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Parasite-associated mortality in a long-lived mammal: Variation with host age, sex, and reproduction

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Abstract

Parasites can cause severe host morbidity and threaten survival. As parasites are generally aggregated within certain host demographics, they are likely to affect a small proportion of the entire population, with specific hosts being at particular risk. However, little is known as to whether increased host mortality from parasitic causes is experienced by specific host demographics. Outside of theoretical studies, there is a paucity of literature concerning dynamics of parasite-associated host mortality. Empirical evidence mainly focuses on short-lived hosts or model systems, with data lacking from long-lived wild or semi-wild vertebrate populations. We investigated parasite-associated mortality utilizing a multigenerational database of mortality, health, and reproductive data for over 4,000 semi-captive timber elephants (*Elephas maximus*), with known causes of death for mortality events. We determined variation