

INCIDENCE OF KERATINOPHILIC FUNGI AT GAYA (BIHAR STATE)

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All together 19 Spp. of Keratinophilic fungi were isolated from various substrata. *Trichophyton verrucosum* was of common occurrence in soil. *Monosporium apiospermum* and *Microsporium canis* were found with sheep stable, piggery, washing places, burning ghat and vegetable field, *Chaetomium homopilatum*, *Aspergillus terreus*, *A. flavus*, *A. Caespitosus*, *Torulla graminis*, *Curvularia lunata* and *Rhizopus oryzae* were observed in association of birds feather. *Chaetomium globosum*, *T. Verrucosum*, *T. graminis*, *Trichoderma lignorum*, *Aspergillus Candidus*, *A. oryzae* and *T. viride* were associated with hairs of domesticated cattle and human nail, *Histoplasma capsulatum* were observed in the soil of burning ghat only. *A. flavus*, *A. oryzae*, *C. lunata*, *H. capsulatum*, *M. apiospermum*, *M. canis* and *T. verrucosum* were positive to the Dermophytic Test Medium..

Keywords :Dermatophytic test; Keratinophilic fungi; Substrates.

Keratinophilic fungi belong to a group deriving nutrition chiefly from Keratinaceous substrates. Their wide occurrence^{1,2} potentially pathogenic to cause skin diseases in man and animals³⁻⁵ causing destruction of woolen product⁶ and dissemination of large number of them to long distance through the agency of migratory birds, compel their through investigation. The present paper deals with extensive survey of keratinophilic fungi from various substrata of Gaya Municipality, Bihar State, India and screening for their dermatophytic nature.

Gaya is located at 24°4' N latitude and 84°58' E longitude at an altitude of 131 M. The place is warm and popular pilgrimage of eastern part of India.

Various types of soil such as river bank, stable of domesticated animals, vegetable field, burning ghat, Poultry and saw mill dust, hairs of domesticated animals and man of varying profession, human nail and feather of thirteen domesticated and wild birds were collected. All the samples were packed in sterilized polythene packet with 95% ethanol for 30 min and stored at 5°C. Snake skin,

human hair and nail and horn of buffalo after defatting twice with diethylether, boiling in 80% ethanol for 20 min. and finally washing thrice with boiling distilled water were used as baits for isolation of the fungi from the soil and dusts keeping them in sterilized petri dishes while feathers, hairs and nails pieces were used as such. The incubation period was maintained for 20-30 days over distilled water at 25 ± 2°C. Dermophytic Test medium (DTM)⁷ was used to screen out the dermatophytes among the isolated fungi.

All together 19 Spp. of fungi were obtained. *Trichophyton verrucosum* Bodin, was of common occurrence in soil samples. *Histoplasma capsulatum* Darling was observed in the soil of burning ghat only. *Monosporium apiospermum* saccardo was found in the soil of piggery, vegetable field and burning ghat. *Microsporium canis* Bodin was found from sheep stable, piggery, washing places of clothes and vegetable field. While *Chaetomium bostrichodes* Zopt from piggery only. *Chaetomium homopilatum* omvik, *Aspergillus terreus* Thom, *A. flavus* Link ex Fries, *A. caespitosus* Rager and

Thom, *Torulla graminis* Dasm, *Curvularia lunata* Boedijn and *Rhizopus oryzae* Went and Prinseen - Gerring were found associated with different birds while *Chaetomium globosum* Kunze, *T. Verrucosum* T. *graminis*, *Trichoderma lignorum* Harz. *Aspergillus candidus* Link ex Fries, *A. Oryzae* Cohn, *T. viride* Pers ex Fries were associated with hair of domesticated cattle. *A. flavus*, *A. oryzae*, *C. lunata*, *H. Capsulatum*, *M. apiospermum*, *M. canis*, *T. Verrucosum* proved positive to the DTM by change in colour of the medium from yellow to red.

The confinement of *H. capsulatum* to the burning ghat might be due to the soil rich in calcium, phosphorus and magnesium. The occurrence of *T. lignorum*, *T. graminis*, *C. globosum*, *C. murorum*, *C. homopilatum*, *a. caespitosus*, *A. nidulans* with feathers and hairs indicate their Keratinophilic nature seemingly to be a new report. The fungi giving positive dermatophytic test can be looked upon as potential dermatophytes. Domesticated animals harbouring keratinophilic fungi may

prove as source of human mycoses^{1,3}.

All the four baits included in the study proved equally good for isolation.

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