

Cebus albifrons (White-fronted Capuchin)

Family: Cebidae (Capuchin and Squirrel Monkeys)

Order: Primates (Lemurs, Monkeys and Apes)

Class: Mammalia (Mammals)



Fig. 1. *Cebus albifrons* (White-fronted Capuchin)

[http://en.wikipedia.org/wiki/White-fronted_capuchin, downloaded 7th November, 2011]

TRAITS. This species of capuchin monkey is slim with long limbs and possesses a somewhat prehensile tail which is normally held coiled. Their tail can also be strong enough to hold the weight of its body also the tail of the males can have a lighter tip. The color of the monkey differs among ranges being mainly different shades of brown (Long, 2003). They vary little from the white face and chest (Fig. 1), with other areas being black, pale yellow grey and sometimes grey brown. They have full body hair also on the tail which appears to be silky and shiny (Nowak, 1999). The males are larger than the female (sexual dimorphism), where the males weigh approximately 3.4 kg and the female 2.9 kg (Encyclopedia of Life, 2011). Sometime because of the season the coat color can change darker in the rain and lighter in the drier seasons (Encyclopedia of Life, 2011). They have strong jaws and dental structure. They are very smart

creatures as they have a large brain compared to the body size. These like other monkey species have opposable thumbs and a strong grip of the hands which allows a wide range of movement and foraging activities (Fragaszy, 2005). In captivity they are expected to live for about 40 years (Encyclopedia of Life, 2011).

ECOLOGY. *Cebus albifrons* are diurnal and are very active creatures, mainly arboreal (Fig. 3, where the capuchin is feeding on a tree) however are capable of foraging the ground layer, found in both deciduous and evergreen forested areas (Long, 2003). Capuchins are found in a wide diversity of forested areas. *Cebus* can be found in seven locations; six within South America (Venezuela, Brazil, Ecuador, parts of Peru and Colombia) and in Trinidad and Tobago. In Trinidad the subspecies *Cebus albifrons trinitatis* can be seen in the Nariva swamp where it forages the trees and can also visit the ground where it collects fruits (Encyclopedia of Life, 2011).

SOCIAL ORGANISATION. *Cebus* are active diurnal monkeys, mainly arboreal and at times territorial. There is one male adult in a troop and defend a large restricted territory. A group ranges from 10 – 35 individuals occupying 35 square kilometers (Nowak, 1999). However the number in a group can vary depending on its location and competition for food. From studies done in Colombia it was seen that under normal circumstances the group would be large, however due to competition in other locations with other Capuchin species the group was reduced (Encyclopedia of Life, 2011).

The group contains more adult females; however a dominant male leads the group. Throughout their entire lives they will live in groups where they feed, travel and even sleep close together. During travels if an individual gets lost it calls loudly to get the attention of the group whilst it searches about until he locates his group (Fragaszy, 2005). All males within a group get along however when they meet with males from rival groups (this may be of other species or even of the same species from a different band) aggression can build. The alpha male (dominant individual) of the group is closely monitored by the males of the group and follow him and his behaviour very closely.

Capuchins are so social they can nearly never be alone. As seen from Fragaszy's research they can even live with other species of monkeys (the spider monkeys), however this is best done when the individual is young, where young capuchins can be introduced into another species colony to live (Fragaszy, 2005). Whilst most of their time is spent on foraging a lot of time is also spent on grooming where it is a norm for the alpha male and dominant females to receive the majority of grooming from other members of the group (which they almost never return). Amongst the group communal grooming is highly present, where individuals groom each other (Fragaszy, 2005).

FORAGING BEHAVIOUR. *Cebus albifrons* feed mainly on fruits (frugivores) (Fig. 4) which they search for on the trees and when they are scarce on trees they visit the ground where they become terrestrial. They sometimes feed on insects and lesser invertebrates. From research it was seen that they only do this whilst on their way looking for fruit trees or when fruits are scarce. They also feed on various palm fruits and nuts and nectar during fruit shortage (Encyclopedia of Life, 2011). Capuchins may also feed on young birds, eggs and even on the young shoots of plants (Fig. 3) (Long, 2003). Since they travel about feeding they help to scatter seeds of the fruits they eat helping to establish new plants (Mijal, 2008).

According to studies done it was noticed that capuchins are able to manipulate objects to feed themselves. They search dried and rolled leaves for insects and other small edible creatures which they consume. In the *Cebus albifrons trinitatis* subspecies it was seen that they use leaves for making cups to drink water and are able to manipulate other objects to their advantage (Phillips, 1998). Also it was observed from reconnaissance of this species at the Emperor Valley Zoo that when they find a suitable food, it uses its hands to break off parts of the material and eats it, other parts are broken off and may be thrown away. It also appears to be very curious to the food; observing it at all angles.

COMMUNICATION. Vocal communication is very important to these creatures where they have various chatters which they use to communicate with each other and maybe with other animals. Calls are used when there is potential danger as an alert call where they also show their teeth (fig. 2) as a sign of aggression, another call used whilst keeping in contact with the group or a particular individual as well as when they ward off an attacker (Nowak, 1999). As seen during reconnaissance at the zoo these capuchins can also make soft squeaks whilst eating to show satisfaction (uh!uh!uh!), there is a communication call given by individuals when it has lost the group where the group returns with a call to give location. Young individuals also communicate with adults and they also have comfort gestures (purr) (Encyclopedia of Life, 2011).

Physical communication: The individuals of a group also shows a peculiar breaking branch display when there is danger where they take branches and hit it on their body and jump around after throwing it to the ground making a crashing sound. This is done by the alpha male to excite the group; in turn the members of the group begin to babble loudly. This is done when the monkeys feel safe and all fear of potential attacker is gone (as if the battle is won).

SEXUAL BEHAVIOUR AND REPRODUCTION. Sexual maturity of capuchins is attained at 4 – 5 years. Females menstruate for about 19 – 22 years whilst gestation last about 22 – 23 weeks; this is followed by no menstruation for 22 weeks, at this time the mother nurses her baby. If she loses the infant she is without menstrual cycle for 7 – 8 weeks (Fragaszy, 2005). The males know that a female is prepared to mate by apparent chemicals present within the urine. Females bear one young where if the young dies will mate in the next season, however if the young lives, she will not breed the following year where she cares for her offspring.

The species *Cebus apella* has the most mating display of the capuchins where she “chases” the alpha male of the group until he becomes interested where a lot of other behaviour is involved. However in other species it is less complex, here the male shows the affection towards the female (Fragaszy, 2005). *Cebus albifrons* are polygamous (they do not stick to one sexual partner), during mating rituals the male gets on the female, whilst holding her legs with his hind legs, copulation last a couple of minutes (Encyclopedia of Life, 2011). One infant is born to a mother, where it holds on to her tightly. As the baby gets stronger it begins to move on its own and may explore the nearby home range and will nurse for several months (Nowak 1999).

JUVENILE BEHAVIOUR. Not much information is published on the general behaviour of the juveniles of monkey species. Most of the juvenile time is spent playing and exploring its home range; staying close to the group and its mother. The young is cared for by the entire group, as it is a baby it will tent to stay with its mother, however as it grows older, it will be cared for by other members of the group even the males in the group. As mentioned before the juvenile has

communication calls to show that it is safe. From observations done it was seen that the young will follow its mother and climb on her whilst he plays (Fig. 5), they will also groom each other. He learns a lot from its group by observations and trial and error. Upon adulthood the males leave their birth group whilst the females remain within her group where she grows to adult and bear children of her own (Encyclopedia of Life, 2011).

ANTIPREDATOR BEHAVIOUR. Since they are very small, they can be vulnerable to predators. They take special care to avoid large birds, cats and snakes (Encyclopedia of Life, 2011). As mentioned in previous sections (communication), they use various communication calls to indicate a predator presence and to ward them off, the main behaviour used (as observed in the zoo lab) is the teeth display, which they do to show that they are offended and that they can be aggressive (Fig. 2). There is also the branch breaking technique; used to arouse excitement and scare predators. Capuchins are also known to travel with other species of monkeys (e.g. spider monkeys), there is safety in numbers.

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Author: Jessica Bissram

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Fig. 2. Teeth-showing display.

[<http://www.wallpapersweb.com/preview/data/media/18/White-Fronted%20Capuchin%20Monkeys,%20Columbia.jpg>, downloaded 7th November, 2011]



Fig. 3. Capuchin feeding on young shoots.

[<http://www.arkive.org/white-fronted-capuchin/cebus-albifrons/> downloaded 6 October, 2011]



Fig. 4. Capuchin feeding on fruits.

[<http://www.arkive.org/white-fronted-capuchin/cebus-albifrons/> - downloaded 6 October, 2011]



Fig. 5. Adult and child – parental care.

[http://rawrainforest.com/wp-content/uploads/2011/04/RAW_Gallery_NWC_jpeg_export_2.jpg - downloaded 7th November, 2011]