

Preliminary study of Malaysian fruit bats species diversity in Lenggong Livestock Breeding Center, Perak: potential risk of spill over infection

ABSTRACT

Aim: Farms that are neighboring wildlife sanctuaries are at risk of spillover infection from wildlife, and the objective of this research is to examine the species diversity of Malaysian fruit bats in livestock farm in determining the possible risk of spill over infection to livestock. **Materials and methods:** Fifty individual fruit bats were captured using six mist nets, from May to July 2017. The nets were set at dusk (1830 h) as bats emerge for foraging and monitored at every 30-min intervals throughout the night until dawn when they returned to the roost. The nets were closed for the day until next night, and captured bats were identified to species levels. **Results:** All the captured bats were mega chiropterans, and *Cynopterus brachyotis* was the highest captured species, representing 40% of the total capture. Shannon-Weiner index is 2.80, and Simpson index is 0.2. Our result suggests that there is a degree of species dominance with low diversity in Lenggong Livestock Breeding Center. **Conclusion:** We concluded that fruit bats are indeed, encroaching livestock areas and the species identified could be a potential source of infection to susceptible livestock. Hence, an active surveillance should be embarked on farms that border wildlife sanctuaries.

Keyword: Fruit bats; Lyssaviruses; Nipah virus; Wildlife sanctuaries; Zoonotic diseases