

Centurio senex (Wrinkle-faced Bat)

Family: Phyllostomidae (Leaf-nosed Bats)

Order: Chiroptera (Bats)

Class: Mammalia (Mammals)



Fig. 1. Wrinkle-faced bat, *Centurio senex*.

[<http://www.mammalogy.org/centurio-senex-360>, downloaded 29 March 2015]

TRAITS. *Centurio senex* is exceptionally bizarre, with its face filled with fleshy folds (Fig. 1). Its most intriguing fold is its notably translucent chin fold which covers its face when roosting (Fig. 2). Its wings are transparent and seem soft and delicate in texture. Its white, horizontal stripes are more noted in males. The folds on the skin of the male's face contain scent glands. The bat has a colour range from grey to shades of brown with a neat, white beard that sits comfortably at the bottom of its face. This bat has a nose that is quite small in comparison to its googly eyes and is the furthest thing from being 'leaf nosed'. Female bats are on average slightly larger than the males. The tragus (ear projection) of the bat is medium in length and its ears are yellow. The bat's tail has a full coverage of hair but the hair does not go past the uropagium (skin flap). Size of bat: total length 55-70mm, forearm 41-45mm, body mass 17-28g, number of teeth 28.

DISTRIBUTION. *Centurio senex* is known from Mexico, south eastward through Middle America to western Venezuela, and is also known from Trinidad and Tobago. No specimen is presently recorded from Colombia but it probably occurs in much of northern, coastal regions of South America. The nominate subspecies (*C. s. senex*) occurs over most of the recorded distribution of the species, and the subspecies *Centurio senex greenhalli* is known only from Trinidad but may occur also in Tobago (Jones, 1951) and the adjacent mainland (Paradisco, 1967).

HABITAT AND ACTIVITY. *Centurio senex* is sometimes abundant in seasonally flooded forest and also in deciduous forest. These bats are captured in mist nets over minute pools of water but can also be spotted in dry forest, gallery forest, plantations and gardens. These bats can adapt to extremely disturbed habitats and can reside in city parks and scrubby forest near cane fields. Specimens of the *C. senex* have been captured in a variety of habitats including deciduous forests and xeric to humid tropical forest. Captured bats in Nicaragua were hanging in daylight hours in small cubicles in a thick growth of vines. They roost in vine tangles and dense foliage (Fig. 3). Males can either roost singly or in groups of 2 or 3 and a number may be dispersed around the same tree. Unlike males, females roost in dense clusters. While roosting, the mask of the skin is pulled up tightly and completely covers the face and forehead and covers the horizontal flaps of the ears while a ridge across the crowns hold it in place and forms an air channel for breathing. It flies rapidly like big, heavy beetle in a wobbly motion, sometimes with the body vertical to the ground. Activity starts soon after sunset but is curtailed around full moon.

FOOD AND FEEDING. Wrinkle-face bats are extremely frugivorous (Fig. 4), their preference is overripe fruits which includes soft mangoes and bananas to which they suck on. However, if the food resources are depleting or decreased, they do resort to unripe fruit. Bats that feed upon the pulp of fruits have modified molars with the sharp cusps suppressed and the crowns broadened or at least flattened so that the upper and lower components oppose one another with crushing surfaces thus serving to mash food into pulp. These bats feed on the fruits by biting ripe fruits and sucking the juice. The facial folds may be used to direct juice to the mouth. These bats have the capability of storing the pulp from fruits in their mouth while protuberances between the gums and lips filter the juices from mushy fruits. Many fruit eating bats may need to supplement their diet to meet their protein requirements but the need will depend upon physiological requirements and the fruit eaten; a mixed diet of several fig species can meet the nutritional requirements. Goodwin and Greenhall (1961) found yellow fruit pulp in the stomach of a bat from Trinidad. *Centurio senex* uses multiple bites to remove a mouthful of food, then these bats spend an extensive amount of time chewing the bolus (food-ball). Fibre in food that is relatively dry is simply spat out and the biting process is repeated.

REPRODUCTION. The odiferous glands under the male's chin are used to attract females. Although males have been found to be most sexually active in March, mating usually takes place from January through August while female lactation take place in February, March and August. The male's sperm morphology is unique in that the sperm has a rounded nucleus and a pointed acrosome. Females roost in the same tree as males during pregnancy.

BEHAVIOUR. *Centurio senex* is nocturnal, the bats roost in groups of two to three during the day. During the non-reproductive months, the males and females roost separately. In the process of roosting, the rolls of skin on the bat's chin can be pulled over their faces and the translucent

skin cover the eyes so that they are able to detect movement and light within their range. By living in groups bats gain protection from predators, both in the roost and on emergence. *Centurio senex* emerge from the roost in clusters. This temporal clustering makes it difficult for predators to fix on a single bat, enhancing the diluting effect (Speakman and Thomas, 2003).

REFERENCES

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Fig. 2. Chin fold of *C. senex*.

[<http://blogs.ciencia.unam.mx/lahuella/2013/11/29/el-enmascarado-volador/>, downloaded 25 April 2015]



Fig. 3. Roosting wrinkle-faced bats.

[<http://de.academic.ru/dic.nsf/dewiki/243922>, downloaded 25 April 2015]



Fig. 4. Wrinkle-faced bat feeding on fruit.

[<http://osaconservation.org/2013/01/nature-sightings/>, downloaded 25 April 2015]