FOREWORD

The combination of classical and current concepts of the reproductive organs of flowers, and their structure and development, are important to drawing theoretical generalizations, analyzation of the distribution of features and evolutionary transformations of structures. This approach offers vast possibilities for revising existing concepts and developing new ones.

The development of reproductive biology is especially important for the conservation of rare plants, as well as of plants of economic importance. Investigations on developmental aspects of reproductive organs have become increasingly important in recent years because it is the reproductive structures that suffer most from adverse environmental factors.

*Potamogeton richardsonii* and *Eichhornia crassipes* are cosmopolitan and are regarded as the world’s worst water weed. The growth of these weeds can be controlled by physical or mechanical method, chemical method or biological control method. The longer they are left, the more seeds will be produced. The mechanical, chemical and biological control of these weeds have their own limitations. One of the best methods to control them is to block sexual reproduction. For this, basic information about reproductive biology of these plants is essential. The present study is a small attempt to provide the basic information on structural and functional features of anther tissues. The results of such study can be used by biotechnologists to control the development of male gametes and thereby the reproduction.

Of late, inventions are made to use these water weeds as the main raw material for making organic fertilizers and animal feeds.

The text of present thesis is organized in to six chapters. Chapter 1 provides Introduction in general and aim and scope of present work. Chapter 2 comprises of Review of Literature on microsporogenesis. Chapter 3 encompasses Materials chosen and methods employed in the present investigation. The results, supported by illustrations, are given in the body of chapter 4. Chapter 5 deals with the discussion and conclusions drawn. Finally,
chapter 6 summarizes the present work. The literature cited in the present work is enlisted at the end.

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