This work was carried out in the Research Division, Department of Zoology, Mar Ivanios College. The problem was suggested to me by Dr. M. V. John (former professor) Research Guide, Department of Zoology, Mar Ivanios College and the work was carried out under his guidance and supervision.

Preliminary studies revealed the occurrence of seven *Dinurus* species in the stomach of dolphin fish, *Coryphaena hippurus* of Kerala coast. Seven species recovered are *D. tornatus, D. barbatus, D. breviductus, D. longisinus, D. coryphaenae, D. scombri* and *D. hippuri*. A new species *D. ivanosi* was later isolated. Since *D. hippuri*, first reported from our laboratory, is one of the commonly occurring species in Kerala and fragmentary information is available on its morphology, I have undertaken a detailed study of the same. Another major objective of this study was to provide detailed information on the biology of *Dinurus* and provide the correct identity of various reported species.

The work is broadly divided into four parts with nine chapters. Part I with two chapters consists of survey of various *Dinurus* species (Chapter 1) and the redescription of seven reported *Dinurus* species along with the description of a new species (Chapter 2). The remaining three parts deal with a detailed study of different aspects of *D. hippuri* using light microscopy and scanning and transmission electron microscopy.

Part II has four chapters dealing with certain aspects of morphology (Chapter 3), studies on tegument and parenchyma (Chapter 4), descriptions of digestive, excretory and nervous systems (Chapter 5) and studies on reproductive system (Chapter 6). Part III has a single chapter dealing with histochemical studies (Chapter 7). Part IV deals with certain experimental studies on *D. hippuri* (Chapter 8). It includes three sections - Section A: Determination of in situ pH of the stomach of *Coryphaena hippurus*; Section B: Regulation of pH of the microhabitat by *Dinurus hippuri* - an in vitro model and Section C: In vitro culture of *Dinurus hippuri*.