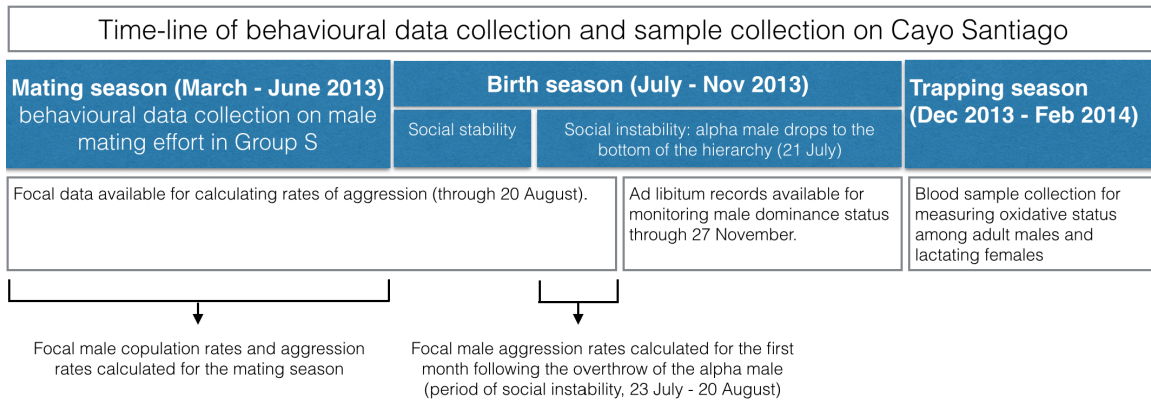


**Supplementary Table 1** Measures of oxidative status in relation to factors examined among male and female rhesus macaques on Cayo Santiago.

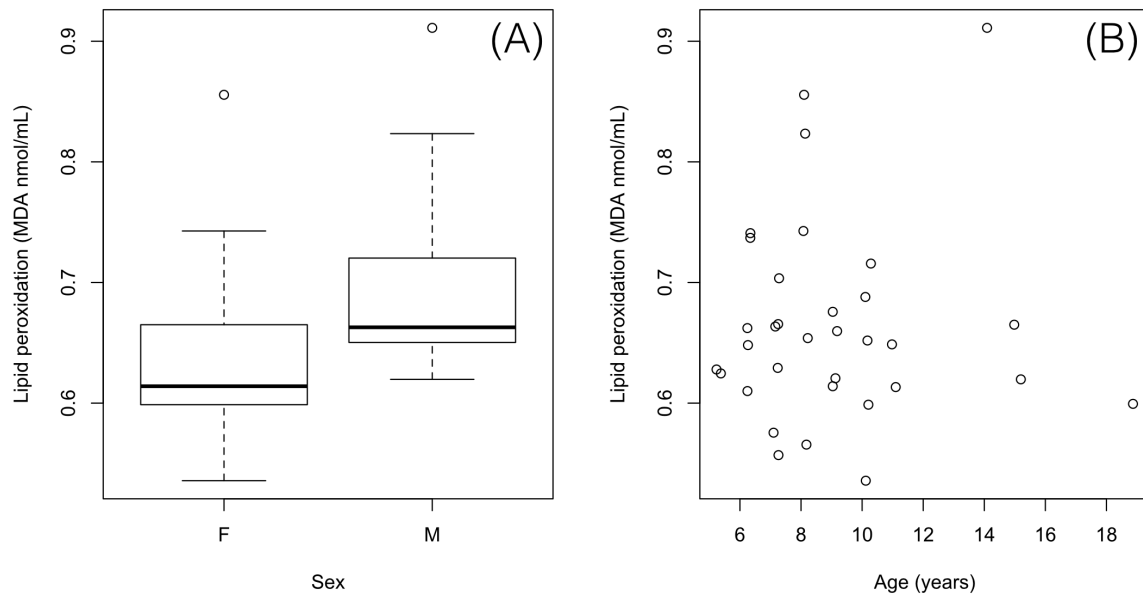
Variable	8-OHdG (ng/ml)	TBARS (MDA nmol/mL)	TAC (Trolox mM)
Male rank (mating season, MS)	$\tau = 0.20, N = 11, P = 0.45$	$\tau = -0.13, N = 13, P = 0.58$	$\tau = -0.14, N = 14, P = 0.51$
Male rank (post alpha overthrow, PAO)	$\tau = -0.13, N = 11, P = 0.64$	$\tau = -0.28, N = 13, P = 0.20$	$\tau = -0.21, N = 14, P = 0.32$
Female rank (high vs. low)	$W = 35, N = 17, P = 0.96$	$W = 37, N = 17, P = 0.96$	$W = 42, N = 17, P = 0.61$
Offspring age (days)	$\tau = 0.26, N = 17, P = 0.16$	$\tau = 0.01, N = 17, P = 1.0$	$\tau = 0.30, N = 17, P = 0.10$
Offspring sex (multiparous females only)	<b><math>W = 53, N = 16, P = 0.02^*</math></b>	$W = 22, N = 16, P = 0.35$	$W = 33, N = 16, P = 0.92$
Male copulation rate (MS)	$\tau = -0.40, N = 11, P = 0.10$	$\tau = 0.09, N = 13, P = 0.71$	$\tau = -0.04, N = 14, P = 0.87$
Male rate of dominance events (MS)	$\tau = -0.05, N = 11, P = 0.88$	$\tau = 0.18, N = 13, P = 0.43$	$\tau = 0.10, N = 14, P = 0.66$
Male attack rate (MS)	$\tau = -0.05, N = 11, P = 0.88$	$\tau = -0.22, N = 13, P = 0.33$	$\tau = 0.35, N = 14, P = 0.09$
Male rate of dominance events (PAO)	$\tau = 0.26, N = 11, P = 0.31$	$\tau = 0.22, N = 13, P = 0.33$	$\tau = 0.11, N = 14, P = 0.62$
Male attack rate (PAO)	<b><math>\tau = 0.50, N = 11, P = 0.04^*</math></b>	$\tau = 0.00, N = 13, P = 1.0$	$\tau = -0.14, N = 14, P = 0.51$

## Supplementary figures



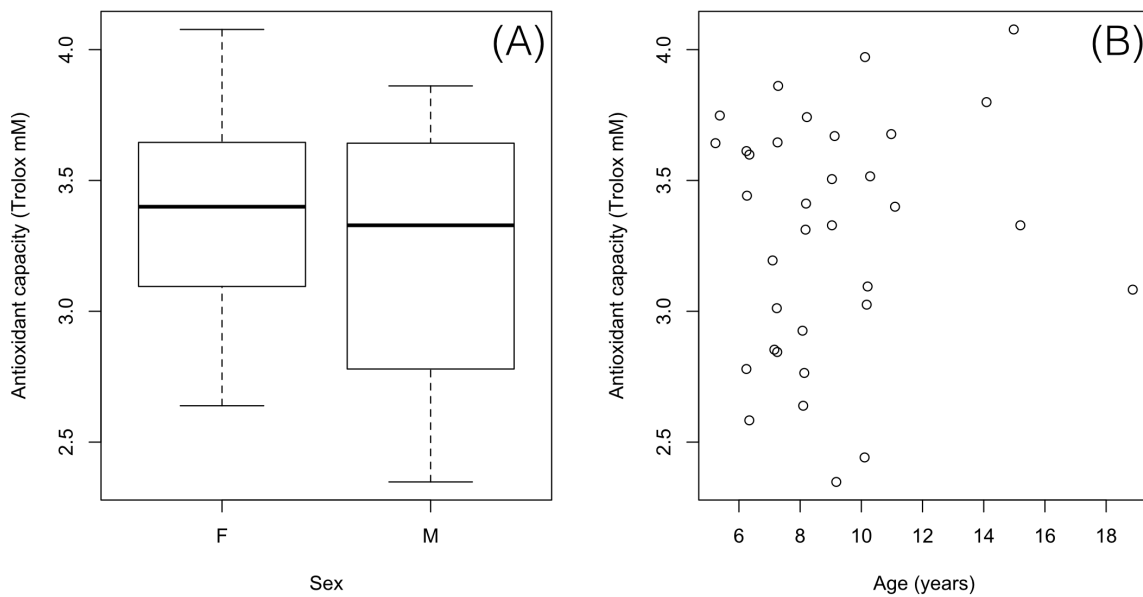
### Figure S1

Schematic time-line of the study depicting when behavioural variables were measured in relation to measurements of oxidative status.



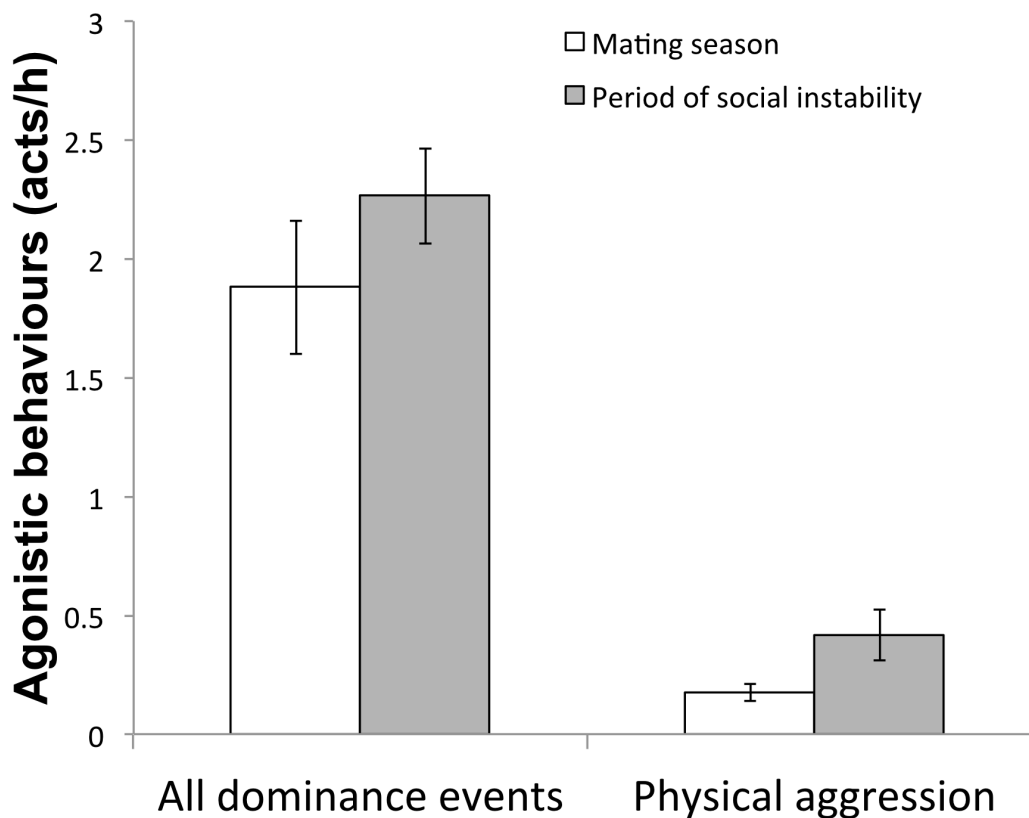
**Figure S2**

Lipid peroxidation was higher among males than among females (A) but was not related to age (B).



**Figure S3**

Total antioxidant capacity of plasma samples was not related to individual's sex (A) or age (B).



**Figure S4**

Male agonistic effort during the mating season (March – June 2013) and during the period of social instability that followed the overthrow of the alpha male (23 July – 20 August 2013). The bar-plot shows mean values (N=11 males) with standard errors.