

Phyllostomus discolor (Pale Spear-nosed Bat)

Family: Phyllostomidae (Leaf-nosed Bats)

Order: Chiroptera (Bats)

Class: Mammalia (Mammals)



Fig. 1. Pale spear-nosed bat, *Phyllostomus discolor*.

[<http://www.inaturalist.org/observations/2629622>, downloaded 2 March 2016]

TRAITS. Also known as pale spear-nosed bat or lesser spear-nosed bat, it has a body of medium size and sturdy form, characterized by an extensively developed nose-leaf about 13mm long and 7mm wide (Fig. 1). Average body size is 75-109mm inclusive of large rounded head and short tail, length 12-17mm (Husson, 1978). It shows sexual dimorphism with larger cranial features and higher body mass in males than females. *P. discolor* has narrow, pointed ears slightly longer than tail; 18-24mm long (Kwiecinski, 2006). There is a v-shaped lower lip with warty growths; no extendable tongue. Wings are dark brown, relatively large with average wing span of 14.6 cm and rounded ends, the wing membrane extends from the ankles (Fig. 2) (Kwiecinski, 2006).

Ventral body surface with soft, thick hair; dorsal fur dark brown to grey; variegated appearance with paler colour below (Smith, 2009).

DISTRIBUTION. Widespread and common occurrence over Central America to South America (Barquez et al., 2015). They extend from Mexico to Peru in the south and also to neighbouring Bolivia, Paraguay and Brazil (Fig. 3). It is also found in Margarita Island and is native to Trinidad and Tobago (Barquez, 2015).

HABITAT AND ACTIVITY. Found in relatively low-lying regions that do not exceed 610m; found in both moist and dry terrestrial areas including croplands such as banana plantations (Smith, 2009; Kwiecinski, 2006), forested areas, orchards and dark caves. They roost (rest) in tree hollows (Fig. 4) with up to 25 individuals found together (Smith, 2009); in Trinidad, they often roost in silk cotton trees (Kwiecinski, 2006). Being nocturnal (Simmons and Conway, 1997), they are most active from 8-10 at night, one to two hours after dark (Smith, 2009; Kwiecinski, 2006). The average foraging time was 181s between prey captures (Smith, 2009); they often forage (search for food) in groups of 2-12, using visual and auditory cues to move around (Kwiecinski, 2006).

FOOD AND FEEDING. *Phyllostomus discolor* is omnivorous (Santana and Talamoni, 2007). They feed in groups and eat nectar, pollen, flowers, fruit, insects and likely frogs (Kwiecinski, 2006; Thomas, 2016). When feeding on flowering plants, they project the entire head into a flower since the tongue cannot project outwards. They tend to be covered in pollen which they spread from plant to plant (Thomas, 2016). They depend on vision for orienting to food, however they use auditory cues from echolocation for landing (Kwiecinski, 2006). There may be some seasonality in diet, feeding on nectar and pollen in the dry season as opposed to fruits and insects in the rainy season (Kwiecinski, 2006).

POPULATION ECOLOGY. *P. discolor* has been found in colonies of up to 400 individuals in Trinidad, and they have a large home range with an average recapture distance of 400m (Kwiecinski, 2006). The current population trend is reported as being stable (Barquez et al., 2015). Maximum longevity is 9 years (Tacutu et al., 2013). Harems have unstable composition, with females interchanging between harems (Smith, 2009).

REPRODUCTION. *P. discolor* maintain highly active harems of 12-20 individuals with 1 male to 15 females (Kwiecinski, 2006). A single naked pup is produced at a time. Copulation may occur within one day when a female is in the harem and gestation requires 105 days (Kwiecinski, 2006; Tacutu et al., 2013). Pups can give isolation calls right after birth (Smith, 2009), and are weaned at two weeks old (Kwiecinski, 2006). Males are seen with pups resting on their backs. The reproductive season depends on the locality; in Guatemala, pregnant females are found only in August and September (Kwiecinski, 2006) while in Trinidad, they are not found pregnant in September but in February, March, June and August (Smith, 2009).

BEHAVIOUR. *P. discolor* leave roosts and forage (search for food) in groups. They have agile movements to and from food using high frequency sounds. Entry into groups requires tactile and vocal communication. Aggression is displayed between females, and movement of females from a strange male. No response is given by females to familiar male (Kwiecinski, 2006).

APPLIED ECOLOGY. Omnivorous bats like *P. discolor* are affected by logging, as studied in Trinidad. Selective logging promotes greater species abundance compared to undisturbed forests. Also, community diversity is increased due to logging with rare species found after regeneration of logged forests and predominant species reduced (Clarke et al., 2005). Ecosystems are affected since *P. discolor* are known pollinators (Presley et al., 2008). As of July 2015, they were classified as least concern on the IUCN red list due to large and slowly decreasing population growth rate. No major threats are known and they are also conserved in protected areas (Barquez et al., 2015). They are not used or traded.

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Fig. 2. Outstretched wings of *Phyllostomus discolor*.

[<https://conservacionverde.wordpress.com/>, downloaded 11 March 2016]



Fig. 3. Geographic distribution of *Phyllostomus discolor*.

[https://commons.wikimedia.org/wiki/File:Distribution_of_Phyllostomus_discolor.png, downloaded 9 March 2016]



Fig. 4. *Phyllostomus discolor* roosting in tree hollow.

[http://naturalhistory.si.edu/mna/full_image.cfm?image_id=2256, downloaded 9 March 2016]

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