

Zygodontomys brevicauda (Short-tailed Cane Mouse)

Family: Cricetidae (Voles and New World Mice)

Order: Rodentia (Rodents)

Class: Mammalia (Mammals)



Fig. 1. Short-tailed cane mouse, *Zygodontomys brevicauda*.

[From Voss (1991)]

TRAITS. The short-tailed cane mouse's pelage (fur) is grizzled brown with tints of red and yellow, whilst its venter (underside) is coloured in different shades of grey, and the tail is 3/4 the length of the body (Fig. 1). Adults have body length of 95-115mm and weigh 60-80g and the pups at birth weigh 3-4g. Pelage colour varies with both habitat and population, for example islanders tend to be more lavishly pigmented than those found in drier, mainland regions. Also known as the common cane rat. No sexual dimorphism recorded.

DISTRIBUTION. A neotropical species, native to northern South America, eastern Central America as well as some Caribbean islands (Fig. 2): from south-eastern Costa Rica through Panama, Venezuela, French Guiana and Guyana, Colombia, Brazil, and Trinidad and Tobago (Musser and Carleton, 2005).

HABITAT AND ACTIVITY. This ground-dwelling tropical species is found abundantly in terrestrial biomes: grasslands, road sides, savanna, clearings, second growth, marshy areas and agricultural expanses (Martino and Aguilera, 1993). They can inhabit many diverse environments and are exceptionally adaptable for populating spaces in close proximity to human development. It is a nocturnal, terrestrial animal which tends to make short burrows under tree roots or in banks that lead to nests made of plant down and grasses (Reid, 1997) and mostly identify with open fields that have dense ground cover/grass (Fig. 3) that creates pathways

interconnecting their nesting and feeding areas. Most commonly they live in areas near water, although they are found as far inland as Brazil. Found at lower elevations, 0-600m. Home range can be as extensive as 70 m².

FOOD AND FEEDING. Time spent above the ground is dedicated to food-seeking, although not much is known of its food searching habits. *Z. breviceauda* are omnivorous mammals; their diet includes seeds, green plant materials, fruits, grains, and insects. They are opportunistic feeders and also eat insect, fungi, grass and larvae. Tolerant of a wide range of foods (Fig. 4) and have exceptionally broad diets as biological studies which were investigating dietary quality and gastrointestinal function in these animals have shown.

POPULATION ECOLOGY. Rodents of the genus *Zygodontomys* are amongst the most abundant and common vertebrates in unforested lowland habitats in South and Central America. Shows a stable population trend. No information available regarding the lifespan, although wild members of this family generally live for no more than one year. They survive much longer in captivity, occasionally up to 5 years, most likely from the lack of predators combined with adequate food supply. Social animals, although no information is known of their social structure. Populations in a specific habitat fluctuate in response to seasonal/yearly variations and resource availability; for example when resources are in abundance densities can reach 15 mice per hectare but can decrease to less than 1 mouse per hectare when resources are inadequate and weather is harsh.

REPRODUCTION. Little is known on its mating systems but generally members of this family are promiscuous. *Z. breviceauda* uniquely breeds non-seasonally (throughout the year) as they don't respond to photoperiod changes but rather their mating habits are connected to availability of resources and social cues. An example of this would be the reproductive peaks exhibited during the wet season. The mother gives birth to a litter of 1-11 pups, 5 on average. Ovulation is spontaneous and gestation lasts 25 days. Neonates are born altricial (without teeth or hair, although their digits are free) depending on their mother completely for protection and food as seen in Fig. 5. The mothers nurse for up to 11 days. Pups start developing pelage on their 5th day, and their eyes open around the 6th/7th day. Females raise the litter on their own as they become very aggressive towards males, but little is known of parental care. Post-partum estrus is exhibited in the mothers and no delay in implantation due to lactation. They can have up to 6 litters a year. Pups mature after 26 days (female) and 42 days (males) after birth. Uterine growth rate is increased in young females by the presence of an adult male. Concerning their reproductive strategy, they display iteroparity which is characterized by multiple reproductive cycles over the course of their lifetime.

BEHAVIOUR. Spends majority of time underground. *Z. breviceauda* dominate a wide range of habitats and as such interact with a multifarious group of predators such as birds of prey and carnivorous mammals. Their colouration helps to reduce the risk of predation, as well as their semi-fossorial tendencies which help keep their interactions with predators at a minimum.

APPLIED ECOLOGY. *Z. breviceauda* have a serious impact on the insect pest population and dispersal of seeds (they are both herbivores and granivores) as they are locally abundant throughout their geographic range. They are particularly attracted to sugar cane, corn fields and

sorghum where they are considered pests as they destroy both the crop and field. Influential prey item for a diversity of carnivores; and are host to ectoparasites and endoparasites. Known reservoirs for various neotropical viruses and diseases which affect local wildlife and human population such as *Yersina pseudotuberculosis*, murine coronavirus, *Hantavirus*, yellow fever and the Guanarito arenavirus which causes Venezuelan haemorrhagic fever.

Listed as Least Concern in the IUCN Red List of Threatened Species, as it does not appear to be a threatened species. It has 'a wide distribution', tolerates various habitats and a 'presumed large population' (Martino and Aguilera, 1993) and therefore does not qualify. No special status on CITES nor US Federal status.

REFERENCES

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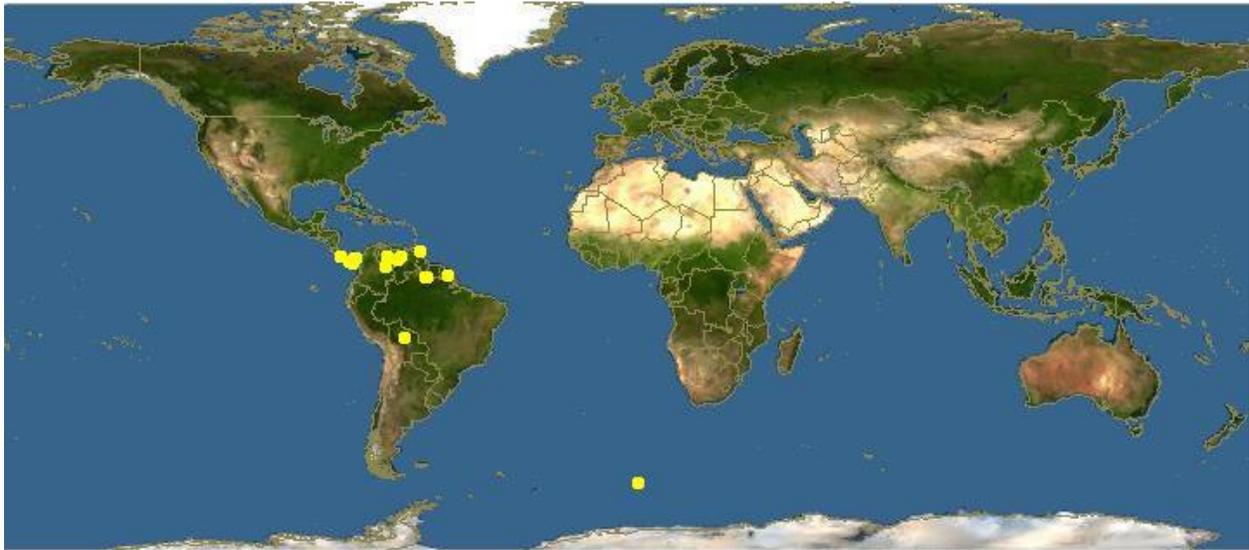


Fig. 2. Short-tailed cane mouse geographic distribution.

[<http://www.discoverlife.org/mp/20m?map=Zygodontomys+brevicauda>, downloaded 6 March 2015]



FIGURA. Ejemplares de ratón marrón (*Zygodontomys brevicauda*).

Fig. 3. Two short-tailed cane mice in the field, their preferred habitat.

[http://www.scielo.org.ve/scielo.php?pid=S0002-192X2010000300004&script=sci_arttext, downloaded 18 March 2015]



Fig. 4. Captive short-tailed cane mouse with various foods.

[http://animaldiversity.org/accounts/Zygodontomys_brevicauda/pictures/collections/contributors/Heideman_Paul/Zygodontomys_brevicauda/, downloaded 7 March 2015]



Fig. 5. Female short-tailed cane mouse with pups (couple of days old).

[<http://www.planet-mammiferes.org/drupal/en/node/38?indice=Zygodontomys+brevicauda> downloaded 20 February 2015]

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