

THE IMPACT OF DISEASE ON THE GOMBE CHIMPANZEES - PAST AND PRESENT

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Disease and other health hazards have been hypothesized to pose serious threats to the persistence of wild ape populations. The total chimpanzee population at Gombe has declined from perhaps 120-150 in the 1960's to about 100 by the end of 2007, with death associated with observable signs of disease as the leading cause of mortality. Major epidemics at Gombe include suspected polio in 1966, respiratory-like syndromes in 1968, 1987, 1996, 2000, 2002 and Sarcoptic mange in 1997. As a result, we have used a variety of retrospective and prospective approaches to identify and understand the risks of infectious disease for the Gombe chimpanzees. We analyzed 8 years of retrospective health data to investigate the impact of human-related factors (e.g. banana feeding, visits to staff quarters) versus non-human-related factors (e.g. sociality, season) and found that season and banana feeding were the most significant predictors of respiratory health in the past. A pathological survey began in 2004 has identified probable cause of death for 10 individuals. Furthermore, ongoing investigations focus on the impacts of Simian Immunodeficiency Virus (SIVcpz) on chimpanzee survival and health and suggest reduced health and survivorship in SIVcpz positive individuals. Newly initiated research is focusing on the presence of other pathogens, such as Cryptosporidia, Giardia and other pathogenic parasites. This work highlights the need for a large, collaborative team and long-term data to fully understand the risk and impacts of disease in a wild ape population.

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