

Hydrochoerus hydrochaeris (Capybara)

Family: Caviidae (Cavies)

Order: Rodentia (Rodents)

Class: Mammalia (Mammals)



Fig. 1. Capybara, *Hydrochoerus hydrochaeris*.

[<https://web.stanford.edu/~siegelr/animalz/capybara.html>, downloaded 3 March 2017]

TRAITS. *Hydrochoerus hydrochaeris*, the largest semi-aquatic rodent (Kenny, 2008) has a characteristic barrelled, elongated body, blunt head, short muscular legs, large muzzle, a vestigial tail, rounded small ears (Fig. 1) sharp incisors with medial anterior groove, 5cm diastema (teeth gap or spacing) and elongated molar teeth (Mones and Ojasti, 1986) (Fig. 2). Total length is approximately 106-134cm, height 50-62cm (Emmons, 2008). Males are distinguishable by dark, hairless glands on the top of the snout (Fig. 1), and females are larger than males. The forelegs are longer than the hind legs, with 4 digits and 3 digits, respectively, with webbed intervals. Infants have a light brown coat with short fur; adults are dark brown or red-yellow brown, with black facial fur. The coat is sparse and bristle-like, between 30-120mm long (Mones and Ojasti, 1986).

DISTRIBUTION. Occurs throughout north and east South America, from the Andes Mountains of Columbia, Venezuela to northern regions of Guyana down to northern Argentina across to Amazonian Ecuador (Fig. 3). Distribution depends on temperature, water availability and an

altitude limit of 1,300m (Mones and Ojasti, 1986). It currently occurs in Trinidad, from escaped or released individuals (Rutherford, 2015; Kenny, 2008).

HABITAT AND ACTIVITY. Inhabits a wide range of aquatic lowland environments, example, mangrove swamps, dried river beds and seasonal floodplains. Capybara are crepuscular. Undisturbed herds of capybara rest near shaded river banks during morning periods. Wallowing for thermoregulation (cooling) at noon in shallow water or mud holes. During the late afternoon to early night most of the grazing occurs slowly for several hours, consuming short grasses. After they rest until midnight and then graze until dawn. Tropical wet seasons provide substantial forage for subcutaneous fat formation.

FOOD AND FEEDING. Capybara travel in herds, in line, forming defined trails when feeding. Capybara are grazing herbivores, feeding mainly on *Reimarochloa acuta*, *Leersia hexandra* and *Hymenachne amplexicaulis*, during the wet season and *Paratheria prostrata*, *Axonopus* spp. and *Sporobus indicus* in the dry season, proven from microscopical identification of faecal material (Mones and Ojasti, 1986). Capybaras select high protein forage, consuming 70g/kg of their body weight a day (c. 3-3.5kg). Capybaras slowly graze by using their nostrils to locate specific plants, cutting them at ground level. Digestion of the fibrous foliage is aided by a cecum. Coprophagy (eating one's faecal matter) supplements a sparse diet during the dry season, providing a high nutrient content (Herrera, 1985). Cultivated fields are subject to raids where capybara consume fruits, potatoes and corn (Mones and Ojasti, 1986).

POPULATION ECOLOGY. Capybara travel in related families or pairs, forming a closed group with a dominant male, several adult females and offspring. Subordinate males (5-10% of the herd) are on the periphery of the herd. Capybara exist in a home range of about 10 ha, but live mostly in a core area of 1 ha. They travel in herds of 20-100, and have a lifespan of 4-8 years. They have been occasionally sighted in the Caroni Swamp, Trinidad (Fig. 4), and are known to be breeding there (Rutherford, 2015; Kenny, 2008). During the dry season when herds accumulate at waterholes they decrease due to desiccated forage and predation (Mones and Ojasti, 1986).

REPRODUCTION. Females produce 4-5 offspring annually after gestation of about 150 days (Mones and Ojasti, 1986). Copulation begins during the females estrus (period) where the dominant male frequently sniffs her on land and ends in shallow water where the male produces 6-10 thrusts, repeating this 20 times daily during the wet season from January to June (Mones and Ojasti, 1986). During infancy, females nurture the young, even mounting them on their back (Fig. 5) and allow them to suckle while standing. After the juvenile stage they disperse from the parental group and may follow subordinate males (Mones and Ojasti, 1986).

BEHAVIOUR. After birth, well developed juveniles follow females and consume grass in their first week, and separate from the group after a year. Juveniles stay in crèches and suckle any nursing female. They play wrestle, gallop and imitate males. Capybara home ranges are hierarchal, where the dominant male intimidates opposing males by enlarging scent gland, and teeth-chatter (Fig. 2) for mating rights, resources for foraging and waterbodies. Predation is avoided by fleeing to aquatic environments and remaining submerged for 5-7 minutes (Mones and Ojasti, 1986). Males bark loudly to ward off predators. Capybaras may be wholly nocturnal in an area hunted by

humans. They release anal gland fluids which mark home range boundaries, as an identification marker to other groups (Mones and Ojasti, 1986).

APPLIED ECOLOGY. Capybara pose a threat to cattle rearing due to their invasive nature (Mones and Ojasti, 1986) and are hunted for their meat, high quality leather skin (Reid, 2016), and for pharmaceutical fatty components. Conservation through rearing capybara may prove successful due to their efficiency in grass digestion and meat production. Capybara are not suited as pets, being very territorial and may express aggression periodically. They have been proved as the source of Brazilian spotted fever which makes the meat illegal in several countries (Krawczak et al., 2014).

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Fig. 2. Incisors and molar teeth of *Hydrochoerus hydrochaeris*.

[<https://copybaraworld.wordpress.com/2014/04/>, downloaded 3 March 2017]



Fig. 3. Geographical distribution map of *Hydrochoerus hydrochaeris*.

[<http://www.science.smith.edu/msi/pdf/i0076-3519-264-01-0001.pdf>, downloaded 5 March 2017]



Fig. 4. *Hydrochoerus hydrochaeris* sighting in Caroni Swamp, Trinidad.

[<http://tffc.org/livingworld/index.php/lwj/article/viewFile/406/395>, downloaded 5 March 2017]



Fig. 5. Yearling capybara riding on a female.

[<http://www.alamy.com/stock-photo/brasil-rodent.html>, downloaded 5 March 2017]

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