SECTION 'B'
CHAPTER IV
MATERIAL & METHODS

Large number of parasites were recovered from the intestines of sheep and goat. The collections were made from slaughter houses. Some of the parasites were cut into pieces, pressed between slides and fixed in Carnoy's fixative for 5 to 30 minutes. The pieces were washed in 70% alcohol and then with distilled water. They were stained with aceto-carmine and differentiated in acid water. After dehydration, they were mounted in Canada balsam. Borax carmine was also tried for whole mounts, but did not give satisfactory results.

For microtomy, the following fixatives were used:
(1) 10% formalin, (ii) Carnoy's fixative, (iii) Zenker's fluid.
Zenker's fluid gave very good results and was thus preferred. For fixation, the worms were taken alive directly from the intestine without washing in water in the jar containing the fixative, and were held in it in an outstretched condition. They were fixed for a period of 12 to 24 hours. The worms were afterwards washed in running water for 24 hours. The washed specimens were cut into pieces, dehydrated and embedded in wax. Sections 5 to 10 microns thick were cut and stained with Mallory's triple stain, which gave better results as compared with Haematoxylin & Eosin staining. For the study of the course of the excretory vessels in the scolex of the worms, thicker sections (25 microns) were found were useful.

The studies were made under light microscope with the maximum lens combination of 20 X eye-piece and oil immersion objective.

All the drawings presented in the thesis are drawn to scale with the aid of camera lucida. All the photomicrographs taken
with the help of a Carl-Zeiss camera over Carl-Zeiss microscope, were done by the author himself. The photographs of the sketches were taken by author himself with 'Contrax Special' German 35 mm. camera, and the processing done in the laboratory by author himself.

Calcareous corpuscles in the strobila of these worms were tested by Silver-method (J. Van Kossa, 1901).

Some of the worms were studied alive under a stereoscopic binocular dissecting microscope for observation of their behaviour, like movement etc.

The entire collection, and all the preparations of the material lies at present in the personal collection of the author, to be ultimately deposited in the 'Helminthology Laboratory' of the P.G.Department of Zoology, J. & K. University, Srinagar, Kashmir (India).