Preface

Sponges are sessile organisms of the sea long been known, but for many years, its nature and importance are not been clearly studied. To the question of what are sponges, there are different answers. For the fishermen, they are nothing but worthless rubbish in their catch; for the industrialists, a valuable raw material; divers sea sponges as a beautiful part of the scenery and fascination; for fishes they are a good habitat; and for taxonomist, they are a challenge.

Now these animals have once again become the subjects of intense research for the pharmaceutical industry as an important source for antibiotic, antiviral, antibacterial formed as a basis of number of bioactive compounds that could have great importance in medical research as well as valuable practical applications. Unknown and quite unexpected chemical compounds are being discovered that focus on sponges in the field of Applied Biotechnology.

The main part of this research focussed on the identification of marine sponges. However, since our knowledge of these animals is quite limited in this field because of inherent difficulties. But knowledge of these animals in the investigation of chemical compounds that can be found in sponges has been increasing as hardly any species of macroscopic animals escaped the attention of divers who have spent thousand of hours underwater, observing, photographing and collecting the various animals of the reef habitats.

Taxonomic descriptions of sponges are based almost exclusively on dried and fluid-preserved specimens. Observations in marine habitats reveal the wide gap between the characters of living sponges and their traditional descriptions. The appearance of living sponges is quite different from that of dead specimens partly due to the hydraulic properties of choanocytes and partly due to colour changes in preservation. The discrepancy may be so great that even an experienced taxonomist may not recognise a well-known genus of sponge when faced with the living animal.

From the southwest and southeast coasts of TamilNadu, India very little was known which raised the knowledge to a new level. The sixty-one species of sponges described herein are of good records with detailed account correlating the present and traditional taxonomic knowledge, which is a new attempt, after several years from this area. The study also enabled with the new record of thirty species, eighteen are new to the southwest Indian coast and a potential new record of thirteen species from the study centes.

Not all of the technical problems of recognizing sponges has been solved in this way, but procedures may be taken as an example for further research in this conspicuous organisms of the sea.