

2. Title: Ecologic study of pathogenic fungi in Thailand.

Principal Investigator: Robert L. Taylor, Lt. Col., MSC

Assistant Investigators: Yupin Charoenvit, B.Sc.
Malinee Thamrongnavasawadi, B.Sc.

Many pathogenic fungi survive as saprophytes in the soil which in turn serves as the reservoir and source for human and animal infections. Examination of soils for pathogenic fungi is a technique frequently used to establish the endemicity of an area or to determine a focus of infection.

Thirty-six soil samples were collected in Bangkok at sites inhabited by pigeons. These samples were processed for recovery of Cryptococcus neoformans using both direct culture and a floatation technique followed by animal inoculation. Six samples of bat guano were collected from a cave in Central Thailand and processed for recovery of Histoplasma capsulatum. Neither Cryptococcus neoformans nor Histoplasma capsulatum were isolated from animals inoculated with soil suspensions.

All soils were also processed using a human hair-baiting technique for isolation of keratinophilic fungi. Microsporium gypseum has been recovered from one of the soil samples and Trichophyton terrestre from 25 samples using this technique. The importance of M. gypseum as an etiologic agent for diseases of the skin and hair is well known, however, the significance of T. terrestre is doubtful since it is currently thought to be a non-pathogen for humans.

Soil sampling will continue in the future as time permits unless an area is found which is suspected of being highly endemic for one of the mycoses, in which case concentrated efforts will be made in this area. Arrangements are being made through a local physician, to investigate soil around the home and office of a recent, fatal case of cryptococcosis.

One soil sample from Viet Nam has been received and arrangements have been made to obtain other samples from different areas of this country.