

Abstract

The distribution of gastro intestinal helminths in a population of wild pigs (*Sus scrofa*) in Jamaica

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This study examines host-parasite interactions between wild pigs (*Sus scrofa*) and their gastro-enteric helminth parasites. The investigation is important because some of the expected parasites are potentially transmissible to humans (e.g. pig hunters), and because nothing is currently known about this host-parasite system in the region. Here we investigate the prevalence and intensity of worm parasites recovered from wild pigs of different sex and age categories.

Bear and hog snares were used to collect wild pigs at Hellshire Hills, St. Catherine, Jamaica. Snaring was followed by ethical euthanasia and removal of gastro-enteric worms. They were then preserved in 70% ethanol with 10% glycerol and identified using morphological keys and photos taken with digital LEICA DC 500 camera attached to optical microscope. Investigated sample consisted of 13 males and 18 females, 5 of which were pregnant. Weight measures ranged from 7.5 to 96 kilograms, and host ages were separated into young and adult. Investigated sample showed that all but one of the 31 pigs was infected with 1 to 3 species of gastro-intestinal worms. There were 2 (6.5%), 10

(32.2%), and 18 (58%) with 1, 2, and 3 species of helminthes respectively. The parasites included three species of nematodes and one acanthocephalan.

In *H. rubidus* mean intensity was significantly higher in female 77 (95%CI: 45.0-124.3) than in male at 21 (95%CI: 10-39). Result also showed a mean of 85 (95%CI: 50.0-145.0) for adult which differ significantly from a mean of 40 (95%CI: 26.7-55.0) for the young. This suggests that adult females are more likely to be infected. Mean intensity of 95(95%CI: 50–147.5) for *G. urosubulatus* among young (n=15) was significantly higher than among adults pigs (n=16) at 29 (95%CI: 15.4–40.9). However, prevalence of 68.8%(95%CI: 43.6-86.7) among young pigs was higher than 26.7%(95%CI: 9.6-53.4) recorded among adult pigs. *H. rubidus* and *M. hirudinaceus* were both highly and equally prevalent at 77.4%(95%CI: 59.8-89.2). Though these parasites are prevalent in many parts of the world, these are the first reported cases in Jamaica.

Keywords: Wild Pigs; Helminths; Infection; Transmission; Intestinal parasites.