



CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

ECTOPARASITOSEs INDUCED BY MICROHYMENOPTERA

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Numerous hazards can hit indoor environment. Among biological contaminants viruses, bacteria, yeasts and even insects such as domestic arthropods.

Microhymenoptera are terrestrial insects of small size, winged or wingless, equipped with a piercing organ called "terebra". In aculeate hymenoptera the genital opening is dislocated in front and the terebra and has lost its primitive function. The ovipositor withdraws into the abdomen and is extroflettibile, assuming the function of defense or offense. In hymenoptera the terebra is called aculeus or sting. The most important pathogenic microhymenoptera belong to the families of Bethyidae (Scleroderma domesticum, Cephalonomia gallicola) or Formicidae (Solenopsis fugax, Tetramorium caespitum, Monomorium destructor)

Scleroderma domesticum (SD) is a cosmopolitan insect living in mild climate countries and stings from May to July. It's natural habitat is represented by worm eaten wooden furniture. It feeds on larvae of xylophagus beetles living in galleries they dig in old furniture. The female of SD paralyzes the woodworms or they larvae by injecting a venom into the motorial ganglionic station and leaves its eggs on the back of paralyzed but still living pests. Subjects at risk of infestation are dealers, restorers, carpenters and whoever is in touch with old furniture infested by woodworms. Both covered and uncovered areas may be involved but the face is usually spared. Numerous erythematous-urticarial lesions develop which show an evident pinpoint hemorrhagic central punctum. Acute pin-prick pain, itching, burning are the local symptoms; systemic symptoms may also be reported.

Cephalonomia gallicola (CF) is similar to a small ant and has a long slightly curved sting. CF penetrates into tunnels dug by woodworms and exploits coleopteran and lepidopteran larvae and pupae. It causes "strophulus-like" dermatitis.

Solenopsis fugax is a small ant which lives in enormous colonies that invade gardens and countryside where they make shallow nests under rocks and under rotten fallen logs. Infestation of houses is correlated to the attraction to food debris. Their presence is frequently associated with the presence of indoor plants and firewood. Solenopsis may induce strophulus-like dermatitis in workers such as harvesters and cereal storage workers, but in indoor diffusion everyone may be affected. The long and thin stings cause multiple lesions. The damage is due to the mechanical action but also by a toxic mechanism as a venom is injected from a poison gland located at the posterior end of the ant.

Another aculeate ant is Tetramorium caespitum. It may repeatedly sting, but its short sting is unable to pierce the skin, so it gives widespread erythematous itching lesions.





Monomorium destructor, also called “destructive trailing ant”, prefers sandy soils and colonizes cracks in the walls; it nests in the soil and inside plant pots. It is attracted inside the houses by stored food substances. It has a high destructive impact, damaging plastics and rubber products.

