

often timed synchronously, so most cubs often end up being reared with other cubs in a "crèche". Cubs are nursed until they are 6 to 8 months old, however, they continue to be dependent on their mother until at least 16 months of age.

#### **Lion Roaring:**

Male lions begin roaring at around 1 year of age, while females will begin roaring a couple of months later. Lions can roar from any position, however, they generally tend to be standing. The reasons for roaring tend to be: to proclaim a pride's territory; to communicate to other pride members when separated; as an aggressive gesture during violent interactions with other lions; and possibly to strengthen bonds with other pride members with chorus roaring. Lions do not typically roar while hunting/stalking prey.

#### **Prey Species:**

Lions are opportunists when it comes to feeding. They will scavenge from other predators that have killed an animal, or will hunt animals ranging in size from the large African buffalo to a small hare.

Based on observations conducted in the Serengeti from 1966 to 1991, seven species represented over 90 % of the diet of lions. They were: wildebeest, zebra, Thompson's gazelle, buffalo, warthog, kongoni (hartebeest), and topi.

Lions do not vary their hunting frequency of buffalo. Only large lion prides tend to hunt buffalo, and typically go after solitary bulls rather than stalk and take on a whole herd of buffalo.

#### **Hunting Strategies:**

Lions hunting in groups of two or more successfully catch prey approximately 30% of the time, whereas individual lions are successful on only 17% of their hunts.

#### **How to Identify Individual Lions:**

Lions can be identified by recording the spots on their muzzle. Lions have 4 or 5 parallel rows of vibrissae, or whisker spots, on either side of its muzzle. Lionologists concentrate on the few extra spots above the topmost row (the "reference" row), and sometimes the spots are in the shape of a triangle. Other lions have just two or three spots in a straight line. The spots usually differ on each side of the face, and their relative position above the reference row is different on every animal. Whisker spots are easily detected in even the smallest cubs, and they remain the same throughout the lion's life.

#### **Sources of Information:**

Most of the information contained on this web page was taken from articles on this website or from the books listed in Further Reading: gazelle, buffalo, warthog, kongoni (hartebeest), and topi.

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# **Kansas City Zoo**

## **Presents Lions**



#### **Information:**

Zoo (816) 513-5700  
Friends of the Zoo (816) 513-5800  
Sprint IMAX Theatre (816) 513-IMAX  
Education Zooline (816) 513-5723  
Zoo Docents (816) 513-5730

#### **Mailing Address:**

Kansas City Zoo  
6800 Zoo Drive  
Kansas City, MO 64132

## A Basic Introduction to Lion Society

### Physical Characteristics of Lions:

Lions ('Panthera Leo') are the second largest members



of the feline family in the world, with only the tiger physically larger. Adult male lions weigh on average 416 pounds (189 kilograms) while female lions weigh 277 pounds (126 kilograms). Lions are tan in color and have a slightly white under-body, with a tuft of black hair at the end of their tails. Albinism and other genetic mutations that lead to white fur do occur occasionally with lions, however, while Jaguars, leopards, and several of the smaller spotted cats

all show occasional examples of melanism (black fur over all their body), there have not been any published reports occurring in lions.

Male lions are typically 4 feet in height (1.2 meters), with a large mane of hair that begins to develop around age two that surrounds the neck. The mane can vary in color from tawny/tan to black.

Females are 44 inches (1.1 meters) in height, and have no mane around their neck. Cubs are born with a slightly spotted coat, that changes to their parents tawny coloration around three months of age. Female lions live longer than males, and Serengeti female lions can live up to age 18, whereas males typically live up to age 12. Lions have 30 teeth.



### Classification of Lions:

Lions are members of the 'Panthera leo' species. Currently most people recognize two subspecies of lions. One is the Asiatic lion (Panthera leo persica) and the other is the African lion (P.l. leo) after O'Brien's work published in 1986.

### The list of different classifications includes:

Panthera leo leo (Barbary lion: extinct)  
P.l.persica (Asiatic lion)  
P.l.melanochaita (Cape lion: extinct)  
P.l.senegalensis (west African lion)

P.l.azandica (north east Congo lion)  
P.l.nubica (east African lion)  
P.l.bleyenberghi (Katanga lion)  
P.l.krugeri (south African lion)

There is no confusion about the first three. Usually, the west African lion is called the Senegal lion, the traditional name for azandica. East African lion includes traditional names such as the Masai lion (massaicus), Serengeti lion (massaicus), Somali lion (somaliensis), Congo lion hollisteri), and Abyssinian lion (roosevelti). The Katanga lion may be called Angolan lion or south Congo lion. The South African lion is usually called Transvaal lion and includes Kalahari lion (verneyi).

### Group Structure:

Lions are the only 'social' cats, whereby related female lions live together and form groups called 'prides'. Lion prides are family groups with all of the females related, mothers and daughters, sisters and cousins, etc.

A pride can range from three to 30 individuals, but tend to average about fifteen members, which include male and female lions plus a number of cubs. The number of lions in a pride will vary significantly based on the number of prey animals that live or migrate through the pride's territory.

A pride of lions will live in a territory that they will defend from other lions. Lions identify their territory by roaring loudly or by physically scent marking trees or rock outcrops. While female lions will hunt and kill most of the animals for the pride to eat, male lions are around primarily to defend the territory from other lion prides or nomadic male lions.

While female lions will live with the pride for life, male lions will only last two to four years before they are evicted or killed by a new coalition of male lions that take over the pride.

### Male Coalitions/Male Behavior:

Male lions leave their pride of birth between the ages of two and four, and sets of male cubs born together will remain together throughout their lives. Male coalitions are not always blood relatives since males can team up with other independent males during their nomadic years. Nearly two-thirds of all male pairs and nearly half of all trios contain unrelated partners.

Large male coalitions can always outcompete smaller male coalitions for taking over a pride of females, and such coalitions may include as many as nine males. Within the coalition however, it is every male for himself when a female comes into estrus.

The consorting male stays close to the female for four or five days and warns off his male companions. Rarely does overt fighting break out between partners.

While male lions that form larger coalitions will be more successful in acquiring territory, the chances than an individual male lion will father offspring is not shared equally. Males only achieve equal mating success in pairs.

Male lions have an unconditional affection for their coalition partners, whether they are blood relatives or not. Males will always cooperate with each other in defending their territory and their pride from other intruding male lions. Even when members of a coalition are temporarily separated from each other, they will still defend their territory from intruders, even when they are outnumbered.

### Mating:

Females start breeding at age four, and can come into heat at any time of the year, however, prides tend to

synchronize reproduction. This could be due to new male coalitions taking over the pride and the death of their previous litter of cubs. It is estimated that lions must copulate 3,000 times for every cub year of age. Estrus will last from 2 to 6 days, and during this and female lion will mate 2 to 3 times per hour. Upon successful conception, the gestation period is 14 to 15 weeks (around 110 days). Females won't come into heat for another 20 to 30 months are a litter is born, however, if their cubs are killed, females can come into heat within four days of death of the cubs.



### Cub rearing:

Cubs are born after a gestation period of 110 days, with female lions giving birth in a den site, typically located in a rock outcrop or in dense vegetation. A female will on average give birth to three cubs that are between 2 to 4 pounds in weight. The cubs' eyes open between three to eleven days of age, and begin walking at 10 to 15 days. When the cubs are between four to six weeks old, the mother brings them out to the rest of the pride. Births within the pride are