm 0.05 (n=9)	1.50 \pm 0.23 (n=11)	17.43 \pm 3.87 (n=9)	33.79 \pm 3.69 (n=19)	0.30 \pm 0.04 (n=17)	0.49 \pm 0.16 (n=19)	7.40 \pm 1.16 (n=17)
September	41.83 \pm 3.08 (n=14)	0.51 \pm 0.04 (n=14)	0.48 \pm 0.14 (n=14)	14.60 \pm 2.57 (n=14)	26.93 \pm 2.99 (n=11)	0.45 \pm 0.06 (n=11)	2.08 \pm 0.44 (n=11)	10.85 \pm 1.72 (n=11)	22.06 \pm 2.07 (n=19)	0.40 \pm 0.04 (n=19)	0.57 \pm 0.19 (n=19)	5.17 \pm 0.78 (n=18)
October	24.21 \pm 2.13 (n=14)	0.56 \pm 0.14 (n=14)	0.55 \pm 0.14 (n=14)	5.95 \pm 1.41 (n=14)	36.15 \pm 4.13 (n=10)	0.34 \pm 0.06 (n=11)	2.00 \pm 0.30 (n=11)	6.10 \pm 1.48 (n=11)	30.87 \pm 3.20 (n=19)	0.44 \pm 0.05 (n=19)	0.50 \pm 0.13 (n=19)	8.10 \pm 1.49 (n=19)
November	26.35 \pm 1.91 (n=14)	0.53 \pm 0.16 (n=14)	1.04 \pm 0.33 (n=14)	14.55 \pm 4.21 (n=14)	39.05 \pm 5.97 (n=11)	0.24 \pm 0.04 (n=11)	1.54 \pm 0.34 (n=11)	19.50 \pm 6.57 (n=11)	56.33 \pm 7.76 (n=19)	0.39 \pm 0.06 (n=19)	0.83 \pm 0.30 (n=19)	10.05 \pm 2.26 (n=19)
December	27.15 \pm 1.67 (n=14)	0.81 \pm 0.08 (n=14)	1.23 \pm 0.27 (n=14)	14.17 \pm 3.18 (n=14)	35.68 \pm 5.75 (n=11)	0.56 \pm 0.09 (n=11)	2.53 \pm 0.50 (n=9)	25.25 \pm 6.57 (n=10)	41.27 \pm 4.24 (n=19)	0.79 \pm 0.06 (n=19)	0.71 \pm 0.16 (n=19)	17.70 \pm 2.26 (n=18)

Table S2 Age of participating elephants

Age	Number of participating elephants		
	Saddle	Bareback	No-riding
1-10		1	2
11-20		2	5
21-30	5	3	2
31-40	3	1	6
41-50	6	3	3
51-60		1	1

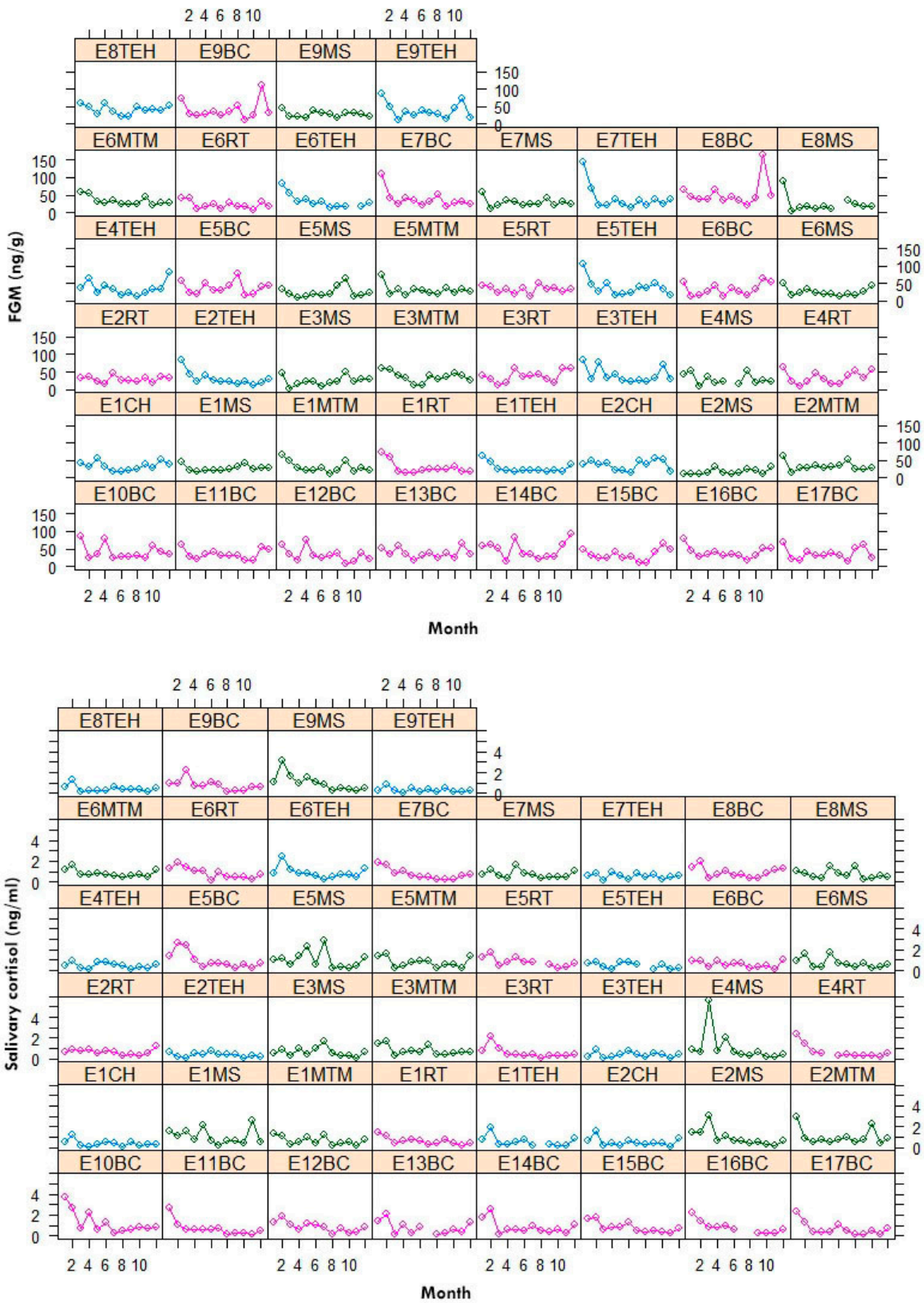


Figure S1. Monthly fecal glucocorticoid metabolite (FGM; ng/g) and salivary cortisol (ng/ml) concentrations in each individual participating elephant.

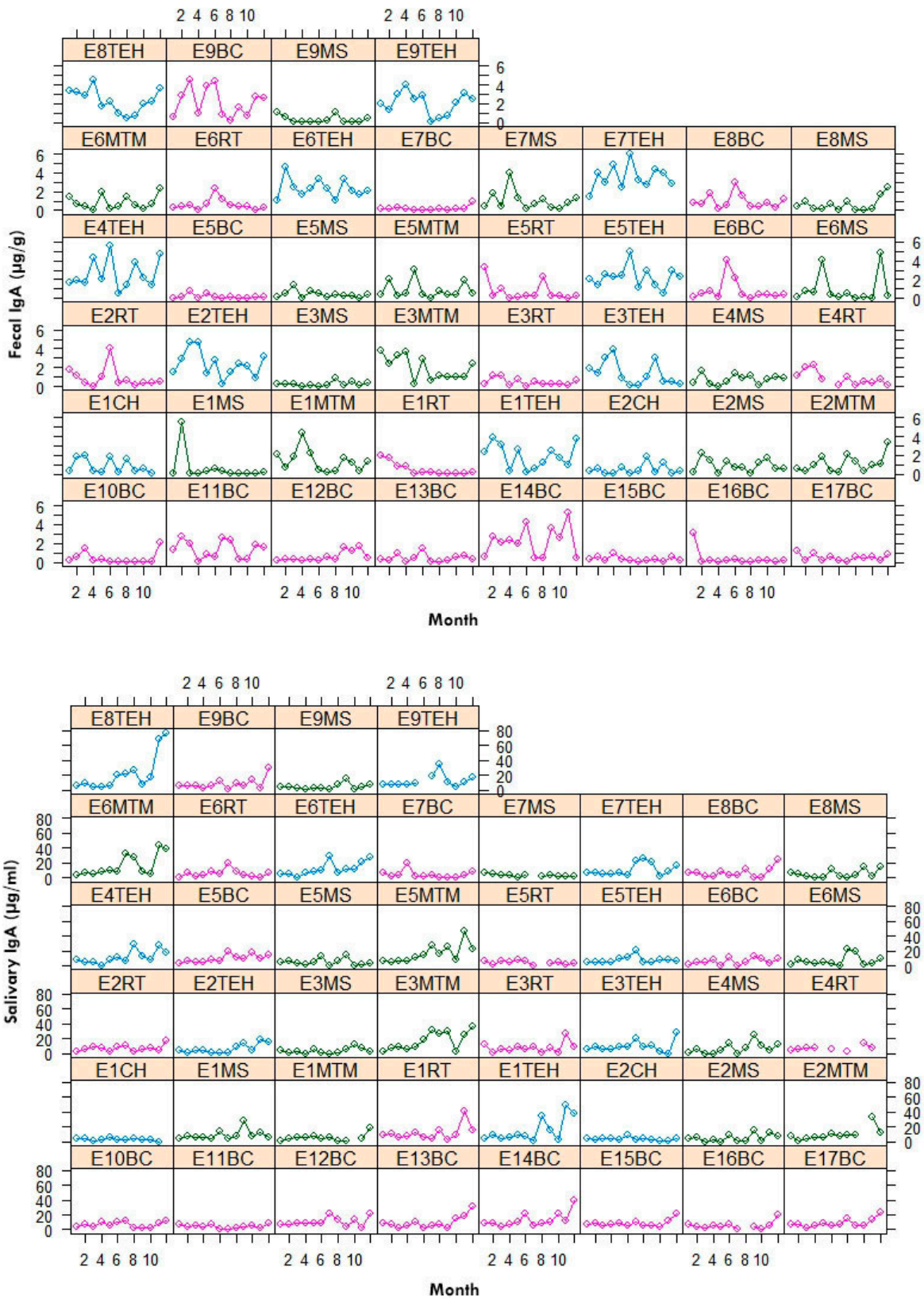


Figure S2 Monthly fecal ($\mu\text{g/g}$) and salivary ($\mu\text{g/ml}$) IgA concentrations in each individual participating elephant.