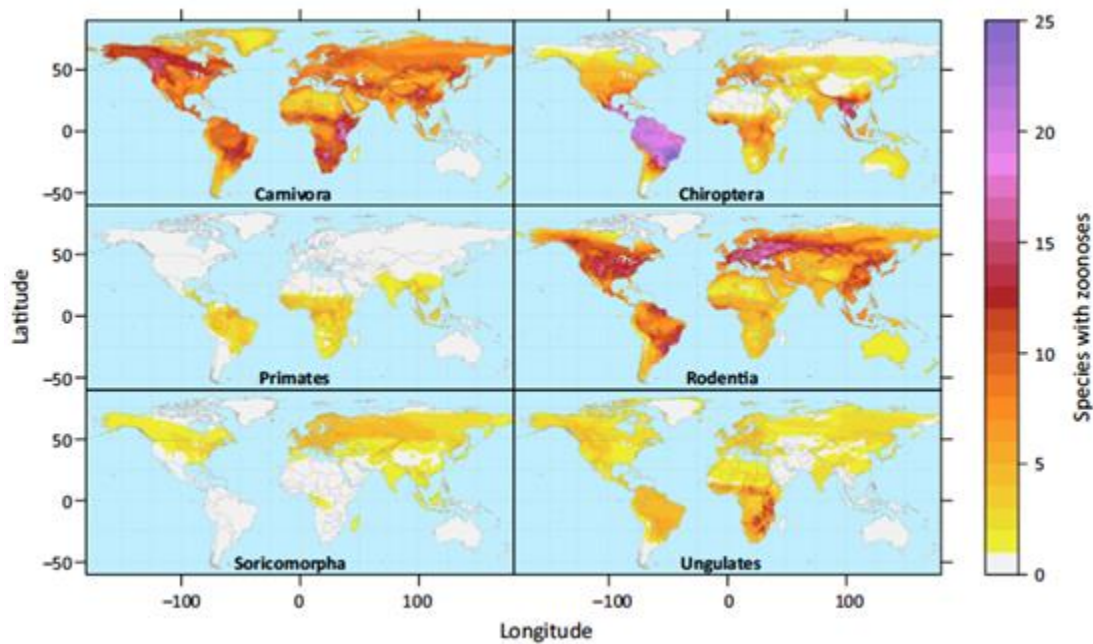




Patterns of Zoonotic Disease



Caption: The six maps show the geographic distribution of clades, or groups, of mammal species known to carry zoonotic pathogens. The six clades include carnivores (*Carnivora*), bats (*Chiroptera*), primates (*Primates*), rodents (*Rodentia*), shrews and moles (*Soricomorpha*), and nondomesticated hoofed mammals (*Ungulates*). The color scale on the right represents the number of species known to carry at least one zoonotic pathogen.

BACKGROUND INFORMATION

A zoonotic pathogen is any pathogen that can be transmitted from animals to humans and cause disease. When a pathogen is passed from an animal to a human, it is known as a spillover event. The 2014 West African Ebola outbreak is a well-publicized example of a zoonotic disease outbreak, resulting from a spillover event strongly suspected to have come from a bat. The frequency and prevalence of zoonotic diseases is on the rise worldwide. In this study, scientists analyzed previously published data on terrestrial mammal zoonotic host species and the pathogens they carry to search for global patterns of zoonotic disease distribution. A better understanding of the diseases, animal hosts, and extrinsic factors (including climate change, urbanization, and the human population's socioeconomic standing) may help predict where and when a spillover event may occur in the future, and where disease outbreaks may occur.