

Marmosa robinsoni (Robinson's Mouse Opossum)

Family: Didelphidae (Opossums)

Order: Didelphimorphia (American Marsupials)

Class: Mammalia (Mammals)



Fig. 1. Robinson's mouse opossum, *Marmosa robinsoni*.

[<http://news.mongabay.com/2014/1003-millar-mouse-opossum.html>, downloaded 31 March 2015]

TRAITS. Robinson's mouse opossum has a relatively large body within the opossum family. Total length males 361 mm, females 324 mm (O'Connell, 1983). Short and broad hind foot; feet have plantar pads (soles) and are good for grasping. Large lobate (rounded) ears (Fig. 1). Scaled, prehensile tail covered in fine white hairs, about 130% the length of the head and body. Colour: russet, pale brown or grey; top of the head generally paler colour; black facial mask (O'Connell, 1983). Scent glands: gular (throat) gland. Pouch-less (Animal Diversity, 2013).

DISTRIBUTION. Widespread over Central and South America (Fig. 2) including northern Venezuela, Trinidad and Tobago and the northern coast of Honduras (O'Connell, 1983).

HABITAT AND ACTIVITY. Found in a variety of habitats ranging from relatively moist to arid preferring secondary forests and farmlands. They are widely found in xeric (dry) shrub lands, savannas, and lowland dry forests (Rossi et al., 2010; Gutierrez et al., 2014). This species of opossum overlaps with *Marmosa murina* in Trinidad and Tobago as well as northern Venezuela and northern Colombia. This opossum like others is nocturnal often dwelling on the ground (O'Connell, 1983). They are active between sunset and sunrise. Their active period started with them grooming themselves specifically their facial and snout area. When evading predators these opossums often escape through vines and trees and use whatever shelter is available during the day instead of specific nesting sites. Its diet consists of fruits, mice, bats, birds, earthworms, grasshoppers and moths with a preference for insects. It cannot survive on fruits alone but fruits are essential in the diet (O'Connell, 1983).

FOOD AND FEEDING. There is not much known about this species of opossum in the wild, but *M. robinsoni* is an omnivore. In captivity Robinson's mouse opossum has been observed following a natural diet of fruits such as bananas and oranges, crickets, mealworms and supplementary vitamins in addition to the aforementioned foods (Godfrey, 1975). In Godfrey's study the opossums did not thrive well on un-natural foods such as the canned marmoset diet and raw horse meat. The opossums did not receive enough calories, had low body weight and developed alopecia (hair loss). *Marmosa robinsoni* stalks then attacks its prey (e.g. grasshopper) to then consume it in a corner (Enders, 1935). This species may also be cannibalistic, and eat weaker individuals of the same species (Enders, 1935).

POPULATION ECOLOGY. Robinson's mouse opossum is nomadic and solitary, the male more nomadic than the females (O'Connell, 1983). According to O'Connell individual males were found at a greater distance apart than individual females (1983).

REPRODUCTION. Robinson's mouse opossum breeds towards the end of the dry season and again during the wet season from July to December (O'Connell, 1983). The female produces an average of 14 offspring in Venezuela and eight generally in the wild. In captivity the amount of offspring is lower, at an average of six (O'Connell, 1983). The courtship and breeding process is often initiated by the male. The male behaves aggressively and makes high pitched noises. The female is either then inviting or passive. The female may initiate by sniffing the male's anal area. The male corners the female and once she is cornered the male latches on to the female's shoulders and neck. In order to continue the male must grab onto something with its tail. The mating process takes about 40 minutes during which the male thrusts its pelvic for about 15-20 minutes. After this the male and female separate and groom themselves (O'Connell, 1983).

BEHAVIOUR. Juvenile behaviour: *Marmosa robinsoni* are born underdeveloped. They will nurse on the mother's nipples for weeks, and are carried around by her (Fig. 3). After about two months the young are weaned off and exhibit playful behaviour. They play by chasing each other around and playfully threatening each other with opened mouths. Those who are not weaned off in time fall victim to cannibalism. Initially the young stick together but after two months nest alone (O'Connell, 1983).

Antipredator behaviour: This opossum relies on evasive and cryptic tactics to avoid predation.

Communication: Olfactory communication - the male opossum has the gular gland that is used socially (Animal Diversity, 2013). Vocal communication - Adult Robinson's mouse opossums communicate through hisses and clicks. An open mouth threat is made when defending itself. The young chirp when separated from the mother and the mother then retrieves them and returns them to the nursing position. During courtship the male clicks at the female to signal interest (Animal Diversity, 2013). Visual communication - visual displays have not been described in detail, but visual cues are used during courtship (O'Connell, 1983).

APPLIED ECOLOGY. Not listed by IUCN; widespread and thrives in many areas disturbed by humans as well as undisturbed areas (Animal Diversity, 2013).

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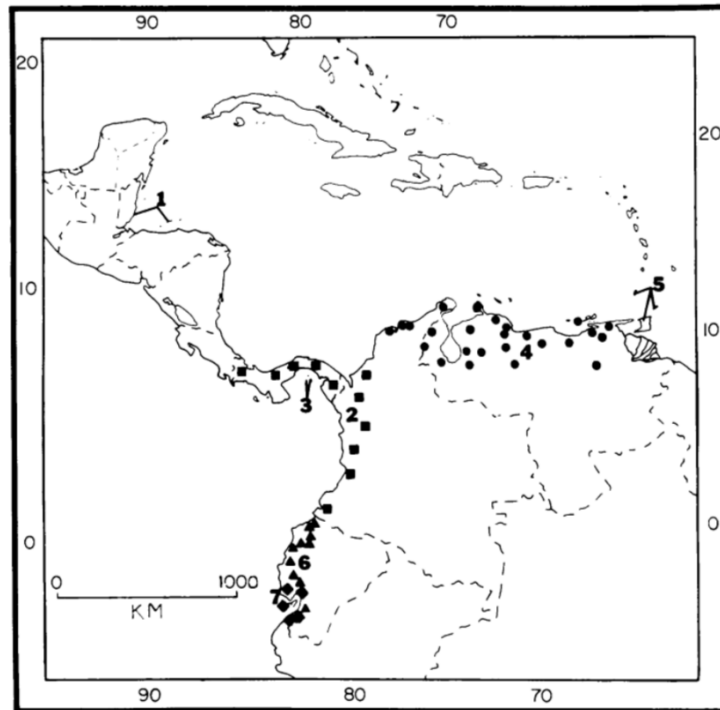


Fig. 2. Robinson's mouse opossum geographic distribution.

[Fig. 4 of O'Connell (1983)]



Fig. 3. Robinson's mouse opossum with young.

[<http://www.taringa.net/comunidades/conciencia-animal/4734528/Encontre-un-marsupial-hermoso-con-hijos-Quiero-su-nombre.html>, downloaded 31 March 2015]