

## Short Note

**Vampire bats, *Desmodus rotundus*, feeding on white-tailed deer, *Odocoileus virginianus***

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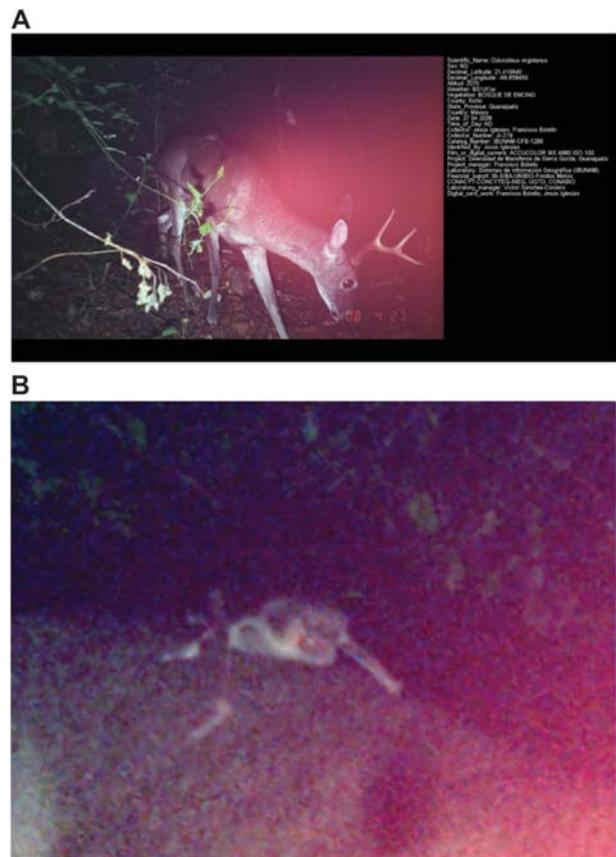
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Vampire bats, *Desmodus rotundus*, are sanguinivorous bats commonly occurring in the Neotropics (Greenhall et al. 1983). Fossil evidence dates them back to the late Pleistocene (ca. 28,400; Greenhall et al. 1983, Arroyo-Cabrales and Ray 1997). At present, the food of vampires consists mainly of the blood of livestock such as cattle, goats, equine species, sheep, pigs, and poultry introduced by Spanish settlers to the Americas more than 350 years ago (Arroyo-Cabrales and Ray 1997, Voigt and Kelm 2006, Voigt et al. 2008). It has been proposed that this recent feeding preference is due to the fact that livestock is a more predictable resource compared to free-ranging native mammals (Voigt and Kelm 2006, Voigt et al. 2008). Moreover, current high vampire bat abundances are likely to be related to such food superabundance, and farmers frequently complain of vampires producing wounds and transmitting disease to cattle. Official campaigns to control vampire bat populations go back to the 1960s and still continue, which also affects other populations of other bat species (Villa 1966, Greenhall and Schmidt 1988). Sporadic observations of bite scars suggest that vampire bats feed on wildlife such as capybara, *Hydrochoeris hydrochaeris* (Azcarate-Bang 1980, Greenhall and Schmidt 1988) and llamas, *Lama glama* (Greenhall and Schmidt 1988), and other suspected prey include deer, tapir, monkey, peccaries, and agouti (Crespo et al. 1961, Villa 1966).

Here, we report noteworthy visual evidence (a photograph) of a vampire bat assumed to be feeding on a white-tailed deer, *Odocoileus virginianus*, taken with camera traps in a tropical deciduous forest from El Platanal, located in the Sierra Gorda Biosphere Reserve in Mexico (21°24'52" N and

99°51'28" W, elevation 2600 m a.s.l.; catalogue numbers IBUNAM-CFB-1282, IBUNAM-CFB-1286; see Botello et al. 2007). The photograph shows similar behavior to that of vampire bats feeding on cattle, namely, biting the back of their prey (Villa 1966, Greenhall and Schmidt 1988); it shows a white-tailed male deer grazing as the vampire sits on its back probably in the process of feeding (Figure 1A and B). Interestingly, our study region also contains livestock such as cattle, horses, and goats (personal observation), and local farmers often report vampire bat wounds. Whether vampire bats feed frequently or sporadically on white-tailed deer blood requires further investigation.

Vampire bats, white-tailed deer, and other large-sized mammals have shared habitats at least since the earliest vampire bat fossils, suggesting a long-term predator-prey



**Figure 1** White-tailed male deer (*O. virginianus*) grazing while a vampire bat (*D. rotundus*) sits on its back and probably feeds on it (A). Note the elongated thumb and the characteristic posture of this species (B).

co-evolved interaction (Fenton 1992). White-tailed deer, peccaries, and agouties presumably constituted favored preys of vampire bats, especially when many species of the megafauna in the Americas were driven to extinction in this region during the late Pleistocene (Fenton 1992).

It is difficult to determine if vampire bats were as abundant then as they are today, but it appears to be the case that vampire populations could have reached high abundances if white-tailed deer and other large mammals, which currently have high abundances, had similar population sizes in earlier periods.

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