

## ABSTRACT

This is the first in a series of three volumes on the freshwater macroinvertebrates of Costa Rica. The present volume includes an introductory chapter summarizing the major types of freshwater environments, the biology of freshwater macroinvertebrates (habitats, food, respiration, osmoregulation, etc.), ecological and economic importance, conservation and a synopsis of the major groups, followed by a simplified key. The next two chapters discuss collecting methods and biomonitoring. These are followed by chapters on mayflies (Ephemeroptera: 10 families), dragonflies (Odonata: 13 families), stoneflies (Plecoptera: 1 family) and caddisflies (Trichoptera: 15 families). Both in this volume and in those to follow, the chapters treating individual taxa include a summary of the natural history, importance, taxonomy, collecting methods, morphology and an illustrated key to the families; each family is discussed separately and an illustrated key to genera is provided; each chapter ends with a bibliography and a table listing all the genera with information on number of species, distribution, habitat and tolerance to water pollution. While the emphasis is on families and genera known from Costa Rica, additional taxa occurring elsewhere in Central America are mentioned. The present volume also includes numerous color plates of aquatic macroinvertebrates.