



NATURE'S MARVELS

# Pinocchio Chameleon

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**M**ADAGASCAR is an island country with numerous peripheral islands in the Indian Ocean. Following the prehistoric breakup of the supercontinent Gondwana, Madagascar split from Africa during the early Jurassic period. This continental drift resulted in the isolation of Madagascar. This isolation led to evolution and allowed native plants and animals to evolve in relative seclusion. As a result, Madagascar is a biodiversity hotspot. This island has subtropical and tropical maritime climates.

Chameleon belongs to the Class Reptilia and order Squamata. They are a distinctive and highly specialised clade of old world lizards with two hundred species described so far. Chameleons primarily live in the mainland of sub-Saharan Africa and on the island of Madagascar. They are also found in other parts of the world.

Pinocchio Chameleon is a rare and fascinating Chameleon with a flexible, long nose. They are endemic to Madagascar. Scientists have discovered this iconic specimen of Madagascar, the Pinocchio Chameleon. This name is now changed to *Calumma pinocchio*. Scientists examined the DNA from the modern specimen of Chameleon and a centuries-old museum specimen and found another species of *Calumma hofreiteri*. Researchers applied museumomics approach, a method that allows scientists to extract DNA from long-preserved museum specimens. A Chameleon collected in the year 1836 was taken for DNA analysis. They also found that Chameleon's elongated snout evolved surprisingly quickly. *Calumma hofreiteri*, which had been classified for years as *Calumma nasutum* because of similarities in the nasal appendage and other visible traits. The genetic analysis revealed that the nasal appendage can change quickly in terms of length, shape and colour. Their evolution is possibly driven by the respective preferences of females in mate selection.

*Calumma* sp. have an elongated nasal appendage in males and a much-reduced nasal appendage in females.

These chameleons have distinctive characteristics like zygodactyly, prehensile tail, independent eye movement, body colour change, laterally compressed body, projectile tongue, swaying gait, and diurnal and arboreal habitat. The prehensile tail is also referred to as the fifth limb.

These Chameleons are found in the humid mountain rainforests of Eastern Madagascar. They feed on insects like crickets, flies, grasshoppers and other small arthropods.

Their long nose in males is a sexual selection to attract females. This also helps to identify members of their own species, preventing cross-breeding.

As it has a wide geographic range in Madagascar and occurs in some protected areas, it is not yet considered an endangered species. Pressures like habitat loss and habitat fragmentation may lead to endangerment of this species.

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