

Species of fungi and bacteria transmitted by the workers of two household ant species, *Anoplolepis gracilipes* Jerdon and *Monomorium pharaonis* Linne.

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ABSTRACT

Workers of several ant species are considered as nuisance insects and household pests. *Anoplolepis gracilipes* and *Monomorium pharaonis* are two such species that attend food and this study was carried out to investigate if the workers of the two species contaminate food by transmitting any species of fungi or bacteria. Worker ants of *A. gracilipes* and *M. pharaonis* were collected in to sterilized Petridishes from a cafeteria of University of Kelaniya using a pair of sterilized forceps around 10 a.m. on the 24th of March, 2009. Five workers of each ant species were introduced to each of the five petridishes containing two culture media; Potato Dextrose Agar (PDA) for isolation of fungi and Nutrient Agar (NA) for isolation of bacteria under aseptic conditions. Both introductions were done within ten minutes after the collection of ants. Ants were allowed to crawl for five minutes in each petridish. Five petridishes containing PDA and five petridishes of NA but without introduction of ants were also maintained in each experiment. The PDA plates contaminated by ants and the control PDA plates were incubated at room temperature (28 °C) for a week. The NA plates contaminated by ants and the control NA plates were incubated at room temperature overnight. Microorganisms observed in each plate were identified according to the standard procedures. Five microorganisms transmitted by *A. gracilipes* included three fungi species; *Aspergillus niger*, *Curvularia* sp., *Helminthesporium* sp. and two bacteria species; *Salmonella* sp. and *Micrococcus* sp. In addition, four microbes, transmitted by *M. pharaonis* were identified as three species of fungi; *Aspergillus niger*, *Aspergillus* sp., *Mucor* sp. and a species of bacteria; *Micrococcus* sp. The identification of bacteria was done at Medical Research Institute in Colombo. The results indicated the possibility of food contamination by the workers of the two ant species.

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