

The fungus, *Entomophthora muscae* zombifying house fly, *Musca domestica*

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Indian common house fly, *Musca domestica* L. (Diptera: Muscidae), is a nuisance household insect pest that lives in association with the humans. However, there is something that is a nuisance to the house fly as well. The fungus, *Entomophthora muscae*, which literally means “fly destroyer”, lives off houseflies and other fruit flies. It invades the fly’s brain and turns them into a zombie-like state and later kills it in order to reproduce. At dusk of the fourth or fifth day, after it encounters with a fungal spore, an infected house fly stops flying and starts behaving strangely like climbing up and down objects around it. *Entomophthora muscae* forces the infected fly to climb to the top of a high structure in a behaviour referred to as “summiting.” In an unorthodox manner, the fly extends its mouthpart down and some liquid drips out and glues the fly to the surface it’s standing on. Over the next 10 minutes, the fly’s wings point straight up and it dies in a horrific lifelike pose so that the white spongy fungus can shoot out and fire hundreds of tiny reproductive spores from its abdomen. This white mass comprises of hundreds of lollipop-shaped protrusions, each of which launches a microscopic bell-shaped spore at high speed. These spores spread and remain in the surroundings for hours so that they can infect other flies for their survival. The infestation of *E. muscae* can prove, it as an effective biological control agent of house fly, however, the spores seem too fragile to grow under laboratory conditions.

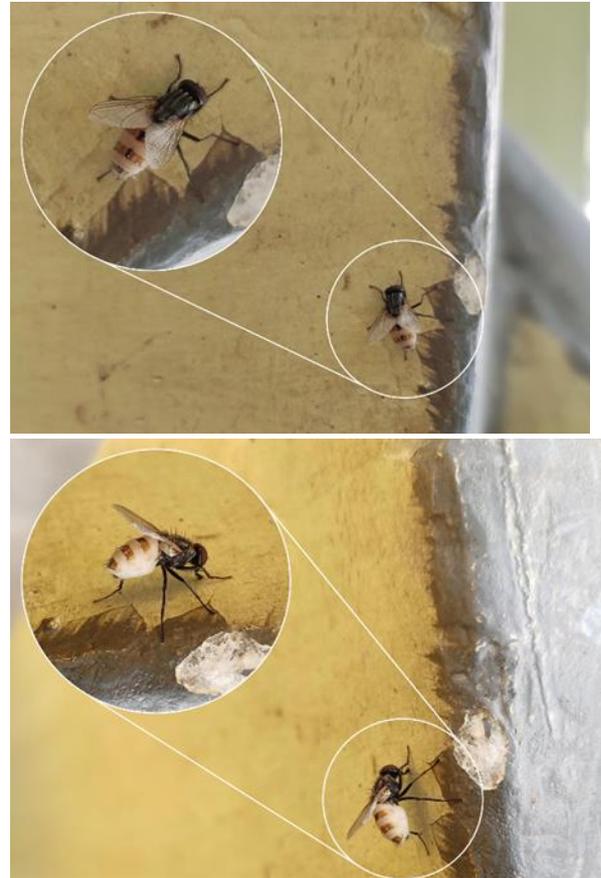


Fig. 1: (a) Lateral-zoomed view and (b) Dorsal-zoomed view of Indian common house fly (*Musca domestica*) high-jacked by the fungus, *Entomophthora muscae* with erect hindwings and fungus protruding from the abdomen.

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