## CONTENTS

1. **INTRODUCTION** ..... 1
2. **MATERIAL AND METHODS** ..... 6
3. **LIST OF ABBREVIATIONS** ..... 9
4. **DESCRIPTION OF DORYLAIMUS STAGNALIS** ..... 11
5. **ANATOMY OF DORYLAIMUS STAGNALIS** ..... 15
   i) Cuticle ..... 16
   ii) Musculature ..... 17
   iii) Digestive organs ..... 23
   iv) Reproductive organs ..... 27
   v) Intersexuality in D. stagnalis ..... 32
   vi) Juvenile stages ..... 34
   vii) Discussion ..... 39
6. **VARIABILITY IN DORYLAIMUS STAGNALIS** ..... 42
   i) Material and Methods ..... 43
   ii) Morphometric variations ..... 44
   iii) Allometric variations ..... 53
   iv) Discussion ..... 62
7. **DEVELOPMENTAL BIOLOGY OF D. STAGNALIS** ..... 66
   i) Material and Methods ..... 68
   ii) Embryogenesis ..... 69
   iii) Effect of temperature on embryonic development ..... 73
   iv) Development of odontostyle ..... 74
   v) Development of oesophagus ..... 76
vi) Development of cardia ... ... 76
vii) Development of gonads ... ... 77
viii) Development of tail ... ... 82
ix) Discussion ... ... ... 82

8. EFFECTS OF CHEMICALS ... ... ... 86
   i) Material and Methods ... ... ... 87
   ii) Results ... ... ... 88
   iii) Discussion ... ... ... 91

9. PREDATORY BEHAVIOUR OF D. STAGNALIS ... 94
   i) Material and Methods ... ... ... 96
   ii) Results ... ... ... 100
   iii) Discussion ... ... ... 103

10. SUMMARY ... ... ... ... 107

11. REFERENCES ... ... ... ... 111

12. TABLES ... ... ... ... I - XII

13. FIGURES ... ... ... ... 1 - 50