

BIO 45 – Lect., 3-7 -- CATS AND DOGS: CONTRASTS IN SOCIAL BEHAVIOR

I. CATS AND DOGS - MAJOR DIFFERENCES BETWEEN TAXA

CATS

1. Pouncers, can get prey larger than itself
2. Courtship and pair-bond short term
3. Small litters 1-5 (mean = 3)
4. Male plays little or no role in parental care
5. Most solitary, some house cats & lions are social
6. Social behavior from mother - family origin

DOGS

1. Runners, mostly small prey - packs get larger prey
2. Courtship longer, pair-bond seasonal or permanent
3. Larger litters 2-13 (mean = 5)
4. Males may be parental, bring food to young
5. Many species social
6. Social behavior from pair bond plus kids

II. SERENGETI CARNIVORES – A brief comparison of SOCIAL BEHAVIOR

CHARACTERISTIC	CHEETAH	LION	HYENA*	WILD DOG
# Adults In Group	1	9(4-15)	55 (35-80)	7 (2-19)
Sex Ratio Males/Females	0/1	2-3/3-9	15-30/15-30	2-6/2-3
# Reproducing Males	--	all	all	1
# Reproducing Females	1	all	All***	1
Female Home Range (Km ²)	1300	20-150	20-40	1500
Sexual Dimorphism	none	mane in male	none	none
Male Wt As % Female Wt	120%	150%	88%	115%
Litter Size	3-5	2-4	2	9-10
Suckling Period	2-3 mo.	6-8 mo.	12 mo.	1.25 mo.
Dependent Period	14-18 mo.	24-30 mo.	18 mo.	12-18 mo.
Communal Suckling?	no	yes	no	no
Cooperative Feeding?	none	none	none	yes
Who Disperses?	--	males	most stay	females
Major Hunting Time	daytime	night	night/dawn	daytime
# Hunting Together	1	1-5	1-3, 4-20	whole pack
Hunting Method	stalk	stalk	pursue	pursue
Distance Prey Chased	<350 m	<200 m	.2-3 km	.5-2.5 km
Capture Success	37-70%	15-30%	35%	50-70%
% Kills Lost To Other Spp	10-12%	almost none	5-20%	50%

* = Spotted hyena *** = dominant females have higher success

III. QUESTIONS ABOUT LIONS

Lions are the only truly social cat. Some feral house cats may live in social groupings, but there are no stable groups of related females as in lions (see Natoli, E. & Devito, E. 1991. *Anim Behav*, **42**:227-241). Several long term studies of lions on the Serengeti (Schaller, Bertram and Packer & Pusey) now give us a good understanding of lion social structure and dynamics. Lions are no longer seen as the "king of the beasts" or an example of lazy males being taken care of by a harem of females. Most cubs die of starvation or predation (80%) and males may get only one brief chance at reproduction before being driven away from the pride they defend by another group of males. Infanticide by new males may account for 25% of cub mortality.

We will look at some questions arising from these studies, including how can lions be so cooperative (feed each other's young) and yet abandon their cubs to starvation and to male infanticide.