# OWLDERING AROUND MAGAZINE

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## **OLWDERING AROUND MAGAZINE**

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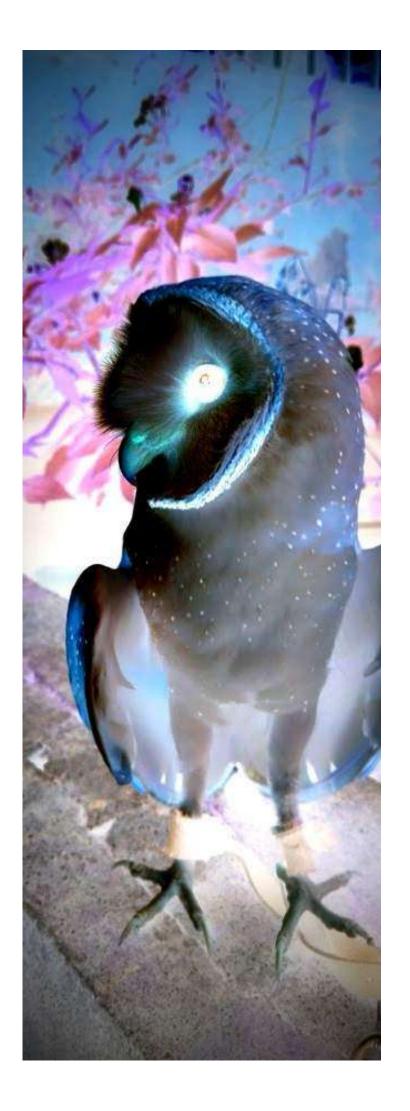
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# BATS

## In loving memory of Roberta Vaughan



## FAMOUS AND FEARFUL



It is very common to see bats scattered around the cities, not exactly flying through the skies, but in t-shirt prints and other elements thanks to their popularity in association with Batman. But even being an animal related to the world of superheroes, outside the screens of the cinemas people are afraid and have a lot of prejudice in relation to these animals that are very important for the ecological balance.

#### FROM HERO TO VILLAIN

Despite the undeniable positive view thanks to Batman, bats are also associated with vampires, and because of the legends and movies relating bats with blood and death, bats suffer from prejudice and are often killed for that reason.

Bats are the only mammals capable of true flight.



## **DISMISTIFYING IS NECESSARY**

Bats are intimately related to our well-being, since they perform ecological services that improve our quality of life, and are considered as indicators of the level of environmental disturbance.

There are several types of bats: insectivores (with insect-based feeding); frugivores (with fruit-based food); carnivores (they feed on small terrestrial vertebrates such as frogs. birds, etc.); piscivores (they feed on fish and aquatic arthropods); omnivores (eat fruit, flowers, insects and small vertebrates) and hematophagy (which feed on blood). About 70% of bat species are insectivorous, and they are found almost everywhere in the world. In the world there are approximately 1,200 species, and in Brazil there are approximately 180 species of bats.



Frugivorous bats play a fundamental role in the recovery of degraded areas, by dissipating seeds of native plants. Their importance as pollinators affects especially human economy, since many fruits such as bananas, avocado, guava, etc have flowers that only open at night. C. F. DIAZ 2013. The usefulness of bats for agriculture goes further, even their feces are useful for cultivation. It has been proven that the so-called guano is an excellent natural fertilizer marketed in many countries.

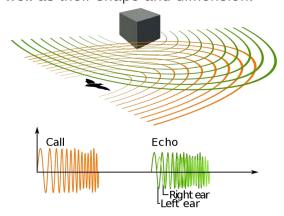
The insectivorous species correspond to 75% of the species of bats, and each million of bats consume approximately ten tons of insects every night, thus realizing a natural biological control of insects harmful to human health, such as the *Aedes aegypti* mosquito. There are even studies that consider bats more important for this biological control than birds. In Brazil, the biologist and researcher Maria da Conceição, from the State University of Feira de Santana (UEFS), studies the control of the mosquito population by bats.

"We are going through a very difficult time in the Public Health of the country because of the diseases transmitted by the Aedes mosquito, therefore protecting bats is a guarantee that fewer mosquitoes will circulate in the environment"

There are only three hematophagous species, all native to Latin America, with two of these species feeding on bird blood, and only one of the blood of mammals. The hematophagous species that feed on mammals is the Desmodus rotandus, and in 2015 more than 1,300 properties in São Paulo registered attacks from them. Despite being popularly feared, there are investigations being conducted currently that analyze the anticoagulant properties of their saliva, for use in humans in the treatment of heart diseases (Reddrop et al, 2005, apud DIAZ 2013).

#### **ECHOLOCATION**

Bats have a mechanism called echolocation, which works like a sonar. Bats emit sounds inaudible by man, in waves of very high frequency. These ultrasound impulses help them locating the position of objects and animals, as well as their shape and dimension.





A flying fox (*Pteropus giganteus*) (Megachiroptera: Pteropodidae) Photo: Wikipedia



A common vampire bat (*Desmodus* rotundus), in the farm Canchim,
Brazil. Photo: Wikipedia

### **CONSERVATION CHALLENGES**

Deforestation is one of the main threats to the survival of bats. The advance of agriculture, especially of soybean and sugar crops, as well as the fragmentation of forests, constitute serious threats to bats. But it is the fear and prejudice that cause mass deaths of bats throughout the world, since the urban cohabitation between bats and man ends up putting them at risk, as they are seen as urban plagues and therefore exterminated.

According to studies in Argentina (Lunney, 1990 apud DIAZ 2013) the conservation of bats is a completely ignored issue. The PCMA conservation program of Argentina tries to demystify and protect bats. In Brazil we have the "Programa de conservação de morcegos no Brasil", and in the United States we have the Bat World Santuary, to name a few.

**FLYING FOXES** 



In Australia thousands of species of flying fox bats (large bats of the genus *Pteropus*) and true bats (order *Chiroptera*) die by electrocution or are killed by shots by farmers.

There are several conservation and rehabilitation projects for bats in Australia that try to save these important agricultural allies, although they are not seen that way by the majority of the population, among them we can mention the "Shoalhaven Bat Clinic and Sanctuary, Do not Shoot Bats, and Bats QLD.

We conclude, therefore, the need to demystify and inform the population of the importance of bats, and promote a peaceful and safe coexistence between humans and bats, for the benefit of both.



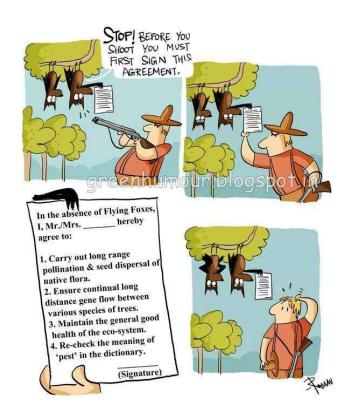
Killing flying-foxes does not work as a method of crop protection. This has been the view of farmers for the past 150 years. Full exclusion netting is the only consistently effective method for protecting fruit crops, and is recommended by governments and industry experts.

Dont Shoot Bats - www.dontshootbats.com



Our missions is to Rescue, Rehabilitate and Release the injured and orphaned Bats and Flying Foxes in South East Queensland that comes into our care throughout the year and to educate the public in how they can best help the Flying Foxes in their area.

Bats QLD - www.batsqld.org.au



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They are dispersers of seeds, of many seeds, they make at night the role that birds make during the day, they are responsible for replanting different species, and for the firm growth of the forest. They are pollinators, that is, they help plants in their reproduction, they are predators, keeping controlled the populations of other species, most invertebrates, but there are some that even eat fish, others that feed on blood, that's crazy, isn't it? They are also prey, helping to keep other species of animals alive.

Guys, these animals are almost responsible for life in caves, their feces are formed by almost everything, in short, they are really incredible animals, incredible! Oh, do you know those horrible things that people say about them? That's nonsense from crazy people, do not believe in that please, respect them, these animals are very useful, much more than us! Victor Basílio – Biologist. Photo: Bat- "Sturnira lilium".