

PREFACE

The Zoology Laboratory of the Shivaji University, Kolhapur is engaged in extensive researches on metabolites such as mucosubstances, lipids, and a galaxy of highly active enzymes viz. β -glucuronidase, acid phosphatase, esterases etc. in the gonads and non-gonadal sex accessories of male and female vertebrates and their role in the physiology of reproduction. In the past several years, the aforementioned metabolites have successfully been investigated in fishes, amphibians, reptiles, birds and mammals, particularly bats. The work included in the present thesis concerns with the characterization of mucosubstances in the seminal vesicles of seven species of mammals belonging to different orders. In addition, the effects of bilateral castration, effects of testosterone in castrated and normal house rats.

The seasonally breeding animals were collected irrespective of the phase of the sex-cycle. This was mainly because of the unavailability of some of them during the tenure of one year. For example the bats, Rhinolophus luctus beddomei are found in single pair of a colony during breeding period, followed by separation of sexes and their migration. Mongoose can also be rarely available for collection. The cyclic variations in testes and all the accessory glands of these animals and some more, and the effects of castration and hormone replacement therapy will be investigated for the doctoral research during three years of tenure.

It was decided to divide the thesis in four chapters viz. Introduction, Material and Methods, Observations and Discussion respectively. These chapters be followed by Summary and Concluding Remarks and Bibliography.