

Uroderma bilobatum (Tent-making Bat)

Family: Phyllostomidae (Leaf-nosed Bats)

Order: Chiroptera (Bats)

Class: Mammalia (Mammals)



Fig. 1. Tent-making bat, *Uroderma bilobatum*.

[<https://www.inaturalist.org/observations/371850>, downloaded 10 March 2016]

TRAITS. The facial stripes are very distinct in *U. bilobatum* (Fig. 1), with a white stripe along the midline of the back (Eisenberg and Redford, 1989). The colour of the edge of the ear is yellowish white, with a white line above and beneath each eye. The head-body length of *U. bilobatum* is from 54-61mm, and the sizes of the sexes are very similar (Eisenberg and Redford, 1989). *Uroderma bilobatum* has bilobed upper medial incisor teeth (Baker and Clark, 1987). An external tail (outside the wing membrane) is not present.

DISTRIBUTION. *Uroderma bilobatum* is found in lowlands of tropical America, stretching from Oaxaca and Veracruz, Mexico, south to Peru, Bolivia, Venezuela and south-eastern Brazil (Davis, 1968). In Trinidad, this species is recorded from Blanchisseuse.

HABITAT AND ACTIVITY. Roosting is diurnal, beneath palm fronds and banana leaves. *U. bilobatum* construct tents by biting into the ribs of fronds which causes the leaves to fold into halves, creating a shelter. *U. bilobatum* may use a tent for up to 60 days before constructing a new shelter. *U. bilobatum* are usually found in large numbers where there is an abundance of tall, upright vegetation, and show preference for habitats with a high density of coconut palms (*Cocos nucifera*). Other plant species used for the construction of tents by *U. bilobatum* include shortstem philodendron (*Philodendron fragrantissimum*), Panama hat plant (*Carludovica palmata*), rabo de gallo (*Carpotroche platyptera*), *Heliconia imbricata* and banana (*Musa* sp.). The various tent styles of *U. bilobatum* vary from conical, palmate umbrella, boat, and bifid, each of which is specific to the selected roosting vegetation. Selection of roosts may also be influenced by the abundance of food, and the number of roosts already present in a particular region.

FOOD AND FEEDING. *U. bilobatum* is highly frugivorous (fruit-eating; Fig. 2), however food may include insects. Overall, the diet of *U. bilobatum* consists of 83% fruit, 9% pollen and nectar, and 8% insects. Analysis of substances within 320 stomachs of *U. bilobatum* obtained in Costa Rica and Panama showed a diet of 76% plant material, 13% insects and 11% unidentified material. With respect to fruits, *U. bilobatum* feed on the pericarp of small palm fruits, figs and occasionally *Psidium guajava*.

POPULATION ECOLOGY. *U. bilobatum* may be solitary or in groups of 2-59 bats consisting of both sexes. Roosting may occur in small colonies of approximately 10 of both sexes (Eisenberg and Redford, 1989), or roosting groups may consist of single adult males and two to six adult females, some of which may have pups (Kunz and Fenton, 2003). It has been debated if *U. bilobatum* forms seasonal maternity groups rather than harems. In the maternity groups, there is an absence of sexual segregation and there is no apparent strong bond among bats of the same roost. Sexual maturity is attained before the species reaches one year of age, however independence in young bats from females may occur as early as one month old (Baker and Clark, 1987).

REPRODUCTION. Reproduction in *U. bilobatum* is viviparous. Research has concluded that *U. bilobatum* has a bimodal polyestry reproductive cycle, with young born at two periods each year, in February and June (Baker and Clark, 1987). One offspring is produced for every pregnancy, therefore each female produces two offspring per year. The spermatogenic cycles of the males correspond to the female receptivity changes that occur with each season (Baker and Clark, 1987). Females become sexually active from February to March and September to October. The gestation period of *U. bilobatum* is approximately 4-5 months (Baker and Clark, 1987).

BEHAVIOUR. Juveniles become independent of females at one month of age. Before becoming independent, residing in the maternal groups provides thermoregulatory advantages to the juveniles and lactating females. Tent-making in taller trees adds an advantage against predation of *U. bilobatum*. Selection of younger fronds for tent-making also assists against predation as these are most likely to be furthest from the ground. The means of communication and perception of the bats of this species are mainly tactile and chemical. The age at which bats of the species begin to construct tents and cooperate with other individuals of the species is unknown. It is also unclear of whether their cooperative behaviours are instinctive or learned (Baker and Clark, 1987).

APPLIED ECOLOGY. *U. bilobatum* is listed by the IUCN as “Least Concern”. The IUCN justifies that this species is widely distributed and numerous in areas that are highly protected. Because this species is located where there is an abundance of vegetation and food, they are unlikely to be considered as pests. With respect to parasites found in *U. bilobatum*, these may include: *Trypanosoma cruzi*, *Alabidocarpus nicaraguae*, *Basilisa constricta*, *B. myotis* and *Amblyomma sp.*

REFERENCES

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Fig. 2. *Uroderma bilobatum* feeding on fruit.

[http://news.bbc.co.uk/earth/hi/earth_news/newsid_9405000/9405863.stm, downloaded 10 March 2016]