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Book Review: Dark Banquet
The fascinating lives of blood-feeders
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The "expert" vampire eradicators rolled a tank of propane gas into a Brazilian cave some years ago, opened the valve and remotely triggered a flashbulb. The explosion was awesome. After the clouds of smoke cleared, a visiting scientist found thousands of dead bats of varied species, but not a single vampire. The vampire bats were found a little deeper into the cave â€“ quite healthy and unruffled. The bats that died, the scientist said, were "more delicate" than the hated vampires.

Similar disasters have occurred countless times throughout Latin America, where millions of beneficial bats have been destroyed by dynamite, poison, flamethrowers and other weapons in usually vain attempts to kill vampires.

"Feeding on blood is a tough way to make a living," the scientist told biolÂ-ogist/author Bill Schutt, who says that's precisely why the common vampire bat (Desmodus rotundus) "evolved to become extremely opÂ-portunistic, extremely intelligent and extremely difficult to eliminate."

Much the same can be said of the many other reviled and feared blood-feeding creatures â€“ the sanguivores. In Dark Banquet: Blood and the Curious Lives of Blood-feeding Creatures (Harmony Books, 2008), Schutt describes not only vampire bats, but also chiggers, ticks, leeches, bedbugs, mosquitoes and others, plus the often-remarkable adaptations that let them fill their unsavory niches.

The author's conversational style and gentle sense of humor serve the topic well, allowing the painless delivery of some impressive lessons in biology, evolution and how science works.

Schutt, associate professor at C.W. Post College of Long Island University, is a bat biologist and, while he examines exotic qualities of all sorts of sanguivores, vampire bats get top billing. The three species of vampire bats (out of more than 1,100 bat species) are all limited to Latin America and were unknown to Europeans until the Spanish explorations of the sixteenth century.

Early naturalists were so dumbfounded by them that centuries of wildly inaccurate information followed. They insisted, for example, that the triangular nose leaf atop the snout of many bat species was a deadly stiletto used to pierce the flesh and release a bloody meal. This bizarre mistake contributed to the misidentification of many beneficial bats as vampires. In fact, nose leaves are actually soft and pliable and used mostly to focus echolocation calls. In vampires, the vestigial leaf is packed with thermoreceptors so the bat can identify where warm blood is flowing near the skin.

The common vampire feeds on the blood of mammals, and its predilection for domestic livestock brings the loathing of ranchers. This bat evolved into a largely terrestrial animal that not only walks and runs easily, but can jump up to three feet (a meter) off the ground.

These are worthy traits for feeding on large mammals â€“ and for escaping them.

The other two species â€“ the white-winged vampire (DiaeÂ-mus youngi) and hairy-legged vampire (Diphylla ecaudata) â€“ prefer trees and feed on bird blood. A captive colony that Schutt once maintained revealed a remarkable trick that white-winged vampires learned to safely feed on chickens: They pretend to be chicks.

The targeted hen actually seems to relax as the much smaller vampire bat snuggles beneath her. As the hen hunkers down contentedly, the vampire almost painlessly pierces a vessel with razor-sharp teeth and laps the blood.

Blood, however, is hardly the perfect food. Because it's mostly water and protein, vampire bats can't store the energy â€“ as fat, for example. They must eat at least half their body weight in blood every night or risk starving to death in a very short time. This probably led to the vampires' unusual altruism: they frequently regurgitate part of a blood meal and share it with roostmates that were unable to find food.

Another problem blood-feeders must overcome is blood's tendency to clot and quit flowing. Vampire bats and leeches, among other sanguivores, solve the problem by including a powerful anticoagulant in their saliva. "These natural anticoagulants are often far more efficient than anything produced by man," Schutt writes, "and several have become important medications." The vampire version is used to prevent strokes and the leech provides a compound used in hip-replacement surgery.

These superficially "icky" creatures turn out to be completely fascinating and, at least in some cases, quite useful. Dark Banquet will hold your attention as Schutt tells you all about them.