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Intestinal Parasite Infection among Bornean Orangutans (*Pongo pygmaeus wurmbii*) in Gunung Palung National Park

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As wild orangutan populations become increasingly endangered, knowledge of their physiological and disease status provides critical information on how human disturbances, such as habitat loss, affect their health and long-term viability. An important tool in the assessment and monitoring of orangutan health is the detection of parasites in feces, as parasites can impact a wide range of biological functions. Intestinal parasites place stress on the host system, affecting nutrition, energy expenditure, travel, feeding patterns, immune function, and reproductive success. Thus, the analysis of non-invasively collected fecal samples provides a useful proxy for population health.

Forty nine samples from 14 unique individuals were analyzed using both direct smear and single centrifuge flotation techniques. Samples were examined under a microscope and parasites were identified using movement type and morphological characteristics. A 100 percent overall parasite prevalence was found. Species of *Balantidium*, *Entamoeba*, *Enterobius*, *Trichuris*, *Ascaris* and Strongyle-type parasites were found. Larvae were also observed in all samples. An independent-samples Mann-Whitney U test found that the distribution of *Balantidium sp.* and *Trichuris sp.* were not even, and the prevalence among females was significantly higher. These results were unexpected, as they differ from the findings of prior parasitology studies, which found no difference in parasite prevalence between the sexes. This further emphasizes the need for continuing research as part of a longitudinal study.

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