

## *Didelphis marsupialis* (Common Opossum or Manicou)

Family: Didelphidae (Opossums)

Order: Didelphimorphia (American Marsupials)

Class: Mammalia (Mammals)



**Fig. 1.** Common opossum, *Didelphis marsupialis*.

[<http://www.art.com/products/p360947213-sa-i4011776/gary-randall-opossum-showing-its-teeth-didelphis-marsupialis-usa.htm/>, downloaded 12 November, 2011]

**TRAITS.** The common opossum generally has a white head with black ears. The back of the opossum may be black or darkly coloured and may extend as a stripe on the crown tapering to a point between the eyes. The eyes of this species are black and shiny. The length of the head and body together range from 265 mm to 430 mm and the tail averages at about 500 mm in length. This species may weigh between 4 and 6 kg with the males being generally bigger and heavier than the females. It has sharp claws which aid in climbing trees and a long, scaly prehensile tail (Hagmann, 2003). Females have a pouch in which young opossums complete their postnatal development. The pouch may have up to 13 teats on which the young opossums suckle in order to obtain nourishment, and has a warm, woolly interior to provide the young with warmth.

**ECOLOGY.** Common opossums usually inhabit forested areas but have also been seen in urban areas. Opossums are nocturnal and may spend the daylight hours in rocky crevices, hollow tree trunks, under piles of dead vegetation and in burrows which they usually have not dug themselves. Their nests are constructed using leaves and grasses as building materials, and their mouths and prehensile tails as a means of transporting these materials (Nowak, 2005). The common opossum has a varied diet which may include small vertebrates, birds, carrion, invertebrates, many kinds of vegetable matter as well as a wide variety of fruits (Tyndale-Biscoe, 2005).

**SOCIAL ORGANIZATION AND ACTIVITY.** The common opossum is nocturnal, terrestrial and solitary, its social interactions with other individuals of the same species being limited to mating and mother-young interactions (Nowak, 2005). These opossums rely heavily on olfaction and touch in order to find their way in the darkness. Common opossums are not strictly territorial and do not actively defend a territory, however when home ranges overlap each animal marks its area with its urine, scats (faeces) and saliva. *Didelphis* is nomadic and will remain in an area for two or three months before leaving to find a new home range with adequate food and water supplies. The shape and size of the range will vary with availability of water and food and the health and mobility of the opossum. Male opossums avoid other individuals of the same species and aggressive behaviour is seen anytime two male individuals come into contact with each other. The females of the species are more sedentary (Hagmann, 2003). However, if opposite sexes meet during the breeding season, they might behave aggressively to each other at first but this may soon turn into courtship with the two opossums spending several days together. Opposite sexes meeting when the female is not in oestrous will cause the female to behave agonistically towards the male but the male does not return her attacks (Nowak, 2005). The common opossum has claws and a prehensile tail which aid it in climbing trees as it tries to escape predators or as it searches for food or a nesting site. The opossum may therefore be a facultative arboreal animal.

**FORAGING BEHAVIOUR.** The dentition found in the common opossum (sharp, pointed, simple teeth) supports a generalised diet which includes insects, small vertebrates, soft plant tissue, fruits, vegetables and carrion (Tyndale-Biscoe, 2005). In urban areas they may find articles of food in compost piles and garbage cans. They find food by walking with a slow, ambling gait and sniffing at the ground while moving their heads from side to side to make sure they cover as much area as possible with their noses. If an article of food is found, they may pick it up directly with their mouths and eat it. If it is too large they may use their front feet to hold the food as they eat it.

**COMMUNICATION.** The common opossum is a solitary animal which rarely communicates with other members of the same species except during mating and parent-offspring interactions. If two individuals of the same sex come into contact with each other, they react agonistically to each other and produce hissing, growling, screeching and clicking sounds (Nowak, 2005). These clicking sounds are also produced by mothers who have become separated from their young and by males during their courtship displays. Communication may also be olfactory when the opossum produces a foul smelling anal secretion to ward off predators or include visual displays

such as drooling excessively, teeth baring and playing dead which all serve to deter predators from attacking them (Hagmann, 2003).

**SEXUAL BEHAVIOUR.** The breeding season for common opossums starts in January and ends at the beginning of the dry season. Shortly before the breeding season starts, common opossum males mark their home ranges more heavily with saliva while females prepare for the season by building leaf nests in tree cavities or burrows. If a male encounters a female who is in heat, he will attempt to mate with her. In fact, the males of this species are polygynous and will attempt to mate with any female of this species that it finds on its home range (Hagmann, 2003). Common opossum males attract females by producing a clicking sound with their mouths. Parental care is entirely up to the female with no participation from the male. Common opossum females are polyoestrous with reports of more than 3 litters being produced in one year (Nowak, 2005).

**JUVENILE BEHAVIOUR.** Typical of all marsupials, females give birth to foetal-like young following a very brief gestation period of only 13.5 days in the womb. The young are born hairless and blind. They are 10 mm in length and weigh 0.13g (Hagmann, 2003). They are much undeveloped; however the front legs are fairly developed and supplied with sharp deciduous claws. The hind legs, however, are undeveloped and at this stage, are useless to the young (Nowak, 2005). Common opossums lack a proper placenta in which the foetuses can develop to full term. The young are therefore born early in their development and journey to their mother's pouch where their development will be completed. Prior to giving birth, the mother licks a trail of saliva from the exit of the birth canal to the pouch which the young then follow using their sense of smell. The claws on the front legs aid in this journey from the birth canal to the pouch and drop off sometime after reaching the pouch (Nowak, 2005). Once the new-borns have reached the pouch, they each latch on to a teat which then swells in the mouth of each new-born thus preventing the young ones from falling off and providing them with the nutrition they need for their development. About 20 young opossums are born, but some of these do not survive the journey from the birth canal to the pouch. In addition to this, there are only 13 teats and some of these are not even functional so will not produce any milk and thus a few more of the young opossums may perish. Additional mortality may occur later on.

At 50 days old, the young may first release their grip on the teat and at 70 days they may occasionally venture outside the pouch although they have not yet been completely weaned. After the pouch has become too small to accommodate the growing, young opossums, some of them may ride on the mother's back and again this is prior to weaning. While on the mother's back, they may observe as she forages for food and learn survival techniques and skills such as the art of predator avoidance and foraging (Nowak, 2005). If one of these young opossums happen to be separated from its family, it signals to its mother by making a sneezing call to her. She in turn signals back to the young opossum by making clicking sounds. At 3 to 4 months, the offspring are completely weaned and independent of the mother and at 6 to 8 months sexual maturity is reached.

**ANTI-PREDATOR BEHAVIOUR.** The common opossum, if met with a predator first tries to escape by running away or climbing a tree out of reach of the predator. However, the common opossum as well as many other species of opossum usually cannot outrun most predators so instead rely on a variety of behaviours which they use to defend themselves against predators.

The opossum may first bare its teeth in a threatening manner to ward off predators. The opossum may then resort to heavy drooling to deter predators. This drooling is produced by excessive working of the jaw and helps to make the opossum appear sick and unappetizing to the predator. The most well-known anti-predator behaviour used by the common opossum, however, is death feigning which is more popularly known as “playing possum.” This behaviour is used as a last resort when all other techniques have failed and is more technically known as “catatonia.” It involves the opossum becoming immobile while lying on its side, with its tail curled ventrally and its mouth and eyes open, paws partially closed. In this state, the animal becomes insensitive to tactile stimuli. This condition may last less than a minute or up to six hours. There is some conflict as to whether this behaviour is voluntary or whether it is induced by fear; however, physiological changes in the animal during this time suggest that this state is similar to fainting in humans. The behaviour works based on the fact that for many predators, killing a prey is part of the stimulus which excites their appetite. Appetite is not stimulated by a dead opossum and thus predators leave it alone. Playing dead can also cause an actively pursuing predator to lose the visual stimulus of motion or to become less strategic as it approaches allowing the opossum a better chance of escape. Catatonia is also usually accompanied by anal secretions which have the odour of a dead animal. This further helps the opossum to appear dead (Nowak, 2005).

#### REFERENCES

- Hagmann, K. (2003). "Didelphis marsupialis" (On-line), Animal Diversity Web. Accessed November 10, 2011 [http://animaldiversity.ummz.umich.edu/site/accounts/information/Didelphis\\_marsupialis.html](http://animaldiversity.ummz.umich.edu/site/accounts/information/Didelphis_marsupialis.html).
- Nowak, R. M. (2005). Walker's Marsupials of the World. Baltimore: The Johns Hopkins University Press.
- Tyndale-Biscoe, H. (2005). Life of Marsupials. Collingwood, Australia: CSIRO Publishers.
- Wikipedia (2011). Common Opossum. [http://en.wikipedia.org/wiki/Common\\_opossum](http://en.wikipedia.org/wiki/Common_opossum), downloaded November 5 2011.

Author: Vashista Shripat

Posted online: 2011



**Fig. 2.** Common opossum female with offspring settled on her back.

[<http://www.superstock.com/stock-photos-images/4179-24357>, downloaded 15 November 2011]



**Fig. 3.** A Virginia opossum (*Didelphis virginiana*) “playing possum” or playing dead.

[<http://www.hartmanprehistoricgarden.com/sa-didelphis.html>, downloaded 15 November 2011]





**Fig. 4.** A Virginia opossum (*Didelphis virginiana*) baring its teeth as a defence mechanism.

[<http://www.critterzone.com/animal-pictures-nature/mammal-opossum-Virginia.htm>, downloaded 15 November 2011]