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FUNGUS

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Introduction:

In tropical countries with a humid climate, damage to cultural property caused by various types of micro-organisms, like fungi, algae, bacteria, lichens and moss, is a great danger. Bacteria, algae and moss normally need the presence of liquid moisture for their growth and are founded on monuments and sculptures in the open (Plate IX). Fungi are a serious threat to museum objects, particularly of organic nature. They are unable to photosynthesis their own food and hence damage the material on which they grow. Usually they are aerobic, needing air for their growth, but some species are anaerobic also, requiring no air. Fungi grow very quickly on food like bread, pickles, jam, etc. In museums they grow on a wide variety of objects like paper, paintings, leather, wood textiles, etc.

Fungies:

Fungus degrades and causes stains on paper, leather and textiles. It disfigures paintings and stone objects and breaks down the structure of materials like wood. It is capable of bringing about changes in the chemical and mechanical properties of various types of cellulosic material, like paper and wood (Plate X). Leather objects are particularly prone to fungal attack. Sometime s fungus grows beneath the surface, for example, in between the paper layers of the support of the miniature painting, during rainy season particularly, fungus grows on books and periodicals and their leather bindings. Some oil paintings which were stored in a wet basement got infected by fungi in just a matter of few days.

Control of fungal growth on art objects may take two important forms: preventive and remedial. As moisture is important for the growth of fungi, humidity control is undoubtedly the best means of their prevention. Air-conditioning is effective, but in the absence of air-conditioning, simple precautions of assuring plenty of ventilation and air-turn should be taken. Cleanliness of the building and of objects is necessary for the control of fungus. All objects, book, manuscripts, paintings, etc. should be taken out of shelves from time to time and dusted with a soft brush or low vacuum. Other means of dehumidification described in the chapter on climate control may be applied.

Disinfecting the storeroom, where organic materials like paper and textiles are kept, will also be helpful. For this purpose, a10 per cent solution of thymol in rectified spirit may be recommended. The solution is sprayed in the room through a fine nozzle. However Due to the presence of rectified spirit, fire hazard is increased. Suitable precautions should be taken. The best remedial measure is to remove the dry fungus on the surface and then place the object in a fumigation chamber, with a suitable fungicide. Thymol, which vaporises with slight heat, has been fund to be very effective as a fungicide.

Conclusion:

In some case, a 5 per cent solution of thymol dissolved in rectified spirit, can be applied to the object, but taking care that the rectified sprit does not have any effect on it. Papers, paintings can be disinfected by wrapping them in fungicidal papers and storing them inside polythene bags for about a week. The fungicidal paper is prepared by treating filter paper with 10 per cent p-chloro-m-creosal solution or 1 per cent pheny1 mercuric acetate solution and then drying it.

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