Public Abstract

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Title:Experimentally assessing the influence of resource availability and social aggregation on the parasites of raccoons.

Few studies have examined how alterations in the behavior of a free-ranging animal, such as a raccoon, influence their parasites. It is important to understand such interactions because habitat alterations may change the behavioral ecology of wild animals and lead to increases in the abundance and associated impacts of parasites in wildlife, domestic animal, and human populations. To address this question, I manipulated raccoon social behavior with food and measured the response of ticks, lice, fleas, gastrointestinal worms, and intracellular parasites. Parasite abundance generally increased with age and was greater on males than females. Social aggregation increased the number of ticks and decreased the number of lice per raccoon. All other parasites examined did not exhibit a clear and consistent response to aggregation. Increases among ticks in aggregated sites may lead to greater tick population sizes and alter the proportion of ticks carrying tick-borne illnesses. Such effects are expected to be most important to domestic animals and humans because anthropogenic activities are a primary cause of raccoon aggregations. Overall, these results indicate multiple factors are important in natural settings and the relationship between host ecology and parasites is as diverse as the parasite assemblage itself.