The evolution of infanticide by females in mammals

Dieter Lukas[1,2*] & Elise Huchard[1,3]

1) Department of Zoology, University of Cambridge, Downing Street, CB2 3EJ Cambridge, U. K.

2) Department of Human Behaviour, Ecology, and Culture, MPI for Evolutionary Anthropology, Deutscher Platz 6, 04103 Leipzig, Germany

3) Institut des Sciences de L'Evolution de Montpellier, UMR 5554, CNRS, Université de Montpellier, Montpellier, France

*) Author for correspondence: dieter_lukas@eva.mpg.de

ORCID: Dieter Lukas: 0000-0002-7141-3545; Elise Huchard: 0000-0002-6944-449X

Keywords: social competition; sexual selection; phylogenetic comparison; sociality; kinship

Abstract

In most mammalian species, females regularly interact with kin, and it may thus be difficult to understand the evolution of some aggressive and harmful competitive behaviour among females, such as infanticide. Here, we investigate the evolutionary determinants of infanticide by females by combining a quantitative analysis of the taxonomic distribution of infanticide with a qualitative synthesis of the circumstances of infanticidal attacks in published reports. Our results show that female infanticide is widespread across mammals and varies in relation to social organization and life-history, being more frequent where females breed in group and invest much energy into reproduction. Specifically, female infanticide occurs where the proximity of conspecific offspring directly threatens the killer's reproductive success by limiting access to critical resources for her dependent progeny, including food, shelters, care or a social position. In contrast, infanticide is not immediately modulated by the degree of kinship among females, and females occasionally sacrifice related juveniles. Our findings suggest that the potential direct fitness rewards of gaining access to reproductive resources have a stronger influence on the expression of female aggression than the indirect fitness costs of competing against kin.

Introduction

Recent work has emphasized that competitive strategies of female mammals are often strikingly symmetrical to those observed in males, including displays and ornaments, fighting and weaponry, dominance hierarchies, and reproductive suppression by evicting rivals or suppressing their reproduction [Clutton-Brock 2007, 2013; Stockley & Bro-Jørgensen 2011; Clutton-Brock & Huchard 2013]. Interactions among conspecific male mammals are often contextual and temporally limited to competition over access to mating partners, and studies of male sociality have therefore revolved around models of intrasexual selection [Emlen & Oring 1977; Connor & Krützen 2015]. In contrast, female mammals are typically philopatric, with neighbouring females living in adjacent homeranges or sharing the same group throughout their lives, so that interactions among females commonly involve kin and occur across extended periods and multiple settings [Clutton-Brock 2016]. Females may thus compete over a diversity of resources - including food, resources necessary to breed (burrows, homerange), or offspring care [Clutton-Brock 2007] - and often do so with their relatives. It has therefore proven difficult to identify the determinants of overt female-female competition, which can vary across species and contexts, especially in the case of extremely harmful behaviour such as infanticide [Clutton-Brock et al. 2001; Young et al. 2006].

The killing of rivals' offspring represents a violent manifestation of intrasexual competition, and a significant source of juvenile mortality in some populations [Palombit 2012], with adults of both sexes committing infanticide. It has been intensely studied in male mammals, where fifty years of field research have shown that it has evolved as a sexually selected strategy over access to mating partners. In cases where the presence of a dependent offspring prevents the mother from becoming pregnant again, committing an infanticide allows the killer to create extra reproductive opportunities in polygynous societies where one or a few alpha male(s) monopolize mating opportunities over short periods before losing dominance to others [van Schaik & Janson 2000; Lukas & Huchard 2014; Palombit 2015]. In contrast, little is known about the determinants and consequences of infanticide by females other than the mother, although it may be more prevalent than infanticide by males, both within and across taxa [Blumstein 2000; Digby 2000]. Unlike males, female killers do not benefit from extra mating opportunities [Agrell et al. 1998; Digby 2000], because male mammals generally do not invest into offspring care to the extent that it would prevent them from mating with other females [Kleiman & Malcom 1981]. If anything, killing a dependent juvenile may exacerbate female mating competition by speeding-up the resumption to fertility for the mother of the victim. Several plausible scenarios explaining the occurrence of infanticide by females have been proposed based on a synthesis of natural observations [reviewed by Digby 2000]. Symmetrically to the patterns observed for male infanticide, predation for nutritional gains (H1: 'exploitation' hypothesis) may not provide a general explanation for female infanticide as killers have relatively rarely been observed to consume victims partially or entirely (e.g. [Goodall 1986; Blumstein 2000]). Instead, hypotheses regarding the adaptive benefits of female infanticide have focused on how killings might facilitate access to resources that are critical to successful reproduction (H2: 'resource competition' hypotheses) [Digby 2000]. Female killers might be defending access to an exclusive territory or shelter when they target victims outside their homerange (H2.1: 'breeding space' hypothesis) (as in black-tailed prairie dogs [Hoogland 1985] or Belding's ground squirrels [Sherman 1981]). In species where females only associate temporally to breed, killers may defend access to their own milk, by discouraging attempts to suckle from unrelated juveniles (H2.2: 'milk competition hypothesis) (as in Northern elephant seals: [Le Boeuf et al. 1973]). In species who breed cooperatively, killers may defend access to extra offspring care by group mates other than the mother by altering the helper-to-pup ratio in their own group (H2.3: 'allocare' hypothesis) (as in meerkats [Clutton-Brock et al. 2001; Young et al. 2006], banded mongooses [Gilchrist 2006; Cant et al. 2014], or marmoset [Digby 1995]). Finally, in species who live in stable groups, killers may defend their offspring's future social status (in species with stable hierarchies) or group membership (in species with forcible evictions) by eliminating future rivals (H2.4: 'social status' hypothesis) (as in some Old World primates [Hrdy 1976; Digby 2000]).

Here, we present an investigation of the distribution and circumstances of infanticide by female mammals, based on data from 289 species collected from the primary literature. The combination of a quantitative synthesis of the taxonomic distribution of infanticide with a qualitative analysis of the circumstances of infanticidal attacks (including traits of the killer and victim) can contribute to reveal the ecological, life-history or social determinants of female reproductive competition across mammalian societies, and their relevance to the occurrence of female associations and interactions within and among matrilines. We first summarize the social organisation and life-histories of species in which infanticide by females has been observed, in order to evaluate the conditions under which reproductive competition among females appears to be particularly intense (Table 1). Next, we perform specific phylogenetic analyses to test core predictions generated by each hypothesis to assess whether females have been observed to commit infanticide in species in which they are most likely to benefit from such killings. In addition, we investigate whether population-level information on the traits of killers and victims are compatible with predictions generated by each hypothesis. All our predictions and tests are summarized in Table 2. We first show that, across all species, the distribution and occurrence of infanticide by females is better explained by resource competition than by exploitation. We next test whether instances where females kill offspring in neighbouring ranges ('breeding space hypothesis') are most likely explained by competition over breeding space; instances where females kill offspring born in the same breeding association by competition over milk ('milk competition hypothesis'); instances where females kill offspring in groups where usually only a single female reproduces by competition over offspring care ('allocare hypothesis') ; and instances where females kill offspring born in groups with multiple breeders by competition over social status or group membership ('social status hypothesis'). This analytical framework relies on a rough categorization of the circumstances of female infanticide, and the occurrence of infanticide in a given species may be explained by multiple reasons, but our aim is to provide a starting point for the investigation of the likely causes and situations under which female infanticide might occur.

Materials & Methods

Following Digby [2000], we use a broad definition of infanticide as 'an act by one or more non-parents that makes a direct or significant contribution to the immediate or imminent death of conspecific young'. This definition excludes matricides and includes cases where infants die as the result of the physical aggression (direct infanticide) as well as cases where the enforced neglect of an infant, such as kidnapping, ultimately causes death (indirect infanticide). Although the latter cases are often excluded from studies of infanticide due to their proximate form of 'overzealous' allomaternal care [Hrdy 1976], their ultimate consequence - infant death - contributes to shape their evolution as infanticidal behaviour. We included infanticide records from both wild and captive populations for which the killer was unambiguously identified as an adult female. Species for which no case of infanticide has ever been observed were included only if detailed observations on individual females and juveniles were available, either from repeated captive observations or from field studies occurring across at least three reproductive seasons, to minimize the risk of misclassifying them as "non-infanticidal". For each species, we recorded whether observations occurred in a captive setting or under natural conditions.

For the comparative analyses, we extracted data for each species in our sample on: social organisation (classified as: solitary breeders [home-ranges of breeding females do no completely overlap with any other breeding individual], pair breeders [home-ranges contain a single breeding female and a single breeding male overlap but may contain additional non-breeding individuals], associated breeders [females share the same space for breeding but associations are unstable and tend not to last beyond the breeding season], or social breeders [several breeding females share the same home-range across multiple breeding seasons]) [

Lukas & Clutton-Brock 2017]; female philopatry and dispersal (whether most breeding females have been born in their current locality/group or elsewhere) [Lukas & Clutton-Brock 2011]; carnivory (whether the diet of a species includes meat or not) [Wilman et al. 2014]; infanticide by males (whether males have been observed to kill conspecific young) [Lukas & Huchard 2014]; environmental climatic harshness (a principal component, with high values indicating that rainfall is low and temperatures are cold and unpredictable across the known range of a species) [Botero et al. 2014]; maternal investment (mean body size of offspring at weaning times mean number of offspring per year divided by mean body mass of adult females) [Sibly et al. 2014]; the use of burrows or nest holes for breeding (information was taken from the papers used to extract information on the absence or presence of infanticide by females); litter size (number of offspring per birth); offspring mass at birth (grams); weaning age (age in days at which offspring are independent); inter-birth interval (time between consecutive births in days) Jones et al. 2009]; energetic value of milk (MJ/ml based on the protein, sugar, and fat composition) [Langer 2008; Barton & Capellini 2011; Hinder & Milligan 2011]; offspring care by fathers and/or non-parental group members (whether offspring receives milk or food, or are being regularly carried, by group members who are not the mother) [Lukas & Clutton-Brock 2017]; dominance hierarchies and mechanisms of rank acquisition in social groups (whether all adult females can be arranged in a dominance hierarchy and if so, whether an individual's rank is influenced by age and/or nepotism); and forcible evictions (whether females use aggression to exclude other females from their own social group). For each species in which females had been observed to kill conspecific young, we used the primary literature to record as much information as possible regarding characteristics of the killer (age and reproductive state) and of the victim (age, sex, and relatedness to killer) to test specific predictions. The full dataset is provided in Supplementary

Table 1 (comparative data) and Supplementary Table 2 (individual characteristics data), with all references for data specifically collected here in Supplementary File 1.

In addition to performing comparisons assessing contrasts in the presence or absence of infanticide across all species in our sample, we classified species into different types according to each of the four resource competition hypotheses (Table 2): for the breeding space hypothesis, we only included instances of infanticide in which females did not share a homerange with the mother of the victims; for the milk competition hypothesis, we restricted the sample to associated breeders; for the allocare hypothesis, we only included pair breeders; and for the social competition hypothesis, we only looked at social breeders.

For the comparative analyses, the phylogenetic relatedness between species was inferred from the updated mammalian supertree [Rolland et al. 2014]. We fitted separate phylogenetic models using MCMCglmm [Hadfield & Nakagawa 2010] to identify the extent to which each of the predicted variables (Table 2) explains the presence of infanticide by females across species (binary response, assuming a categorical family of trait distribution). Following the recommendations of Hadfield [2010], we set the priors using an uninformative distribution (with variance, V, set to 0.5 and belief parameter, nu, set to 0.002). Each model was run three times for 100,000 iterations with a burn-in of 20,000, visually checked for convergence and for agreement between separate runs.

Results

Social organisation and infanticide by females

Infanticide by females has been observed in 89 (31%) of the 289 mammalian species in our sample (Table 1). Female infanticide (of any type) varies with the social organisation and is more frequent when females breed in groups (Figure 1): it has been observed in 43% of associated breeders, in 36% of pair breeders, and in 30% of social breeders, but only in 18% of solitary breeders. Across all species, females are equally likely to kill offspring when they are philopatric (47 of 135 species, 34%) than when they disperse to breed (17 of 59 species, 29%) (effect of female dispersal on presence of infanticide by females: -10.1, 95% CI -39.3 – 11.3, p=0.34) but there are differences for two types of social organisation: across associated breeders infanticide only occurs in philopatric species; while across pair breeders infanticide is more likely to occur in species in which females disperse (Table 1). Across all group-living species (associated breeders, pair breeders with helpers, social breeders), there is no relationship between levels of average relatedness among female group members and whether infanticide by females of offspring born in the same group does (median levels of average relatedness across 10 species 0.09, range 0.01-0.38) or does not occur (median levels of average relatedness across 24 species 0.21, range -0.03-0.52) (effect of levels of average relatedness on presence of infanticide by females: -21.1, 95% CI -81.4 – 10.1, p=0.18).

Life-histories and infanticide by females

Energetic investment into reproduction by mothers is higher in species with any form of infanticide by females compared to the remaining species, with species having larger offspring mass at birth, shorter time to weaning and between births, and larger litter sizes (Table 1).

However, these patterns encountered across all species do not reflect a general association between infanticide and all these traits, but rather the fact that each different scenario of infanticide is associated with specific life histories, characterized by one or a couple of these traits. Females in infanticidal species where there is usually a single breeding female per home range (extraterritorial infanticide and infanticide in pair breeders) have larger litters than females in species without infanticide (Table 1). Species in which females kill offspring in a breeding association are characterized by fast-growing offspring, while offspring are relatively small at birth in species in which females kill offspring in stable groups (Table 1).

Figure 1: The distribution of the different forms of infanticide by females in relation to the social organisation across the mammalian species in our sample (for picture credit see Supplementary File 2).

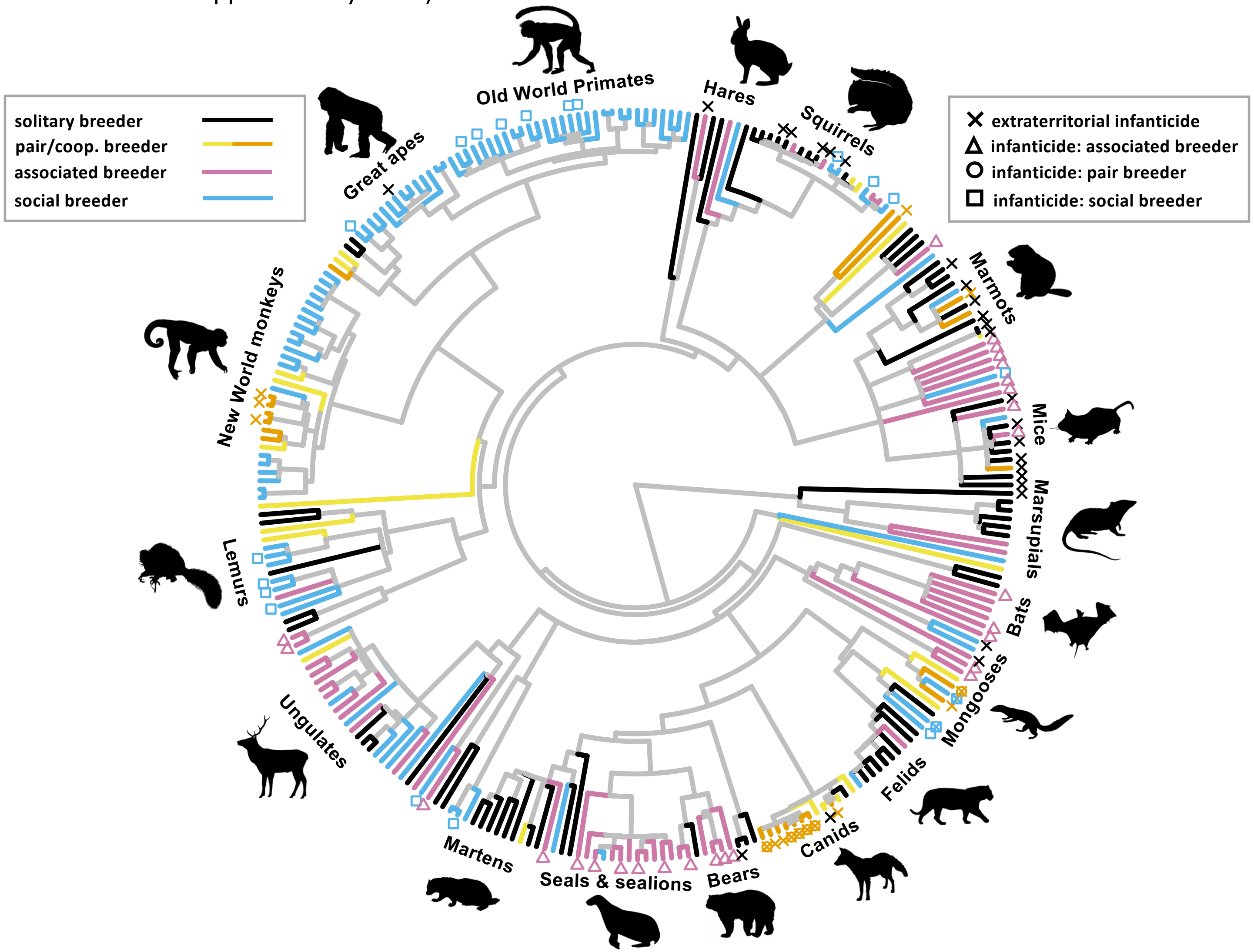


Table 1: The social and life-history conditions associated with the distribution of infanticide by females

Females are more likely to commit infanticide in group-living species, but whether breeding females are philopatric or disperse does not appear to be associated with the distribution of infanticide. In general, species with infanticide by females are characterized by high maternal investment, with females having large litters, short lactational and interbirth periods, and relatively large offspring.

Sample of species	**all**		**all**		**associated breeders**		**pair breeders**		**social breeders**	
Type of infanticide	**any**		**extraterritorial**		**within-group**		**within-group**		**within-group**	
Infanticide is	**absent**	**present**	**absent**	**present**	**absent**	**present**	**absent**	**present**	**absent**	**present**
Sample size	200	89	253	33	34	19	29	16	92	20
Females solitary (% species)	38%	16%	39%	76%	NA	NA	NA	NA	NA	NA
Female philopatric (% species)	73%	68%	70%	70%	65%	100%	48%	31%	64%	63%
Maternal investment (per year relative to bodyweight)	39%	118%	47%	150%	48%	86%	110%	169%	29%	45%
Litter size	1.6	2.6	1.7	3.9	1.5	2.1	1.9	4	1.3	1.3
Interbirth interval (days)	365	180	340	104	308	212	308	181	453	522
Age at weaning (days)	127	61	113	35	107	59	105	42	229	273
Offspring weight (relative to bodyweight)	3.6%	3.9%	3.9%	2.8%	3.5%	5.9%	5.1%	2.8%	5.1%	3.0%

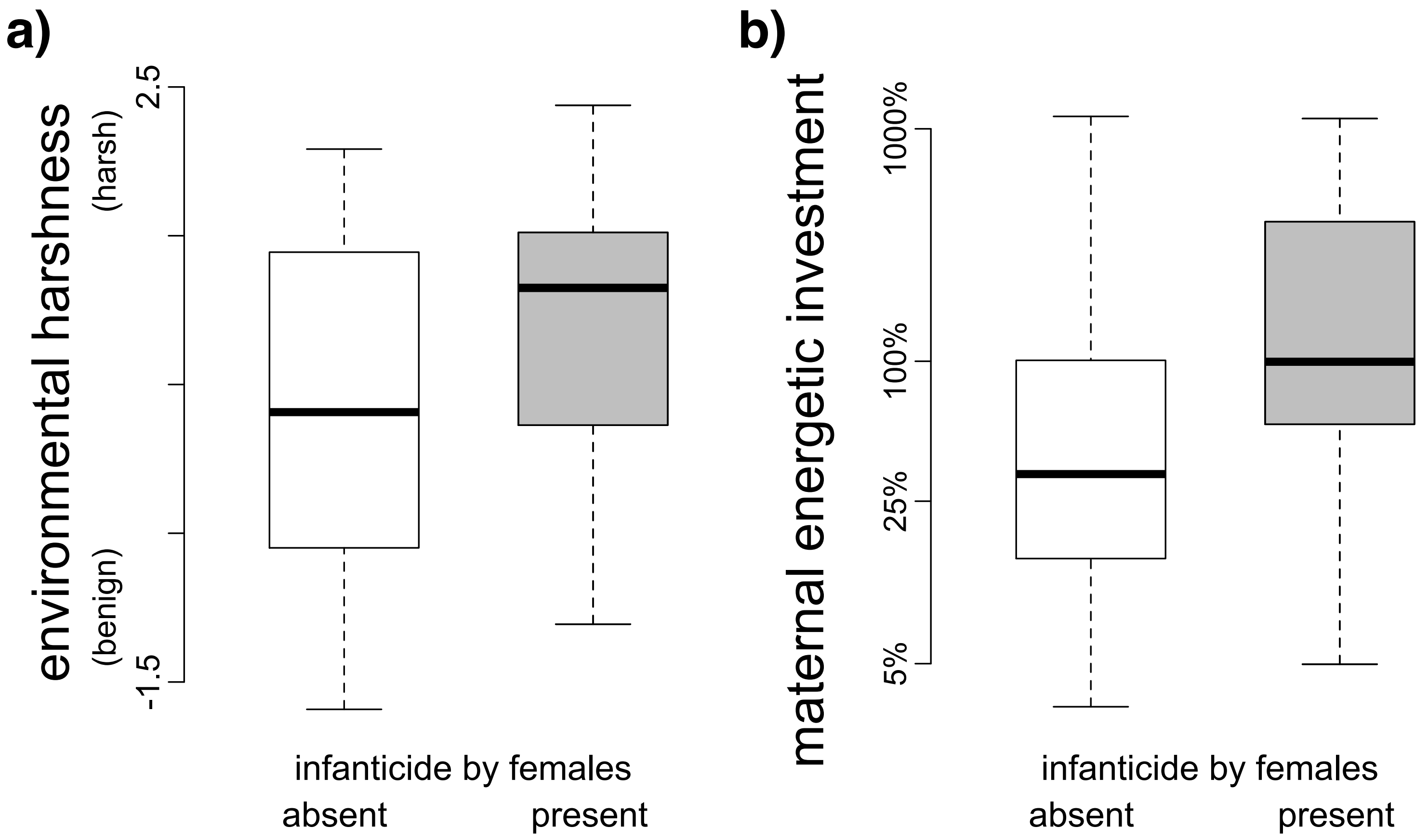
Table 2: Testing the core predictions generated by the different hypotheses proposed to explain the distribution of infanticide by females

For each of the main hypotheses, we tested two core predictions in phylogenetic comparisons and two predictions about the individual traits from the field observations. For the comparisons, we list the sample of species included.

Hypothesis	Type of infanticide / Sample of species	Core prediction(s)	Support?	Predictions on individual traits	Support?
H1: exploitation	*any form of infanticide*	- primarily in carnivores	No	killer: any reproductive state	No
	across all species	- infanticide also by males	No	victim: any age	No
H2: resource competition	*any form of infanticide*	- harsher environments	Yes	killer: gestating/lactating	Yes
	across all species	- higher maternal investment	Yes	victim: dependent on care	Yes
H2.1: over space	*extraterritorial infanticide*	- more burrow use	Yes	killer: gestating/lactating	Yes
	across all species	- exclusive home-ranges	Yes	victim: unweaned	Yes
H2.2: over milk	*within group infanticide*	- higher energetic milk content	No	killer: lactating	Yes
	across associated breeders	- faster offspring growth	Maybe	victim: unweaned/killed during nursing attempt	Yes
H2.3: over allocare	*within group infanticide*	- allocarers present	Yes	killer: gestating/lactating	Yes
	across pair breeders	- higher offspring to carer ratio	Yes	victim: dependent on care	Yes
H2.4: over social status	*within group infanticide*	- nepotistic hierarchy present	Yes	killer: high social rank	Yes
	across social breeders	- evictions occur	Yes	victim: any age	Yes

Figure 2: Factors associated with female competition and the distribution of infanticide by females

Species in which female infanticide is present are, on average, characterized by (a) living in harsher environments (lower and more unpredictable rainfall and temperatures) and by (b) higher maternal energetic investment (total mass of weaned offspring produced per year relative to maternal mass). Black lines indicate the median across the species in the sample, boxes contain 75% of the values, and whiskers extend to the extremes.



H1: Exploitation

We find no support for predictions suggesting that females kill conspecific offspring primarily for exploitation (Table 2). Across species, infanticide by females is as likely to occur in the absence of infanticide by males (44 of 147 species, 30%) as in its presence (43 of 135 species, 32%) (effect of presence of male infanticide on presence of female infanticide 2.1, 95% CI -13.5 – 16.9, p=0.74). Similarly, carnivorous species are not more likely to show infanticide by females (18 of 56 species, 32%) than in species in which meat does not constitute an important part of the diet (59 of 192 species, 31%) (effect of carnivory on presence of female infanticide -0.7, 95% CI -11.2 – 10.0, p=0.89). The age of victims varies from birth to beyond independence across species, but is more homogeneous within each type of infanticide (see below), so that killings do not appear simply opportunistic.

H2: *Resource competition*

Infanticide by females appears more likely to occur where competition over resources is expected to be more intense (Table 2). The climatic environments of species in which females commit infanticide are harsher (as estimated by a principal component reflecting low unpredictable rainfall and cold seasons) than the environments of species in which infanticide has not been observed (effect of environmental harshness on presence of female infanticide 7.0, 95% CI -0.2 – 14.7, p=0.03, 54 species with infanticide and 193 without)(Figure 2a). In species where females commit infanticide, they invest substantially more energy into the production of offspring, being able to produce the equivalent of 1.0 times their own body mass in offspring mass per year (number of offspring times mass of weaned offspring; median across 41 species, range 0.05 – 12.1 times) compared to 0.33 times in species in which infanticide has not been observed (median across 77 species, range 0.03 – 11.1) (effect of maternal energetic investment on presence of female infanticide 25.8, 95% CI 1.5 – 58.7, p<0.001)(Figure 2b).

H2.1: Competition over breeding space

Thirty-two of the 33 species in which females kill juveniles outside their own home-range keep their offspring in burrows or holes, compared to 93 of the 163 species in which infanticide by females appears absent (effect of burrow use on the presence of infanticide by females 14.4, 95% CI 6.0 – 22.9, p<0.001). The exception is *Semnopithecus entellus*, where "females occasionally steal infants from a neighboring troop" [Hrdy 1976; Mohnot 1980]. In most species in which females kill offspring in neighbouring home-ranges (25 of 33), females generally appear not to tolerate other breeding females close by and most home-ranges only contain a single breeding female (solitary or cooperatively breeding species), while in most other species females form associations or groups (home-ranges contain a single breeding female in 105 out of 268 species) (effect of presence of a single breeding female per home-range on presence of infanticide by females 12.4, 95% CI 0.3 – 30.1, p=0.007). In all cases, the killer was either pregnant or had dependant young of her own (17 species with observations), and all offspring that were killed were not yet weaned (17 species).

H2.2: Competition over milk

Across associated breeders, the energy content of milk produced by mothers in species in which females have been observed to kill offspring within the same breeding space (2.8 MJ/100ml, median across 8 species, range 1.2-4.7) does not differ from that of species in which such killings have not been observed (2.1 MJ/100ml, median across 7 species, range 0.8-5.7) (mean effect of milk energy on presence of infanticide by females 2.0, 95% CI -66.3 –

83.1, p=0.97). In associated breeders with female infanticide, offspring do not seem to have greater growth rates (they gain on average 0.28% of their adult body mass per day until weaning, median across 9 species, range 0.04% - 1.72%) than in species in which females have not been observed to kill juveniles (offspring gain on average 0.17% of their adult body mass per day until weaning, median across 11 species, range 0.05% - 0.73%) (effect of presence of infanticide by females on offspring growth rate 6.1, 95% CI -16.2 – 35.4, p=0.59). Killers are either pregnant or have dependant young (21 out of 21 species) and are old, with most reports suggesting that they had been observed to give birth in previous years (they are not primiparous). All victims were reported to be unweaned (22 out of 22 species). In 7 out of 14 infanticide reports from associated breeders, victims were killed as they attempted to breast-feed from the killer.

H2.3 Competition over allomaternal care

Infanticide by females in pair breeders occurs only when fathers provide care (all 16 species) while fathers care for offspring in only 16 of the 39 pair breeding species in which this form of infanticide is absent. In 15 of the 16 pair breeders with female infanticide, additional helpers are present (cooperative breeders), while there are only a further 7 cooperatively breeding species in which females have not been observed to kill juveniles from their own group (female infanticide occurs in 68% [15/22] of cooperative breeders versus in 4% [1/23] of pair breeders in which there are no other helpers). Across species in which offspring receive allocare, the number of potential allocarers is higher in species with (3 allocarers per group, median across 15 species, range 2-23) compared to species without (2 allocarers per group, median across 13 species, range 1-20) female infanticide (effect of number of allocarers on presence of infanticide 25.3, 95% CI 1.9 – 48.6, p=0.02). The killer was usually the dominant breeder (as was regularly the case in 9 of 12 species) and was pregnant or with dependent infants in all cases. In most instances the killer and the victim belonged to the same group (11 of 14 species), and were consequently related (10 out of 13 species). Victims were often a few days old and all dependent.

H2.4: Competition over social status

Of the 27 social breeders with female philopatry (and available data), female group members do not form social hierarchies in three species, hierarchical rank is determined by age in five species, and rank is influenced by nepotism in 19 species. Females have been observed to kill offspring born to other group members in eight of these latter 19 species, but in none of the species where nepotism does not influence female rank (effect of presence of nepotistic rank acquisition on presence of infanticide by females 134.1, 95% CI 28.8 – 238.1, $p<0.001$). Females are more likely to kill offspring born to other females in social breeders in which they also aggressively evict other females from their group (infanticide has been observed in 6 of 10 species with evictions and 7 of 35 without evictions) (effect of occurrence of evictions on presence of infanticide by females 7.8, 95% CI -0.2 – 14.4, $p=0.02$). In all twelve social breeders in which infanticide events have been observed, killers were old and high-ranking. Killers were never pregnant, but in all cases had dependant young of their own. Victims were not yet weaned, and in 5 out of 12 species victims might be related to the killer. There is only one species where the data suggest that females might preferentially kill offspring of one sex: in *Macaca radiata* (a species with female philopatry), female offspring appear to be the predominant victims.

Discussion

Our findings establish that female competition is widespread across mammals and that it is frequently expressed as intensely as competition among males. Females have been observed to kill conspecific juveniles in various species and our comparative analyses provide support to the idea that this behaviour may be adaptive under a wide range of circumstances. Infanticide is more likely to occur in species in which multiple adult females live or breed together than where females breed solitarily, and infanticide appears most frequent in species where females only associate temporarily to breed. This may reflect the fact that opportunities to commit and to observe infanticides may be greater where females live or breed together. Within each type of social organisation, we do however find that females, like males, appear to commit infanticide when the presence of the victim might otherwise limit their own reproductive success. While infanticide by males has evolved in response to a single cause - mate competition - across mammals [Lukas & Huchard 2014; Palombit 2015], the evolutionary determinants of infanticide by females are apparently more complex, as females may compete over multiple resources.

Several lines of evidence support this adaptive scenario of resource competition for the occurrence of infanticide by females. First, infanticide appears associated with variation in ecology and life-history. Specifically, it is most frequently observed in species facing harsh climatic conditions and making the greatest reproductive efforts; it is unlikely that such associations are due to variations in opportunities to observe or commit infanticides across species. Rather, the potential costs of sharing critical resources might outweigh the risks associated with committing infanticide in such circumstances.

Second, specific ecological determinants of female infanticide identified at the population level by field studies also seem to predict its distribution across species. Extraterritorial infanticides were found to be most frequent in solitary species where females use burrows to give birth and territories to raise offspring, allowing killers to free-up reproductive space for their own offspring. Our findings further show that female infanticide occurs in pair breeders where helpers – fathers or additional group mates - are present. Finally, patterns are slightly more complex in social breeders. There, infanticide preferentially occurs in species where aggressive competition among females leads to the eviction of some individuals – generally young adults - from the group, especially at times when group size increases (e.g. [Kappeler & Fichtel 2012]). In such cases, killing unrelated juveniles may limit future competition and the related risk of being evicted for the killer's offspring. In addition, in social breeders where females are philopatric, infanticide was only found to occur where female rank acquisition is nepotistic, a hierarchical system where each additional offspring may contribute to strengthen the social status of a matriline – and where infanticide may consequently weaken competing matrilines on the long term.

Anecdotal reports of female pinnipeds killing orphans as they attempted to breast-feed from them inspired the hypothesis that females compete over milk in species where they only associate to breed [Digby 2000]. While our comparative analyses did not reveal any difference in the energy content of milk of associated breeders in which infanticide is present versus absent, associated breeders nevertheless comprise the species with the highest energy content of milk and the fastest growth rates, and we further found that offspring are weaned at an earlier age in associated breeders with infanticide compared to those without it. The lack of support for the milk competition hypothesis in our analyses may be explained by a noisy dataset, where the absence of infanticide in some species may be due to the fact that it goes undetected if it is hard to observe, or to the evolution of counter-adaptations that protect offspring against infanticide. Alternatively, milk is not the only resource over which these females compete. For example, in the large breeding colonies of pinnipeds, space is sometimes very restricted [Baldi et al. 1996], especially in the immediate vicinity of the harem leaders. These bulls often protect their females and calves from attacks by younger males, and may represent another source of competition for lactating females.

It is likely that, in any given species, infanticide may be triggered by more than one determinant - including some that may not be considered here. A killer may accordingly get multiple benefits from one infanticide event, but may also commit infanticides in more than one context. For example, half of the species of pair breeders committing intra-group infanticides also commit extraterritorial infanticides. It is therefore possible that different types of female infanticide – following our classification - have followed a common evolutionary path. Specifically, it is possible that infanticidal behaviour initially emerged in response to one particular pressure (e.g., competition over access to allocare) in a given species, which subsequently started to extend its expression to other competitive contexts (e.g., competition over breeding territories). However, the limited number of species for which observational data on infanticide are available, as well as heterogeneities in the sample – such as an over-representation of group-living species – introduce uncertainty when attempting to reconstitute the evolutionary history of the trait. It is consequently hard to infer the ancestral state, whether each infanticide type has evolved independently, or how many times infanticidal behaviour has emerged across mammals.

In addition to the nature of the resources that may directly limit female reproductive success in various types of social organisations, contrasts in the occurrence of infanticide across species reveal other broad patterns on female reproductive competition in mammals. In particular, the lack of association between female infanticide and philopatry across species (Table 1), as well as a synthesis of observations revealing that killers and victims are commonly related in some contexts, such as in pair or social breeders, suggest that matrilineality and subsequent increases in average kinship among associated females does not necessarily lead to a reduction in competition among females. Some previous work suggested that mammalian females might be predisposed to behave positively and cooperatively with kin [di Fiore & Rendall 1994], such that species with female philopatry would be characterized by stable social bonds [Silk 2007]. However, the factors leading to limited dispersal and the spatial association of kin frequently also result in high local competition [Frank 1998] which can overcome the potential benefits of cooperation among kin [West et al. 2002]. Studies of competition among males in such circumstances have shown that contrasts in levels of aggression can be explained by variation in the potential direct fitness benefits of winning [West et al. 2001], and it is likely that this also applies to the observed pattern of infanticide by females– where the direct benefits of infanticide in terms of increased access to a critical resource might outweigh its costs, including the indirect fitness costs associated with killing related juveniles.

Our study compiles five decades of behavioural data across species and within populations to elucidate the determinants of infanticide by mammalian females, which are less well understood than those of male infanticide. Our analyses suggest that the distribution of female infanticide across species is a consequence of contrasts in social organisation;

infanticide is most frequent in species that breed in groups, which probably have more opportunities for killings and also face greater breeding competition. Female infanticide occurs where the proximity of conspecific offspring directly threatens the killer's reproductive success by limiting access to critical resources for her dependent progeny, including food, shelters, care or a social position. Finally, these data support the idea that female killers occasionally sacrifice related juvenile conspecifics, and may therefore actively harm their indirect fitness in order to maximize their direct fitness.

Acknowledgements

We thank Tim Clutton-Brock, Peter Kappeler, Oliver Höhner and Eve Davidian for useful discussions.

Data Accessibility

All data are provided in the supplementary material and will be deposited at the Knowledge Network for Biocomplexity http://knb.ecoinformatics.org/

Authors' Contributions

Both authors contributed to the conception and design of the study, collected and interpreted the data, wrote the article, and gave final approval; the analyses were done by DL with input from EH.

Competing Interests

We have no competing interests.

Funding

DL was supported by the European Research Commission (grant 294494-THCB2011 to Prof. T. Clutton-Brock) and the Max Planck Society. EH was funded by the ANR (grant ANR-17-CE02-0008) during the writing-up of this manuscript.

Supplementary Material

This submission includes all data in Supplementary Tables 1 (comparative data) and 2 (population observations), with references for observations on infanticide by females in Supplementary File 1, and credits for the animal drawings used in Figure 1 in Supplementary File 2.

References

1. Clutton-Brock T. 2007 Sexual Selection in Males and Females. *Science* **318**, 1882–1885. (doi:10.1126/science.1133311)

2. Clutton-Brock T, Huchard E. 2013 Social competition and its consequences in female mammals. *J. Zool.* **289**, 151–171. (doi:10.1111/jzo.12023)

3. Clutton-Brock TH, Huchard E. 2013 Social competition and selection in males and females. *Philos. Trans. R. Soc. B Biol. Sci.* **368**. (doi:10.1098/rstb.2013.0074)

4. Stockley P, Bro-Jørgensen J. 2011 Female competition and its evolutionary consequences in mammals. *Biol. Rev. Camb. Philos. Soc.* **86**, 341–366. (doi:10.1111/j.1469-185X.2010.00149.x)

5. Emlen ST, Oring LW. 1977 Ecology, sexual selection, and the evolution of mating systems. *Science* **197**, 215-223. (doi: 10.1126/science.327542)

6. Connor RC, Krützen M. 2015 Male dolphin alliances in Shark Bay: changing perspectives in a 30-year study. *Anim. Behav.* **103**, 223-235. (doi:10.1016/j.anbehav.2015.02.019)

7. Clutton-Brock TH. 2016 *Mammalian Societies.* New York: Wiley and Sons.

8. Young AJ, Clutton-Brock T. 2006 Infanticide by subordinates influences reproductive sharing in cooperatively breeding meerkats. *Biol. Lett.* **2**, 385–387. (doi:10.1098/rsbl.2006.0463)

9. Clutton-Brock TH *et al.* 2001 Cooperation, Control, and Concession in Meerkat Groups. *Science* **291**, 478–481. (doi:10.1126/science.291.5503.478)

10. Palombit R. 2012 Infanticide: male strategies and female counter-strategies. In *The Evolution of Primate Societies*, pp. 432–468. Chicago: Mitani JC, Call J, Kappeler PM, Palombit RA, Silk JB.

11. van Schaik CP, Janson CH. 2000 *Infanticide by Males and Its Implications*. Cambridge University Press.

12. Lukas D, Huchard E. 2014 The evolution of infanticide by males in mammalian societies. *Science* **346**, 841–844. (doi:10.1126/science.1257226)

13. Palombit RA. 2015 Infanticide as Sexual Conflict: Coevolution of Male Strategies and Female Counterstrategies. *Cold Spring Harb. Perspect. Biol.* **7**. (doi:10.1101/cshperspect.a017640)

14. Digby L. 2000 Infanticide by female mammals: implications for the evolution of social systems. In *Infanticide by males and its implications*, van Schaik CP and Janson CH.

15. Blumstein D. 2000 The evolution of infanticide in rodents: a comparative analysis. pp. 178–198. Cambridge: van Schaik CP and Janson CH.

16. Agrell J, Wolff JO, Ylönen H. 1998 Counter-Strategies to Infanticide in Mammals: Costs and Consequences. *Oikos* **83**, 507–517. (doi:10.2307/3546678)

17. Kleiman DG, Malcolm J. 1981 The Evolution of Male Parental Investment in Mammals. In *Parental care in mammals*, Gübernick DJ; Klopfer PH.

18. Goodall J. 1986 *The chimpanzees of Gombe: patterns of behavior*. Belknap Press of Harvard University Press.

19. Hoogland JL. 1985 Infanticide in prairie dogs: lactating females kill offspring of close kin. *Science* **230**, 1037–1040. (doi:10.1126/science.230.4729.1037)

20. Sherman P. 1981 Reproductive competition and infanticide in Belding's ground squirrels and other animals. In *Natural and Social Behavior: Recent Research and New Theory*, Alexander RD, Tinkle DW.

21. Boeuf BJL, Whiting RJ, Gantt RF. 1973 Perinatal Behavior of Northern Elephant Seal Females and Their Young. *Behaviour* **43**, 121–156. (doi:10.1163/156853973X00508)

22. Gilchrist JS. 2006 Female eviction, abortion, and infanticide in banded mongooses (Mungos mungo): implications for social control of reproduction and synchronized parturition. *Behav. Ecol.* **17**, 664–669. (doi:10.1093/beheco/ark012)

23. Cant MA, Nichols HJ, Johnstone RA, Hodge SJ. 2014 Policing of reproduction by hidden threats in a cooperative mammal. *Proc. Natl. Acad. Sci.* **111**, 326–330. (doi:10.1073/pnas.1312626111)

24. Digby L. 1995 Infant care, infanticide, and female reproductive strategies in polygynous groups of common marmosets (Callithrix jacchus). *Behav. Ecol. Sociobiol.* **37**, 51–61. (doi:10.1007/BF00173899)

25. Hrdy SB. 1976 Care and Exploitation of Nonhuman Primate Infants by Conspecifics Other Than the Mother. In *Advances in the Study of Behavior* (eds JS Rosenblatt, RA Hinde, E Shaw, C Beer), pp. 101–158. Academic Press. (doi:10.1016/S0065-3454(08)60083-2)

26. Lukas D, Clutton-Brock T. 2017 Climate and the distribution of cooperative breeding in mammals. *R. Soc. Open Sci.* **4**, 160897. (doi:10.1098/rsos.160897)

27. Lukas D, Clutton-Brock TH. 2011 Group structure, kinship, inbreeding risk and habitual female dispersal in plural-breeding mammals. *J. Evol. Biol.* **24**, 2624–2630. (doi:10.1111/j.1420-9101.2011.02385.x)

28. Wilman H, Belmaker J, Simpson J, de la Rosa C, Rivadeneira, MM, Jetz W. 2014 EltonTraits 1.0: Species-level foraging attributes of the world's birds and mammals. Ecological Archives E095-178. *Ecology* **95**, 2027-2027. (doi: 10.1890/13-1917.1)

29. Botero CA, Dor R, McCain CM, Safran RJ. 2014 Environmental harshness is positively correlated with intraspecific divergence in mammals and birds. *Mol. Ecol.* **23**, 259–268. (doi:10.1111/mec.12572)

30. Sibly RM, Grady JM, Venditti C, Brown JH. 2014 How body mass and lifestyle affect juvenile biomass production in placental mammals. *Proc. Roy. Soc. B* **281**, 20132818. (doi: 10.1098/rspb.2013.2818)

31. Jones KE *et al.* 2009 PanTHERIA: a species-level database of life history, ecology, and geography of extant and recently extinct mammals. *Ecology* **90**, 2648–2648. (doi:10.1890/08-1494.1)

32. Langer P. 2008 The phases of maternal investment in eutherian mammals. *Zoology* **111**, 148–162. (doi:10.1016/j.zool.2007.06.007)

33. Barton RA, Capellini I. 2011 Maternal investment, life histories, and the costs of brain growth in mammals. *Proc. Natl. Acad. Sci. U. S. A.* **108**, 6169–6174. (doi:10.1073/pnas.1019140108)

34. Hinde K, Milligan LA. 2011 Primate milk: proximate mechanisms and ultimate perspectives. *Evol. Anthropol.* **20**, 9–23. (doi:10.1002/evan.20289)

35. Rolland J, Condamine FL, Jiguet F, Morlon H. 2014 Faster Speciation and Reduced Extinction in the Tropics Contribute to the Mammalian Latitudinal Diversity Gradient. *PLOS Biol.* **12**, e1001775. (doi:10.1371/journal.pbio.1001775)

36. Hadfield JD, Nakagawa S. 2010 General quantitative genetic methods for comparative biology: phylogenies, taxonomies and multi-trait models for continuous and categorical characters. *J. Evol. Biol.* **23**, 494–508. (doi:10.1111/j.1420-9101.2009.01915.x)

37. Hadfield J. 2010 MCMCglmm: Markov chain Monte Carlo methods for generalized linear mixed models retrieved from cran.uvigo.es/web/packages/MCMCglmm/vignettes/Tutorial.pdf

38. Mohnot SM. 1980 Intergroup infant kidnapping in Hanuman langur. *Folia Primatol. (Basel)* **34**, 259–277. (doi:10.1159/000155958)

39. Kappeler PM, Fichtel C. 2012 Female reproductive competition in Eulemur rufifrons: eviction and reproductive restraint in a plurally breeding Malagasy primate. *Mol. Ecol.* **21**, 685–698. (doi:10.1111/j.1365-294X.2011.05255.x)

40. Baldi R, Campagna C, Pedraza S, Le Boeuf BJ. 1996 Social effects of space availability on the breeding behaviour of elephant seals in Patagonia. *Anim. Behav.* **51**, 717–724. (doi:10.1006/anbe.1996.0075)

41. Di Fiore A, Rendall D. 1994 Evolution of social organization: a reappraisal for primates by using phylogenetic methods. *Proc. Natl. Acad. Sci. U. S. A.* **91**, 9941–9945. (doi:10.1073/pnas.91.21.9941)

42. Silk JB. 2007 Social Components of Fitness in Primate Groups. *Science* **317**, 1347–1351. (doi:10.1126/science.1140734)

43. Frank, SA. 1998 *Foundations of Social Evolution.* Princeton Univ. Press, Princeton.

44. West SA, Pen I, Griffin AS. 2002 Cooperation and competition between relatives. *Science* **296**, 72–75. (doi:10.1126/science.1065507)

45. West SA, Murray MG, Machado CA, Griffin AS, Herre EA. 2001 Testing Hamilton's rule with competition between relatives. *Nature* **409**, 510-513. (doi: 10.1038/35054057)

Supplementary File 1 for Lukas & Huchard: The evolution of infanticide by females in mammals

Parts A (citations for comparative data), B (citations for population data), and C (reference list).

A) Citations for new data in comparative analyses

The table lists the references with the observations on the presence or absence of infanticide by females for each species, and the references with details on the interactions among females in group-living species. All references are listed in full below the second table.

Species	Reference infanticide by females	Reference eviction/dominance hierarchy
Acinonyx jubatus	Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Acomys cahirinus	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Acrobates pygmaeus	Ward, Australian Journal of Zoology 38, 503 (1990).	NA
Aepyceros melampus	Averbeck, Doctoral dissertation, Technische Universität München (2002).	NA
Aethomys namaquensis	Fleming, African Zoology 39, 123 (2004).	NA
Ailurus fulgens	Glatston, Red panda: biology and conservation of the first panda. Andrew, Ed., Noyes Series in Animal Behavior, Ecology, Conservation and management (2010), pp. 488.	NA
Alces alces	Sæther et al., Wildlife Biology 10, 51 (2004).	NA
Alouatta caraya	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Alouatta guariba	Galetti et al., Neotropical Primates 2, 6 (1994).	Galetti et al., Neotropical Primates 2, 6 (1994).
Alouatta palliata	Ebensperger, Biological Reviews 73, 321 (1998).	Zucker & Clarke, International Journal of Primatology 19, 433 (1998).
Alouatta pigra	Treves et al., Ethology 109, 135 (2003); van Belle et al. Primates 51, 279 (2010).	NA
Alouatta seniculus	Ebensperger, Biological Reviews 73, 321 (1998).	Pope, Behavioral Ecology and Sociobiology 48, 253 (2000)
Antechinus stuartii	Holleley et al., Molecular Ecology 15, 3439 (2006).	NA
Antechinus swainsonii	Holleley et al., Molecular Ecology 15, 3439 (2006).	NA
Antilocapra americana	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Jacques & Jenks, Western North American Naturalist 70, 570 (2010); Dunn et al., Molecular Ecology 20, 4889 (2011); Van Vuren et al., Journal of Mammalogy 94, 155 (2013).	NA
Antrozous pallidus	O'Shea & Vaughan, Journal of Mammalogy 58, 269 (1977).	NA
Aotus azarae	Huck et al., International Journal of Primatology 32, 1133 (2011); Huck & Fernandez-Duque, Behavioral Ecology and Sociobiology 66, 505 (2012).	NA
Apodemus sylvaticus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Arctocephalus forsteri	Bradshaw et al., Journal of Mammalogy 84, 65 (2003).	NA

Arctocephalus galapagoensis	Trillmich, Behavioral Ecology and Sociobiology 19, 157 (1986).	NA
Arctocephalus gazella	Doidge et al., Journal of Zoology 202, 449 (1984); Harcourt, Journal of Zoology 202, 449 (1992);	NA
Arctocephalus pusillus	Gibbens & Arnould, Canadian Journal of Zoology-Revue Canadienne De Zoologie 87, 902 (2009).	NA
Arctocephalus tropicalis	Beauplet et al., Journal of Animal Ecology 74, 1160 (2005).	NA
Ateles belzebuth	Gibson et al., American Journal of Primatology 70, 485 (2008); Link et al., in Sexual coercion in primates and humans: An evolutionary perspective on male aggression against females, N., W., Eds. (Harvard University Press, Harvard, 2009), pp. 157-183.	NA
Ateles geoffroyi	Gibson et al., American Journal of Primatology 70, 485 (2008); Slater et al., American Journal of Primatology 71, 21 (2009).	NA
Ateles paniscus	McFarland Symington, Behavioral Ecology and Sociobiology 20, 421 (1987); Symington, American Journal of Primatology 15, 45 (1988)	NA
Avahi laniger	Fuentes, International Journal of Primatology 23, 953 (2002).	NA
Bison bison	Lott, Applied Animal Behaviour Science 29, 135 (1991); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Daleszczyk, Acta Theriologica 49, 555 (2004)	Rutberg, A Ethology 63, 206 (1983) ; Vervaecke et al. 2005, Animal Behaviour 70, 763 (2005).
Brachyteles arachnoides	Strier, Faces in the forest: the endangered muriqui monkeys of Brazil. (Oxford University Press, Oxford, 1992).	NA
Brachyteles hypoxanthus	Strier & Mendes, The Northern Muriqui (Brachyteles hypoxanthus): lessons on behavioral plasticity and population dynamics from a critically endangered species. Kappeler, Watts, Eds., Long-term field studies of primates. (2012), pp. 125-140.	NA
Bunopithecus hoolock	Alfred, J. R. B. & Sati, J. P. 1991 On the first record of infanticide in the hoolock gibbon Hylobates hoolock in the wild. Records of the Zoological Survey of India 89, 319-321; Kumar et al., in Rare animals of India, Singaravelan, Ed. (Bentham Science Publisher, 2013), pp. 242-266.	NA
Callimico goeldii	Porter, Folia primatologica 72, 69 (2001).	NA
Callithrix flaviceps	Digby & Saltzman, in The smallest anthropoids: the Marmoset/Callimico radiation, Ford, Porter, Davis, Eds. (Springer, New York, 2009), pp. 135–153; Hilario & Ferrari, Journal of Ethology 28, 195 (2010).	NA
Callithrix jacchus	Digby, Behavioral Ecology and Sociobiology 37, 51 (1995).	NA
Callorhinus ursinus	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Canis dingo	Corbett, Ethology 78, 177 (1988).	NA
Canis latrans	Camenzind, in Coyotes: Biology, Behavior, and Management, M. Bekoff, Ed. (Academic Press, New York, 1978), pp. 267-294; Ebensperger, Biological Reviews 73, 321 (1998); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Canis lupus	McLeod, Canadian Journal of Zoology 68, 402 (1990); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Canis mesomelas	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Jenner, Zoological Society of London's Institute of Zoology, London and University of Kent, Canterbury, UK (2008).	NA

Canis simensis	SilleroZubiri et al., Behavioral Ecology and Sociobiology 38, 331 (1996); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Capreolus capreolus	Andersen & Linnell, Canadian Journal of Zoology 76, 1217 (1998).	NA
Cavia aperea	Ebensperger, Biological Reviews 73, 321 (1998); Hennessy et al., Journal of Comparative Psychology 120, 12 (2006).	NA
Cavia intermedia	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Cavia magna	Ebensperger, Biological Reviews 73, 321 (1998); Kraus et al., Journal of Mammalogy 86, 763 (2005).	NA
Cavia porcellus	Ebensperger, Biological Reviews 73, 321 (1998); Sachser, Naturwissenschaften 85, 307 (1998).	NA
Cebus apella	Janson et al., in Long-Term Field Studies of Primates, P. M. Kappeler, W. D. P., Eds. (Springer-Verlag, Berlin Heidelberg, 2012), pp. 185-212.	Janson, Behavioral Ecology and Sociobiology 18, 125 (1985) ; Ferreira et al. American Journal of Primatology 68, 765 (2006); Izawa, Primates 21, 443 (1980)
Cebus capucinus	Manson et al., Folia Primatologica 75, 104 (2004).	Perry, International Journal of Primatology 40, 167 (1996); Bergstrom & Fedigan, Behaviour 147, 899 (2010).
Cebus nigritus	Ramírez-Llorens et al., American Journal of Primatology 70, 473 (2008).	Tiddi et al. Plos One 7, e36641 (2012)
Cebus olivaceus	Ebensperger, Biological Reviews 73, 321 (1998); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Cercocebus atys	Range & Noë, American Journal of Primatology 56, 137 (2002).	Range & Noë, American Journal of Primatology 56, 137 (2002); Range, Behavioral Ecology and Sociobiology 59, 511 (2006).
Cercocebus torquatus	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Range, Behavioral Ecology and Sociobiology 59, 511 (2006).	NA
Cercopithecus albogularis	Henzi & Lawes, Folia primatologica 48, 125 (1987).	NA
Cercopithecus ascanius	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Cercopithecus campbelli	Galat-Luong, A. & Galat, G. 1979 Consequences comportementales des perturbations sociales repetees sur une troupe de Mones de Lowe, Cercopithecus campbelli lowei, de Cote d'Ivoire. Terre et Vie 33, 4-57; Bourlière et al., in Old World Monkeys: Evolution, Systematics and Behavior, J. R. Napier, P. H. Napier, Eds. (Academic Press, New York, 1970).	NA
Cercopithecus mitis	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Cervus elaphus	Guinness et al., Journal of Animal Ecology 47, 817 (1978).	NA
Chalinolobus gouldii	Dixon & Huxley, Mammalia 53, 395 (1989).	NA
Cheirogaleus medius	Fietz et al., Behavioral Ecology and Sociobiology 49, 8 (2000); Fietz & Dausmann, Folia primatologica 74, 246 (2003).	NA
Chiropotes albinasus	Treves, Folia primatologica 69, 81 (1998).	Treves, Folia primatologica 69, 81 (1998).
Chiropotes satanas	Treves, Folia primatologica 69, 81 (1998).	NA
Chlorocebus aethiops	Horrocks, Life-history characteristics of a wild population of vervet monkeys (Cercopithecus aethiops) in Barbados, West Indies. International Journal of Primatology 7, 31 (1986); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Isbell et al., International Journal of Primatology 30, 103 (2009).	Isbell & Pruetz, International Journal of Primatology 19, 837 (1998).
Chlorocebus sabaeus	Treves, Folia primatologica 69, 81 (1998).	NA
Colobus guereza	Ebensperger, Biological Reviews 73, 321 (1998).	NA

Colobus vellerosus	Teichroeb et al., Behavioral Ecology 23, 1348 (2012).	Wikberg et al. Behaviour 150, 295 (2013).
Connochaetes taurinus	Estes & Estes, Zeitschrift für Tierpsychologie 50, 45 (1979).	NA
Crocidura russula	Cantoni & Vogel, Animal behaviour 38, 205 (1989).	NA
Crocuta crocuta	Kruuk, The Spotted Hyena: A Study of Predation and Social Behaviour. (University of Chicago Press, Chicago, 1972); Hofer & East, in Serengeti II. Dynamics, Management and Conservation of an Ecosystem, A. R. E. Sinclair, P. Arcese, Eds. (University Press, Chicago, 1995), pp. 332-363.	White, Behavioral Ecology 16, 606 (2005)
Cryptomys damarensis	Clarke et al., Proceedings of the Royal Society of London. Series B: Biological Sciences 268, 899 (2001).	NA
Cuon alpinus	Johnsingh, Journal of Zoology 198, 443 (1982); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Cynictis penicillata	Vidya et al., Journal of Zoology 278, 57 (2009).	NA
Cynomys gunnisoni	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Cynomys leucurus	Hoogland, Behaviour 69, 1 (1979).	NA
Cynomys ludovicianus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Hoogland, Science 230, 1037 (1985)
Cynomys parvidens	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, Wolff, Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Cystophora cristata	Perry & Stenson, Behaviour 122, 1 (1992); Lydersen et al., Journal of Comparative Physiology B-Biochemical Systemic and Environmental Physiology 167, 81 (1997); Haug et al., Northwest Atlantic Fisheries Organization Scientific Council Studies 26, 101 (1996).	NA
Dasyurus hallucatus	Kraaijeveld et al., Proceedings of the Royal Society of London. Series B: Biological Sciences 270, S251 (2003).	NA
Dasyurus viverrinus	Kraaijeveld et al., Proceedings of the Royal Society of London. Series B: Biological Sciences 270, S251 (2003).	NA
Diceros bicornis	Weladji & Laflamme-Mayer, African Journal of Ecology 49, 471 (2011).	NA
Dicrostonyx groenlandicus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Didelphis virginiana	Hopkins & Forbes, The Murrelet 61, 20 (1980).	NA
Dolichotis patagonum	Taber & Macdonald, Journal of Zoology 227, 439 (1992).	NA
Enhydra lutris	Riedman & Estes, Biological report 90, 1126 (1990); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Eptesicus fuscus	Kilgour, Ethology 119, 189 (2013).	NA
Equus burchellii	Pluhacek et al., Journal of Mammalogy 87, 35 (2006).	NA
Equus caballus	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Equus zebra	Smith et al., African Journal of Ecology 46, 207 (2008); Lloyd & rasa, Behavioral Ecology and Sociobiology 25, 411 (1989).	NA
Erythrocebus patas	Enstam et al., International Journal of Primatology 23, 85 (2002).	Pruetz & Isbell, Behavioral Ecology and Sociobiology 49, 38 (2000); Isbell & Pruetz, International Journal of Primatology 19, 837 (1998).

Eubalaena australis	Cerqueira Santos et al., Ensaios e Ciencia 14, 83 (2010); Payne, Reports of the International Whaling Commission Special Issue, 161 (1986).	NA
Eulemur fulvus	Jolly et al., International Journal of Primatology 21, 21 (2000).	Jolly et al. International Journal of Primatology 21, 21 (2000).
Eulemur macaco	Pereira & Weiss, Behavioral Ecology and Sociobiology 18, 141 (1991); Andrews, Folia Primatologica 69, 14 (1998); Jolly et al., International Journal of Primatology 21, 21 (2000).	Andrews, Folia Primatologica, 69, 14 (1998).
Eumetopias jubatus	Bruemmer, Natural History 103, 26 (1994).	NA
Felis catus	Ebensperger, Biological Reviews 73, 321 (1998); Pontier & Natoli, Aggressive Behavior 25, 445-449 (1999).	NA
Galea monasteriensis	Hennessy et al., Journal of Comparative Psychology 120, 12 (2006); Adrian et al., Journal of Zoology 265, 97 (2005).	NA
Galea musteloides	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Gazella dorcas	Baharav, Journal of Zoology 200, 445 (1983).	NA
Giraffa camelopardalis	Carter et al., Animal Behaviour 85, 385 (2012); Bercovitch & Berry, Journal of Zoology 290, 281 (2013); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Gorilla beringei	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Gorilla gorilla	Stokes et al., Behavioral Ecology and Sociobiology 54, 329 (2003).	NA
Halichoerus grypus	Anderson et al., Journal of Zoology 189, 407 (1979); Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA
Hapalemur griseus	Nievergelt et al., American Journal of Primatology 57, 157 (2002).	NA
Helogale parvula	Rasa book chapter (1994)	NA
Herpestes sanguineus	Rood, Animal Behaviour 39, 566 (1989); Waser et al., Animal Behaviour 47, 289 (1994).	NA
Heterocephalus glaber	Faulkes, in Cooperative Breeding in Mammals, Solomon, French, Eds. (Cambridge University press, New York, 1997).	NA
Hippopotamus amphibius	Karstad & Hudson, Mammalia 50, 153 (1986); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Hippotragus equinus	Beudels et al. Biological Conservation (1992)	NA
Hyaena brunnea	Owens & Owens, Nature 308, 843 (1984); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Hyaena hyaena	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Wagner et al., Molecular Ecology 16, 4356 (2007); Wagner et al., Animal Behaviour 75, 1131 (2008).	NA
Hydrochoeris hydrochaeris	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Hylobates lar	Borries et al., Behavioral Ecology and Sociobiology 65, 685 (2011).	NA
Lagothrix lagotricha	Stevenson, Primates 47, 239 (2006); Di Fiore et al., American Journal of Primatology 68, 637 (2006).	NA

Lasiopodomys brandtii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Lemmus lemmus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Lemur catta	Sauther et al., Evolutionary Anthropology 8, 120 (1999); Jolly et al., International Journal of Primatology 21, 21 (2000).	Jolly et al., International Journal of Primatology 21, 21 (2000).
Leontopithecus chrysomelas	De Vleeschouwer et al., Folia Primatologica 72, 1 (2001).	NA
Leontopithecus rosalia	Digby & Saltzman, in The smallest anthropoids: the Marmoset/Callimico radiation, S. M. Ford, L. M. Porter, L. Davis, Eds. (Springer, New York, 2009), pp. 135–153; Henry et al., Hormones and Behaviour 63, 675 (2013).	NA
Leopardus pardalis	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Lepilemur edwardsi	Rasoloharijaona et al., International Journal of Primatology 21, 41 (2000).	NA
Leptonychotes weddellii	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276; Proffitt et al., Oikos 119, 1255 (2010).	NA
Lepus americanus	Krebs et al., BioScience 51, 25 (2001).	NA
Lophocebus albigena	Arlet et al., Folia Biologica 61, 3 (2013).	Chancellor & Isbell, Behavioral Ecology and Sociobiology 63, 1447 (2009).
Lophostoma silvicolum	Knörnschild et al., PLoS One 6, e25001 (2011).	NA
Loris lydekkerianus	Nekaris, Folia primatologica 74, 312 (2003); Radhakrishna & Singh, Current Science 86, 1121 (2004).	NA
Loris tardigradus	Nekaris, Folia primatologica 74, 312 (2003); Nekaris, American Journal of Primatology 68, 1171 (2006).	NA
Loxodonta africana	Moss, Journal of Zoology 255, 145 (2001); Wittmeyer & Getz, Animal Behaviour 73, 671 (2007).	Archie et al. Animal Behaviour 71, 117 (2006).
Lycaon pictus	van Lawick, Solo: the story of an African wild dog. (Houghton Mifflin Company, Boston, MA. , 1974); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Lynx canadensis	Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Lynx pardinus	Lopez et al., Wildlife Biology in Practice 6, 67 (2010).	NA
Macaca arctoides	Solanski & Zothansiama, Current Science 104, 1081 (2013).	Gouzoules, Primates 16, 405 (1975)
Macaca fascicularis	Ebensperger, Biological Reviews 73, 321 (1998).	De Waal, Zeitschrift für Tierpsychologie 44, 225 (1977); Thierry 2007 Evolutionary Anthropology 16, 224 (2007).
Macaca fuscata	Kutsukake, Primates 41, 321 (2000).	Koyama, Primates 8, 189 (1967); Koyama, Primates 11, 335 (1970) ; Kutsukake, Primates 41, 321 (2000).
Macaca mulatta	Hrdy, Ethology and Sociobiology 1, 13 (1979); Maestripieri & Carroll, Psychological Science 9, 143 (1998); Ebensperger, Biological Reviews 73, 321 (1998).	Maestripieri, Behaviour 131, 97 (1994).
Macaca nemestrina	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Maestripieri, Behaviour 131, 97 (1994).

Macaca nigra	A. Engelhardt, Pers. Comm.	Engelhardt, pers com; Duboscq et al., American Journal of Primatology 75, 361 (2013)
Macaca radiata	Ebensperger, Biological Reviews 73, 321 (1998).	Silk et al. Animal Behaviour 29, 1106 (1981).
Macaca silenus	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Singh et al. 2006 Journal of Bioscience 31, 369 (2006)
Macaca sinica	Dittus, Animal Behaviour 36, 1628 (1988).	Dittus, Behavioral Ecology and Sociobiology 19, 257 (1986)
Macaca sylvanus	Ebensperger, Biological Reviews 73, 321 (1998); Paul & Kuester, Behavioral Ecology and Sociobiology 39, 139 (1996)	Paul & Kuester, Behavioral Ecology and Sociobiology 39, 139 (1996)
Macaca thibetana	Berman et al., International Journal of Primatology 28, 1123 (2007).	Berman et al. International Journal of Primatology 25, 1283 (2004).
Macaca tonkeana	Muroyama & Thierry, International Journal of Primatology 17, 219 (1996).	Muroyama & Thierry, International Journal of Primatology 17, 219 (1996).
Macropus giganteus	Nave, Doctoral dissertation, The University of Melbourne (2002).	NA
Madoqua kirkii	Hendrichs, Zeitschrift für Tierpsychologie 38, 55 (1975); Brotherton & Manser, Animal Behaviour 54, 1413 (1997); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Mandrillus leucophaeus	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Mandrillus sphinx	Setchell et al., American Journal of Physical Anthropology 131, 498 (2006).	Setchell et al. International Journal of Primatology 23, 51 (2002).
Marmota caligata	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, Wolff, Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Marmota caudata	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Marmota flaviventris	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Brody & Melcher, Animal Behaviour 33, 673-674 (1985).
Marmota marmota	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Marmota monax	Maher & Duron, Journal of Mammalogy 91, 628 (2010).	NA
Martes americana	Erb et al., Minnesota Department of Natural Resources Summaries of Wildlife Research Findings 2009, 12 (2010)	NA
Martes pennanti	Erb et al., Minnesota Department of Natural Resources Summaries of Wildlife Research Findings 2009, 12 (2010)	NA
Megaderma lyra	Knörnschild et al., PLoS One 6, e25001 (2011).	NA
Meles meles	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Mellivora capensis	Begg et al., Journal of Zoology 265, 23 (2005).	NA
Mephitis mephitis	Sargeant et al., Canadian Field Naturalist 96, 312 (1982); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Meriones unguiculatus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Mesocricetus auratus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O.	NA

	Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	
Microcebus murinus	Eberle & Kappeler, Behavioral Ecology and Sociobiology 57, 91 (2004); Eberle & Kappeler, Behavioral Ecology and Sociobiology 60, 582 (2006).	NA
Microtus agrestis	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Microtus arvalis	Heise & Lippke, Aggressive Behavior 23, 293 (1997).	NA
Microtus californicus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Microtus canicaudus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Microtus ochrogaster	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Microtus pennsylvanicus	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Microtus townsendii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000)	NA
Mirounga angustirostris	LeBoeuf et al., Behaviour 43, 121 (1972); LeBoeuf & Briggs, Mammalia 41, 167 (1977).	NA
Mirounga leonina	McCann, Animal Behaviour 30, 268 (1982); LeBoeuf et al., Behaviour 43, 121 (1972).	NA
Mirza coquereli	Stanger et al., American Journal of Primatology 36, 223 (1995).	NA
Monachus schauinslandi	Bonness, Behavioral Ecology and Sociobiology 27, 113 (1990); Hiruki et al., Canadian Journal of Zoology 71, 458 (1993).	NA
Mungos mungo	Gilchrist, Behavioral Ecology 11, 1 (2006).	Hodge et al. 2011. Biology letters 7, 54 (2011).
Mus musculus	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, Wolff, Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Mustela erminea	Alterio, Ecography 21, 18 (1998); Hellstedt & Henttonen, Journal of Zoology 269, 205 (2006); Samson & Raymond, Mammalia 62, 165 (1998); Cuthbert & Sommer, New Zealand Journal of Zoology 29, 149 (2002).	NA
Mustela frenata	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Myodes glareolus	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Myotis myotis	Łupicki et al., Mammalia 74, 339 (2010).	NA
Nasalis larvatus	Murai et al., Primates 48, 117 (2007).	NA
Nasua nasua	Ebensperger, Biological Reviews 73, 321 (1998); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Hirsch, Ethology 113, 446 (2007).

Neophoca cinerea	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276; Higgins & Tedman, Marine Mammal Science 71, 617 (1990).	NA
Neotoma albigula	Topping & Millar, Behavioral Ecology and Sociobiology 43, 115 (1998).	NA
Neotoma cinerea	Escherich, American Zoologist 15, 821 (1975).	NA
Neotoma lepida	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000)	NA
Neovison vison	Garcia-Diaz & Lizana, North-Western Journal of Zoology 9, 438 (2013).	NA
Nyctereutes procyonoides	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Drygala et al., Acta Theriologica 53, 111 (2008); Drygala et al., Wildlife biology 14, 457 (2008); Kowalczyk et al., Annales Zoologici Fennici 46, 291 (2009).	NA
Nycticeius humeralis	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).	NA
Ochotona curzoniae	Dobson et al., Behavioral Ecology 9, 622 (1998).	NA
Octodon degus	Ebensperger, Acta Ethologica 3, 89 (2001).	Ebensperger, Acta Ethologica 3, 89 (2001).
Odobenus rosmarus	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA
Odocoileus virginianus	Sams et al., Journal of Mammalogy 77, 179 (1996).	NA
Onychomys torridus	Horner & Taylor, Journal of Mammalogy 49, 644 (1968).	NA
Oreamnos americanus	Gaillard et al., Annual Review of Ecology and Systematics 31, 367 (2000).	NA
Oryctolagus cuniculus	Künkele, Journal of Mammalogy 73, 317 (1992); Rödel et al., Ethology 114, 22 (2008).	NA
Oryx leucoryx	Harding, Oryx 41, 478 (2007).	NA
Otaria byronia	Campagna et al., Behaviour 107, 44 (1988).	NA
Otocyon megalotis	Lamprecht, Zeitschrift für Tierpsychologie-Journal of Comparative Ethology 49, 260 (1979); Malcolm, Journal of Zoology 208, 457 (1986); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Wright et al., Journal of Mammalogy 91, 437 (2012).	NA
Otolemur crassicaudatus	Buettner-Janusch, Folia primatologica 2, 93 (1964); Welker & Schaäfer-Witt, International journal of primatology 9, 509 (1988).	NA
Otolemur garnettii	Welker & Schaäfer-Witt, International journal of primatology 9, 509 (1988).	NA
Ovibos moschatus	Lent, Mammalian species 302, 1 (1988).	NA
Ovis aries	Gaillard et al., Annual Review of Ecology and Systematics 31, 367 (2000).	NA
Ovis canadensis	Festabianchet, Journal of Animal Ecology 58, 785 (1989); Festabianchet et al., Behavioral Ecology 5, 21 (1994); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Ozotoceros bezoarticus	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).	NA
Pan paniscus	Furuichi et al., in P. M. Kappeler, D. P. Watts, Eds., Long-term field studies of primates. (Springer-Verlag, Berlin Heidelberg, 2012), pp. 413-433.	NA
Pan troglodytes	Goodall, The chimpanzees of Gombe: patterns of behaviour. Harvard University Press, Cambridge, (1996); Townsend et al., Current Biology 17, R355 (2007).	NA

Panthera leo	Packer & Pusey, in Infanticide: Comparative and Evolutionary Perspectives, G. Hausfater, S. B. Hrdy, Eds. (Aldine, New York, 1984), pp. 31-42.	Packer & Pusey, in Infanticide: Comparative and Evolutionary Perspectives, G. Hausfater, S. B. Hrdy, Eds. (Aldine, New York, 1984), pp. 31-42.
Panthera onca	Soares et al., Genetics and Molecular Biology 29, 735 (2006).	NA
Panthera pardus	Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Panthera tigris	Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Papio anubis	Ebensperger, Biological Reviews 73, 321 (1998); Palombit, in Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions, C. B. Jones, Ed. (American Society of Primatologists, 2003), pp. 367-412.	Smuts, *Sex and Friendship in Baboons*. Routledge, (1985).
Papio cynocephalus	Collins et al., in Infanticide: comparative and evolutionary perspectives G. Hausfater, S. B. Hrdy, Eds. (Aldine: New York, 1984); Wasser & Starling, in Primate ontogeny, cognition and social behavior, J. G. Else, P. C. Lee, Eds. (Cambridge University Press, Cambridge, 1986), pp. 343-354; Shopland & Altmann, International Journal of Primatology 13, 61 (1987); Palombit, in Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions, C. B. Jones, Ed. (American Society of Primatologists, 2003), pp. 367-412.	Kleindorfer & Wasser, Behavioral Ecology and Sociobiology, 56, 328. (2004)
Papio hamadryas	Ebensperger, Biological Reviews 73, 321 (1998); Palombit, in Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions, C. B. Jones, Ed. (American Society of Primatologists, 2003), pp. 367-412.	NA
Papio papio	Ebensperger, Biological Reviews 73, 321 (1998); Palombit, in Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions, C. B. Jones, Ed. (American Society of Primatologists, 2003), pp. 367-412.	NA
Papio ursinus	Ebensperger, Biological Reviews 73, 321 (1998); Palombit, in Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions, C. B. Jones, Ed. (American Society of Primatologists, 2003), pp. 367-412; Brain, International Journal of Primatology 13, 593 (1992).	Cheney et al., 2006. In Reproduction and fitness in baboons: Behavioral, ecological, and life history perspectives. (Springer US 2006) pp. 147-176; Brain, International Journal of Primatology 13, 593 (1992).
Paraxerus cepapi	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Peromyscus californicus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Peromyscus leucopus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Peromyscus maniculatus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Peromyscus polionotus	Margulis et al., Animal Behaviour 69, 627 (2005); Kaufman & Kaufman, Journal of Mammalogy 68, 275 (1987); Foltz, American Naturalist 117, 665 (1981).	NA
Phacochoerus aethiopicus	Somers et al., Acta Theriologica 40, 257 (1995); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Phascogale tapoatafa	Rhind, Wildlife Research 29, 247 (2002).	NA
Phoca groenlandica	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA

Phoca sibirica	Thomas et al., Mammalian Species, 1 (1982).	NA
Phoca vitulina	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA
Phocarctos hookeri	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA
Phodopus campbelli	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Phodopus sungorus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Phyllostomus hastatus	Bohn et al., Behavioral Ecology and Sociobiology 63, 1693 (2009).	NA
Phyllotis darwini	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Pithecia pithecia	Norconk, International journal of primatology 27, 653 (2006).	NA
Pongo abelii	Beaudrot et al., Behavioral Ecology and Sociobiology 63, 1549 (2009).	NA
Pongo pygmaeus	Beaudrot et al., Behavioral Ecology and Sociobiology 63, 1549 (2009).	NA
Potos flavus	Kays, Journal of Zoology 253, 491 (2001).	NA
Presbytis potenziani	Fuentes, International Journal of Primatology 23, 953 (2002).	NA
Presbytis thomasi	Steenbeek, in Infanticide by males and its implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000), pp. 153-177.	NA
Procolobus badius	Struhsaker & Leland, Zeitschrift fuer Tierpsychologie 69, 89 (1985).	NA
Propithecus diadema	Wright, International Journal of Primatology 16, 835 (1995); Erhart & Overdorff, International Journal of Primatology 19, 73 (1998).	NA
Propithecus edwardsi	Ebensperger, Biological Reviews 73, 321 (1998); Morelli, Behaviour 146, 499 (2009).	Morelli et al. Behaviour 146, 499 (2009).
Propithecus verreauxi	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	Erhart & Overdorff, International Journal of Primatology 29, 1227 (2008).
Proteles cristata	Koehler & Richardson, Mammalian Species 363, 1 (1990); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Kotze et al., Animal Behaviour 84, 1573 (2012).	NA
Pteronura brasiliensis	Mourao & Carvalho, Mammalia 65, 225 (2001).	NA
Pteropus hypomelanus	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).	NA
Pteropus vampyrus	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).	NA
Puma concolor	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Hunter & Skinner, Transactions of the Royal Society of South Africa 56, 79 (2003).	NA
Pygathrix bieti	Xiang & Grueter, American Journal of Primatology 69, 249 (2007).	NA
Pygathrix nemaeus	Angst & Thommen, Folia primatologica 27, 198 (1977).	NA
Pygathrix roxellana	Zhang et al., Folia Primatologica 70, 274 (1999); Qi et al., American Journal of Primatology 71, 670 (2009).	NA
Rangifer tarandus	Gaillard et al., Annual Review of Ecology and Systematics 31, 367 (2000).	Barrette & Vandal, Behaviour 97, 118 (1986).

Rattus norvegicus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000); Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Rhabdomys pumilio	Schradin & Pillay, Journal of Comparative Psychology 117, 317 (2003).	NA
Rhinoceros unicornis	Dinerstein et al., Journal of Mammalogy 69, 813 (1988).	NA
Rhynchocyon chrysopygus	Rathbun, Mammalian species 117, 1 (1979).	NA
Saguinus fuscicollis	Tirado-Herrera et al., American Journal of Primatology 50, 153 (2000).	NA
Saguinus mystax	Culot et al., Primates 52, 179 (2011).	NA
Saguinus oedipus	Savage et al., American Journal of Primatology 38, 85 (1996).	NA
Saimiri oerstedii	Zimbler-DeLorenzo & Stone, American Journal of Primatology 73, 607 (2011).	NA
Saimiri sciureus	Hrdy, Advances in the Study of Behavior 6, 101 (1976).	NA
Sciurus carolinensis	Lane et al., Animal Behaviour 75, 1927 (2008).	NA
Semnopithecus entellus	Sugiyama, in Social communication among primates, S. A. Altmann, Ed. (University of Chicago Press, Chicago, 1967), pp. 221-236; Hrdy, Folia primatologica 22, 19 (1974); Hrdy, Advances in the Study of Behavior 6, 101 (1976).	Borries, Behavioral Ecology and Sociobiology 41, 139 (1997).
Speothos venaticus	Macdonald, Journal of Zoology 239, 525 (1996); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus beecheyi	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Spermophilus beldingi	Ebensperger & Blumstein, in Rodent societies: an ecological and evolutionary perspective, J. O. Wolff, P. W. Sherman, Eds. (The University of Chicago Press, Chicago, 2007).	NA
Spermophilus citellus	Ramos-Lara et al. Mammalian Species 46, 71 (2014).	NA
Spermophilus columbianus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus franklinii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus fulvus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus parryii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus richardsonii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus townsendii	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Spermophilus tridecemlineatus	Blumstein, in Infanticide by Males and Its Implications, C. P. van Schaik, C. H. Janson, Eds. (Cambridge University Press, Cambridge, 2000).	NA
Suncus murinus	Rissman, Journal of Experimental Zoology 4, 207 (1990).	NA
Suricata suricatta	Clutton-Brock et al., Proceedings of the Royal Society of London, Series B 265, 2291 (1998).	NA
Sus scrofa	Andersson et al., Applied Animal Behaviour Science 134, 184 (2011).	Andersson et al. Applied Animal Behaviour Science 134, 184 (2011).
Symphalangus syndactylus	Morino, Doctoral dissertation, Rutgers University-Graduate School-New Brunswick (2012).	NA

Tadarida brasiliensis	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999); Knörnschild et al., PLoS One 6, e25001 (2011).	NA
Tamias striatus	Bergeron et al., Journal of Evolutionary Biology 24, 1685 (2011).	NA
Tarsius bancanus	Roberts, International Journal of Primatology 15, 1 (1994).	NA
Theropithecus gelada	Ebensperger, Biological Reviews 73, 321 (1998).	Dunbar, Behavioral Ecology and Sociobiology 7, 253 (1970).
Trachypithecus cristatus	Harding, Mammalian Species 42, 149 (2010).	NA
Trachypithecus poliocephalus	Zhao et al., Behavioral Ecology and Sociobiology 65, 1535 (2011).	NA
Trachypithecus vetulus	Ebensperger, Biological Reviews 73, 321 (1998).	NA
Tursiops truncatus	Patterson et al., Proceedings of the Royal Society, Series B 265, 1167 (1998).	NA
Ursus americanus	Ebensperger, Biological Reviews 73, 321 (1998); Samson, Canadian Journal of Zoology 79, 633 (2001).	NA
Ursus arctos	Ebensperger, Biological Reviews 73, 321 (1998); Wielgus & Bunnell, Biological Conservation 93, 145 (2000).	NA
Ursus maritimus	Taylor et al., Arctic 38, 303 (1985).	NA
Varecia variegata	van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000); Baden et al., Behavioral Ecology and Sociobiology 67, 1937 (2013).	NA
Vulpes lagopus	Kruchenkova et al., Naturwissenschaften 96, 457 (2009).	NA
Vulpes velox	Kamler et al., Animal Behaviour 68, 83 (2004); Kitchen et al., Animal Behaviour 71, 1029 (2006).	NA
Vulpes vulpes	Packer & Pusey, in Infanticide: comparative and evolutionary perspectives., G. Hausfater, S. B. Hrdy, Eds. (Aldine, New York, 1984), pp. 31-42.	NA
Vulpes zerda	Lariviere, Mammalian Species 714, 1 (2002).	NA
Xerus inauris	Waterman, Ethology 101, 130 (1995).	NA
Zalophus californianus	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA
Zalophus wollebaeki	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.	NA

B) Citations for population observation with details on female infanticide

The table lists the references with the observations on the characteristics of the killer and the victim and the circumstances of infanticide by females for the set of species for which this information was available. All references are listed in full below.

Species	Reference
Acomys cahirinus	Porter & Doane, Zeitschrift für Tierpsychologie 47, 225 (1978)
Aethomys namaquensis	Fleming & Nicolson, African Zoology 39, 123 (2004).
Apodemus sylvaticus	Gerlach & Bartmann, Behavioral Ecology 13, 408 (2002).
Arctocephalus gazella	Doidge et al. Journal of Zoology 449 (1984) ; Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Callithrix flaviceps	Hilário & Ferrari, Journal of Ethology 28, 195 (2010).
Callithrix jacchus	Melo et al. Folia Primatologica 74, 48 (2003).
Callithrix jacchus	Melo et al. Folia Primatologica 74, 48 (2003).
Callorhinus ursinus	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.
Canis dingo	Corbett. Ethology. 78, 177 (1988)
Canis latrans	Camenzind, in Coyotes: Biology, Behavior, and Management, M. Bekoff, Ed. (Academic Press, New York, 1978), pp. 267-294; Ebensperger, Biological Reviews 73, 321 (1998); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).
Canis lupus	McLeod, Canadian Journal for Zoology, 68, 402 (1990)
Canis mesomelas	Jenner, PhD Thesis. University of Kent, Canterbury, UK (2008).
Canis simensis	SilleroZubiri et al., Behavioral Ecology and Sociobiology 38, 331 (1996); van Noordwijk & van Schaik, in Infanticide by Males and Its Implications, Van Schaik, Janson, Eds. (Cambridge University Press, Cambridge, 2000).
Clethrionomys glareolus	Ylonen et al. Annals Zoologica Fennici 34, 259 (1997)
Crocuta crocuta	White, Behavioral Ecology 16, 606 (2005)
Cynomys ludovicianus	Hoogland, Science 230, 1037 (1985)
Dicrostonyx groenlandicus	Mallory & Brooks, Biology of Reproduction, 22, 192 (1980)
Equus zebra	Lloyd & Rasa, Behavioral Ecology and Sociobiology, 25, 411 (1989)
Eulemur fulvus	Jolly et al., International Journal of Primatology. 21, 21 (2000)
Eulemur macaco	Andrews, Folia Primatologica, 69, 14 (1989)
Galea musteloides	Künkele & Hoeck, Ethology. 83, 316 (1989).
Halichoerus grypus	Anderson et al., Journal of Zoology 189, 407 (1979); Le Boeuf & Campagna, in Infanticide and parental care, Parmigiani & vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276.
Heterocephalus glaber	Faulkes & Bennett, Trends in Ecology & Evolution, 16, 184 (2001).
Hyaena brunnea	Owens & Owens Nature 308, 843 (1984)
Lasiopodomys brandtii	Yu & Fang. Acta Theriologica Sinica, 23, 326 (2003)
Lemmus lemmus	Semb-Johansson et al., Oikos (1979): 246-260.
Lemur catta	Jolly et al, International Journal of Primatology. 21, 21 (2000)
Leontopithecus chrysomelas	De Vleeschouwer, et al. Folia Primatologica, 72, 1 (2001)
Leptonychotes weddellii	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Lycaon pictus	Creel & Creel Animal Conservation 1, 1 (1998)
Macaca mulatta	Maestripieri. Behaviour, 131, 97 (1994)
Macaca nemestrina	Maestripieri. Behaviour, 131, 97 (1994)
Macaca radiata	Silk et al, Animal Behaviour, 29, 1106 (1981)
Macaca sylvanus	Paul & Kuester, Behavioral Ecology and Sociobiology 39,139 (1996)
Macaca tonkeana	Muroyama et al. International journal of primatology. 17, 219 (1996)

Marmota caligata	Patilet al., PloS one 10, e0119081 (2015).
Marmota flaviventris	Brody & Melcher, Animal Behaviour 33, 673-674 (1985).
Marmota marmota	King & Allainé, Canadian Journal of Zoology 80, 2137 (2002)
Megaderma lyra	Knörnschild et al. PloS one, 6, e25001 (2011)
Meles meles	Mallinson et al,. Philosophical Transactions of the Royal Society of London B: Biological Sciences 338, 393 (1992)
Meriones unguiculatus	Elwood & Ostermeyer, in: G. Hausfater, S.B. Hrdy (Eds.), Infanticide, Aldine, New York (1984), pp. 367–386
Meriones unguiculatus	Elwood & Ostermeyer, in: G. Hausfater, S.B. Hrdy (Eds.), Infanticide, Aldine, New York (1984), pp. 367–386
Mesocricetus auratus	Goldman & Swanson, Zeitschrift für Tierpsychologie. 37, 225 (1975)
Microtus agrestis	Agrell, Behavioral Ecology 6, 82 (1995)
Microtus canicaudus	Wolff et al. Journal of Mammalogy, 83, 947 (2002)
Microtus ochrogaster	Lonstein & De Vries, Physiology & Behavior, 66, 33 (1999)
Microtus pennsylvanicus	Ebensperger et al., Ethol Ecol Evol 12, 149 (2000)
Microtus townsendii	Boonstra, Ecology 59,242 (1978)
Mirounga angustirostris	LeBoeuf et al., Behaviour 43, 121 (1972)
Monachus schauinslandi	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Mungos mungo	Hodge et al., Biology letters 7, 54 (2011)
Mus musculus	Manning et al. Animal Behaviour 50, 741 (1995)
Myotis myotis	Łupicki, et al., Mammalia, 74, 339 (2010)
Neophoca cinerea	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Neotoma lepida	Fleming, Behavioral and Neural Biology 26, 41 (1979)
Nycticeius humeralis	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).
Odobenus rosmarus	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Oryctolagus cuniculus	Künkele America Society of Mammalogists 73, 317 (1992)
Otaria flavescens	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276
Otolemur crassicaudatus	Welker & Schaäfer-Witt, International journal of primatology 9, 509 (1988).
Otolemur garnettii	Welker & Schaäfer-Witt, International journal of primatology 9, 509 (1988).
Pan troglodytes	Pusey et al.,. International Journal of Primatology, 29, 949 (2008)
Panthera leo	Packer & Pusey, in: Infanticide: Comparative and Evolutionary Perspectives (1984), Eds: Hausfater & Hrdy, pp38
Papio cynocephalus	Kleindorfer & Wasser, Behavioral Ecology and Sociobiology 56, 328 (2004)
Papio ursinus	Cheney et al.: In Reproduction and fitness in baboons: Behavioral, ecological, and life history perspectives (pp. 147-176) (2006). Springer US; Brain International Journal of Primatology 13, 1992 (1992)
Peromyscus leucopus	Wolff & Cicirello, Behavioral Ecology 2, 38 (1991)
Peromyscus maniculatus	Wolff & Cicirello, Behavioral Ecology 2, 38 (1991)
Phacochoerus aethiopicus	Somers et al. Acta Theriologica 40,257 (1995)
Phodopus campbelli	Vella et al., Developmental psychobiology 46, 75 (2005)
Phodopus sungorus	Vella et al., Developmental psychobiology 46, 75 (2005)
Phyllostomus hastatus	Bohn et al., Behavioral Ecology and Sociobiology 63, 1693 (2009)
Phyllotis darwini	Ebensperger & Blumstein, in: Rodent societies: an ecological and evolutionary perspective, pp.267-279. (2007)
Propithecus edwardsi	Morelli et al. Behaviour 146, 499 (2009)
Pteropus hypomelanus	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).
Pteropus vampyrus	Kunz & Ebensperger, Acta Chiropterologica 1, 17 (1999).
Rattus norvegicus	Schultz & Lore, Journal of Comparative Psychology 107, 216 (1993)
Rhabdomys pumilio	Hill et al., Journal of Animal Ecology 84, 1497 (2015)

Speothos venaticus	Macdonald, Journal of Zoology 239, 525 (1996)
Spermophilus beecheyi	Trulio, Behavioral Ecology and Sociobiology 38, 97 (1996)
Spermophilus beldingii	Jenkins & Eshelman Mammalian Species 221, 1 (1984)
Spermophilus columbianus	Stevens, Canadian Journal of Zoology 76, 1183 (1998)
Suricata suricatta	Clutton-Brock et al., Proceedings of the Royal Society of London B: Biological Sciences 265, 2291 (1998)
Sus scrofa	Andersson et al., Applied Animal Behaviour Science, 134, 84 (2011)
Tadaria brasiliensis	Knörnschild et al. PloS one 6, p.e25001 (2011)
Vulpes lagopus	Kruchenkova e al., Naturwissenschaften, 96, 457 (2009)
Vulpes vulpes	Vergara, Canadian Field-Naturalist, 115, 170 (2001)
Zalophus californianus	Le Boeuf & Campagna, in Infanticide and parental care, S. Parmigiani, F. vom Saal, Eds. (Harwood Academic Publishers, 1994), pp. 257-276

C) Reference list

Adrian, Oliver, Ina Brockmann, Christa Hohoff, and Norbert Sachser. "Paternal Behaviour in Wild Guinea Pigs: A Comparative Study in Three Closely Related Species with Different Social and Mating Systems." *Journal of Zoology* 265, no. 1 (January 2005): 97–105. https://doi.org/10.1017/S0952836904006090.

Agrell, Jep, Jerry O. Wolff, and Hannu Ylönen. "Counter-Strategies to Infanticide in Mammals: Costs and Consequences." *Oikos* 83, no. 3 (1998): 507–17. https://doi.org/10.2307/3546678.

Agrell, J. "A shift in female social organization independent of relatedness: an experimental study on the field vole (Microtus agrestis)." *Behavioral Ecology* 6.2 (1995): 182-191. https://doi.org/10.1093/beheco/6.2.182

Alfred, J. R. B., Sati, J. P. "On the First Record of Infanticide in the Hoolock Gibbon Hylobates Hoolock in the Wild." *Records of the Zoological Survey of India* 89 (1991): 319–21.

Alterio, Nic. "Spring Home Range, Spatial Organisation and Activity of Stoats Mustela Erminea in a South Island Nothofagus Forest, New Zealand." *Ecography* 21, no. 1 (February 1998): 18–24. https://doi.org/10.1111/j.1600-0587.1998.tb00390.x.

Andersen, Reidar, and John D Linnell. "Ecological Correlates of Mortality of Roe Deer Fawns in a Predator-Free Environment." *Canadian Journal of Zoology* 76, no. 7 (July 1998): 1217–25. https://doi.org/10.1139/z98-067.

Anderson, Sheila S., John R. Baker, John H. Prime, and Anna Baird. "Mortality in Grey Seal Pups: Incidence and Causes." *Journal of Zoology* 189, no. 3 (August 20, 2009): 407–17. https://doi.org/10.1111/j.1469-7998.1979.tb03972.x.

Andersson, Annelie, Anna Valros, Johan Rombin, and Per Jensen. "Extensive Infanticide in Enclosed European Wild Boars (Sus Scrofa)." *Applied Animal Behaviour Science* 134, no. 3–4 (November 2011): 184–92. https://doi.org/10.1016/j.applanim.2011.08.001.

Andres Link, Anthony Di Fiore, Stephanie N S. "Female-Directed Aggression and Social Control in Spider Monkeys." In *Sexual Coercion in Primates and Humans: An Evolutionary Perspective on Male Aggression against Females*, edited by artin N. Muller, Richard W. Wrangham, 157–83. Boston: Harvard University Press, 2009.

Andrews, Josephine. "Infanticide by a Female Black Lemur, *Eulemur Macaco,* in Disturbed Habitat on Nosy Be, North-Western Madagascar." *Folia Primatologica* 69, no. 1 (1998): 14–17. https://doi.org/10.1159/000052694.

Angst, W., and D. Thommen. "New Data and a Discussion of Infant Killing in Old World Monkeys and Apes." *Folia Primatologica* 27, no. 3 (1977): 198–229. https://doi.org/10.1159/000155787.

Archie, Elizabeth A., Thomas A. Morrison, Charles A.H. Foley, Cynthia J. Moss, and Susan C. Alberts. "Dominance Rank Relationships among Wild Female African Elephants, Loxodonta Africana." *Animal Behaviour* 71, no. 1 (January 2006): 117–27. https://doi.org/10.1016/j.anbehav.2005.03.023.

Arlet, Małgorzata E., Freerk Molleman, Lynne A. Isbell, Rebecca L. Chancellor, James R. Carey, and Raivo Mänd. "Correlations between Social Context and Fecal Glucocorticoid Metabolite Concentrations in Free-Ranging Female Gray-Cheeked Mangabeys (*Lophocebus Albigena*) in Kibale National Park, Uganda." *Folia Biologica* 61, no. 3 (August 30, 2013): 239–46. https://doi.org/10.3409/fb61_3-4.239.

Aureli, Filippo, Anthony Di Fiore, Evin Murillo-Chacon, Shoji Kawamura, and Colleen M. Schaffner. "Male Philopatry in Spider Monkeys Revisited." *American Journal of Physical Anthropology* 152, no. 1 (September 2013): 86–95. https://doi.org/10.1002/ajpa.22331.

Averbeck, Christiane. "Population Ecology of Impala (Aepyceros Melampus) and Community-Based Wildlife Conservation in Uganda." Doctoral Dissertation, Technische Universität München, 2001. https://mediatum.ub.tum.de/doc/603260/document.pdf.

Baden, Andrea L., Patricia C. Wright, Edward E. Louis, and Brenda J. Bradley. "Communal Nesting, Kinship, and Maternal Success in a Social Primate." *Behavioral Ecology and Sociobiology* 67, no. 12 (December 2013): 1939–50. https://doi.org/10.1007/s00265-013-1601-y.

Baharav, Dan. "Reproductive Strategies in Female Mountain and Dorcas Gazelles (Gazella Gazella Gazella and Gazella Dorcas)." *Journal of Zoology* 200, no. 4 (August 20, 2009): 445–53. https://doi.org/10.1111/j.1469-7998.1983.tb02808.x.

Baldi, R., C. Campagna, S. Pedraza, and Burney J. Le Boeuf. "Social Effects of Space Availability on the Breeding Behaviour of Elephant Seals in Patagonia." *Animal Behaviour* 51, no. 4 (April 1, 1996): 717–24. https://doi.org/10.1006/anbe.1996.0075.

Barnett, S. A. "An Analysis of Social Behaviour in Wild Rats." *Proceedings of the Zoological Society of London* 130, no. 1 (January 1, 1958): 107–52. https://doi.org/10.1111/j.1096-3642.1958.tb00565.x.

Barrette, Cyrille, and Denis Vandal. "Social Rank, Dominance, Antler Size, and Access to Food in Snow-Bound Wild Woodland Caribou." *Behaviour* 97, no. 1/2 (1986): 118–46.

Barton, Robert A., and Isabella Capellini. "Maternal Investment, Life Histories, and the Costs of Brain Growth in Mammals." *Proceedings of the National Academy of Sciences of the United States of America* 108, no. 15 (April 12, 2011): 6169–74. https://doi.org/10.1073/pnas.1019140108.

Beaudrot, Lydia H., Sonya M. Kahlenberg, and Andrew J. Marshall. "Why Male Orangutans Do Not Kill Infants." *Behavioral Ecology and Sociobiology* 63, no. 11 (September 2009): 1549–62. https://doi.org/10.1007/s00265-009-0827-1.

Beauplet, Gwenael, Christophe Barbraud, Magaly Chambellant, and Christophe Guinet. "Interannual Variation in the Post-Weaning and Juvenile Survival of Subantarctic Fur Seals: Influence of Pup Sex, Growth Rate and Oceanographic Conditions." *Journal of Animal Ecology* 74, no. 6 (November 2005): 1160–72. https://doi.org/10.1111/j.1365-2656.2005.01016.x.

Begg, C. M., K. S. Begg, J. T. Du Toit, and M. G. L. Mills. "Spatial Organization of the Honey Badger Mellivora Capensis in the Southern Kalahari: Home-Range Size and Movement Patterns." *Journal of Zoology* 265, no. 1 (January 2005): 23–35. https://doi.org/10.1017/S0952836904005989.

Bercovitch, F. B., and P. S. M. Berry. "Age Proximity Influences Herd Composition in Wild Giraffe: Giraffe Herds and Age Proximity." *Journal of Zoology* 290, no. 4 (August 2013): 281–86. https://doi.org/10.1111/jzo.12039.

Bergeron, P., D. Réale, M. M. Humphries, and D. Garant. "Evidence of Multiple Paternity and Mate Selection for Inbreeding Avoidance in Wild Eastern Chipmunks." *Journal of Evolutionary Biology* 24, no. 8 (August 2011): 1685–94. https://doi.org/10.1111/j.1420-9101.2011.02294.x.

Bergstrom, Mackenzie L., and Linda M. Fedigan. "Dominance among Female White-Faced Capuchin Monkeys (Cebus Capucinus) : Hierarchical Linearity, Nepotism, Strength and Stability." *Behaviour* 147, no. 7 (2010): 899–931.

Berman, Carol M., Consuel S. Ionica, and Jinhua Li. "Dominance Style Among Macaca Thibetana on Mt. Huangshan, China." *International Journal of Primatology* 25, no. 6 (n.d.): 1283–1312. https://doi.org/10.1023/B:IJOP.0000043963.77801.c3.

Berman, Carol M., Jinhua Li, Hideshi Ogawa, Consuel Ionica, and Huabao Yin. "Primate Tourism, Range Restriction, and Infant Risk Among Macaca Thibetana at Mt. Huangshan, China." *International Journal of Primatology* 28, no. 5 (November 13, 2007): 1123–41. https://doi.org/10.1007/s10764-007-9199-4.

Bernstein, I. S., and M. A. Cooper. "Dominance in Assamese Macaques (Macaca Assamensis)." *American Journal of Primatology* 48, no. 4 (1999): 283–89. https://doi.org/10.1002/(SICI)1098-2345(1999)48:4<283::AID-AJP3>3.0.CO;2-4.

Bernstein, Irwin S. "Stability of the Status Hierarchy in a Pigtail Monkey Group (Macaca Nemestrina)." *Animal Behaviour* 17 (August 1, 1969): 452–58. https://doi.org/10.1016/0003-3472(69)90146-8.

Beudels, Roseline C., Sarah M. Durant, and John Harwood. "Assessing the Risks of Extinction for Local Populations of Roan Antelope Hippotragus Equinus." *Biological Conservation* 61, no. 2 (1992): 107–16. https://doi.org/10.1016/0006-3207(92)91100-7.

Blanchard, R. J., K. J. Flannelly, and D. C. Blanchard. "Life-Span Studies of Dominance and Aggression in Established Colonies of Laboratory Rats." *Physiology & Behavior* 43, no. 1 (1988): 1–7.

Blumstein, Dan. "The Evolution of Infanticide in Rodents: A Comparative Analysis." In *Infanticide by Males and Its Implications*, edited by Janson van Schaik, C.P. C.H. Cambridge: Cambridge University Press, n.d.

Blumstein, DT. "The Evolution of Infanticide in Rodents: A Comparative Analysis," Cambridge University Press., 178–98. Cambridge: van Schaik CP and Janson CH, 2000.

Boeuf, Burney J. Le, Ronald J. Whiting, and Richard F. Gantt. "Perinatal Behavior of Northern Elephant Seal Females and Their Young." *Behaviour* 43, no. 3 (January 1, 1973): 121–56. https://doi.org/10.1163/156853973X00508.

Bohn, Kirsten M., Cynthia F. Moss, and Gerald S. Wilkinson. "Pup Guarding by Greater Spear-Nosed Bats." *Behavioral Ecology and Sociobiology* 63, no. 12 (October 2009): 1693–1703. https://doi.org/10.1007/s00265-009-0776-8.

Boinski, Sue, Karen Sughrue, Lara Selvaggi, Robert Quatrone, Malinda Henry, and Susan Cropp. "An Expanded Test of the Ecological Model of Primate Social Evolution: Competitive Regimes and Female Bonding in Three Species of Squirrel Monkeys (*Saimiri Oerstedii, S. Boliviensis* and *S. Sciureus*)." *Behaviour* 139, no. 2 (February 1, 2002): 227–61. https://doi.org/10.1163/156853902760102663.

Boness, Daryl J. "Fostering Behavior in Hawaiian Monk Seals: Is There a Reproductive Cost?" *Behavioral Ecology and Sociobiology* 27, no. 2 (August 1990): 113–22. https://doi.org/10.1007/BF00168454.

Boonstra, Rudy. "Effect of adult Townsend voles (Microtus townsendii) on survival of young." *Ecology* 59.2 (1978): 242-248. https://doi.org/10.2307/1936369

Borries, Carola, Tommaso Savini, and Andreas Koenig. "Social Monogamy and the Threat of Infanticide in Larger Mammals." *Behavioral Ecology and Sociobiology* 65, no. 4 (April 2011): 685–93. https://doi.org/10.1007/s00265-010-1070-5.

Botero, Carlos A., Roi Dor, Christy M. McCain, and Rebecca J. Safran. "Environmental Harshness Is Positively Correlated with Intraspecific Divergence in Mammals and Birds." *Molecular Ecology* 23, no. 2 (February 2014): 259–68. https://doi.org/10.1111/mec.12572.

Bradshaw, Corey J. A., Richard J. Barker, Robert G. Harcourt, and Lloyd S. Davis. "Estimating Survival and Capture Probability of Fur Seal Pups Using Multistate Mark-Recapture Models." *Journal of Mammalogy* 84, no. 1 (February 2003): 65–80. https://doi.org/10.1644/1545-1542(2003)084<0065:ESACPO>2.0.CO;2.

Brain, C. "Deaths in a Desert Baboon Troop." *International Journal of Primatology* 13, no. 6 (1992): 593–99.

Brody, A. K., & Melcher, J. "Infanticide in yellow-bellied marmots." *Animal Behaviour* 33, no. 2 (1985): 673-674.

Bromley, Peter T. "Manifestations of Social Dominance in Pronghorn Bucks." *Applied Animal Behaviour Science* 29, no. 1 (February 1, 1991): 147–64. https://doi.org/10.1016/0168-1591(91)90243-Q.

Brotherton, Peter N.M, and Martha B Manser. "Female Dispersion and the Evolution of Monogamy in the Dik-Dik." *Animal Behaviour* 54, no. 6 (December 1997): 1413–24. https://doi.org/10.1006/anbe.1997.0551.

Bruemmer, F. "Rough Rookeries." *Natural History* 103 (1994): 26–33.

Camenzind F.J. in Coyotes: Biology, Behavior, and Management, M. Bekoff, Ed. (Academic Press, New York, 1978), pp. 267-294.

Cant, Michael A., Hazel J. Nichols, Rufus A. Johnstone, and Sarah J. Hodge. "Policing of Reproduction by Hidden Threats in a Cooperative Mammal." *Proceedings of the National Academy of Sciences* 111, no. 1 (January 7, 2014): 326–30. https://doi.org/10.1073/pnas.1312626111.

Cantoni, Debora, and Peter Vogel. "Social Organization and Mating System of Free-Ranging, Greater White-Toothed Shrews, Crocidura Russula." *Animal Behaviour* 38, no. 2 (August 1989): 205–14. https://doi.org/10.1016/S0003-3472(89)80083-1.

Carter, Kerryn D., Jennifer M. Seddon, Celine H. Frère, John K. Carter, and Anne W. Goldizen. "Fission–Fusion Dynamics in Wild Giraffes May Be Driven by Kinship, Spatial Overlap and Individual Social Preferences." *Animal Behaviour* 85, no. 2 (February 2013): 385–94. https://doi.org/10.1016/j.anbehav.2012.11.011.

Chanan-Khan, Asher. "Bcl-2 Antisense Therapy in Hematologic Malignancies." *Current Opinion in Oncology* 16, no. 6 (November 2004): 581–85.

Chancellor, Rebecca L., and Lynne A. Isbell. "Food Site Residence Time and Female Competitive Relationships in Wild Gray-Cheeked Mangabeys (<Emphasis Type="Italic">Lophocebus Albigena</Emphasis>)." *Behavioral Ecology and Sociobiology* 63, no. 10 (August 1, 2009): 1447–58. https://doi.org/10.1007/s00265-009-0805-7.

Cheney, Dorothy L. "The Acquisition of Rank and the Development of Reciprocal Alliances among Free-Ranging Immature Baboons." *Behavioral Ecology and Sociobiology* 2, no. 3 (September 1, 1977): 303–18. https://doi.org/10.1007/BF00299742.

Cheney, Dorothy L., et al. "Reproduction, mortality, and female reproductive success in chacma baboons of the Okavango Delta, Botswana." *Reproduction and fitness in baboons: Behavioral, ecological, and life history perspectives*. Springer, Boston, MA, 2006. 147-176.

Clarke, F. M., G. H. Miethe, and N. C. Bennett. "Reproductive Suppression in Female Damaraland Mole-Rats Cryptomys Damarensis: Dominant Control or Self-Restraint?" *Proceedings of the Royal Society B: Biological Sciences* 268, no. 1470 (May 7, 2001): 899–909. https://doi.org/10.1098/rspb.2000.1426.

Clutton-Brock, T. H., P. N. M. Brotherton, A. F. Russell, M. J. O'Riain, D. Gaynor, R. Kansky, A. Griffin, et al. "Cooperation, Control, and Concession in Meerkat Groups." *Science* 291, no. 5503 (January 19, 2001): 478–81. https://doi.org/10.1126/science.291.5503.478.

Clutton-Brock, T. H., P. N. Brotherton, R. Smith, G. M. McIlrath, R. Kansky, D. Gaynor, M. J. O'Riain, and J. D. Skinner. "Infanticide and Expulsion of Females in a Cooperative Mammal." *Proceedings. Biological Sciences* 265, no. 1412 (December 7, 1998): 2291–95. https://doi.org/10.1098/rspb.1998.0573.

Clutton-Brock, T. H., and E. Huchard. "Social Competition and Selection in Males and Females." *Philosophical Transactions of the Royal Society B: Biological Sciences* 368, no. 1631 (December 5, 2013). https://doi.org/10.1098/rstb.2013.0074.

Clutton-Brock, T., and E. Huchard. "Social Competition and Its Consequences in Female Mammals." *Journal of Zoology* 289, no. 3 (March 1, 2013): 151–71. https://doi.org/10.1111/jzo.12023.

Clutton-Brock, Tim. "Sexual Selection in Males and Females." *Science* 318, no. 5858 (December 21, 2007): 1882–85. https://doi.org/10.1126/science.1133311.

Collins, DA, Busse, C.D., and Goodall, J. "Infanticide in Two Populations of Savanna Baboon." In *Infanticide: Comparative and Evolutionary Perspectives*, edited by Hrdy Hausfater, G. S. New York: Aldine, 1984.

Cooper, Matthew A., and Irwin S. Bernstein. “Evaluating Dominance Styles in Assamese and Rhesus Macaques.” *International Journal of Primatology* 29, no. 1 (February 1, 2008): 225–43. https://doi.org/10.1007/s10764-008-9236-y.

Corbett, Laurence K. “Social Dynamics of a Captive Dingo Pack: Population Regulation by Dominant Female Infanticide.” *Ethology* 78, no. 3 (January 12, 1988): 177–98. https://doi.org/10.1111/j.1439-0310.1988.tb00229.x.

Culot, Laurence, Yvan Lledo-Ferrer, Oda Hoelscher, Fernando J. J. Muñoz Lazo, Marie-Claude Huynen, and Eckhard W. Heymann. “Reproductive Failure, Possible Maternal Infanticide, and Cannibalism in Wild Moustached Tamarins, Saguinus Mystax.” *Primates* 52, no. 2 (April 2011): 179–86. https://doi.org/10.1007/s10329-011-0238-6.

Cuthbert, Richard, and Erica Sommer. “Home Range, Territorial Behaviour and Habitat Use of Stoats (*Mustela Erminea*) in a Colony of Hutton’s Shearwater (*Puffinus Huttoni*), New Zealand.” *New Zealand Journal of Zoology* 29, no. 2 (January 2002): 149–60. https://doi.org/10.1080/03014223.2002.9518298.

Creel, Scott, and Nancy Marusha Creel. "Six ecological factors that may limit African wild dogs, Lycaon pictus." *Animal Conservation* 1.1 (1998): 1-9. https://doi.org/10.1111/j.1469-1795.1998.tb00220.x

De Vleeschouwer, Kristel, Linda Van Elsacker, and Kristin Leus. “Multiple Breeding Females in Captive Groups of Golden-Headed Lion Tamarins *(Leontopithecus Chrysomelas):* Causes and Consequences.” *Folia Primatologica* 72, no. 1 (2001): 1–10. https://doi.org/10.1159/000049913.

Di Fiore, A, and D Rendall. “Evolution of Social Organization: A Reappraisal for Primates by Using Phylogenetic Methods.” *Proceedings of the National Academy of Sciences of the United States of America* 91, no. 21 (October 11, 1994): 9941–45. https://doi.org/10.1073/pnas.91.21.9941.

Di Fiore, Anthony, Andres Link, and Pablo R. Stevenson. “Scent Marking in Two Western Amazonian Populations of Woolly Monkeys (Lagothrix Lagotricha).” *American Journal of Primatology* 68, no. 6 (June 2006): 637–49. https://doi.org/10.1002/ajp.20257.

Digby, L., Saltzman, W. “Balancing Cooperation and Female-Female Competition in the Common Marmoset, Callithrix Jacchus.” In *The Smallest Anthropoids: The Marmoset/Callimico Radiation*, edited by Ford, S.M., Porter, L.M., Davis, L.C., 135–53. New York: Springer, 2009.

Digby, Leslie. “Infant Care, Infanticide, and Female Reproductive Strategies in Polygynous Groups of Common Marmosets (Callithrix Jacchus).” *Behavioral Ecology and Sociobiology* 37, no. 1 (July 1, 1995): 51–61. https://doi.org/10.1007/BF00173899.

Digby, Leslie. “Infanticide by Female Mammals: Implications for the Evolution of Social Systems.” In *Infanticide by Males and Its Implications*, Cambridge University Press. van Schaik CP and Janson CH, 2000.

Dinerstein, E., C. Wemmer, and H. Mishra. “Adoption in Greater One-Horned Rhinoceros (Rhinoceros Unicornis).” *Journal of Mammalogy* 69, no. 4 (November 29, 1988): 813–14. https://doi.org/10.2307/1381636.

Dittus, Wolfgang P. J. "Sex Differences in Fitness Following a Group Take-over among Toque Macaques: Testing Models of Social Evolution." *Behavioral Ecology and Sociobiology* 19, no. 4 (n.d.): 257–66. https://doi.org/10.1007/BF00300640.

Dittus, Wolfgang P.J. "Group Fission among Wild Toque Macaques as a Consequence of Female Resource Competition and Environmental Stress." *Animal Behaviour* 36, no. 6 (November 1988): 1626–45. https://doi.org/10.1016/S0003-3472(88)80104-0.

Dixon, J. M., and L. Huxley. "Observations on a Maternity Colony of Gould's Wattled Bat Chalinolobus Gouldii (Chiroptera: Vespertilionidae)." *Mammalia* 53, no. 3 (1989). https://doi.org/10.1515/mamm.1989.53.3.395.

Doidge, D. W., J. P. Croxall, and J. R. Baker. "Density-Dependent Pup Mortality in the Antarctic Fur Seal *Arctocephalus Gazellu* at South Georgia." *Journal of Zoology* 202, no. 3 (March 1984): 449–60. https://doi.org/10.1111/j.1469-7998.1984.tb05095.x.

Drygala, Frank, Norman Stier, Hinrich Zoller, Henry M. Mix, Kathrin Bögelsack, and Mechthild Roth. "Spatial Organisation and Intra-Specific Relationship of the Raccoon Dog Nyctereutes Procyonoides in Central Europe." *Wildlife Biology* 14, no. 4 (December 2008): 457–66. https://doi.org/10.2981/0909-6396-14.4.457.

Drygala, Frank, Hinrich Zoller, Norman Stier, Henry Mix, and Mechthild Roth. "Ranging and Parental Care of the Raccoon DogNyctereutes Procyonoides during Pup Rearing." *Acta Theriologica* 53, no. 2 (June 2008): 111–19. https://doi.org/10.1007/BF03194244.

Dunbar, R. I. M. "Determinants and Evolutionary Consequences of Dominance among Female Gelada Baboons." *Behavioral Ecology and Sociobiology* 7, no. 4 (November 1, 1980): 253–65. https://doi.org/10.1007/BF00300665.

Ebensperger, L.A., and Blumstein, D.T. "Nonparental Infanticide." In *Rodent Societies: An Ecological and Evolutionary Perspective*, edited by Sherman Wolff, J.O. P., 267–79. Chicago: University of Chicago Press, 2007.

Ebensperger, L. A., C. Botto-Mahan, and R. H. Tamarin. "Nonparental infanticide in meadow voles, Microtus pennsylvanicus: the influence of nutritional benefits." *Ethology Ecology & Evolution* 12.2 (2000): 149-160. https://doi.org/10.1080/08927014.2000.9522810

Ebensperger, Luis A. "Strategies and Counterstrategies to Infanticide in Mammals." *Biological Reviews* 73, no. 3 (January 11, 2007): 321–46. https://doi.org/10.1111/j.1469-185X.1998.tb00034.x.

Ebensperger, Luis A., Adrian S. Chesh, Rodrigo A. Castro, Liliana Ortiz Tolhuysen, Verónica Quirici, Joseph Robert Burger, Raúl Sobrero, and Loren D. Hayes. "Burrow Limitations and Group Living in the Communally Rearing Rodent, Octodon Degus." *Journal of Mammalogy* 92, no. 1 (2011): 21–30. https://doi.org/10.1644/09-MAMM-S-383.1.

Eberle, Manfred, and Peter M. Kappeler. "Family Insurance: Kin Selection and Cooperative Breeding in a Solitary Primate (Microcebus Murinus)." *Behavioral Ecology and Sociobiology* 60, no. 4 (August 2006): 582–88. https://doi.org/10.1007/s00265-006-0203-3.

Elwood, R.W. and Ostermeyer, M.C., 1984. Infanticide by male and female mongolian gerbils: ontogeny, causation and function G. Hausfater, S.B. Hrdy (Eds.), Infanticide, Aldine, New York (1984), pp. 367–386

Emlen, ST, and LW Oring. “Ecology, Sexual Selection and the Evolution of Mating Systems.” *Science* 197 (1977): 215–23.

Engh, Anne, Esch, Katrina, Smale, and Holekamp, Kay. “Mechanisms of Maternal Rank ‘inheritance’ in the Spotted Hyaena, Crocuta Crocuta.” *Animal Behaviour* 60, no. 3 (September 2000): 323–32. https://doi.org/10.1006/anbe.2000.1502.

Enstam, K.L., Isbell, L.A., De Maar, T.W. “Male Demography, Female Mating Behavior, and Infanticide in Wild Patas Monkeys (Erythrocebus Patas).” *International Journal of Primatology* 23, no. 1 (2002): 85–104.

Erb, J., Sampson, B., and Coy, P. “Reproductive Ecology of Fisher and Marten in Minnesota.” *Minn. Dep. Nat. Resour. Summ. Wildl. Res. Findings*, no. 2009 (2010): 24–31.

Erhard, E.M., and Overdorff, D.J. “Infanticide in Propithecus Diadema Edwardsi: An Evaluation of the Sexual Selection Hypothesis.” *International Journal of Primatology* 19 (1998): 73–81. https://doi.org/10.1023/A:1020306910493.

Erhart, Elizabeth M., and Deborah J. Overdorff. “Rates of Agonism by Diurnal Lemuroids: Implications for Female Social Relationships.” *International Journal of Primatology* 29, no. 5 (October 1, 2008): 1227–47. https://doi.org/10.1007/s10764-008-9287-0.

Escherich, P.C. “Social Structure in Bushy-Tailed Wood Rat.” *American Zoologist* 15 (1975): 821–821.

Estes, Richard D., and Runhild K. Estes. “The Birth and Survival of Wildebeest Calves.” *Zeitschrift Für Tierpsychologie* 50, no. 1 (April 26, 2010): 45–95. https://doi.org/10.1111/j.1439-0310.1979.tb01015.x.

Luca, D. W. de, and J. R. Ginsberg. “Dominance, Reproduction and Survival in Banded Mongooses: Towards an Egalitarian Social System?” *Animal Behaviour* 61, no. 1 (January 1, 2001): 17–30. https://doi.org/10.1006/anbe.2000.1559.

Fairbanks, W. Sue. “Dominance, Age and Aggression among Female Pronghorn, Antilocapra Americana (Family: Antilocapridae).” *Ethology* 97, no. 4 (January 12, 1994): 278–93. https://doi.org/10.1111/j.1439-0310.1994.tb01047.x.

Faulkes, Chris G., and Nigel C. Bennett. "Family values: group dynamics and social control of reproduction in African mole-rats." *Trends in Ecology & Evolution* 16.4 (2001): 184-190. https://doi.org/10.1016/S0169-5347(01)02116-4

Ferreira, Renata G., Patrícia Izar, and Phyllis C. Lee. “Exchange, Affiliation, and Protective Interventions in Semifree-Ranging Brown Capuchin Monkeys (Cebus Apella).” *American Journal of Primatology* 68, no. 8 (August 1, 2006): 765–76. https://doi.org/10.1002/ajp.20277.

Fietz, J., H. Zischler, C. Schwiegk, J. Tomiuk, K. H. Dausmann, and J. U. Ganzhorn. “High Rates of Extra-Pair Young in the Pair-Living Fat-Tailed Dwarf Lemur, Cheirogaleus Medius.” *Behavioral Ecology and Sociobiology* 49, no. 1 (December 4, 2000): 8–17. https://doi.org/10.1007/s002650000269.

Fietz, Joanna, and Kathrin H. Dausmann. “Costs and Potential Benefits of Parental Care in the Nocturnal Fat-Tailed Dwarf Lemur (Cheirogaleus Medius).” *Folia Primatologica* 74, no. 5–6 (2003): 246–58. https://doi.org/10.1159/000073312.

Fiore, Anthony Di, and Robert C. Fleischer. “Social Behavior, Reproductive Strategies, and Population Genetic Structure of <Emphasis Type="Italic">Lagothrix Poeppigii</Emphasis>.” *International Journal of Primatology* 26, no. 5 (October 1, 2005): 1137–73. https://doi.org/10.1007/s10764-005-6462-4.

Fleming, P.A., Nicolson, S.W. “Sex Differences in Space Use, Body Condition and Survivorship during the Breeding Season in the Namaqua Rock Mouse, Aethomys Namaquensis.” *African Zoology* 39, no. 1 (n.d.): 123–32.

Fleming, Alison S. "Maternal nest defense in the desert woodrat Neotoma lepida lepida." *Behavioral and Neural Biology* 26.1 (1979): 41-63. https://doi.org/10.1016/S0163-1047(79)92868-1

Flynn, J. J. “Riedman, M. L., and J. A. Estes. 1990. THE SEA OTTER (ENHYDRA LUTRIS): Behavior, Ecology, and Natural History. United States Fish and Wildlife Service, Biological Report, 90(14): 1-126. ISSN 0895-1926.” *Journal of Mammalogy* 76, no. 1 (February 23, 1995): 263–64. https://doi.org/10.2307/1382334.

Foerster, Steffen, Mathias Franz, Carson M. Murray, Ian C. Gilby, Joseph T. Feldblum, Kara K. Walker, and Anne E. Pusey. “Chimpanzee Females Queue but Males Compete for Social Status.” *Scientific Reports* 6 (October 14, 2016). https://doi.org/10.1038/srep35404.

Foltz, David W. “Genetic Evidence for Long-Term Monogamy in a Small Rodent, Peromyscus Polionotus.” *The American Naturalist* 117, no. 5 (May 1981): 665–75. https://doi.org/10.1086/283751.

Fuentes, A. “Patterns and Trends in Primate Pair Bonds.” *International Journal of Primatology* 23, no. 5 (2002): 953–78. https://doi.org/10.1023/A:1019647514080.

Furuichi, T., Idani, G., Idobe, H., Hashimoto, C., Tashiro, Y., Sakamaki, T., Mulavwa, M. N., Yangozene, K., and Kuroda, S. “Lont-Term Studies on Wild Bonobos at Wamba, Luo Scientific Reserve, D.R. Congo.” In *Long-Term Field Studies of Primates*, edited by Kappeler, P. M., Watts, D. Berlin: Springer, 2012.

Furuichi, Takeshi. “Agonistic Interactions and Matrifocal Dominance Rank of Wild Bonobos (<Emphasis Type="Italic">Pan Paniscus</Emphasis>) at Wamba.” *International Journal of Primatology* 18, no. 6 (December 1, 1997): 855–75. https://doi.org/10.1023/A:1026327627943.

Gaillard, J.-M., M. Festa-Bianchet, N. G. Yoccoz, A. Loison, and C. Toïgo. “Temporal Variation in Fitness Components and Population Dynamics of Large Herbivores.” *Annual Review of Ecology and Systematics* 31, no. 1 (November 2000): 367–93. https://doi.org/10.1146/annurev.ecolsys.31.1.367.

Galat-Luong, A. & Galat, G. “Consequences Comportementales Des Perturbations Sociales Repetees Sur Une Troupe de Mones de Lowe, Cercopithecus Campbelli Lowei, de Cote d’Ivoire.” *Terre et Vie* 33 (1979): 4–57.

Gantt, Richard F., Burney J. Le Boeuf, and Ronald J. Whiting. “Perinatal Behavior of Northern Elephant Seal Females and Their Young.” *Behaviour* 43, no. 3 (January 1, 1973): 121–56. https://doi.org/10.1163/156853973X00508.

Garcia-Diaz, P., and Lizana, M. “Field Observation of Male Infanticide in the American Mink.” *North-Western Journal of Zoology* 9 (2013): 438–40.

Gerlach, Gabriele, and Susann Bartmann. "Reproductive skew, costs, and benefits of cooperative breeding in female wood mice (Apodemus sylvaticus)." *Behavioral Ecology* 13.3 (2002): 408-418. https://doi.org/10.1093/beheco/13.3.408

Gibbens, J., and J.P.Y. Arnould. “Age-Specific Growth, Survival, and Population Dynamics of Female Australian Fur Seals.” *Canadian Journal of Zoology* 87, no. 10 (October 2009): 902–11. https://doi.org/10.1139/Z09-080.

Gilchrist, Jason S. “Female Eviction, Abortion, and Infanticide in Banded Mongooses (Mungos Mungo): Implications for Social Control of Reproduction and Synchronized Parturition.” *Behavioral Ecology* 17, no. 4 (July 1, 2006): 664–69. https://doi.org/10.1093/beheco/ark012.

Glatston, A. R., ed. *Red Panda: Biology and Conservation of the First Panda*. 1. ed. Amsterdam: Academic Press, 2011.

Goldman, L., and Heidi Swanson. "Population control in confined colonies of golden hamsters (Mesocricetus auratus Waterhouse)." *Zeitschrift für Tierpsychologie* 37.3 (1975): 225-236. https://doi.org/10.1111/j.1439-0310.1975.tb00878.x

Goodall, J. *The Chimpanzees of Gombe: Patterns and Behaviour*. Cambridge: Harvard University Press, 1996.

Goodall, Jane. *The Chimpanzees of Gombe: Patterns of Behavior*. Belknap Press of Harvard University Press, 1986.

Gouzoules, Harold. “Maternal Rank and Early Social Interactions of Infant Stumptail Macaques,<Emphasis Type="Italic">Macaca Arctoides</Emphasis>.” *Primates* 16, no. 4 (December 1, 1975): 405–18. https://doi.org/10.1007/BF02382739.

Gray, David Robert. *The Muskoxen of Polar Bear Pass*. Fitzhenry & Whiteside, 1987.

Guinness, F. E., T. H. Clutton-Brock, and S. D. Albon. “Factors Affecting Calf Mortality in Red Deer (Cervus Elaphus).” *The Journal of Animal Ecology* 47, no. 3 (October 1978): 817. https://doi.org/10.2307/3673.

Hämäläinen, Anni, Michael Heistermann, and Cornelia Kraus. “The Stress of Growing Old: Sex- and Season-Specific Effects of Age on Allostatic Load in Wild Grey Mouse Lemurs.” *Oecologia* 178, no. 4 (2015): 1063–75. https://doi.org/10.1007/s00442-015-3297-3.

Harcourt, Robert. “Maternal Aggression in the South American Fur Seal in Peru.” *Canadian Journal of Zoology* 70, no. 2 (February 1992): 320–25. https://doi.org/10.1139/z92-048.

Harding, Lee E. “Trachypithecus Cristatus (Primates: Cercopithecidae).” *Mammalian Species* 42 (January 25, 2010): 149–65. https://doi.org/10.1644/862.1.

Hausfater, G., J. Altmann, and S. Altmann. “Long-Term Consistency of Dominance Relations Among Female Baboons (Papio Cynocephalus).” *Science (New York,* *N.Y.)* 217, no. 4561 (August 20, 1982): 752–55. https://doi.org/10.1126/science.217.4561.752.

Heise, Sigrid, and Jessica Lippke. “Role of Female Aggression in Prevention of Infanticidal Behavior in Male Common Voles,Microtus Arvalis (Pallas, 1779).” *Aggressive Behavior* 23, no. 4 (1997): 293–98. https://doi.org/10.1002/(SICI)1098-2337(1997)23:4<293::AID-AB6>3.0.CO;2-L.

Hellstedt, P., and H. Henttonen. “Home Range, Habitat Choice and Activity of Stoats (Mustela Erminea) in a Subarctic Area.” *Journal of Zoology* 0, no. 0 (March 16, 2006): 060316061830001-??? https://doi.org/10.1111/j.1469-7998.2006.00072.x.

Hendrichs, Hubert. “Changes in a Population of Dikdik, Madoqua (Rhynchotragus) Kirki (Günther 1880).” *Zeitschrift Für Tierpsychologie* 38, no. 1 (April 26, 2010): 55–69. https://doi.org/10.1111/j.1439-0310.1975.tb01992.x.

Hennessy, Michael B., Gesa Neisen, Katie L. Bullinger, Sylvia Kaiser, and Norbert Sachser. “Social Organization Predicts Nature of Infant-Adult Interactions in Two Species of Wild Guinea Pigs (Cavia Aperea and Galea Monasteriensis).” *Journal of Comparative Psychology* 120, no. 1 (2006): 12–18. https://doi.org/10.1037/0735-7036.120.1.12.

Henry, MaLinda D., Sarah J. Hankerson, Jennifer M. Siani, Jeffrey A. French, and James M. Dietz. “High Rates of Pregnancy Loss by Subordinates Leads to High Reproductive Skew in Wild Golden Lion Tamarins (Leontopithecus Rosalia).” *Hormones and Behavior* 63, no. 5 (May 2013): 675–83. https://doi.org/10.1016/j.yhbeh.2013.02.009.

Henzi, S.P., and M. Lawes. “Breeding Season Influxes and the Behaviour of Adult Male Samango Monkeys *(Cercopithecus Mitis Albogularis)*.” *Folia Primatologica* 48, no. 3–4 (1987): 125–36. https://doi.org/10.1159/000156290.

Herrera, Emilio A., Viviana Salas, Elizabeth R. Congdon, María José Corriale, and Zuleyma Tang-Martínez. “Capybara Social Structure and Dispersal Patterns: Variations on a Theme.” *Journal of Mammalogy* 92, no. 1 (February 16, 2011): 12–20. https://doi.org/10.1644/09-MAMM-S-420.1.

Herrera, Em□rita R. Tirado, Christoph Knogge, and Eckhard W. Heymann. “Infanticide in a Group of Wild Saddle-Back Tamarins,Saguinus Fuscicollis.” *American Journal of Primatology* 50, no. 2 (February 2000): 153–57. https://doi.org/10.1002/(SICI)1098-2345(200002)50:2<153::AID-AJP5>3.0.CO;2-#.

Higgins, L.V., and Tedman, R.A. “Attacks on Pups by Male Australian Sea Lions, Neophoca Cinerea, and the Effect on Pup Mortality.” *Marine Mammal Science* 71 (1990): 617–19.

Hilário, Renato R., and Stephen F. Ferrari. “Double Infanticide in a Free-Ranging Group of Buffy-Headed Marmosets, Callithrix Flaviceps.” *Journal of Ethology* 28, no. 1 (January 2010): 195–99. https://doi.org/10.1007/s10164-009-0182-8.

Hill, Davina L., Neville Pillay, and Carsten Schradin. "Alternative reproductive tactics in female striped mice: heavier females are more likely to breed solitarily than communally." *Journal of Animal Ecology* 84.6 (2015): 1497-1508. https://doi.org/10.1111/1365-2656.12431

Hirsch, Ben T. “Spoiled Brats: Is Extreme Juvenile Agonism in Ring-Tailed Coatis (Nasua Nasua) Dominance or Tolerated Aggression?” *Ethology* 113, no. 5 (May 1, 2007): 446–56. https://doi.org/10.1111/j.1439-0310.2007.01348.x.

Hiruki, Lisa M., William G. Gilmartin, Brenda L. Becker, and Ian Stirling. “Wounding in Hawaiian Monk Seals (*Monachus Schauinslandi*).” *Canadian Journal of Zoology* 71, no. 3 (March 1993): 458–68. https://doi.org/10.1139/z93-066.

Hodge, S. J., M. B. V. Bell, and M. A. Cant. "Reproductive competition and the evolution of extreme birth synchrony in a cooperative mammal." *Biology letters* 7.1 (2011): 54-56. https://doi.org/10.1098/rsbl.2010.0555

Hofer, H., East, M. “Population Dynamics, Population Size, and the Commuting System of the Serengeti Spotted Hyenas.” In *Serengeti II: Dynamics, Management, and Conservation of an Ecosystem*, edited by Sinclair, A.R.E., Arcese, P., 332–63. London: University of Chicago Press, 1995.

Holleley, C. E., C. R. Dickman, M. S. Crowther, and B. P. Oldroyd. “Size Breeds Success: Multiple Paternity, Multivariate Selection and Male Semelparity in a Small Marsupial, Antechinus Stuartii: MULTIPLE PATERNITY and SELECTION IN ANTECHINUS.” *Molecular Ecology* 15, no. 11 (July 24, 2006): 3439–48. https://doi.org/10.1111/j.1365-294X.2006.03001.x.

Hoogland, J. L. “Infanticide in Prairie Dogs: Lactating Females Kill Offspring of Close Kin.” *Science (New York, N.Y.)* 230, no. 4729 (November 29, 1985): 1037–40. https://doi.org/10.1126/science.230.4729.1037.

Hoogland, John L. “Aggression, Ectoparasitism, and Other Possible Costs of Prairie Dog (Sciuridae, Cynomys Spp.) Coloniality.” *Behaviour* 69, no. 1 (January 1, 1979): 1–34. https://doi.org/10.1163/156853979X00377.

Hopkins, David D., and Richard B. Forbes. “Dietary Patterns of the Virginia Opossum in an Urban Environment.” *The Murrelet* 61, no. 1 (1980): 20. https://doi.org/10.2307/3536187.

Horrocks, J. A. “Life-History Characteristics of a Wild Population of Vervets (Cercopithecus Aethiops Sabaeus) in Barbados, West Indies.” *International Journal of Primatology* 7, no. 1 (February 1986): 31–47. https://doi.org/10.1007/BF02692308.

Hrdy, S. B. “Male-Male Competition and Infanticide among the Langurs (Presbytis Entellus) of Abu, Rajasthan.” *Folia Primatologica; International Journal of Primatology* 22, no. 1 (1974): 19–58.

Hrdy, Sarah Blaffer. “Care and Exploitation of Nonhuman Primate Infants by Conspecifics Other Than the Mother.” In *Advances in the Study of Behavior*, edited by Jay S. Rosenblatt, Robert A. Hinde, Evelyn Shaw, and Colin Beer, 6:101–58. Academic Press, 1976. https://doi.org/10.1016/S0065-3454(08)60083-2.

Hrdy, Sarah Blaffer. “Infanticide among Animals: A Review, Classification, and Examination of the Implications for the Reproductive Strategies of Females.” *Ethology and Sociobiology* 1, no. 1 (October 1, 1979): 13–40. https://doi.org/10.1016/0162-3095(79)90004-9.

Huck, Maren, and Eduardo Fernandez-Duque. “Children of Divorce: Effects of Adult Replacements on Previous Offspring in Argentinean Owl Monkeys.” *Behavioral Ecology and Sociobiology* 66, no. 3 (March 2012): 505–17. https://doi.org/10.1007/s00265-011-1297-9.

Huck, Maren, Marcelo Rotundo, and Eduardo Fernandez-Duque. “Growth and Development in Wild Owl Monkeys (Aotus Azarai) of Argentina.” *International Journal of Primatology* 32, no. 5 (October 2011): 1133–52. https://doi.org/10.1007/s10764-011-9530-y.

Hunter, L. T.B., and J. D. Skinner. “Do Male Cheetahs *Acinonyx Jubatus* Commit Infanticide?” *Transactions of the Royal Society of South Africa* 58, no. 1 (January 2003): 79–82. https://doi.org/10.1080/00359190309519937.

Isbell, Lynne A., and Jill D. Pruetz. “Differences Between Vervets (<Emphasis Type="Italic">Cercopithecus Aethiops</Emphasis>) and Patas Monkeys (<Emphasis Type="Italic">Erythrocebus Patas</Emphasis>) in Agonistic Interactions Between Adult Females.” *International Journal of Primatology* 19, no. 5 (October 1, 1998): 837–55. https://doi.org/10.1023/A:1020393329574.

Isbell, Lynne A., and Truman P. Young. “Ecological Models of Female Social Relationships in Primates: Similarities, Disparities, and Some Directions for Future Clarity.” *Behaviour* 139, no. 2 (February 1, 2002): 177–202. https://doi.org/10.1163/156853902760102645.

Isbell, Lynne A., Truman P. Young, Karin Enstam Jaffe, Anne A. Carlson, and Rebecca L. Chancellor. “Demography and Life Histories of Sympatric Patas Monkeys, Erythrocebus Patas, and Vervets, Cercopithecus Aethiops, in Laikipia, Kenya.” *International Journal of Primatology* 30, no. 1 (February 2009): 103–24. https://doi.org/10.1007/s10764-009-9332-7.

Izawa, Kosei. “Social Behavior of the Wild Black-Capped Capuchin (<Emphasis Type="Italic">Cebus Apella</Emphasis>).” *Primates* 21, no. 4 (October 1, 1980): 443–67. https://doi.org/10.1007/BF02373834.

Jacques, Christopher N., and Jonathan A. Jenks. “Antipredatory Defense of Neonatal Pronghorn (*Antilocapra Americana*) by Yearling Male Pronghorn in Southwestern South Dakota.” *Western North American Naturalist* 70, no. 4 (January 2011): 570–72. https://doi.org/10.3398/064.070.0418.

Janson, Charles. “Aggressive Competition and Individual Food Consumption in Wild Brown Capuchin Monkeys (Cebus Apella).” *Behavioral Ecology and Sociobiology* 18, no. 2 (1985): 125–38.

Jenner, N. “Contributions to Offspring Care by Parents and Helpers in the Black-Backed Jackal (Canis Mesomelas).” PhD thesis, University of Kent, 2008.

Jenkins, Stephen H., and Bruce D. Eshelman. "Spermophilus beldingi." *Mammalian Species* 221 (1984): 1-8. https://doi.org/10.2307/3503911

Johnsingh, A.J.T. “Reproductive and Social Behaviour of the Dhole, *Cuon Alpinus* (Canidae).” *Journal of Zoology* 198, no. 4 (December 1982): 443–63. https://doi.org/10.1111/jzo.1982.198.4.443.

Jolly, A., Caless, S., Gould, L., Pereira, M.E., Pride, R.E., Rabenandrasana, H.D., Walker, J.D., Zafison, Z. "Infant Killing, Wounding and Predation in Eulemur and Lemur." *International Journal of Primatology* 21, no. 1 (2000): 21–40.

Jones, Kate E., Jon Bielby, Marcel Cardillo, Susanne A. Fritz, Justin O'Dell, C. David L. Orme, Kamran Safi, et al. "PanTHERIA: A Species-Level Database of Life History, Ecology, and Geography of Extant and Recently Extinct Mammals." *Ecology* 90, no. 9 (September 1, 2009): 2648–2648. https://doi.org/10.1890/08-1494.1.

Kamler, Jan F., Warren B. Ballard, Patrick R. Lemons, and Kevin Mote. "Variation in Mating System and Group Structure in Two Populations of Swift Foxes, Vulpes Velox." *Animal Behaviour* 68, no. 1 (July 2004): 83–88. https://doi.org/10.1016/j.anbehav.2003.07.017.

Kappeler, Peter M., and Claudia Fichtel. "Female Reproductive Competition in Eulemur Rufifrons: Eviction and Reproductive Restraint in a Plurally Breeding Malagasy Primate." *Molecular Ecology* 21, no. 3 (February 2012): 685–98. https://doi.org/10.1111/j.1365-294X.2011.05255.x.

Karstad, E.L., and R.J. Hudson. "Social Organization and Communication of Riverine Hippopotami in Southwestern Kenya." *Mammalia* 50, no. 2 (1986). https://doi.org/10.1515/mamm.1986.50.2.153.

Kays, Roland W., and John L. Gittleman. "The Social Organization of the Kinkajou Potos Flavus (Procyonidae)." *Journal of Zoology* 253, no. 4 (April 2001): 491–504. https://doi.org/10.1017/S0952836901000450.

Keane, B., P.M. Waser, S.R. Creel, N.M. Creel, L.F. Elliott, and D.J. Minchella. "Subordinate Reproduction in Dwarf Mongooses." *Animal Behaviour* 47, no. 1 (January 1994): 65–75. https://doi.org/10.1006/anbe.1994.1008.

Kilgour, R. Julia, and R. Mark Brigham. "The Relationships between Behavioural Categories and Social Influences in the Gregarious Big Brown Bat (*Eptesicus Fuscus*)." Edited by L. Ebensperger. *Ethology* 119, no. 3 (March 2013): 189–98. https://doi.org/10.1111/eth.12052.

King, Wendy J., and Dominique Allainé. "Social, maternal, and environmental influences on reproductive success in female Alpine marmots (Marmota marmota)." *Canadian Journal of Zoology* 80.12 (2002): 2137-2143. https://doi.org/10.1139/z02-205

Kitchen, Ann M., Eric M. Gese, Lisette P. Waits, Seija M. Karki, and Edward R. Schauster. "Multiple Breeding Strategies in the Swift Fox, Vulpes Velox." *Animal Behaviour* 71, no. 5 (May 2006): 1029–38. https://doi.org/10.1016/j.anbehav.2005.06.015.

Kleiman, Devra G., and J. Malcolm. "The Evolution of Male Parental Investment in Mammals." In *Parental Care in Mammals*, Plenum Publishing Corporation. Gübernick DJ; Klopfer PH, 1981. http://repository.si.edu//handle/10088/4324.

Kleindorfer, Sonia, and Samuel K. Wasser. "Infant handling and mortality in yellow baboons (Papio cynocephalus): evidence for female reproductive competition?." *Behavioral Ecology and Sociobiology* 56.4 (2004): 328-337. https://doi.org/10.1007/s00265-004-0798-1

Knörnschild, Mirjam, Katja Ueberschaer, Maria Helbig, and Elisabeth K. V. Kalko. "Sexually Selected Infanticide in a Polygynous Bat." Edited by Brock Fenton. *PLoS ONE* 6, no. 9 (September 16, 2011): e25001. https://doi.org/10.1371/journal.pone.0025001.

Koehler, C. E., and P. R. K. Richardson. "Proteles Cristatus." *Mammalian Species*, no. 363 (October 23, 1990): 1. https://doi.org/10.2307/3504197.

Koenig, A. "Competitive Regimes in Forest-Dwelling Hanuman Langur Females (<Emphasis Type="Italic">Semnopithecus Entellus</Emphasis>)." *Behavioral Ecology and Sociobiology* 48, no. 2 (July 1, 2000): 93–109. https://doi.org/10.1007/s002650000198.

Kotze, Robynne, Nigel C. Bennett, Elissa Z. Cameron, J. Low de Vries, David G. Marneweck, Christian W.W. Pirk, and Fredrik Dalerum. "Temporal Patterns of Den Use Suggest Polygamous Mating Patterns in an Obligate Monogamous Mammal." *Animal Behaviour* 84, no. 6 (December 2012): 1573–78. https://doi.org/10.1016/j.anbehav.2012.09.035.

Kowalczyk, Rafał, Andrzej Zalewski, Bogumiła Jędrzejewska, Hermann Ansorge, and Aleksei N. Bunevich. "Reproduction and Mortality of Invasive Raccoon Dogs (*Nyctereutes Procyonoides*) in the Białowieża Primeval Forest (Eastern Poland)." *Annales Zoologici Fennici* 46, no. 4 (August 2009): 291–301. https://doi.org/10.5735/086.046.0406.

Koyama, Naoki. "Changes in Dominance Rank and Division of a Wild Japanese Monkey Troop in Arashiyama." *Primates* 11, no. 4 (December 1, 1970): 335–90. https://doi.org/10.1007/BF01730638.

Kraaijeveld, K., F. J. L. Kraaijeveld-Smit, and G. J. Adcock. "Does Female Mortality Drive Male Semelparity in Dasyurid Marsupials?" *Proceedings of the Royal Society B: Biological Sciences* 270, no. Suppl 2 (November 7, 2003): S251–53. https://doi.org/10.1098/rsbl.2003.0082.

Kraus, Cornelia, Fritz Trillmich, and Joachim Künkele. "Reproduction and Growth in a Precocial Small Mammal, Cavia Magna." *Journal of Mammalogy* 86, no. 4 (August 2005): 763–72. https://doi.org/10.1644/1545-1542(2005)086[0763:RAGIAP]2.0.CO;2.

Krebs, Charles J., Rudy Boonstra, Stan Boutin, and A.R.E. Sinclair. "What Drives the 10-Year Cycle of Snowshoe Hares?" *BioScience* 51, no. 1 (2001): 25. https://doi.org/10.1641/0006-3568(2001)051[0025:WDTYCO]2.0.CO;2.

Kruchenkova, Elena P., Michael Goltsman, Sergei Sergeev, and David W. Macdonald. "Is Alloparenting Helpful for Mednyi Island Arctic Foxes, Alopex Lagopus Semenovi?" *Die Naturwissenschaften* 96, no. 4 (April 2009): 457–66. https://doi.org/10.1007/s00114-008-0494-5.

Kruuk, Hans. *The Spotted Hyena: A Study of Predation and Social Behavior*. Wildlife Behavior and Ecology. Chicago: Univ. of Chicago Press, 1972.

Künkele, Joachim. "Infanticide in wild rabbits (Oryctolagus cuniculus)." *Journal of Mammalogy* 73.2 (1992): 317-320. https://doi.org/10.2307/1382063

Kunz, T.H., and Ebensperger, L.A. "Why Does Infanticide Seem so Rare in Bats?" *Acta Chiropterologica* 1 (1999): 17–29.

Kutsukake, Nobuyuki. “Matrilineal Rank Inheritance Varies with Absolute Rank in Japanese Macaques.” *Primates* 41, no. 3 (July 1, 2000): 321–35. https://doi.org/10.1007/BF02557601.

Lane, Jeffrey E., Stan Boutin, Melissa R. Gunn, Jon Slate, and David W. Coltman. “Female Multiple Mating and Paternity in Free-Ranging North American Red Squirrels.” *Animal Behaviour* 75, no. 6 (June 2008): 1927–37. https://doi.org/10.1016/j.anbehav.2007.10.038.

Langer, Peter. “The Phases of Maternal Investment in Eutherian Mammals.” *Zoology* 111, no. 2 (March 15, 2008): 148–62. https://doi.org/10.1016/j.zool.2007.06.007.

Larivière, Serge. “Vulpes Zerda.” *Mammalian Species* 714 (December 2002): 1–5. https://doi.org/10.1644/1545-1410(2002)714<0001:VZ>2.0.CO;2.

Le Boeuf, B. J., and Briggs, K. T. “The Cost of Living in a Seal Harem.” *Mammalia* 41 (1977): 167–95. https://doi.org/10.1163/156853973X00508

Le Boeuf, B.J., Campagna, C. “Protection and Abuse of Young in Pinnipeds.” In *Infanticide and Parental Care*, edited by Parmigiani, S.., vom Saal, F.S., 257–76. Chur: Harwood Academic Press Publishers, 1994.

Le Boeuf, Burney J., Ronald J. Whiting, and Richard F. Gantt. "Perinatal behavior of northern elephant seal females and their young." *Behaviour* 43.3 (1973): 121-156.

Lloyd, P. H., and O. A. E. Rasa. “Status, Reproductive Success and Fitness in Cape Mountain Zebra (Equus Zebra Zebra).” *Behavioral Ecology and Sociobiology* 25, no. 6 (December 1989): 411–20. https://doi.org/10.1007/BF00300187.

Lonstein, Joseph S., and Geert J. De Vries. "Comparison of the parental behavior of pair-bonded female and male prairie voles (Microtus ochrogaster)." *Physiology & Behavior* 66.1 (1999): 33-40. https://doi.org/10.1016/S0031-9384(98)00270-4

López, Guillermo, Marcos López-Parra, Leonardo Fernández, Gema Ruiz, José M. Gil-Sánchez, and Miguel A. Simón. “First Evidence of Non-Parental Male Infanticide in the Endangered Iberian Lynx (Lynx Pardinus).” *Wildlife Biology in Practice* 6, no. 3 (December 28, 2010). https://doi.org/10.2461/wbp.lynx.5.

Lott, Dale F. “American Bison Socioecology.” *Applied Animal Behaviour Science* 29, no. 1–4 (February 1991): 135–45. https://doi.org/10.1016/0168-1591(91)90242-P.

Łupicki, Dariusz, Jan Cichocki, Rafał Szkudlarek, and Agnieszka Ważna. “Cannibalism in Maternity Colonies of the Greater Mouse-Eared Bat Myotis Myotis.” *Mammalia* 74, no. 3 (January 1, 2010). https://doi.org/10.1515/mamm.2010.031.

Lydersen, C., K. M. Kovacs, and M. O. Hammill. “Energetics during Nursing and Early Postweaning Fasting in Hooded Seal (Cystophora Cristata) Pups from the Gulf of St Lawrence, Canada.” *Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology* 167, no. 2 (February 18, 1997): 81–88. https://doi.org/10.1007/s003600050050.

Macdonald, D. W. “Social Behaviour of Captive Bush Dogs (*Speothos Venaticus*).” *Journal of Zoology* 239, no. 3 (July 1996): 525–43. https://doi.org/10.1111/j.1469-7998.1996.tb05941.x.

Maestripieri, Dario. "Mother-infant relationships in three species of macaques (Macaca mulatta, M. nemestrina, M. arctoides). I. Development of the mother-infant relationship in the first three months." *Behaviour* 131.1 (1994): 75-96. DOI: 10.1163/156853994X00226

Maestripieri, Dario, and Kelly A. Carroll. “Risk Factors for Infant Abuse and Neglect in Group-Living Rhesus Monkeys.” *Psychological Science* 9, no. 2 (March 1998): 143–45. https://doi.org/10.1111/1467-9280.00027.

Maher, Christine R., and Melissa Duron. “Mating System and Paternity in Woodchucks (*Marmota Monax*).” *Journal of Mammalogy* 91, no. 3 (June 16, 2010): 628–35. https://doi.org/10.1644/09-MAMM-A-324.1.

Mallinson, P. J., Cresswell, W. J., Harris, S., & Cheeseman, C. L. (1992). To breed or not to breed: an analysis of the social and density-dependent constraints on the fecundity of female badgers (Meles meles). *Phil. Trans. R. Soc. Lond. B, 338*(1286), 393-407. https://doi.org/10.1098/rstb.1992.0157

Mallory, Frank F., and Ronald J. Brooks. "Infanticide and pregnancy failure: reproductive strategies in the female collared lemming (Dicrostonyx groenlandicus)." *Biology of Reproduction* 22.2 (1980): 192-196. https://doi.org/10.1095/biolreprod22.2.192

Manning, C. Jo, et al. "Communal nesting and communal nursing in house mice, Mus musculus domesticus." *Animal Behaviour* 50.3 (1995): 741-751. https://doi.org/10.1016/0003-3472(95)80134-0

Manson, Joseph H., Julie Gros-Louis, and Susan Perry. “Three Apparent Cases of Infanticide by Males in Wild White-Faced Capuchins *(Cebus Capucinus)*.” *Folia Primatologica* 75, no. 2 (2004): 104–6. https://doi.org/10.1159/000076270.

Margulis, Susan W., Mark Nabong, Glen Alaks, Allison Walsh, and Robert C. Lacy. “Effects of Early Experience on Subsequent Parental Behaviour and Reproductive Success in Oldfield Mice, Peromyscus Polionotus.” *Animal Behaviour* 69, no. 3 (March 2005): 627–34. https://doi.org/10.1016/j.anbehav.2004.04.021.

McCann, T.S. “Aggressive and Maternal Activities of Female Southern Elephant Seals (Mirounga Leonina).” *Animal Behaviour* 30, no. 1 (February 1982): 268–76. https://doi.org/10.1016/S0003-3472(82)80263-7.

McLeod, Peter J. “Infanticide by Female Wolves.” *Canadian Journal of Zoology* 68, no. 2 (February 1990): 402–4. https://doi.org/10.1139/z90-058.

Melo, Leonardo, AR Mendes Pontes, and MAO Monteiro da Cruz. "Infanticide and cannibalism in wild common marmosets." *Folia Primatologica* 74.1 (2003): 48-50. https://doi.org/10.1159/000068389

Missakian, Elizabeth A. “Genealogical and Cross-Genealogical Dominance Relations in a Group of Free-Ranging Rhesus Monkeys (<Emphasis Type="Italic">Macaca Mulatta</Emphasis>) on Cayo Santiago.” *Primates* 13, no. 2 (June 1, 1972): 169–80. https://doi.org/10.1007/BF01840878.

Mohnot, S. M. “Intergroup Infant Kidnapping in Hanuman Langur.” *Folia Primatologica* 34, no. 3–4 (1980): 259–77. https://doi.org/10.1159/000155958.

Morelli, Toni Lyn, Patricia Wright, Stephen King, and Sharon Pochron. “The Rules of Disengagement: Takeovers, Infanticide, and Dispersal in a Rainforest Lemur, Propithecus Edwardsi.” *Behaviour* 146, no. 4 (April 1, 2009): 499–523. https://doi.org/10.1163/15683908X399554.

Morino, L. "Behavioral Endocrinology of Wild Male Siamangs (Symphalangus Syndactylus)." Rutgers University, 2012.

Moss, Cynthia J. "The Demography of an African Elephant (Loxodonta Africana) Population in Amboseli, Kenya." *Journal of Zoology* 255, no. 2 (October 2001): 145–56. https://doi.org/10.1017/S0952836901001212.

Mourao, G., and Carvalho, L. "Cannibalism among Giant Otters (Pteronura Brasiliensis)." *Mammalia* 65 (2001): 225–27.

Muehlenbein, Michael P., David P. Watts, and Patricia L. Whitten. "Dominance Rank and Fecal Testosterone Levels in Adult Male Chimpanzees (Pan Troglodytes Schweinfurthii) at Ngogo, Kibale National Park, Uganda." *American Journal of Primatology* 64, no. 1 (September 1, 2004): 71–82. https://doi.org/10.1002/ajp.20062.

Murai, Tadahiro, Maryati Mohamed, Henry Bernard, Patrick Andau Mahedi, Rashid Saburi, and Seigo Higashi. "Female Transfer between One-Male Groups of Proboscis Monkey (Nasalis Larvatus)." *Primates* 48, no. 2 (April 2007): 117–21. https://doi.org/10.1007/s10329-006-0005-2.

Muroyama, Yasuyuki, and Bernard Thierry. "Fatal Attack on an Infant by an Adult Female Tonkean Macaque." *International Journal of Primatology* 17, no. 2 (April 1996): 219–27. https://doi.org/10.1007/BF02735449.

Mwamende, Kuruthumu Ally. "Social Organisation, Ecology and Reproduction in the Sanje Mangabey (Cercocebus Sanjei) in the Udzungwa Mountains National Park, Tanzania," 2009. http://researcharchive.vuw.ac.nz/handle/10063/1114.

Nave, C.D. "Fertility Control in the Eastern Grey Kangaroo, Macropus Giganteus." The Unviversity of Melbourne, 2002.

Nekaris, K.A.I. "Observations of Mating, Birthing and Parental Behaviour in Three Subspecies of Slender Loris (Loris Tardigradus and Loris Lydekkerianus) in India and Sri Lanka." *Folia Primatologica* 74, no. 5–6 (2003): 312–36. https://doi.org/10.1159/000073317.

Nekaris, K.A.I. "Social Lives of Adult Mysore Slender Lorises (Loris Lydekkerianus Lydekkerianus)." *American Journal of Primatology* 68, no. 12 (December 2006): 1171–82. https://doi.org/10.1002/ajp.20316.

Nievergelt, Caroline M., Thomas Mutschler, Anna T.C. Feistner, and David S. Woodruff. "Social System of the Alaotran Gentle Lemur (Hapalemur Griseus Alaotrensis): Genetic Characterization of Group Composition and Mating System." *American Journal of Primatology* 57, no. 4 (August 2002): 157–76. https://doi.org/10.1002/ajp.10046.

Norconk, Marilyn A. "Long-Term Study of Group Dynamics and Female Reproduction in Venezuelan Pithecia Pithecia." *International Journal of Primatology* 27, no. 3 (June 2006): 653–74. https://doi.org/10.1007/s10764-006-9030-7.

Nunn, CL, and CP van Schaik. "Social Evolution in Primates: The Relative Roles of Ecology and Intersexual Conflict," Cambride University Press., 388–420. Cambridge: van Schaik CP and Janson CH, 2000.

Opie, Christopher, Quentin D. Atkinson, Robin I. M. Dunbar, and Susanne Shultz. "Male Infanticide Leads to Social Monogamy in Primates." *Proceedings of the*

National Academy of Sciences 110, no. 33 (August 13, 2013): 13328–32. https://doi.org/10.1073/pnas.1307903110.

O'Shea, T. J., and T. A. Vaughan. "Nocturnal and Seasonal Activities of the Pallid Bat, Antrozous Pallidus." *Journal of Mammalogy* 58, no. 3 (August 20, 1977): 269–84. https://doi.org/10.2307/1379326.

Owens, Delia D., and Mark J. Owens. "Helping Behaviour in Brown Hyenas." *Nature* 308, no. 5962 (April 1984): 843–45. https://doi.org/10.1038/308843a0.

Packer, C., and Pusey, A.E. "Infanticide in Carnivores." In *Infanticide: Comparative and Evolutionary Perspectives*, edited by Hrdy Hausfater, G. S. New York: Aldine, 1984.

Packer, Craig, Anne E. Pusey, and Lynn E. Eberly. "Egalitarianism in Female African Lions." *Science* 293, no. 5530 (July 27, 2001): 690–93. https://doi.org/10.1126/science.1062320.

Palombit, RA. "Infanticide: Male Strategies and Female Counter-Strategies." In *The Evolution of Primate Societies*, University of Chicago Press., 432–68. Chicago: Mitani JC, Call J, Kappeler PM, Palombit RA, Silk JB, 2012.

Palombit, R.A. "Male Infanticide in Wild Savanna Baboons: Adaptive Significance and Intraspecific Variation." In *Sexual Selection and Reproductive Competition in Primates: New Perspectives and Directions*, edited by Jones, C.B. Norman: American Society of Primatologists, 2003.

Palombit, Ryne A. "Infanticide as Sexual Conflict: Coevolution of Male Strategies and Female Counterstrategies." *Cold Spring Harbor Perspectives in Biology* 7, no. 6 (June 2015). https://doi.org/10.1101/cshperspect.a017640.

Paoli, T., E. Palagi, and S.M. Borgognini Tarli. "Reevaluation of Dominance Hierarchy in Bonobos (Pan Paniscus)." *American Journal of Physical Anthropology* 130, no. 1 (May 1, 2006): 116–22. https://doi.org/10.1002/ajpa.20345.

Patil, Vijay P., Timothy J. Karels, and David S. Hik. "Ecological, evolutionary and social constraints on reproductive effort: are hoary marmots really biennial breeders?." *PloS one* 10.3 (2015): e0119081. https://doi.org/10.1371/journal.pone.0119081

Patterson, I. A., R. J. Reid, B. Wilson, K. Grellier, H. M. Ross, and P. M. Thompson. "Evidence for Infanticide in Bottlenose Dolphins: An Explanation for Violent Interactions with Harbour Porpoises?" *Proceedings. Biological Sciences* 265, no. 1402 (July 7, 1998): 1167–70. https://doi.org/10.1098/rspb.1998.0414.

Paul, Andreas, and Jutta Kuester. "Dominance, Kinship and Reproductive Value in Female Barbary Macaques (<Emphasis Type="Italic">Macaca Sylvanus</Emphasis>) at Affenberg Salem." *Behavioral Ecology and Sociobiology* 21, no. 5 (November 1, 1987): 323–31. https://doi.org/10.1007/BF00299970.

Paul, Andreas, Jutta Kuester, and Joachim Arnemann. "The Sociobiology of Male–Infant Interactions in Barbary Macaques,Macaca Sylvanus." *Animal Behaviour* 51, no. 1 (January 1996): 155–70. https://doi.org/10.1006/anbe.1996.0013.

Pedroni, F. Galetti, M. Paschoal, M. "Infanticide in the Brown Howler Monkey, Alouatta Fusca." *Neotropical Primates* 2, no. 4 (1994): 6–7.

Pereira, Michael E., and Peter M. Kappeler. "Divergent Systems of Agonistic Behaviour in Lemurid Primates." *Behaviour* 134, no. 3/4 (1997): 225–74.

Pereira, MichaelE., and MarkL. Weiss. "Female Mate Choice, Male Migration, and the Threat of Infanticide in Ringtailed Lemurs." *Behavioral Ecology and Sociobiology* 28, no. 2 (February 1991). https://doi.org/10.1007/BF00180991.

Perry, Elizabeth A., and Garry B. Stenson. "Observations On Nursing Behaviour of Hooded Seals, Cystophora Cristata." *Behaviour* 122, no. 1 (January 1, 1992): 1–10. https://doi.org/10.1163/156853992X00264.

Perry, Susan. "Female-Female Social Relationships in Wild White-Faced Capuchin Monkeys,Cebus Capucinus." *American Journal of Primatology* 40, no. 2 (1996): 167–82. https://doi.org/10.1002/(SICI)1098-2345(1996)40:2<167::AID-AJP4>3.0.CO;2-W.

Pluháček, Jan, Luděk Bartoš, and Jitka Víchová. "Variation in incidence of male infanticide within subspecies of plans zebra (Equus burchelli)." *Journal of Mammalogy* 87, no. 1 (February 2006): 35–40. https://doi.org/10.1644/05-MAMM-A-126R2.1.

Podgórski, Tomasz, David Lusseau, Massimo Scandura, Leif Sönnichsen, and Bogumiła Jędrzejewska. "Long-Lasting, Kin-Directed Female Interactions in a Spatially Structured Wild Boar Social Network." *PLoS ONE* 9, no. 6 (June 11, 2014). https://doi.org/10.1371/journal.pone.0099875.

Pontier, Dominique, and Eugenia Natoli. "Infanticide in Rural Male Cats (Felis Catus L.) as a Reproductive Mating Tactic." *Aggressive Behavior* 25, no. 6 (1999): 445–49. https://doi.org/10.1002/(SICI)1098-2337(1999)25:6<445::AID-AB5>3.0.CO;2-K.

Porter, Leila M. "Social Organization, Reproduction and Rearing Strategies of *Callimico Goeldii:* New Clues from the Wild." *Folia Primatologica* 72, no. 2 (2001): 69–79. https://doi.org/10.1159/000049925.

Porter, Richard H., and Helen M. Doane. "Studies of maternal behavior in spiny mice (Acomys cahirinus)." *Zeitschrift für Tierpsychologie* 47.3 (1978): 225-235. https://doi.org/10.1111/j.1439-0310.1978.tb01833.x

Pradhan, Gauri R., and Carel van Schaik. "Infanticide-Driven Intersexual Conflict over Matings in Primates and Its Effects on Social Organization." *Behaviour* 145, no. 2 (2008): 251–75.

Proffitt, Kelly M., Jay J. Rotella, and Robert A. Garrott. "Effects of Pup Age, Maternal Age, and Birth Date on Pre-Weaning Survival Rates of Weddell Seals in Erebus Bay, Antarctica." *Oikos* 119, no. 8 (February 16, 2010): 1255–64. https://doi.org/10.1111/j.1600-0706.2009.18098.x.

Pruetz, J. D., and L. A. Isbell. "Correlations of Food Distribution and Patch Size with Agonistic Interactions in Female Vervets (<Emphasis Type="Italic">Chlorocebus Aethiops</Emphasis>) and Patas Monkeys (<Emphasis Type="Italic">Erythrocebus Patas</Emphasis>) Living in Simple Habitats." *Behavioral Ecology and Sociobiology* 49, no. 1 (December 1, 2000): 38–47. https://doi.org/10.1007/s002650000272.

Pruetz, Jill. *The Socioecology of Adult Female Patas Monkeys and Vervets in Kenya*. Routledge, 2015.

Pusey, Anne, et al. "Severe aggression among female Pan troglodytes schweinfurthii at Gombe National Park, Tanzania." *International Journal of Primatology* 29.4 (2008): 949. https://doi.org/10.1007/s10764-008-9281-6

Qi, Xiao-Guang, Bao-Guo Li, Paul A. Garber, Weihong Ji, and Kunio Watanabe. "Social Dynamics of the Golden Snub-Nosed Monkey (*Rhinopithecus Roxellana*): Female Transfer and One-Male Unit Succession." *American Journal of Primatology* 71, no. 8 (August 2009): 670–79. https://doi.org/10.1002/ajp.20702.

Radhakrishna, S., and Sing, M. "Infant Development in the Slender Loris (Loris Lydekkerianus Lydekkerianus)." *Current Science* 86 (2004): 1121–27.

Ramírez-Llorens, P., M.S. Di Bitetti, M.C. Baldovino, and C.H. Janson. "Infanticide in Black Capuchin Monkeys (Cebus Apella Nigritus) in Iguazú National Park, Argentina." *American Journal of Primatology* 70, no. 5 (May 2008): 473–84. https://doi.org/10.1002/ajp.20522.

Ramos-Lara, Nicolás, John L. Koprowski, Boris Kryštufek, and Ilse E. Hoffmann. "*Spermophilus Citellus* (Rodentia: Sciuridae)." *Mammalian Species* 913 (December 12, 2014): 71–87. https://doi.org/10.1644/913.1.

Range, Friederike. "Social Behavior of Free-Ranging Juvenile Sooty Mangabeys (Cercocebus Torquatus Atys)." *Behavioral Ecology and Sociobiology* 59, no. 4 (February 2006): 511–20. https://doi.org/10.1007/s00265-005-0076-x.

Range, Friederike, and Ronald Noë. "Familiarity and Dominance Relations among Female Sooty Mangabeys in the Taï National Park." *American Journal of Primatology* 56, no. 3 (March 1, 2002): 137–53. https://doi.org/10.1002/ajp.1070.

Rasa, O.A.E. "Altruistic Infant Care or Infanticide: The Dwarf Mongooses' Dilemma." In *Infanticide and Parental Care*, edited by Parmigiani, S.., vom Saal, F.S., 301–20. Chur: Harwood Academic Press Publishers, 1994.

Rathbun, Galen B. "Rhynchocyon Chrysopygus." *Mammalian Species*, no. 117 (June 8, 1979): 1. https://doi.org/10.2307/3503789.

Rhind, S. G. "Reproductive Demographics among Brush-Tailed Phascogales (Phascogale Tapoatafa) in South-Western Australia." *Wildlife Research* 29, no. 3 (2002): 247. https://doi.org/10.1071/WR01013.

Rissman, Emilie F. "The Musk Shrew,Suncus Murinus, a Unique Animal Model for the Study of Female Behavioral Endocrinology." *Journal of Experimental Zoology* 256, no. S4 (1990): 207–9. https://doi.org/10.1002/jez.1402560445.

Roberts, Miles. "Growth, Development, and Parental Care in the Western Tarsier (Tarsius Bancanus) in Captivity: Evidence for a 'Slow' Life-History and Nonmonogamous Mating System." *International Journal of Primatology* 15, no. 1 (February 1994): 1–28. https://doi.org/10.1007/BF02735232.

Rood, John P. "Male Associations in a Solitary Mongoose." *Animal Behaviour* 38, no. 4 (October 1989): 725–28. https://doi.org/10.1016/S0003-3472(89)80024-7.

Roosmalen, Van, M. G. M, Van Roosmalen, and M. G. M. "Habitat Preferences, Diet, Feeding Strategy and Social Organization of the Black Spider Monkey [Ateles

Paniscus Paniscus Linnaeus 1758] in Surinam." *Acta Amazonica* 15 (1985): 7–238. https://doi.org/10.1590/1809-43921985155238.

Rutberg, Allen T. "Factors Influencing Dominance Status in American Bison Cows (Bison Bison)." *Zeitschrift Für Tierpsychologie* 63, no. 2–3 (January 12, 1983): 206–12. https://doi.org/10.1111/j.1439-0310.1983.tb00087.x.

S. Rasoloharijaona, B. Rakotosamimanana, E. Zimmermann. "Infanticide by a Male Milne-Edward's Sportive Lemur, Lepilemur Edwardsi, in Ampijoroa, NW-Madagascar." *International Journal of Primatology* 21 (2000): 41–45. https://doi.org/10.1023/A:1005419528718.

Sachser, Norbert. "Of Domestic and Wild Guinea Pigs: Studies in Sociophysiology, Domestication, and Social Evolution." *Naturwissenschaften* 85, no. 7 (July 27, 1998): 307–17. https://doi.org/10.1007/s001140050507.

Sæther, Bernt-Erik, Erling J. Solberg, Morten Heim, John E. Stacy, Kjetill S. Jakobsen, and Randi Olstad. "Offspring Sex Ratio in Moose *Alces Alces* in Relation to Paternal Age: An Experiment." *Wildlife Biology* 10, no. 1 (January 2004): 51–57. https://doi.org/10.2981/wlb.2004.009.

Samson, Claude, and Jean Huot. "Spatial and Temporal Interactions between Female American Black Bears in Mixed Forests of Eastern Canada." *Canadian Journal of Zoology* 79, no. 4 (April 2001): 633–41. https://doi.org/10.1139/z01-021.

Santos, F.C., Rodrigues, J., Correa, A.A., Groch, K.R. "Comportamento de pares de femea – filhote Eubalaena australis (Desmoulins, 1822) na temporada reprodutiva de 2008, enseada de rianceira e ibiraquera, Santa Catarina,." *Ensaios e Ciência Ciências Biológicas, Agrárias e Da Saúde* 14, no. 1 (2010): 83–101.

Sargeant, A.B., Greenwood, R.J., Piehl, J.L., and Bicknell, W.B. "Recurrence, Mortality, and Dispersal of Prairie Striped Skunks." *Canadian Field Naturalist* 96 (1982): 312–16.

Sauther, Michelle L., Robert W. Sussman, and Lisa Gould. "The Socioecology of the Ringtailed Lemur: Thirty-Five Years of Research." *Evolutionary Anthropology: Issues, News, and Reviews* 8, no. 4 (1999): 120–32. https://doi.org/10.1002/(SICI)1520-6505(1999)8:4<120::AID-EVAN3>3.0.CO;2-O.

Savage, A., L. H. Giraldo, L. H. Soto, and C. T. Snowdon. "Demography, Group Composition, and Dispersal in Wild Cotton-Top Tamarin (Saguinus Oedipus) Groups." *American Journal of Primatology* 38, no. 1 (1996): 85–100. https://doi.org/10.1002/(SICI)1098-2345(1996)38:1<85::AID-AJP7>3.0.CO;2-P.

Schradin, Carsten, and Neville Pillay. "Paternal Care in the Social and Diurnal Striped Mouse (Rhabdomys Pumilio): Laboratory and Field Evidence." *Journal of Comparative Psychology* 117, no. 3 (2003): 317–24. https://doi.org/10.1037/0735-7036.117.3.317.

Schultz, Lori A., and Richard K. Lore. "Communal reproductive success in rats (Rattus norvegicus): effects of group composition and prior social experience." *Journal of Comparative Psychology* 107.2 (1993): 216-22. https://doi.org/10.1037/0735-7036.107.2.216

Semb-Johansson, Arne, Richard Wiger, and Carl Erik Engh. "Dynamics of freely growing, confined populations of the Norwegian lemming Lemmus lemmus." *Oikos* (1979): 246-260.

Setchell, Joanna M., Phyllis C. Lee, E. Jean Wickings, and Alan F. Dixson. “Reproductive Parameters and Maternal Investment in Mandrills (Mandrillus Sphinx).” *International Journal of Primatology* 23, no. 1 (2002): 51–68. https://doi.org/10.1023/A:1013245707228.

Setchell, Joanna M., E. Jean Wickings, and Leslie A. Knapp. “Life History in Male Mandrills (Mandrillus Sphinx): Physical Development, Dominance Rank, and Group Association.” *American Journal of Physical Anthropology* 131, no. 4 (December 2006): 498–510. https://doi.org/10.1002/ajpa.20478.

Sherman, PW. “Reproductive Competition and Infanticide in Belding’s Ground Squirrels and Other Animals.” In *Natural and Social Behavior: Recent Research and New Theory*, Chiron Press New York. Alexander RD, Tinkle DW, 1981.

Sicotte, Pascale, Julie Teichroeb, Iulia Bădescu, and Eva Wikberg. “Individualistic Female Dominance Hierarchies with Varying Strength in a Highly Folivorous Population of Black-and-White Colobus.” *Behaviour* 150 (January 1, 2013): 1–26. https://doi.org/10.1163/1568539X-00003050.

Silk, Joan B. “Social Components of Fitness in Primate Groups.” *Science* 317, no. 5843 (2007): 1347–51. https://doi.org/10.1126/science.1140734.

Silk, Joan B., Amy Samuels, and Peter S. Rodman. “Hierarchical Organization of Female<Emphasis Type="Italic">Macaca Radiata</Emphasis> in Captivity.” *Primates* 22, no. 1 (January 1, 1981): 84–95. https://doi.org/10.1007/BF02382559.

Silk, Joan B., et al. "Differential reproductive success and facultative adjustment of sex ratios among captive female bonnet macaques (Macaca radiata)." *Animal Behaviour* 29.4 (1981): 1106-1120. https://doi.org/10.1016/S0003-3472(81)80063-2

Sillero-Zubiri, Claudio, Dada Gottelli, and D. W. Macdonald. “Male Philopatry, Extra-Pack Copulations and Inbreeding Avoidance in Ethiopian Wolves (Canis Simensis).” *Behavioral Ecology and Sociobiology* 38, no. 5 (May 20, 1996): 331–40. https://doi.org/10.1007/s002650050249.

Slater, Kathy Y., Colleen M. Schaffner, and Filippo Aureli. “Sex Differences in the Social Behavior of Wild Spider Monkeys (*Ateles Geoffroyi Yucatanensis*).” *American Journal of Primatology* 71, no. 1 (January 2009): 21–29. https://doi.org/10.1002/ajp.20618.

Smith, Bradley. *The Dingo Debate: Origins, Behaviour and Conservation*. Csiro Publishing, 2015.

Smith, Rebecca K., Andrae Marais, Peter Chadwick, Peter H. Lloyd, and Russell A. Hill. “Monitoring and Management of the Endangered Cape Mountain Zebra Equus Zebra Zebra in the Western Cape, South Africa.” *African Journal of Ecology* 46, no. 2 (June 2008): 207–13. https://doi.org/10.1111/j.1365-2028.2007.00893.x.

Smuts, Barbara B. *Sex and Friendship in Baboons*. Routledge, 1985.

Soares, Thannya Nascimento, Mariana P.C. Telles, Lucileide V. Resende, Leandro Silveira, Anah Tereza A. Jácomo, Ronaldo G. Morato, José Alexandre F. Diniz-Filho, Eduardo Eizirik, Rosana P.V. Brondani, and Claudio Brondani. "Paternity Testing and Behavioral Ecology: A Case Study of Jaguars (Panthera Onca) in Emas National Park, Central Brazil." *Genetics and Molecular Biology* 29, no. 4 (2006): 735–40. https://doi.org/10.1590/S1415-47572006000400025.

Solanski, G., and Zothansiama, S. "Infanticide in Captive Stump-Tailed Macaques (Macaca Arctoides) Is in Accordance with the Sexual Selection Hypothesis." *Current Science*, no. 104 (2013): 1081–83.

Somers, Michael J., O. Anne E. Rasa, and Barend L. Penzhorn. "Group Structure and Social Behaviour of Warthogs Phacochoerus Aethiopicus." *Acta Theriologica* 40 (June 9, 1995): 257–81. https://doi.org/10.4098/AT.arch.95-25.

Stanger, Kathrin F., Barbara S. Coffman, and M. Kay Izard. "Reproduction in Coquerel's Dwarf Lemur (Mirza Coquereli)." *American Journal of Primatology* 36, no. 3 (1995): 223–37. https://doi.org/10.1002/ajp.1350360306.

Steenbeek, R. "Infanticide by Males and Female Choice in Wild Thomas's Langurs." In *Infanticide by Males and Its Implications*, edited by Janson van Schaik, C.P. C.H., 153–77. Cambridge: Cambridge University Press, 2000.

Stevens, Scott D. "High incidence of infanticide by lactating females in a population of Columbian ground squirrels (Spermophilus columbianus)." *Canadian Journal of Zoology* 76.6 (1998): 1183-1187. https://doi.org/10.1139/z98-045

Stevenson, Pablo R. "Activity and Ranging Patterns of Colombian Woolly Monkeys in North-Western Amazonia." *Primates* 47, no. 3 (July 2006): 239–47. https://doi.org/10.1007/s10329-005-0172-6.

Stockley, Paula, and Jakob Bro-Jørgensen. "Female Competition and Its Evolutionary Consequences in Mammals." *Biological Reviews of the Cambridge Philosophical Society* 86, no. 2 (May 2011): 341–66. https://doi.org/10.1111/j.1469-185X.2010.00149.x.

Stokes, Emma J, Richard J Parnell, and Claudia Olejniczak. "Female Dispersal and Reproductive Success in Wild Western Lowland Gorillas (Gorilla Gorilla Gorilla)." *Behavioral Ecology and Sociobiology* 54, no. 4 (September 1, 2003): 329–39. https://doi.org/10.1007/s00265-003-0630-3.

Strier, Karen B. "Brotherhoods Among Atelins: Kinship, Affiliation, and Competition." *Behaviour* 130, no. 3 (January 1, 1994): 151–67. https://doi.org/10.1163/156853994X00505.

Strier, Karen B. "New World Primates, New Frontiers: Insights from the Woolly Spider Monkey, or Muriqui (Brachyteles Arachnoides)." *International Journal of Primatology* 11, no. 1 (February 1990): 7–19. https://doi.org/10.1007/BF02193693.

Strier, K.B., Mendes, S.L. "The Northern Muriqui (Brachyteles Hypoxanthus): Lessons on Behavioral Plasticity and Population Dynamics from a Critically Endangered Species." In *Long-Term Field Studies of Primates*, edited by Kappeler, P. M., Watts, D. Berlin: Springer, 2012.

Struhsaker, Thomas T., and Lysa Leland. “Infanticide in a Patrilineal Society of Red Colobus Monkeys.” *Zeitschrift Für Tierpsychologie* 69, no. 2 (April 26, 2010): 89–132. https://doi.org/10.1111/j.1439-0310.1985.tb00139.x.

Sugiyama, Y. “Social Organization of Hanuman Langurs.” In *Social Communication among Primates*, edited by Altmann, S.A., 221–36. Chicago: University of Chicago Press, 1967.

Symington, M. McFarland. “Sex Ratio and Maternal Rank in Wild Spider Monkeys: When Daughters Disperse.” *Behavioral Ecology and Sociobiology* 20, no. 6 (June 1987): 421–25. https://doi.org/10.1007/BF00302985.

Taber, A. B., and D. W. Macdonald. “Communal Breeding in the Mara, *Dolichotis Patagonum*.” *Journal of Zoology* 227, no. 3 (July 1992): 439–52. https://doi.org/10.1111/j.1469-7998.1992.tb04405.x.

Taylor, Mitchell, Thor Larsen, and R.E. Schweinsburg. “Observations of Intraspecific Aggression and Cannibalism in Polar Bears (*Ursus Maritimus*).” *ARCTIC* 38, no. 4 (January 1, 1985). https://doi.org/10.14430/arctic2149.

Teichroeb, Julie A., Eva C. Wikberg, Iulia Bădescu, Lisa J. Macdonald, and Pascale Sicotte. “Infanticide Risk and Male Quality Influence Optimal Group Composition for Colobus Vellerosus.” *Behavioral Ecology* 23, no. 6 (2012): 1348–59. https://doi.org/10.1093/beheco/ars128.

Thierry, Bernard. “Feedback Loop between Kinship and Dominance: The Macaque Model.” *Journal of Theoretical Biology* 145, no. 4 (August 23, 1990): 511–22. https://doi.org/10.1016/S0022-5193(05)80485-0.

Thierry, Bernard.. “Unity in Diversity: Lessons from Macaque Societies.” *Evolutionary Anthropology: Issues, News, and Reviews* 16, no. 6 (November 1, 2007): 224–38. https://doi.org/10.1002/evan.20147.

Thomas, Jeanette, Vladamir Pastukhov, Robert Elsner, and Eugene Petrov. “Phoca Sibirica.” *Mammalian Species*, no. 188 (November 23, 1982): 1. https://doi.org/10.2307/3503825.

Tiddi, Barbara, Filippo Aureli, and Gabriele Schino. “Grooming Up the Hierarchy: The Exchange of Grooming and Rank-Related Benefits in a New World Primate.” *PLOS ONE* 7, no. 5 (mai 2012): e36641. https://doi.org/10.1371/journal.pone.0036641.

Topping, Michael G., and John S. Millar. “Mating Patterns and Reproductive Success in the Bushy-Tailed Woodrat (Neotoma Cinerea), as Revealed by DNA Fingerprinting.” *Behavioral Ecology and Sociobiology* 43, no. 2 (July 24, 1998): 115–24. https://doi.org/10.1007/s002650050473.

Townsend, Simon W., Katie E. Slocombe, Melissa Emery Thompson, and Klaus Zuberbühler. “Female-Led Infanticide in Wild Chimpanzees.” *Current Biology* 17, no. 10 (May 2007): R355–56. https://doi.org/10.1016/j.cub.2007.03.020.

Treves, Adian. “Primate Social Systems: Conspecific Threat and Coercion-Defense Hypotheses.” *Folia Primatologica* 69, no. 2 (1998): 81–88. https://doi.org/10.1159/000021567.

Treves, Adrian, Ann Drescher, and Charles T. Snowdon. "Maternal Watchfulness in Black Howler Monkeys (Alouatta Pigra)." *Ethology* 109, no. 2 (February 2003): 135–46. https://doi.org/10.1046/j.1439-0310.2003.00853.x.

Trillmich, F. "Maternal Investment and Sex-Allocation in the Galapagos Fur Seal, Arctocephalus Galapagoensis." *Behavioral Ecology and Sociobiology* 3 (1986): 157–64. https://doi.org/10.1007/BF00300855.

Trulio, Lynne A. "The functional significance of infanticide in a population of California ground squirrels (Spermophilus beecheyi)." *Behavioral Ecology and Sociobiology* 38.2 (1996): 97-103. https://doi.org/10.1007/s002650050222

Schaik, C. P. van, and R. I. M. Dunbar. "The Evolution of Monogamy in Large Primates: A New Hypothesis and Some Crucial Tests." *Behaviour* 115, no. 1/2 (1990): 30–62.

Schaik, C P van, and P M Kappeler. "Infanticide Risk and the Evolution of Male-Female Association in Primates." *Proceedings of the Royal Society B: Biological Sciences* 264, no. 1388 (November 22, 1997): 1687–94.

Schaik, Carel P. van. "The Ecology of Social Relationships amongst Female Primates." In *Comparative Socio-Ecology: The Behavioural Ecology of Humans and Other Mammals.*, Blackwell., 195–218. Oxford: Standen V, Foley RA, 1989.

Schaik, Carel P. van, and Charles H. Janson. *Infanticide by Males and Its Implications*. Cambridge University Press, 2000.

Van Belle, Sarie, Aimee E. Kulp, Robyn Thiessen-Bock, Marisol Garcia, and Alejandro Estrada. "Observed Infanticides Following a Male Immigration Event in Black Howler Monkeys, Alouatta Pigra, at Palenque National Park, Mexico." *Primates* 51, no. 4 (October 2010): 279–84. https://doi.org/10.1007/s10329-010-0207-5.

van Lawick, H. *Solo: The Story of an African Wild Dog*. Boston: Houghton Mifflin, 1974.

van Noordwijk, M. A., van Schaik, C.P. "Reproductive Patterns in Eutherian Mammals: Adaptations against Infanticide?" In *Infanticide by Males and Its Implications*, edited by Janson van Schaik, C.P. C.H., 322–60. Cambridge: Cambridge University Press, 2000.

Van Vuren, Dirk H., Martin P. Bray, and Jeannie M. Heltzel. "Differential Investment in Twin Offspring by Female Pronghorns (*Antilocapra Americana*)." *Journal of Mammalogy* 94, no. 1 (February 2013): 155–61. https://doi.org/10.1644/12-MAMM-A-107.1.

Vella, Emily T., et al. "Ontogeny of the transition from killer to caregiver in dwarf hamsters (Phodopus campbelli) with biparental care." *Developmental psychobiology* 46.2 (2005): 75-85. https://doi.org/10.1002/dev.20047

Verdolin, J. L., and C. N. Slobodchikoff. "Resources, Not Kinship, Determine Social Patterning in the Territorial Gunnison's Prairie Dog (Cynomys Gunnisoni)." *Ethology* 115, no. 1 (January 1, 2009): 59–69. https://doi.org/10.1111/j.1439-0310.2008.01590.x.

Vergara, Valeria. "Two cases of infanticide in a red fox, Vulpes vulpes, family in southern Ontario." *Canadian Field-Naturalist* 115.1 (2001): 170-173.

Vervaecke, Hilde, Catherine Roden, and Han de Vries. "Dominance, Fatness and Fitness in Female American Bison, Bison Bison." *Animal Behaviour* 70, no. 4 (October 2005): 763–70. https://doi.org/10.1016/j.anbehav.2004.12.018.

Wagner, Aaron P., Scott Creel, Laurence G. Frank, and Steven T. Kalinowski. "Patterns of Relatedness and Parentage in an Asocial, Polyandrous Striped Hyena Population." *Molecular Ecology* 16, no. 20 (October 2007): 4356–69. https://doi.org/10.1111/j.1365-294X.2007.03470.x.

Wagner, Aaron P., Laurence G. Frank, and Scott Creel. "Spatial Grouping in Behaviourally Solitary Striped Hyaenas, Hyaena Hyaena." *Animal Behaviour* 75, no. 3 (March 2008): 1131–42. https://doi.org/10.1016/j.anbehav.2007.08.025.

Ward, Sj. "Life-History of the Feathertail Glider, Acrobates-Pygmaeus (Acrobatidae, Marsupialia) in South-Eastern Australia." *Australian Journal of Zoology* 38, no. 5 (1990): 503. https://doi.org/10.1071/ZO9900503.

Waterman, Jane M. "The Social Organization of the Cape Ground Squirrel (Xerus Inauris; Rodentia: Sciuridae)." *Ethology* 101, no. 2 (April 26, 2010): 130–47. https://doi.org/10.1111/j.1439-0310.1995.tb00352.x.

Weladji, Robert B., and Karine Laflamme-Mayer. "Influence of Environmental Conditions on Sex Allocation in the Black Rhinoceros Population of Mkhuze Game Reserve, South Africa: Sex Allocation in Black Rhinoceros." *African Journal of Ecology* 49, no. 4 (December 2011): 471–80. https://doi.org/10.1111/j.1365-2028.2011.01280.x.

Wells, Randall S., Michael D. Scott, and A. Blair Irvine. "The Social Structure of Free-Ranging Bottlenose Dolphins." In *Current Mammalogy*, 247–305. Springer, Boston, MA, 1987. https://doi.org/10.1007/978-1-4757-9909-5 7.

Welker, Christian, and Cornelia Schaäfer-Witt. "Preliminary observations on behavioral differences among thick-tailed bushbabies." *International journal of primatology* 9.6 (1988): 509-518.

White, Paula A. "Maternal rank is not correlated with cub survival in the spotted hyena, Crocuta crocuta." *Behavioral Ecology* 16.3 (2005): 606-613. https://doi.org/10.1093/beheco/ari033

Wielgus, Robert B, and Fred L Bunnell. "Possible Negative Effects of Adult Male Mortality on Female Grizzly Bear Reproduction." *Biological Conservation* 93, no. 2 (April 2000): 145–54. https://doi.org/10.1016/S0006-3207(99)00152-4.

Wikberg, Eva C., Pascale Sicotte, Fernando A. Campos, and Nelson Ting. "Between-Group Variation in Female Dispersal, Kin Composition of Groups, and Proximity Patterns in a Black-and-White Colobus Monkey (Colobus Vellerosus)." *PLOS ONE* 7, no. 11 (November 7, 2012): e48740. https://doi.org/10.1371/journal.pone.0048740.

Wittemyer, G., and W.M. Getz. "Hierarchical Dominance Structure and Social Organization in African Elephants, Loxodonta Africana." *Animal Behaviour* 73, no. 4 (April 2007): 671–81. https://doi.org/10.1016/j.anbehav.2006.10.008.

Wolff, Jerry O., and Donna M. Cicirello. "Comparative paternal and infanticidal behavior of sympatric white-footed mice (Peromyscus leucopus noveboracensis) and deermice (P. maniculatus nubiterrae)." *Behavioral Ecology* 2.1 (1991): 38-45. https://doi.org/10.1093/beheco/2.1.38

Wolff, Jerry O., and David W. Macdonald. "Promiscuous Females Protect Their Offspring." *Trends in Ecology & Evolution* 19, no. 3 (March 2004): 127–34. https://doi.org/10.1016/j.tree.2003.12.009.

Wolff, Jerry O., W. Daniel Edge, and Guiming Wang. "Effects of adult sex ratios on recruitment of juvenile gray-tailed voles, Microtus canicaudus." Journal of Mammalogy 83.4 (2002): 947-956. https://doi.org/10.1644/1545-1542(2002)083<0947:EOASRO>2.0.CO;2

Wrangham, Richard W. "An Ecological Model of Female-Bonded Primate Groups." *Behaviour* 75 (1980): 262–300.

Wright, Patricia C. "Demography and Life History of Free-RangingPropithecus Diadema Edwardsi in Ranomafana National Park, Madagascar." *International Journal of Primatology* 16, no. 5 (October 1995): 835–54. https://doi.org/10.1007/BF02735722.

Wroblewski, Emily E., Carson M. Murray, Brandon F. Keele, Joann C. Schumacher-Stankey, Beatrice H. Hahn, and Anne E. Pusey. "Male Dominance Rank and Reproductive Success in Chimpanzees, Pan Troglodytes Schweinfurthii." *Animal Behaviour* 77, no. 4 (2009): 873–85. https://doi.org/10.1016/j.anbehav.2008.12.014.

Xiang, Zuo-fu, and Cyril C. Grueter. "First Direct Evidence of Infanticide and Cannibalism in Wild Snub-Nosed Monkeys (Rhinopithecus Bieti)." *American Journal of Primatology* 69, no. 3 (March 2007): 249–54. https://doi.org/10.1002/ajp.20333.

Yu, Xiaodong, and Jiming Fang. "A preliminary study on effects of kinship on parental care and infanticide of brandt's voles (Microtus brandti)." Acta theriologica sinica 23.4 (2003): 326-331. https://europepmc.org/abstract/cba/528685

Ylönen, Hannu, Esa Koskela, and Tapio Mappes. "Infanticide in the bank vole (Clethrionomys glareolus): occurrence and the effect of familiarity on female infanticide." *Annales Zoologici Fennici*. Finnish Zoological and Botanical Publishing Board, 1997.

Young, Andrew J., and Tim Clutton-Brock. "Infanticide by Subordinates Influences Reproductive Sharing in Cooperatively Breeding Meerkats." *Biology Letters* 2, no. 3 (September 22, 2006): 385–87. https://doi.org/10.1098/rsbl.2006.0463.

Zhang, Shuyi, Bing Liang, and Lixin Wang. "Infanticide within Captive Groups of Sichuan Golden Snub-Nosed Monkeys *(Rhinopithecus Roxellana)*." *Folia Primatologica* 70, no. 5 (1999): 274–76. https://doi.org/10.1159/000021707.

Zhao, Qing, Carola Borries, and Wenshi Pan. "Male Takeover, Infanticide, and Female Countertactics in White-Headed Leaf Monkeys (Trachypithecus Leucocephalus)." *Behavioral Ecology and Sociobiology* 65, no. 8 (August 2011): 1535–47. https://doi.org/10.1007/s00265-011-1163-9.

Zimbler-Delorenzo, Heather S., and Anita I. Stone. "Integration of Field and Captive Studies for Understanding the Behavioral Ecology of the Squirrel Monkey (Saimiri

Sp.).” *American Journal of Primatology* 73, no. 7 (July 2011): 607–22. https://doi.org/10.1002/ajp.20946.

Ziporyn, Terra, and Martha K. McClintock. “Passing as an Indicator of Social Dominance Among Female Wild and Domestic Norway Rats.” *Behaviour* 118, no. 1 (January 1, 1991): 26–41. https://doi.org/10.1163/156853991X00184.

Zucker, Evan L., and Margaret R. Clarke. “Agonistic and Affiliative Relationships of Adult Female Howlers (<Emphasis Type="Italic">Alouatta Palliata</Emphasis>) in Costa Rica Over a 4-Year Period.” *International Journal of Primatology* 19, no. 3 (June 1, 1998): 433–49. https://doi.org/10.1023/A:1020356321396.

Supplementary File 2 for Lukas & Huchard: The evolution of infanticide by females in mammals

Credit for animal drawings used in Figure 1

All drawings were downloaded from PhyloPic: http://phylopic.org

Picture information is listed as:

Common name listed in figure (taxon identifier for picture on PhyloPic): Author

Starting from top, clockwise:

Old World primate (*Papio*): Uncredited

Hare (*Leporidae*): Sarah Werning

Squirrel (*Sciuridae*): Catherine Yasuda

Marmot (*Marmota monax*): Michael Keesey

Mice (*Muridae*): Madeleine Price Ball

Marsupial (*Marsupialia*): Sarah Werning

Bat (*Chiroptera*): Michael Keesey

Mongoose (*Herpestoidae*): Michael Keesey

Felids (*Panthera*): Sarah Werning

Canids (*Canidae*): Michael Keesey

Bear (*Ursus*): Steven Traver

Seal & sealions (*Pinnipedia*): Steven Traver

Marten (*Meles*): Uncredited

Ungulate (*Cervus*): Steven Traver

Lemur (*Daubentonia*): Uncredited

Great ape (*Gorilla*): Michael Keesey

New World primate (*Cebus*): Sarah Werning