Macroparasite species are responsible for endemic infections in almost all animal species (including humans). An increasing number of studies demonstrate the capacity of such macroparasites to alter the dynamics of coinfecting microparasite populations via within-host processes (e.g. resource competition, alteration of host immune response). There also exists a large body of theoretical and empirical evidence demonstrating that macroparasites can alter host demography; through effects on host fecundity and survival. However, the potential for such demographic change to alter the course of microparasite infections has only been explored in a single theoretical study. Here we present the first study providing empirical evidence that a macroparasite, *Heligmosmoides polygyrus*, of wild mice, *Apodemus flavicollis*, could be driving the dynamics of a zoonotic microparasite, Hantavirus, via such changes in host demography. We then explore this relationship using a theoretical model parameterized from our empirical data and consider the implications of host and parasites control measures on viral transmission.