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## Frequency of spore attachment on the body surfaces of Collembola feeding on mushrooms

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**Purpose:** Among fungi that produce umbrella-shaped sporocarps aboveground, spores are generally believed to be wind-dispersed. However, recent studies have raised the possibility of animal dispersal of these fungal spores. Collembola are micro-arthropods found abundantly in soil. Certain *Ceratophysella* species (family Collembola) have occasionally been reported in large numbers (thousands) on aboveground fungal sporocarps; therefore, these species are expected to carry fungal spores. The possibility of epizoochory of fungal spores by Collembola species has not been investigated. Therefore, in this study, we examined the frequency of spore attachment on the body surface of *Ceratophysella* species feeding on aboveground sporocarps.

**Methods:** Collembola were collected from sporocarps of 16 fungus species, and spore occurrence on the body surface was examined for a maximum of 50 randomly selected *Ceratophysella* individuals per sporocarp.

**Results and conclusions:** The frequency of individuals with spores on the body surface varied among fungus species, ranging from 0 to 88%. Although no individual had spores on the body surface in *Amanita citrina* and *A. virosa*, 88 and 78% of individuals had spores in *Psathyrella cineraria* and ***Cortinarius salor***, respectively. Spores were frequently observed on the ventral side of the body, including the ventral tube, claws, antennae, and mouth parts. The results of this study suggest that Collembola contribute to spore dispersal of certain fungus species with aboveground sporocarps, including *P. cineraria* and *C. salor*, but not *Amanita* species.