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Supplemental Information

Mechanisms of inbreeding avoidance in a wild primate

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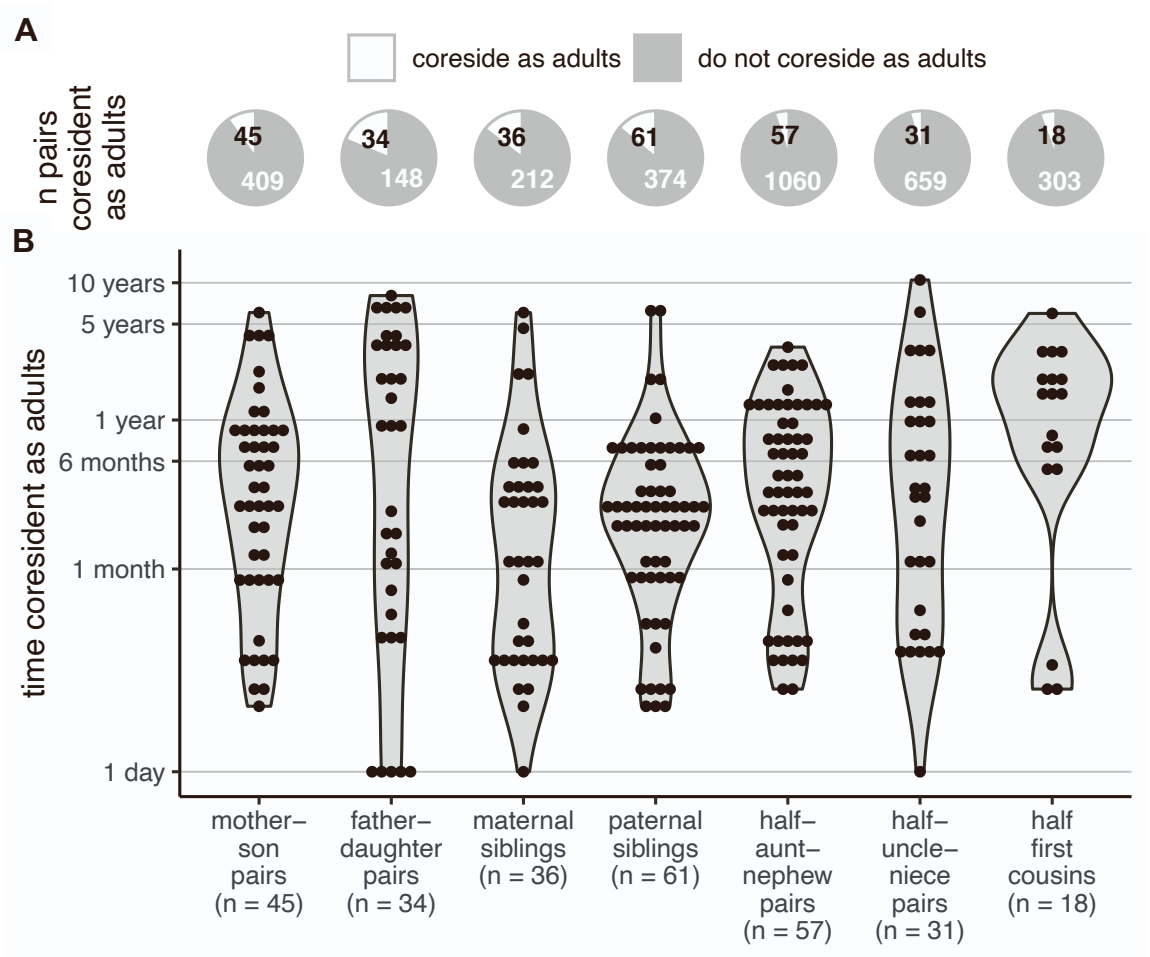

Figure S1. Adult Co-residence Patterns for Opposite-sex Kin Pairs, Related to Figure 1. (A) Pie charts showing the proportion of opposite-sex wild-feeding kin pairs of each kin category that lived together as adults. Type of kin category and sample size for each pie chart is indicated on the x-axis of panel (B). (B) Of those kin-pairs that did co-reside, length of time co-resident as adults. Note that the y-axis for time co-resident is on a logarithmic scale.

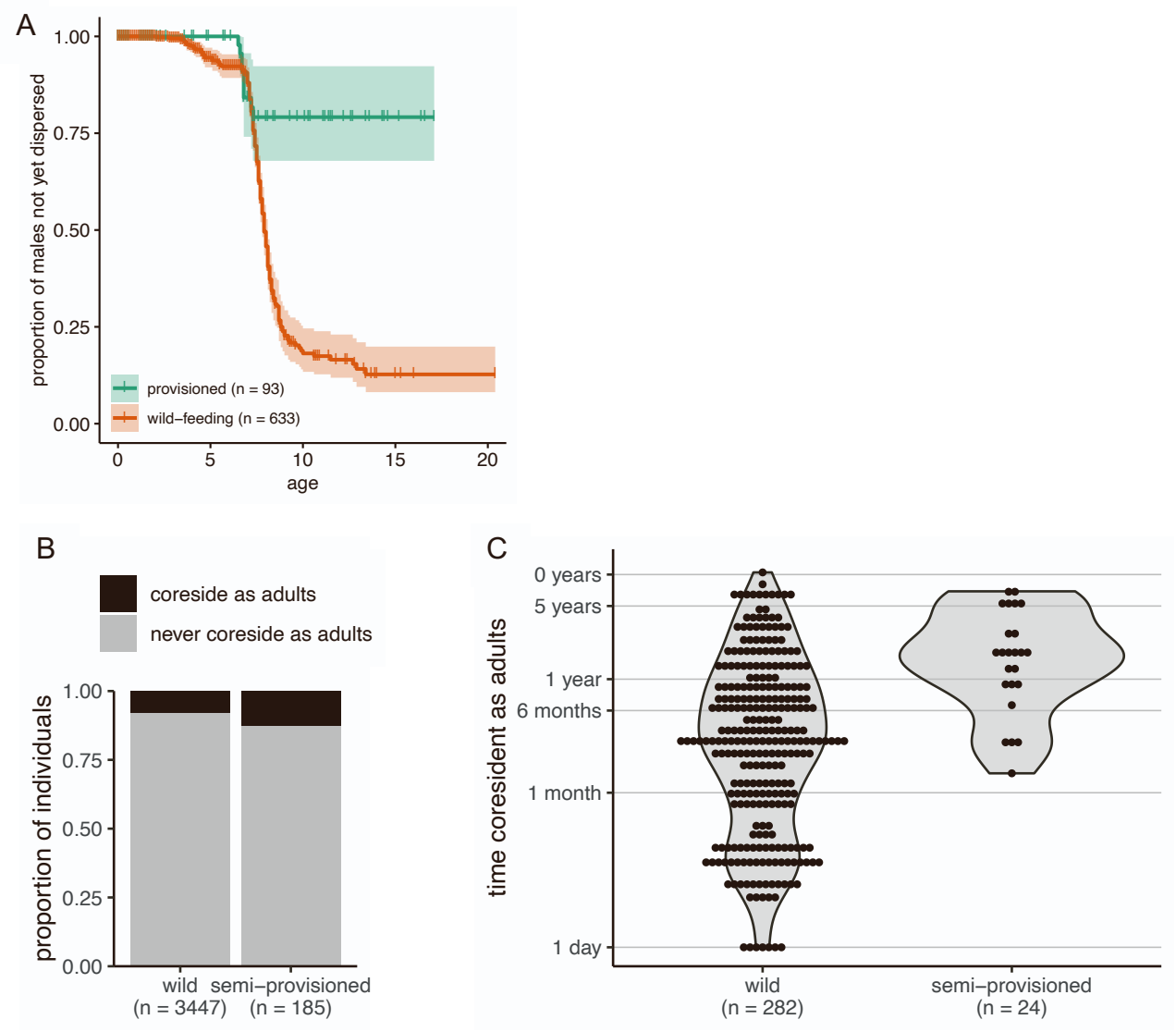

Figure S2. Dispersal and Co-residence in the Lodge Group Versus Wild-feeding Groups, Related to Figure 1. (A) Dispersal of wild-feeding vs. semi-provisioned Lodge group males. Semi-provisioned Lodge group males (green) were much more likely to fail to disperse from their natal group than wild-feeding males (orange; log-rank test of Kaplan-Meier curves, $p = 3x10^{-8}$). Each tick mark represents a censored individual (including individuals that died before dispersal, individuals whose study group was dropped before dispersal, and individuals that were still alive at the end of the study and had not yet dispersed). Shaded regions represent the 95% confidence interval. (B) Proportion of opposite-sex kin pairs that lived together as adults in wild vs. semi-provisioned social groups. (C) Length of adult co-residency among kin pairs that lived together as adults in wild-feeding groups vs. the semi-provisioned Lodge group. Each point represents one pair of kin. Note that the y-axis is on a logarithmic scale.

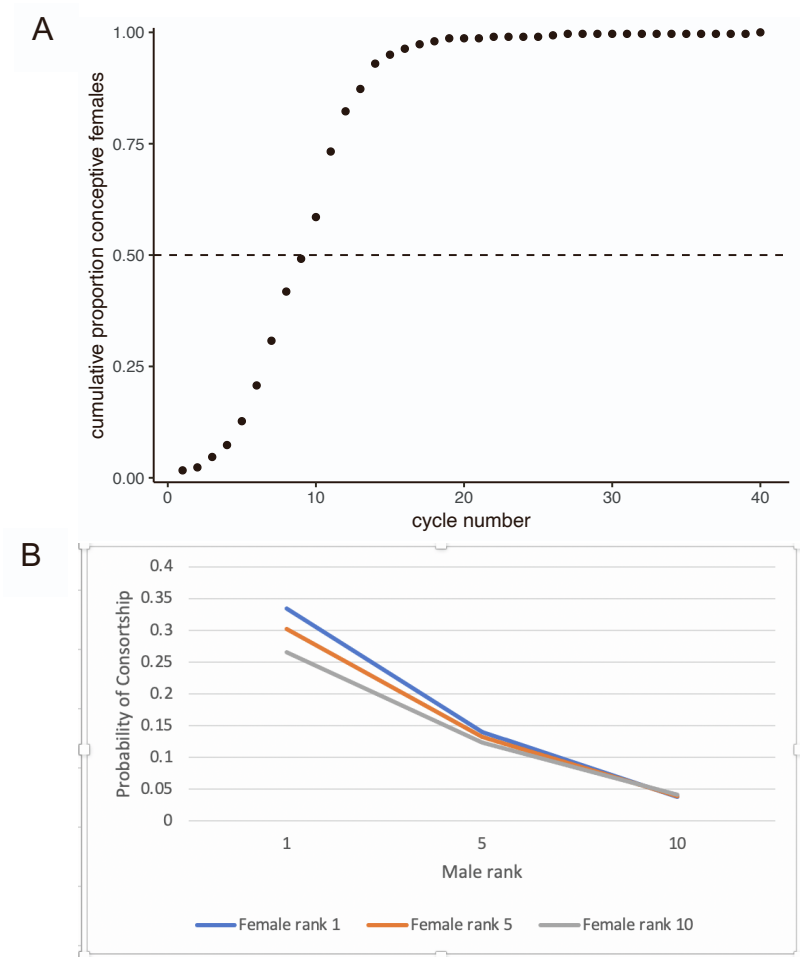

Figure S3. Effects of Maturation Status and Dominance Rank on Consortship Probabiligy, Related to Figure 2, Table 1, Table 2. (A) Cumulative proportion of females that experienced their first conception by a given sexual cycle number. The median cycle number at first conception is nine. Therefore, we designated the adolescent sub-fertile period as encompassing cycles one through nine, and the adult fertile period as encompassing cycles 10 and after (and including all parous females). **(B)** Predicted probability of consortship for males of different dominance ranks with females of different dominance ranks, showing positive assortative mating between high-ranking male and female baboons. Males of rank one (highest ranking) are more likely to mate with females of rank one (blue) than with females of rank five (orange) or ten (grey). In contrast, males of rank 10 are overall less likely to mate with any female but are very slightly more likely to mate with females of rank five or ten than with females of rank one.

			90% credible interval			
	Log odds[2]	**sd**	**lower**	**upper**	**odds ratio[3]**	**Interpretation**
intercept	-0.468	1.879	-2.876	1.920	0.626	
kinship classes[1]						
mother-son*	-2.353	1.635	-4.523	-0.357	0.095	**Pr(consort) ↓**
father-daughter*	-1.493	0.686	-2.377	-0.631	0.225	**Pr(consort) ↓**
maternal siblings*	-2.702	1.572	-4.790	-0.816	0.067	**Pr(consort) ↓**
paternal siblings	-0.677	0.757	-1.680	0.252	0.508	No effect
half-aunt-nephew	0.024	0.524	-0.640	0.687	1.024	No effect
half-uncle-niece	-0.126	0.448	-0.704	0.442	0.882	No effect
half-first cousins	0.594	0.337	0.160	1.028	1.811	No effect
male dominance rank*	-0.285	0.080	-0.387	-0.183	0.752	↑ male rank = ↑ Pr(consort)
natal male*	-1.371	0.592	-2.141	-0.634	0.254	Pr(consort) ↓ for natal males
# adult males in group*	-0.079	0.042	-0.133	-0.025	0.924	↑ # males = ↓ Pr(consort) per male
male rank:# adult males in group*	0.006	0.006	-0.002	0.014		↑ # males= ↓ benefit to high-ranking males
female age*	0.043	0.024	0.012	0.073	1.044	Pr(consort) slightly ↑ for older females
female dominance rank	-0.024	0.032	-0.065	0.016	0.976	No effect
female rank:male rank	0.004	0.004	-0.001	0.009		No effect
# co-resident days*	0.553	0.211	0.294	0.830	1.738	↑ time co-resident = ↑ Pr(consort)
female anubis admixture score*	-6.563	3.651	-11.288	-1.999	0.001	Pr(consort) slightly ↓ for anubis-like females
male anubis admixture score	-1.085	1.328	-2.773	0.584	0.338	No effect
assortative admixture score index*	-12.263	5.685	-19.637	-5.121	0.000	Pr(consort) ↑ for pairs with dissimilar or intermediate admixture scores

Table S1. Main model including admixture score variables, related to STAR Methods. Results of Bayesian logistic regression that is the same as the main model but with the addition of female admixture score, male admixture score, and an assortative admixture index (N = 1007 unique fertile windows for 93 females and 89 males; the sample size is smaller than for the main model in Table 1 because we have admixture scores for only a subset of study subjects).

[1]Reference category is unrelated pairs. [2]Log odds represent the posterior median estimate. [3]Odds ratios for interactions are not reported because calculating an odds ratio involves exponentiation, which does not yield an easily interpretable number for an interaction. *Bold text and asterisks designate kin classes for which behavioral inbreeding avoidance is demonstrated by the credible intervals of the log odds ratio, which do not overlap zero. Asterisks without bold text indicate other variables for which the credible intervals do not overlap zero.

			90% credible interval			
	log odds[3]	**sd**	**lower**	**upper**	**odds ratio[4]**	**Interpretation**
intercept	-1.778	0.674	-2.652	-0.938	0.169	
related[1]*	-0.550	0.153	-0.750	-0.356	0.577	**Pr(consort) ↓ for related pairs**
semi-provisioned[2]*	-1.172	0.449	-1.756	-0.600	0.310	Pr(consort) ↓ for semi-provisioned pairs
related:semi-provisioned	0.130	0.512	-0.520	0.785		No effect
male dominance rank*	-0.405	0.049	-0.469	-0.342	0.667	↑ male rank = ↑ Pr(consort)
# adult males in group*	-0.081	0.023	-0.111	-0.051	0.922	↑ # males = ↓ Pr(consort) per male
male rank:# adult males in group*	0.011	0.004	0.006	0.016		↑ # males= ↓ benefit to high-ranking males
female age	-0.005	0.013	-0.022	0.012	0.995	No effect of female age
female dominance rank*	-0.038	0.016	-0.059	-0.017	0.963	↑ female rank = ↑ Pr(consort)
female rank:male rank*	0.005	0.002	0.002	0.008		↑ male and female ranks = ↑ Pr(consort)
# co-resident days*	0.431	0.123	0.277	0.593	1.539	↑ time co-resident = ↑ Pr(consort)

Table S2. Lodge group model, related to Figure 2. Results of Bayesian logistic regression predicting the probability of a sexual consortship for semi-provisioned versus wild-feeding paternal kin pairs, controlling for known sources of variance in male consortship success (N = 2096 unique fertile windows for 212 females and 238 males).

[1]Reference category: unrelated. [2]Reference category: wild-feeding. [3]Log odds represent the posterior median estimate. [4]Odds ratios for interactions are not reported because calculating an odds ratio involves exponentiation, which does not yield an easily interpretable number for an interaction. *Bold text and asterisks as in previous tables.