

S Y N O P S I S

The problem dealt with in the course of the present investigation is entitled ' Studies on some parasitic protozoa in some invertebrates in Darjeeling'. The work is divided into four parts.

Part I includes the description of seventeen accephaline gregarines new to science, including two proposed new genera, along with their photographs and figures. Life cycles of three of these gregarines have been worked out and Pheretima californica is recorded for the first time in India.

Part II deals with the cytochemical studies on some of the gregarines, mentioned in Part I of the thesis. It has been noticed that the nuclei of all the gregarines studied showed a negative response to the Feulgen technique, though the presence of DNA could be shown in the nuclei by Fluorescence microscopy.

In Nematocystis n.sp.(a), when stained with periodic/acid Schiff method, there was either a complete absence of paraglycogen granules or, if present, these were very few in number.

Part III includes cases of gregarines being parasitised by organisms apparently of microbial nature. It is shown that such cases of hyperparasitisation, may lead to changes in the staining characteristics of the host gregarines, finally leading to their death, in some instances. Intracellular bacteria apparently of harmless nature are also reported.

Part IV records that a heavy concentration of gregarines occurring in the coelomic fluid of Apporectodea trapezoides may lead to the death of the host.

Growth of a new species of Apolocystis on the dorsal blood vessel of Pheretima robusta, is shown to be correlated to the phenomenon of autotomy i.e., amputation of certain parts of the body of the host. Cystic bodies representing another new species of Apolocystis are found to exert physical pressure on the alimentary canal of the host, which as a consequence tend to flatten at the point of such parasitic growth.