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Maryann E. Hohn* (hohn@pstat.ucsb.edu), Dept. of Statistics and Applied Probability, UC Santa Barbara, Santa Barbara, CA 93106-3110. *A parasite for sore eyes: Living together in a social network.*

Individuals who live in close, collaborate groups are susceptible to infectious diseases such as pathogens and parasites through their social network. Ectoparasites, external parasites that may be spread through social grooming, differ from pathogens in that the number of parasites impacts an individual's fitness. In this talk, we will discuss two approaches to understanding the effects of ectoparasites on social groups. The first is a system of differential equations that shows the importance of a hub-like structure in a social network, and the second is an agent-based model that shows parasite spread based on individual behavior in a dynamic network. (Received August 28, 2018)