## Contents:

### Introduction
1. Significance of the work .......................... 1
2. Principal objectives of the study .............. 6
3. Literature review .................................. 7

### Materials and Methods
1. Study Sites ........................................... 21
2. Waterbird Census .................................. 31
3. Determination of arrival date, departure date and length of stay .......................... 33
4. Collection of data on environmental variables and wetland attributes ................. 34
5. Collection of photoperiod and temperature data ................................................. 36
6. Collection of data on wetland variables ................................................................. 36
7. Data analysis ......................................... 37

### Results
1. Migratory waterbird diversity ....................... 41
2. Patterns of arrival of the waterbirds ............. 43
3. Patterns of departure of the waterbirds .......... 52
4. Patterns of duration of stay and environmental variable ....................................... 61
5. Richness and abundance of waterbirds .......... 66
6. Relationship between environmental variables and waterbird abundance ............... 69
7. Relationship between environmental variables and waterbird community shift ....... 74
8. Spatial and temporal variations in the environmental parameters ......................... 75

### Discussion .............................................. 77

### Concluding Remarks ................................ 84

### References .......................................... 86

### List of Publications