

JELLYFISH

INTRODUCTION

Jellyfish can be sub-divided into 3 main groups, based on the symptoms they cause - those causing: -

- Human fatalities
- Severe envenomation with systemic effects
- Nuisance stings

There are three main types of jellyfish that cause these problems:

1. Scyphozoans (Class Scyphozoa) - the true jellyfish. This group of jellyfish, which are common worldwide, have tentacles arising at regular intervals all round the bell (and often in other areas inside the bell) - i.e. they are radially arranged (see Figure *).

2. Cubozoans (Class Cubozoa) - the box jellyfish. These are the most dangerous jellyfish and have caused hundreds, possibly thousands, of human deaths in tropical and sub-tropical waters worldwide. They have a box, or cube, shape with tentacles arising only from the corners (Figure *). They have two sub-groups, or Families:

- Carybdeids, having just one tentacle (except in rare cases) arising from each lower corner of the bell (Figure *). They have not caused a documented human fatality to date, although there is a possibility that death from heart failure after Irukandji envenomation may have occurred, but been classified as a myocardial infarction, followed by heart failure (see below).
- Chirodropids, having more than one tentacle in each corner of the bell (Figure ¥). Chirodropids regularly cause human deaths each year (Table 1)

3. Other jellyfish (in the Class Hydrozoa). These are not actually jellyfish, although they resemble them, and cause similar problems to the bathing public. They are commonly regarded by the general public as jellyfish and are discussed as such in this book. This group includes the siphonophore *Physalia* sp., commonly known as the Portuguese man-o-war, and *Gonionemus*, a small hydrozoan, which causes sting problems in the Sea of Japan (see below).

Jellyfish causing fatal stings and severe morbidity

- i. Chirodropids (multi-tentacled box-jellyfish) - The family of jellyfish causing most of the human fatalities. Fatal stings regularly occur worldwide in tropical and sub-tropical waters (Table 1).
- ii. Portuguese man-o-war (*Physalia physalis*) - a siphonophore colony that looks like a jellyfish, and is commonly regarded as one by the general public - has caused 3 human fatalities in the SE corner of the United States (Table 2).
- iii. A large scyphozoan jellyfish, locally called *Stomolophus nomurai* (the sand jellyfish), has now caused 8 recorded deaths in one area of the South China Sea around Qindao, China.