

Spider Monkey Captive Care Guide



SUZANNE TURNOCK AND Dr KATHY SLATER

Translated by: Fundacion Entropika, Colombia

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About this Manual

This manual is designed to provide husbandry guidance and advice about captive spider monkeys in zoos, sanctuaries and private collections. This manual is an overview of captive management for all species of spider monkeys (*Ateles*). The authors have tried to cover the main aspects of captive management however there is a vast amount of literature relating to wild and captive spider monkeys available. If you would like further information about these topics, see page 16.

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Spider monkeys are NOT suitable pets. Spider monkeys need specialised care and can become extremely aggressive when they reach sexual maturity.

Spider Monkey Facts

In order to provide optimal care for spider monkeys in captivity it is necessary to understand their natural history and to replicate their wild environment.

Life History Variables

Longevity: 40 – 50 years

Sexual Maturity: 6 – 7 years

Emigration from natal group: 5- 7 years

Age at first reproduction: approx. 7 years

Gestation length: 7 - 7.5 months

Mean inter-birth interval: approx. 37 months

Age at weaning: approx. 3 years



Ecology

Habitat: Spider monkeys inhabit evergreen rainforests, semi deciduous and mangrove forests, preferring undisturbed high forest. Spider monkeys are primarily arboreal and rarely come to the ground.

Home range: 1 – 3 km²



Behaviour: Spider monkeys are diurnal and spend up to 80% the daily activity budget travelling and foraging. They sleep on horizontal forked branches high in a tree above the canopy.

Diet: Spider monkeys are frugivorous. 80 – 90% of the diet consists of ripe fruit. Their diet is supplemented with leaves, flowers and young seeds. Up to 50% of feeding bouts involve suspensory feeding positions (*pictured left*).

Social System

Spider monkeys live in mixed-sex communities of between 30-70 individuals. Males remain in their natal group, but the majority of females disperse upon reaching sexual maturity. Communities are therefore composed of related males and unrelated females and thus social interactions occur most frequently between males. Spider monkeys live in fission-fusion societies in which individuals belonging to the same community are rarely all together and spend most of the time in temporary subgroups that frequently merge and split with different compositions. Subgroups can vary in size from one individual to all individuals together. Subgroup size can be adjusted to food patch size and is therefore a strategy to reduce feeding competition.

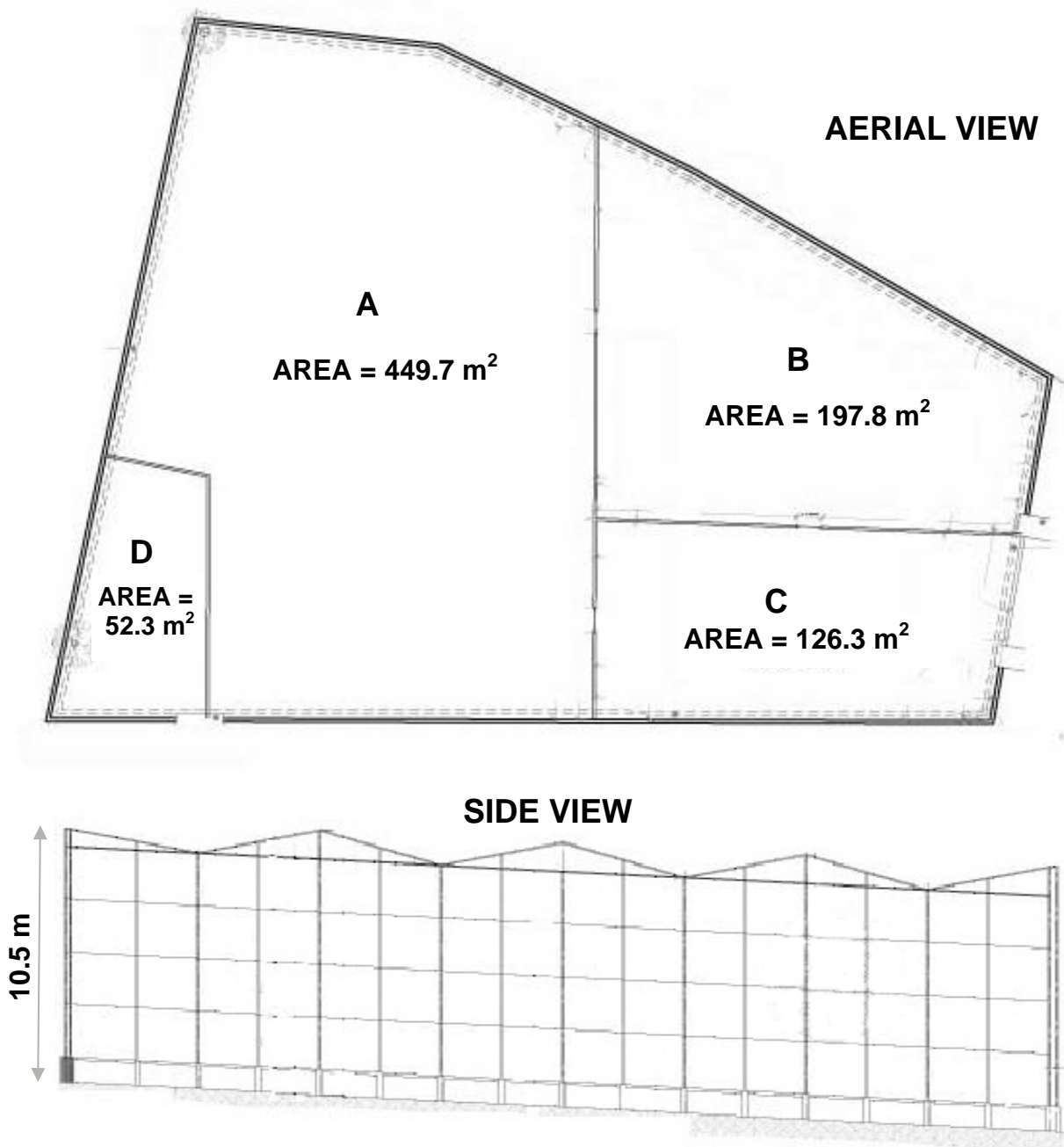
Conservation Issues

The major threats to spider monkeys are deforestation, hunting and the pet trade. Their slow reproductive rates and specialised diets make them extremely vulnerable to human activity. Zoos and sanctuaries can play an important role in conservation and education. Visitors' attitudes towards animals and conservation can be improved after a positive and enjoyable experience at a captive facility.

Enclosure

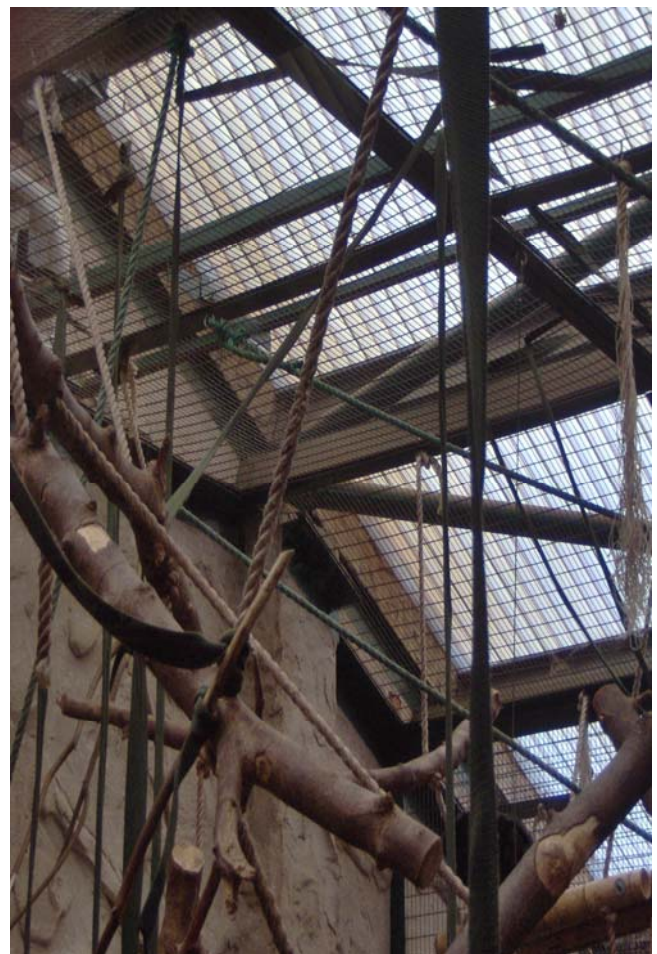
Enclosure design is one of the most important aspects of captive management. Spider monkeys need adequate space to exhibit natural behaviour and their full range of locomotory skills. Vertical space is particularly important as spider monkeys rarely come to the ground in the wild. Spider monkeys need to be provided with as much arboreal space as possible. The arboreal environment needs to be filled with mobile and fixed furnishings to increase the complexity of the enclosure (see page 5).

Here is an example of an outdoor enclosure built for 30 spider monkeys. The enclosure is divided into four areas (A-D). The areas can be closed off for cleaning, feeding, separating individuals and veterinary treatment (D) with wire mesh doors on a pulley system. Each area has its own entrance. A barrier is placed at 1.5 m from the enclosure to prevent close contact between visitors and the monkeys.





Natural vegetation and materials can be used to replicate their forest habitat. The natural vegetation acts as a visual barrier to allow fission-fusion in the enclosure, which can reduce aggression. Individuals can escape and hide from aggressive conspecifics during times of group conflict.



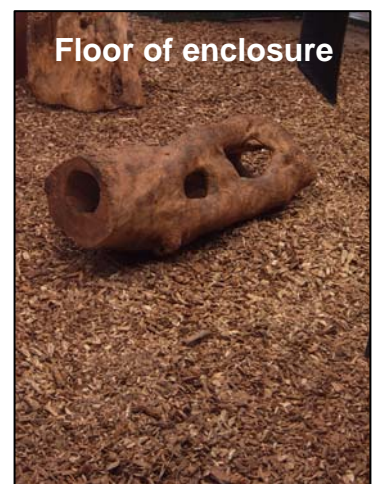
Replicate the forest canopy by providing horizontal and vertical ropes and branches to encourage arboreal locomotion.



Mobile bamboo and wooden platforms provide sleeping sites and arboreal areas for social interactions. Ensure that the platforms are at different levels in the enclosure so individuals can escape aggressive conspecifics.

Other Housing Considerations

- Always ensure fresh drinking water is available. Provide branches and ropes above the water to encourage suspensory drinking positions (*pictured right*).
- Provide shelter from extreme weather and shade from the sun.
- A variety of substrates can be used to cover the floor of the enclosure including natural vegetation, wood bark or straw (*pictured right*).
- Use different materials in the enclosure including bamboo, wood, natural vegetation, ropes and tyres.
- Change the enclosure design regularly for variation for both the monkeys and regular visitors.















Diet

DAILY DIET: An adult spider monkey should receive 2kgs of fruit and vegetables each day consisting of:

FOODS	% IN DIET (by weight)
Fruit	80
Vegetables	20

Provide a variety of fruit and vegetables from the list below to achieve an appropriate nutrient level:

FRUITS	VEGETABLES
Avocado 	Carrots 
Bananas 	Corn on the cob 
Mangos 	Cucumber 
Melon 	Lettuce 
Oranges 	DIET SUPPLEMENTS
Tomatos 	60g of “monkey chow” or dried dog food per monkey, twice a week
Watermelon 	Bread 
Plus seasonal fruits	

Food Storage

All food should be stored in a cool and hygienic area, which is free of vermin and insects. If possible refrigerate fresh fruit and vegetables to minimise deterioration or spoilage of food. Clean equipment and storage areas thoroughly each day.

Food Preparation

Wash all fruit thoroughly with fresh water. Most of the food can be chopped into large pieces. Some of the fruit and vegetables can be given whole to lengthen the time it takes the monkeys to process and eat the food.



Feeding Regime

Spider monkeys should be fed at least twice per day with one feed during the morning and one during the afternoon. Feeding times should be scattered evenly throughout the day and vary each day.

Feeding Spider Monkeys

Place all food in arboreal areas of the enclosure to encourage suspensory feeding postures. Evenly distribute the food in the enclosure to encourage fission-fusion feeding. This will also reduce potential conflict and any fighting over food.

Either:

- (i) Scatter the food throughout the arboreal areas of the enclosure.
- (ii) If the roof of the enclosure is wire mesh distribute food over the roof of the enclosure.
- (iii) Use environmental enrichment (see page 9) to feed the spider monkeys

Vary the food presentation at each feed.

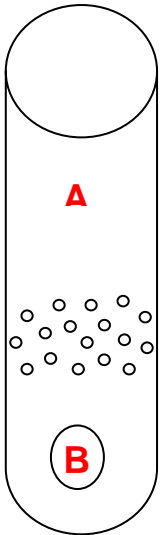
Environmental Enrichment

Environmental enrichment provides captive animals with stimulus to encourage natural behaviours, increase physical activity and prevent or reduce the occurrence of abnormal behaviours. Enrichment that incorporates food rewards is more likely to encourage use.

Here are some examples:

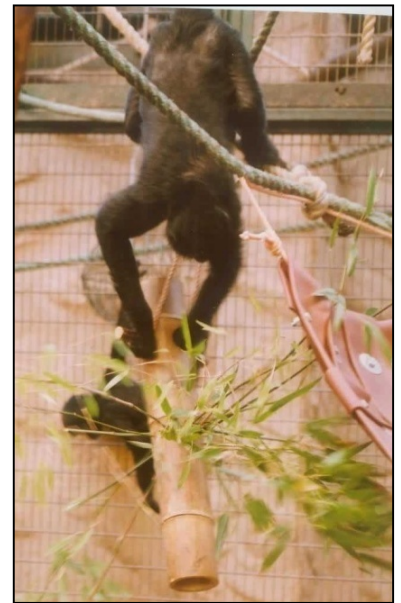
Kerplunk Feeders

Materials: Long hollow bamboo or plastic tube
Short twigs or branches
Rope



Construction: Drill small holes around the middle of the tube. Drill one large hole (B) near the end of the tube. Block either end of the tube.

Set up: Place fruit in area A of the feeder and put the short twigs through the small holes so they come out the other side. Hang the kerplunk feeder with rope to the roof of the enclosure. Area A needs to be nearest to the roof.



Aim: The spider monkeys remove the small branches and fruit falls down the tube to be collected in the large hole.

Bamboo Feeders



Materials: Bamboo tube
Rope

Construction: Drill holes in the side of a bamboo tube. The bamboo tube needs to be divided into sections with each section blocked between the holes.

Set up: Place fruit in each section of the bamboo tube. Hang the bamboo feeder from the roof of the enclosure.

Aim: The spider monkeys have to reach into the holes in the bamboo to get the food.

Wire Feeding Balls



Materials: Rope
Metal poles
Thin wire mesh

Construction: Weld the metal poles into the shape of a ball. Secure thin wire mesh in the bottom half of the ball to stop the fruit falling out.

Setup: Place fruit inside the wire feeding ball and hang from the roof of the enclosure.

Aim: The spider monkeys have to reach inside the wire ball to get food.

Puzzle Feeders

Materials: Wooden log
Small circular pieces of wood
Nails
Rope

Construction: Drill holes in the side of the log (large enough for pieces of fruit). Cover the each hole with a small circular piece of wood. Fix the wood to the log with one nail above the hole.

Setup: Place fruit inside the holes of the log and hang from the roof of the enclosure.

Aim: The spider monkeys move the pieces of wood to reach into the holes to get the food.



Tips

- Provide a range of enrichment daily.
- Use a variety of enrichment devices and change the enrichment regularly. This will keep the spider monkeys interested for longer and the enrichment devices will be more effective in the long-term.
- Provide enough enrichment so all individuals have access. It is recommended that there is one enrichment device per two individuals.
- Place enrichment as high as possible in the enclosure to encourage arboreal behaviour.
- Try and come up with new ideas for environmental enrichment and test them out on the spider monkeys!

Group Composition

It is important that the group composition reflects the natural groupings found in the wild. This will enable spider monkeys to engage in the full repertoire of social behaviour. Spider monkeys should never be housed individually.

Group size and density:

Spider monkeys should be housed in multimale-multifemale groups. Group size varies in captivity, however there should be a minimum of four individuals consisting of at least one adult male and three adult females in a group. Group size can be adjusted for enclosure size, therefore the larger the enclosure the more individuals that can be housed. The more space available, especially vertical space, per monkey the better. Remember enclosure size is as equally important as enclosure complexity.

Sex ratio:

In captivity, adult females should outnumber adult males. In the wild, females outnumber males by an average of two adult females to one adult male.

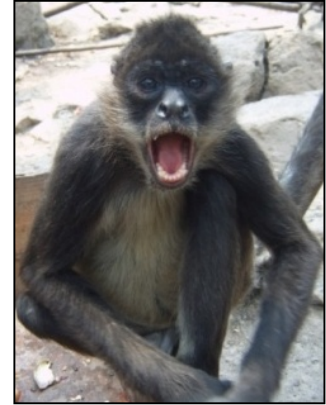
Rearing of spider monkeys:

Infants need be reared in a social group for normal development. Infants should only be separated from the mother when the health of the mother or infant is at serious risk. Hand rearing of an infant (pre-weaning age) should only be carried out in extreme circumstances, such as death of the mother.



Introduction of Spider Monkeys to an Established Group

Males remain in their natal group in the wild and females disperse. Groups are generally composed of related males and unrelated females. Unrelated adult males can be extremely aggressive and will not tolerate each other. Lethal aggression has been reported in zoos and in the wild. It is therefore recommended that only females are transferred between captive groups as females would migrate in the wild.



New animals should be introduced gradually. House new animals along side the group to allow visual and tactile contact. All animals need areas to hide if they want. Depending on how the animals react to one another will determine how long they will need to be separated. The more animals the longer it will take.



When introducing individuals monitor social interactions to ensure the animals are compatible. It is important that the spider monkeys show positive social behaviour and minimum aggression.

If the new animal is stressed or the monkeys exhibit high rates of aggression it may be necessary to separate the new animal again for short periods. In the cases of large groups it can also be useful to separate the new animal with one or two friendly members of the group so they can form social bonds and are not overwhelmed. Animals need to be chosen carefully and should not be separated for too long.

Health Care

Every captive facility should have a qualified veterinarian to oversee all health care programmes

Quarantine

The quarantine facility needs to be located away from the rest of the captive collection. All animals arriving at a captive facility need to be in quarantine for at least 30 days to prevent any potential disease transmission. The health status of the newly arrived animal needs to be determined before introducing the individual to other animals. Staff working in the quarantine area are required to wear protective clothing.

Daily Health Checks

Animals should be observed daily by a trained animal carer to check for any signs of illnesses or injuries. Check for any changes or abnormalities in the following:

- condition of hair and skin
- eyes
- behaviour
- social interactions
- appetite



Report any problems or concerns to a qualified veterinarian.

Further Health Checks

Test faeces for parasites twice a year and conduct physical examinations annually (animals will need to be immobilised). Record weight, vital signs of heart and respiratory rates. Thorough oral, eye and external examinations should be conducted.

Contraception

Discuss possible contraceptive methods with a qualified veterinarian if required, for example for captive population control.

Hygiene and Cleaning

Remove any food remains, faeces and other waste from the enclosure before cleaning. Enclosures need to be cleaned daily with fresh water.

Health and Safety of Animal Carers

Staff need to wear protective clothing when in direct contact with animals and wash their hands thoroughly afterwards. Employees with colds or cold sores should not work directly with spider monkeys.

Record Keeping

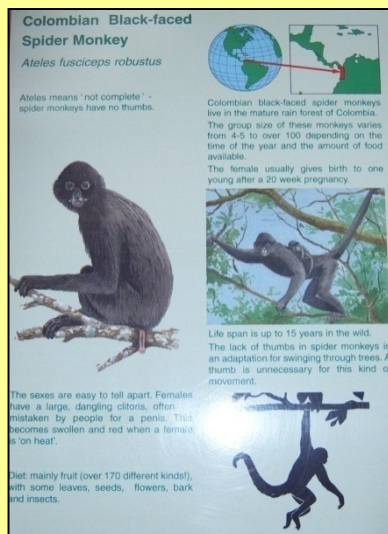
Keep accurate records of individual animals in the captive collection. An electronic version is recommended. Include the following details: place of origin, (estimated) date of birth, parentage (if known), details of health checks, injuries, illnesses, date and cause of death, departures and new arrivals.

Visitor Experience

Here are some examples of education resources and activities to increase the educational value of the zoo or sanctuary and make the visitor experience more enjoyable.

Information Boards

Information boards introduce the captive species and present general information about their natural history.



Possible topics for information boards:

- Natural Habitat
- Life History Variables
- Group Composition in the wild
- Morphology
- Behaviour
- Diet



Colourful information boards with lots of pictures and a small amount of writing will encourage more people to read them.

You could use information from the spider monkey fact page of this manual (pg. 3) to develop the information boards.

- Conservation status
- Encourage conservation activities such as recycling and discourage keeping spider monkeys as pets.
- Introduce the captive spider monkeys in the zoo. Include name of the animal, date of birth and any offspring.

Interactive Information Boards

Interactive information boards present questions, such as "What do spider monkeys eat?" or "Where do spider monkeys live in the wild?" Visitors have to lift up the flaps to find out the answer.



Presentations

Short informative talks about the captive animals can be given to visitors near the enclosures. Talks can coincide with feeding the animals. During feeds people can clearly see the animals and it may discourage visitors from trying to feed the animals. For a more in depth presentation **guided tours** around the zoo or sanctuary could be given to visitors, particularly school groups. Topics for presentations could include animal behaviour, their natural habitat, diet, ecology or conservation. Presentations also give the visitors an opportunity to ask questions about the animals or the zoo.



Education Centre

An education centre adds another attraction to the zoo. Education centres can be filled with a variety of educational resources including information boards, photographs, games, videos, slideshows or an activity area for children.

Play Area

Children learn best when they are playing and having fun. Play areas and apparatus, such as 'monkey bars', can be used to relate play to spider monkey behaviour. Challenging children to move like a spider monkey will make their experience at the zoo more fun as well as educational.



Other Education Resources

- Leaflets containing information about wildlife, conservation or the zoo/sanctuary.
- Map of the zoo/sanctuary
- Question sheets aimed at children. Visitors can fill them in as they walk around the zoo/sanctuary.
- Animal -themed souvenirs e.g. postcards, stationary, t-shirts and books.

Many captive facilities have problems with visitors trying to feed the animals. This can cause health problems for the animals and can cause aggression towards visitors and between the animals. Place signs near the enclosures to ask visitors not to feed the animals and explain that it can make the animals ill.

Further Information

If you would like further information about 'Spider Monkey Captive Care Guide' feel free to contact the authors. For correspondents in English please contact Suzanne Turnock at suzanne.turnock@googlemail.com or for correspondents in Spanish please contact Dr Kathy Slater at kathy.slater@opwall.com. Please also send us any comments you have about the manual.



If you would like more information about spider monkeys visit the following websites:

Websites in Spanish*

Veterinarios de vida silvestre
<http://www.veterinariosvs.org/>

Fundacion Biodiversa, Colombia:
http://www.fundacionbiodiversa.org/proyectos_conservacion_ateles.htm

Neotropical Primate Conservation
<http://neoprimate.org/espanol>

Primate Research en México:
<http://www.primatesmx.com/> (*also in English*)

Websites in English*

Animal Diversity Web:
<http://animaldiversity.ummz.umich.edu/site/index.html>

IUCN:
<http://www.iucnredlist.org/>

Primate Info Net:
<http://pin.primate.wisc.edu/factsheets/links/ateles>

Primates (Tutorials):
<http://anthro.palomar.edu/primate/Default.htm>

The Primates:
http://www.theprimata.com/primate_links.html

** The authors take no responsibility for the content of these websites*

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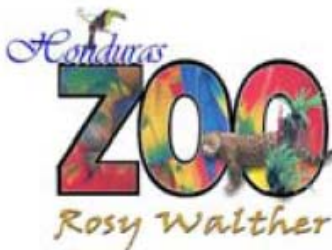
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