

Dasyprocta leporina (Red-rumped Agouti)

Family: Dasyproctidae (Agoutis)

Order: Rodentia (Rodents)

Class: Mammalia (Mammals)



Fig. 1. Red-rumped agouti, *Dasyprocta leporina*.

[<http://upload.wikimedia.org/wikipedia/commons/3/3b/Dasyprocta.leporina-03-ZOO.Dvur.Kralove.jpg>,
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TRAITS. Formerly *Dasyprocta aguti*, and also known as the Brazilian agouti and as “Cutia” in Brazil and “Acure” in Venezuela. The average *Dasyprocta leporina* weighs approximately between 3 kg and 6 kg with a body length of about 49-64 cm. They are medium sized caviomorph rodents (Wilson and Reeder, 2005) with brown fur consisting of darker spots of brown covering their upper body and a white stripe running down the centre of their underside (Eisenberg, 1989). Show sexual dimorphism as the males are usually smaller in size than the females but have a similar appearance (Wilson and Reeder, 2005). Locomotion is quadrupedal. Forefeet have four toes while hind feet (usually longer than forefeet) have 3. Small round ears with short hairless tail not more than 6 cm in length (Dubost 1998).

ECOLOGY. *Dasyprocta leporina* is found in the tropical forests of Trinidad and conserved in the Central Range Wildlife Sanctuary at the headwaters of the Tempuna and Talparo watersheds in central Trinidad (Bacon and French 1972). They are South American natives and are distributed widely in Venezuela, French Guiana and Amazon forests of Brazil (Asquith et al. 1999; Dubost 1998). Has widespread distribution in the Neotropics (Eisenberg 1989; Emmons and Feer 1997). They prefer high elevations and can achieve high population densities in some tropical forests of up to 63 animals per km² (Jorge and Peres 2005). Preference lies to cultivated areas, brush, near water availability. Take refuge in well-covered, shaded and concealed areas such as logs, near wetlands (Dubost 1998; Eisenberg 1989). Tend to appreciate hollow logs and cover themselves under low trees.

SOCIAL ORGANIZATION. Each individual occupies an area that is regularly visited which is termed the “home range.” This area does not overlap with ranges of other individuals (Dubost 1998). According to a study done by Maher and Burger (2011) on social systems of caviomorphs, indicates that *D. leporina* correlate fruit accessibility to the space they occupy. Alter ranges to include food source (Jorge and Peres 2005), contrary to another study that proves where there was greater food accessibility, ranges crossed over (Aliaga-Rossel et al. 2008).

ACTIVITY. Crepuscular (active at dusk and dawn) and saltatorial (adapted to high jumps), foraging mostly during the day to accumulate food resources for the night (Wilson and Reeder 2005). Extremely swift and conceal themselves quickly if they suspect danger. Play a critical role in seed dispersal for trees such as *Hymenaea courbaril* (Wilson and Reeder 2005). Feed and travel on land. Observed activity involves muzzling, sitting, digging, sniffing, eating, walking, and probing for food most of the time.

FORAGING BEHAVIOUR. Food mostly consists of seeds, pulp, leaves, roots and all fruits. Eat insect larvae when plant resources are low. Bury food in caches where it is temporarily stored for times of scarcity. They sit back on their hind legs while holding the food in front limbs while eating (Fig. 2). Search for food in day and eat mostly at night. They seem to prefer large seeded fruits and are hence extremely valued dispersers of plants seeds such as that belonging to the *Hymenaea courbaril*.

COMMUNICATION. *D. leporina* use sounds in varying pitches to communicate to other members of the species, consisting of grunts, squeals and screams. This co-exists with body language and specific postures, which consists of touching and stamping their hind feet to indicate feelings of stress or suspecting that they are in an unsafe environment or situation (Dubost 1998). Other members of the group are familiar with the signals and run to safety if they feel threatened. A feature that is characteristic to herbivores such as the agouti is their eyes being oriented to give a wide angle of view that allows them to detect unsafe situations quickly (Emmons and Feer 1997). They are highly territorial animals that defaecate and urinate to mark the area which they claim.

SEXUAL BEHAVIOUR. *D. leporina* show monogamy in that one female chooses one male and stay together without extra-copulation relationships (Dubost 1998). In enclosed area, agoutis have been observed not to reproduce as efficiently because of their need for large spaces (for courtship and breeding) (Emmons and Feer 1997). They stay together to provide security and

breeding benefits to one another. Their inconspicuous groups consist of mating partners and their 1-4 offspring (Eisenberg, 1989). A lot of resources are placed on raising the young. Juvenile *D. leporina* are able to move swiftly not too long after being born. This is an imperative trait and a much needed advantage if they are escape predation (Aliaga-Rossel et.al 2008). Breeding occurs approximately twice per year and females have a gestation period of roughly 120 days. Females are considered sexually and reproductively mature at 193 days and over (Dubost 1998). During courtship, males spray females with their urine causing them to do what is known as a 'frenzy dance.' After repeating the act several times, he is allowed to come close to her.

JUVENILE BEHAVIOUR. Juveniles are active (eating and moving) within an hour. May eat leaves alone. Newborn agoutis have sight upon being born. Freeze in the presence of potential predators (Wilson and Reeder 2005).

ANTIPREDATOR BEHAVIOUR. *D. leporina* behaves suspiciously of approaching animals as they are often preyed upon. For this reason, they are often found in pairs or with their partner in near proximity. Predators include mammals like the ocelot, jaguar, snakes and humans that hunt them (Wilson and Reeder 2005). They are also predated by boas. They use a series of sounds, tactile and body postures to communicate danger to nearby agoutis. Red-rumped agoutis behave uneasy and act suspicious of their surroundings, in constant observation of their environment with keen caution (Dubost 1998). This is possibly because of the expectation and fear of being attacked by predators. Males are more likely to be found in the open than the female and thus are more likely to be attacked and killed (Eisenberg 1989). This justifies their need for concealed, secured habitats. Their advantage is that they are swift animals that can conceal themselves quickly if they suspect danger.

REFERENCES

- Aliagra-Rossel, Enzo, Moreno, R.Kays and J. Giacalone. (2006). Ocelot (*Leopardus pardalis*) Predation on Agouti (*Dasyprocta punctata*). Biotropica 38,no.5 (September): 691-694.
- Aliaga-rossel, E.Kay,.RW.Fragasso,.JMV.(2008).Home Range Used by the Central American Agouti, *Dasyprocta punctata*, on Barro Colorado Island,Panama. Journal of Tropical Ecology.24: 367-374.
- Asquith, N.J.Terborgh, A. Arnold, C. Riveros. (1999). The Fruits that the Agouti Ate: *Hymenaea courbaril* seed fate when its dispenser is absent. Journal of Tropical Ecology, 15: 229-235.
- Bacon,P.R and R.P Ffrench.(1972). The Wildlife Sanctuaries of Trinidad and Tobago. Port of Spain: Wildlife Conservation Committee, Ministry of Agriculture, Lands and Fisheries.
- Dubost, G. (1998). Ecology and Social Life of the Red Acouchy, *Myoprocta exilis*; comparison with the orange-rumped agouti, *Dasyprocta leporina*. Journal of Zoology, 214:107-123.
- Eisenberg,J.F.(1989).Mammals of the Neotropics,vol. 1. Chicago: University of Chicago Press.
- Emmons, L.H., and F. Feer.(1997). Neotropical Rainforest Mammals:a field guide. 2nd ed. Chicago: University of Chicago Press.
- Jorge, MSP., and Carlos. A. Peres. (2005). Population Density and Home Range Size of a Red- Rumped Agoutis (*Dasyprocta leporina*) Within and Outside a Natural Brazil Nut Stand in Southeastern Amazonia1. Biotropica 37, no. 2(June) 317-321.
- Maher, C.R and J.R. Burger.(2012). Intraspecific variation in space use, group size, and mating systems of caviomorph rodents. J Mammal. 2011 February; 92(1): 54–64. doi: 10.1644/09-MAMM-S-317.1
- Wilson D.E, Reeder DM.(2005). Mammal species of the world: A Taxonomic and Geographic Reference. Johns Hopkins University Press: Baltimore.

Author: Christine Soodnarinesingh

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Fig. 2. *Dasyprocta leporina* holding food between forelimbs while standing upright to eat.

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