

Miniature dracula's: the vampires of the tropics



**ASSIGN
BUSTER**

The word vampire brings to mind a myriad of spine tingling images; eyes as red as the fresh blood dripping from a pale chin, an eerily wing-like cape flapping in the wind of a misty night, a worryingly well-preserved crypt in an old abandoned castle. Or perhaps the more modern interpretation of a beautiful and brooding young man, as dark as he is handsome, is what comes to mind. Very rarely would one find someone to which the word vampire would immediately conjure images of small furry creatures who spend their days cuddling, grooming each other, and feeding others, who have missed a meal of blood, from their own supply.

In reality, the later description is far more accurate. Their diet of blood gained them the name vampire, after the legends of the bloodsucking monsters of the night, but these tiny creatures have more in common with a flying ball of fluff than a Transylvanian Count. Vampire bats, though often considered frightening or repulsive, are in fact fascinating creatures who show a depth of compassion and familial bonds which humanity would do well to learn from.

The three living species of vampire bats; the common *Desmodus rotundus*, the hairy legged *Diphylla ecaudata*, and the white winged *Diaemus youngii*, can only be found in the New World tropics with the exception of a single hairy legged vampire bat found in the state of Texas in the year 1967 which would have had to wandered some 700 km north from its breeding population in order to be found where it was (Chiroptera · Phyllostomidae · *Diphylla Ecaudata*). Otherwise, the common vampire bat can be found from Mexico to as far south as central Chile, the hairy legged vampire bat can be found all over Central and South America, and the white winged vampire bat

can be found mostly in South America with a sliver of territory reaching as far north as central Mexico. All three species of vampire bats prefer a tropical to subtropical habitat, as they cannot survive in a temperate climate. They tend towards remaining in the rainforest, at least until the lure of bountiful prey brings their colonies towards the farms of rural areas.

All vampire bats live on a diet of blood. Common traits across the species that assist in their dietary activities are; an anticoagulant agent in their saliva, few, but razor-sharp teeth in their gums and cheeks, and a heat sensor-like organ in their nose. However, the separate species display distinct differences in prey and hunting techniques. The common vampire bat preys mostly on cattle and other large mammals. The bat can typically only consume about two tablespoons of the thick protein rich blood, before becoming full nearly to bursting (Sartore). The white winged vampire bat feeds, instead, on the fat rich blood of birds, usually drinking from the pad of the backmost toe, or the blood vessel rich brood patch. However, in 2017, there were recorded incidents of white winged vampire bats, which had previously been thought to exclusively prey on birds, having DNA from human blood in their feces. This discovery was disturbing on many levels as the bats that had evolved specifically to process fat heavy bird blood were now drinking the protein rich blood of humans. This was made even more shocking in the context that previously the bats had been observed to consistently choose to fast rather than feed on protein heavy pig or goat blood. In addition, risk to the human and bat populations were significant, as the bats had already lost concerning amounts of habitat and prey prior to this discovery from humans encroaching on their territory, never mind the

violent reaction from a fearful human population. The humans being at risk for transmission of highly deadly diseases from the bats (Horton). The hairy legged vampire bat also feeds on birds, but thankfully has not yet been observed consuming human blood. Otherwise they show similar hunting methods to the white winged vampire bat. An interesting hunting technique has been observed which involves a bat mimicking the behavior of chicks to a domestic hen. The bat nuzzles the chest of the brooding hen. She responds by opening her wings and fluffing out her feathers, unknowingly giving the vampires access to her brood patch and underwing area (Schutt). Despite two of the three species feeding on fat heavy blood, vampire bats do not accumulate much, if any, fat. As a result, missing even one feeding can be disastrous for an unsuccessful vampire bat. However, this fact is the reason for a heartwarming interaction between bats, if a successful bat sees that a fellow bat has gone hungry it will regurgitate a portion of its meal to the hungry bat, very similarly to how a mother bird feeds her chicks. Perhaps most astonishing of all, this compassionate act has been frequently observed taking place between bats from different family groups and even different colonies. Additionally, a bat that has been helped in the past will often reciprocate and also be more likely to pay it forward and help another bat who is hungry, showing a capacity for empathy and even kindness.

Vampire bats of all kinds form complex relationships, not dissimilar to human, dolphin, or primate relationships. They have been observed to form friendships based on mutual grooming. They have been known to sometimes show preferential treatment to family members in regard to feeding a hungry bat. Indeed, the charitable act of sharing food also shows some sort of social

safety net for the bats to fall back on (Griffin). This, alongside the hunting tactic using a hens motherly instincts, shows that, not only do vampire bats form complex social bonds, they understand those of other animals as well. This displays a level of intelligence that some might find surprising.

Vampire bats, though potentially unsettling at first, are intelligent, loyal, and compassionate creatures who lead complex and interesting lives. Though their blood-based diet makes every meal a crucial one, the close bonds they form with others gives them a safety net to fall back on. Their importance to the ecosystems they inhabit could not be overestimated. Indeed, far from their Transylvanian namesakes, these bats could be accurately described as friendly flying puffballs who simply require a droplet of blood now and again. Humans could stand to take a few lessons on compassion and charity from these tiny Draculas.