

Pygmy Marmosets

By: Maureen Neidhardt

An Interview with Dr. Paul Reillo, Curator Rare Species Conservatory

Editor's Introduction: The Rare species Conservatory of Loxahatchee, Florida was formed to breed and conserve endangered species. This operation is dedicated to the propagation of African hoofed stock which includes 3 types of African Antelope including the Bongo, Nile Lechwe and Ellipsis Water Buck. It is also dedicated to the propagation of 2 very rare South American Primates, namely the Pygmy Marmoset and the Spider Monkey and several types of very rare Brazilian Parrots.

The Double EE Ranch of Basinger, Florida is a separate division. Here Watusi cattle and Waterbuffalo are raised. Dr. John Vaughn of Warner Robbins, Georgia is the Director over all, funding and orchestrating the business financially. Dr. Paul Reillo, who is a doctor of Zoology with specialty training in "population genetics", is the Curator of both establishments.

The number of species handled by the Conservatory is kept fairly low because instead of mere pairs of each species the objective is to maintain a genetically manageable, self sustaining, captive population. There are multiple bloodlines for each species and this, of course makes unrelated breeding pairs available. A genetic profile of the population that they create and full pedigree of the animals is kept. This breeding program is as genetically heterogeneous as they can make it. The only animals sold are genetic duplicates.

The Rare Species Conservatory participates with ISIS which is the international zoo species record system used around the world.

The Rare Species Conservatory is a model facility of a somewhat experimental nature from the standpoint that others could learn from them and set up similar facilities. This type of business can serve as a liaison between the zoo community and the private sector. People wishing to participate in this type of conservation, propagation effort must be expert in animal care. They must then be willing to follow the regulations that have been established as guidelines regarding possession of endangered species. Upon fitting all of these criteria they can provide a substantial contribution to species conservation and have an economically viable business as well.

Those who enter this field and demonstrate commitment will be richly rewarded. Motives are mostly financially driven and this makes commitment necessary. Attitude is important. One must view the objective as larger than you. You will consider your position as that of custodian, responsible for species that we all bear responsibility for.

In operating such a facility the operators walk the line between the private sector and the public, professional facility. Ninety percent of the business of the Rare Species Conservatory is done with zoological parks, schools or universities. They serve as a satellite of major zoological parks or aquariums. Being not as accessible as a private farm they are primarily interested in proper people being interested.

The species propagated at Rare Species Conservatory includes the



5-6 weeks of age, hand raised, Pygmy Marmoset, the tiniest true monkey in the world.

Pygmy Marmoset. The following account of the propagation of these fascinating tiny primates gives one a feel for the importance of the mission of conservation and how intensely unique many of nature's creatures are.

PYGMY MARMOSETS (Cebuella pygmaea)

Adults about the length of a chipmunk weighing 4-6 ounces with babies born fairly big, the size of a man's thumb. This describes the Pygmy Marmoset, known as the world's smallest true monkey.

This species originates in lowland rain forests. The ones at Rare Species Conservatory were derived from Peru. As the rainforests are depleted they have less habitat

to survive in.

Offspring are usually fraternal twins. Triplet births occur 15% of the time and singlets are rare. The babies take up about 1/4 of the mother's total weight. They are born with their eyes open, fully formed.

The father takes an active role in rearing the babies for they ride on his back during the first 5-6 weeks of their lives. At feeding time he hands them to the mother to nurse. If a baby ever falls from his back it is rejected. This seems cruel, however, according to Dr. Reillo such babies apparently have a genetic defect or weakness and by the laws of nature just should not survive. He believes this theory

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fallen babies have never been successful at the Rare Species Conservatory.

When triplets are born Dr. Reillo takes one of the babies to hand raise because the mothers have only two nipples and one of the babies will starve. Such attempts at hand rearing have been successful with 4-5 being documented thus far. He reports that these babies make very interesting subjects. Anyone undertaking such a project must be prepared to give round the clock care for about eight weeks. Basically you become a surrogate parent to a baby that goes through the developmental stages of a human baby. Requiring very much contact and bonding the new little charge rides in your hair or in your neck. They must be taught about eating, massaged to defecate, and fed with disposable pipettes. The first week contact time is minimal but after that they require at least 8 hours a day. At 5 weeks they become semi independent.

The temperament of the Pygmy Marmoset is very high strung.

They are almost always under stress. They will get used to people and can eventually sit on one's hand. They are however, very hiper and need to be regarded as wild animals. They are handleable only in rare circumstances. The reason for their hiperactivity and fear stems from their extremely small size. In the wild they are truly almost always in danger. Even the parrots such as the Hyacinth prey on them. Along with their active temperament they are extremely inquisitive and intelligent.

The Pygmy Marmoset is omnivorous, meaning that they eat about anything that they can including insects, fruit and vegetables and meat. They are also uniquely specialized gum eaters. They lick saps and gums exuded from several kinds of trees. This is an important supplement to their diet, particularly at times of fruit shortage. The Pygmy Marmoset and seven other larger marmosets practice gum eating. Their mouth and jaw is specially equipped in that they anchor their upper incisors into the bark and gouge through the bark with their chisel

like lower incisors. The holes in the bark are small, oval shaped and they actually maintain their "Sap gardens" by tending and pruning from year to year.

In captivity they are fed a zoo diet supplemented with fruit and vegetables.

There are two types of Pygmy Marmosets known as Type 1 for the Yellow Bellied and Type 2 for the White Bellied (males of this type also have black speckles on the scrotum). Type 3 is the term given to the hybrid crosses of Type 1 and Type 2. They are considered to be genetic errors.

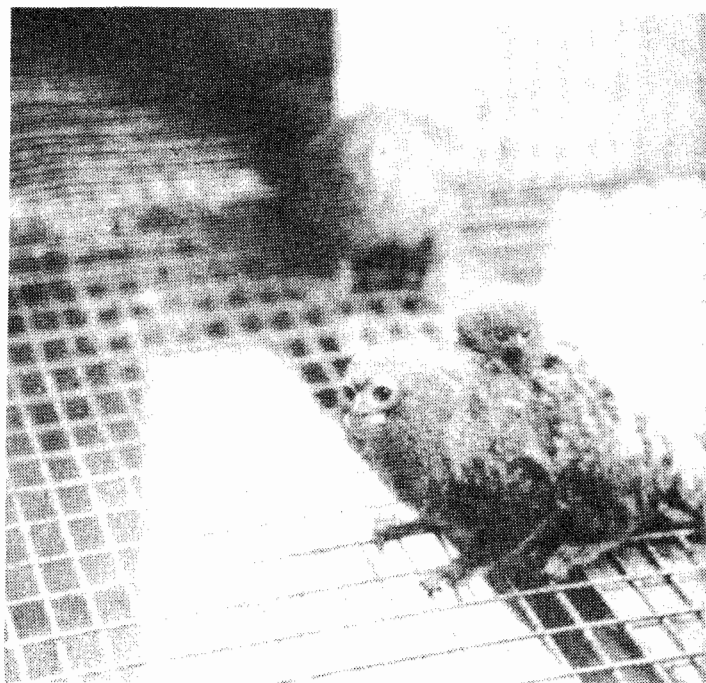
The life span of the Pygmy Marmoset is not known in the wild but in captivity ranges from 7 to 16 years with averages being about 9 years. There is a lot of infant mortality. Babies are born 160 to 190 days apart. Females stay pregnant most of the time as their gestation is about 140 days. They are very efficient at reproduction. They are a creature with a simple

uterus. 1 bag contains all babies. They are fertilized at the same time and develop in tandem. In essence, a barrel full of babies. They are born very quickly with no waiting time between babies.

Reproduction between relatives is suppressed. They are very scent marking oriented and recognize close relatives by scent or appearance. They have a strong incest taboo. Though formal writings term them as monogamous breeders they mate to their choice of mates as long as they are alive or available. Some may die of grief at the loss of a mate, others will take a new mate much as humans exist.

Housing of the Pygmy Marmoset in captivity is very important. They are extremely cold sensitive below 55 degrees. At Rare Species Conservatory heat lamps are used starting at 60 degrees. Cages are 4 X 4 X 6 feet or 4 X 6 X 8 for a single pair. This provides a huge

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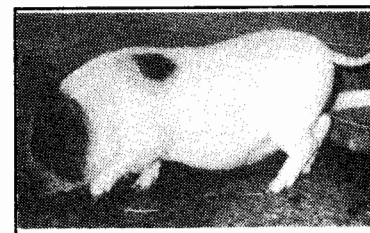
The father Pygmy Marmoset takes a great deal of responsibility in baby care. They ride on his back for about the first eight weeks of their lives.

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area in relation to their size. Being extremely inquisitive in nature they need variety in their habitat such as vegetation, things to climb on, etc.

Dominant females can suppress ovulation in other females so they must be separated and not caged beside each other if this appears to be happening. The cages need to be interspersed so that relatives are not adjacent to one another.

In the wild they live in extended family groups for a long time. Later young males are driven out but the females are held back for years helping raise the babies but not having their own, possibly until the father dies or the single females leave on their own.

Because of the stress that the public places upon them in exhibits, they must be introduced gradually. Allowing them to see others at their choice and using psychology this can grow to be a comfortable experience. Not handled properly they can succumb to the stress. Six months introduction time would not be unreasonable.

An International Stud Book for the Pygmy Marmoset is compiled by Wim Mager, Stud Book Keeper, Apenheul Zoo in the Netherlands. By the latest stud book 1400 Pygmy Marmosets had been re-

corded as of 1990. This is probably up to about 2500 by now. In the U.S. the population is estimated at 250 to 300 recorded animals. Europe has a nice population of them and Holland has the most with about 1000.

Bloodline wise the original founding stock encompasses 140 family groups derived from 67 animals which are kept worldwide in 70 institutions. In the U.S. about 20 places possess them and they are all descendant from 5 bloodlines.

Hand raised young are a pleasure. They are playful, running on "their person", in their hair and getting into one's food, etc. They need a complex environment to satisfy their curiosity.

Will hand raised babies be more trusting parents and raise young that are less flighty exhibit animals? or will they lose instinct and not be good parents at all? The answers to these questions will be found in about a year at the Rare Species Conservatory.

The Pygmy Marmoset is, with understanding, a truly winsome tiny creature with a great deal of human interest appeal. Despite their appearance they are "little people" going through the same development steps as our babies. They cry at night, need to have their vision focus develop, need a



The tiny primate's size in relation to a man's hand.

good, healthy environment, proper diet and psychological care of their emotions. They are very aware, clever and creative showing intellect. In other words, "They have a handle on what is going on"!

Persons interested in serving as a conservator of an endangered species that is attractive, that doesn't carry disease, that people can identify with and that is realistic to keep may well be willing to

take all of the steps necessary to become such a keeper and conservator. Until the rain forest is saved these little creatures need a place to exist. This is the type of project that can truly be rewarding.

Rare Breeds Journal

Follow Up:

Rare Species Conservatory

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Winsome and inquisitive describes the expression on this female baby's face.

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