

Sturnira lilium (Little Yellow-shouldered Bat)

Family: Phyllostomidae (Leaf-nosed Bats)

Order: Chiroptera (Bats)

Class: Mammalia (Mammals)



Fig. 1. Little yellow-shouldered bat, *Sturnira lilium*.

[<http://www.arkive.org/little-yellow-shouldered-bat/sturnira-lilium/image-G120328.html>, downloaded 1 March 2016]

TRAITS. *Sturnira lilium*, commonly known as the little yellow-shouldered bat, is moderately-sized, on average 62-65mm in length, 300mm wingspan, and about 20g in weight. The species shows sexual dimorphism with the males being larger than the females (Anderson, 2009). *Sturnira lilium* has the characteristic leaf-shaped nose of the Phyllostomidae but it is smaller in this species compared to other members of the family. The ears of *Sturnira lilium* are short and broad and the bat lacks a true external tail. The soft but dense fur of the animal is variably coloured with factors such as age, location and sex, but generally the dorsal fur ranges from dark grey to red-brown while the ventral side is shades lighter. Males have a yellow patch of hair on their shoulders, obtained from excretions of the shoulder glands, this characteristic trait gave them their common name (Fig. 1) (Anderson, 2009).

DISTRIBUTION. *Sturnira lilium* is native to the tropical and non-tropical regions of Central and South America, and the Lesser Antilles in the Caribbean, including Trinidad and Tobago

(Fig. 2) (Anderson, 2009; Barques et al, 2008). Regional migration patterns have not been observed for this species but Mello et al. (2008) observed a seasonal altitudinal migration in the Argentine mountains.

HABITAT AND ACTIVITY. The Little yellow-shouldered bat is the best distributed phyllostomid and prefers damp, humid and semiarid habitats, which include tropical rainforests and mountain forests with maximum elevations of 1000m. *Sturnira lilium* typically dwell in large wide bodied trees since the heartwood of these trees decays easily creating hollows that serve as roosts, however they can sometimes be found in caves, under palm leaves and vine tangles (Arkive.org, 2016). *Sturnira lilium* disperse the seeds of the *Solanaceae* (nightshade) family, such as *Solanum riparium* (Fig. 3). They are pollinators for flowering plants such as *Mabea fistulifera* and are important in the regeneration of forests.

FOOD AND FEEDING. *Sturnira lilium* is a frugivorous, nocturnal bat with a dietary preference for plants of the *Solanaecae* family. However, in a study by Mello et al. (2008), it was discovered that the diet of *Sturnira lilium* consists of 28 families and 83 species of plants such as pepper (Piperaceae) and nettle (Ceropiraceae) families. They are also known to feed on nectar, pollen and occasionally on insects (Arkive.org, 2016). They forage for an average of 4 hours from dusk, usually in the understory of the forest for short periods or at canopy level for longer periods. They can be found foraging over open lowlands such as agricultural farmlands or near bodies of water such as lakes, rivers and streams. They eat several fruits in 20-minute intervals (Fig. 4), pausing before excreting 20 minutes after consumption (Anderson, 2009).

POPULATION ECOLOGY. Though fairly abundant, *Sturnira lilium* typically roosts solitarily, with occasional incidents of groups as large as ten individuals roosting together. This bat has a lifespan of 12 years in captivity and 20 years in the wild. The little yellow-shouldered bat seldomly leaves its home range but have been recorded leaving higher altitudes as temperatures drop, as their minimal body fat cannot sustain extended periods of torpor (Anderson, 2009).

REPRODUCTION. Both males and females are reproductively mature within 8-11 months of birth. The females experience seasonal bimodal polyestry, which means they give birth only twice annually, once per tropical season (Barquez et al., 2008). The gestation period of the animal is 105 days, after which a pup of average weight of 5.2g is born (HAGR, 2014).. If left unimpregnated they go into multiple heat during the breeding season and they experience post-partum oestrus, that is, they come into heat after giving birth. Like all bats, female *Sturnira lilium* gives birth to live young (Barquez et al., 2008). The shoulder gland of the male *Sturnira lilium* secretes a spicy pheromone which plays a significant part in mating (Anderson, 2009).

BEHAVIOUR. At birth, juveniles have open eyes, fur and fully developed limbs. They can take anywhere between 5- 20 weeks to wean off their mother's milk, although they become independent one month after birth. Female fruit bats are known to take their young with them foraging, and so it is highly suspected that *Sturnira lilium* does the same; however this 4-hour period leaves the young and mother highly susceptible to predators such as spectral bats, snakes and possums while flying in the forest understory. Their dark colour protects them at night and their ability to fly gives them advantage over the flightless predators but they are unprotected against the spectral bats.

APPLIED ECOLOGY. The IUCN Red List (2008) has listed *Sturnira lilium* as under no conservation threat due to the wide dispersion of its large population, especially in the protected areas of Central America. Although they are quite tolerant and adaptable to deforestation, they are also susceptible to it as they choose to roost in the trees with wide diameter and these trees are usually harvested first because they are older. They bear no threat to humans as interaction between the bat and humans is rare (Anderson, 2009).

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Posted online: 2016



Fig. 2. Little yellow-shouldered bat geographic distribution.

[<http://maps.iucnredlist.org/map.html?id=20953>, downloaded 25 February 2016]



Fig. 3. Little yellow-shouldered bat in flight during nocturnal feeding.

[<http://cienciap todos.webnode.pt/news/rdp-co-evolução/>, downloaded 25 February 2016]



Fig. 4. Little yellow-shouldered bat feeding at night.

[<https://www.flickr.com/photos/11412389@N05/2677389302/in/photostream/>, downloaded 25 February 2016]

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