

## JELLYFISH NAMES

Jellyfish usually have a common name and a scientific name. The scientific name consists of two parts (binomial system), which is standard for all scientific names. The first name is the genus to which the jellyfish belongs and always starts with a capital, the second part of the name is the species and starts in the lower case. The species identifies the jellyfish and gives it its name. Both parts of this scientific name are written in italics or underlined. In this book both names are given, but usually the common name is used to prevent confusion with those unfamiliar with scientific terms.

Scientific name	Common name
<i>Chironex fleckeri</i>	Chironex box jellyfish
<i>Physalia utriculus</i>	Bluebottle
<i>Cyanea capillata</i>	Hair jellyfish

## Appearance

### Scyphozoans (The "true" jellyfish)

Figure 1 - The Scyphozoan Hair jellyfish

#### Bell

The bell of scyphozoan or true jellyfish comes in various shapes and sizes, depending on the type of jellyfish and its maturity. It may be opaque and white or have various colours or patterns. The bell contracts and relaxes, pushing water behind, gently propelling the jellyfish through the water.

Most scyphozoans do not have stinging cells (nematocysts) present on the bell, although some do. The bell should not be touched until you are confident that groups of stinging cells (like little warts on the surface of the bell) are not present.



#### Tentacles

Many tentacles are the business part of the jellyfish. They contain the stinging cells (see Chapter 4) that discharge, thus paralysing and killing its prey, or causing a sting of varying intensity to a hapless human victim. The pattern of the groups of these stinging cells and even their colour gives a characteristic appearance to the tentacles of each jellyfish species.

Tentacles arise symmetrically from all over the bell - both round the edges and in various areas under the bell, such as around the mouth, or manubrium of the jellyfish. This is unlike the box jellyfish where the tentacles are gathered in bundles in the corners (see below).

## Chirodropids

*“Box” jellyfish - many tentacles in each corner*

### Bell

The bell varies in size according to the species of the jellyfish, but in chirodropids it is usually fairly large in the adult jellyfish - some 10-30cm diameter. The bell is cuboid - in the shape of a box. It is usually somewhat transparent and colourless.

In the lower four corners, tentacles arise in bundles, or groups, from a specialised area of the bell called the pedalium. In between each pedalium, half way along the lower edge of the bell is a specialised organ called the rhopalium. This specialised organ, present in all box jellyfish, contains 3 main structures:

1. An eye - a lens that distinguishes light and dark (e.g. shadows in the water that may signify danger, such as a predator).
2. An organs to detect vibration, or movement in the water, again helping to detect larger predators, or rough water, in which case the turbulence may damage the fine jellyfish structures.
3. An organ that determines the position of the jellyfish in the water - i.e. whether it is swimming sideways, or moving upwards, or downwards.

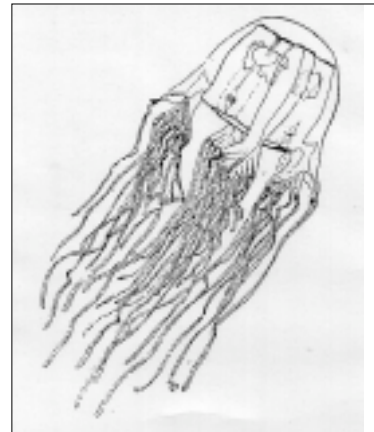
Contraction of the bell is powerful, and the lower part of the bell has a skirt which helps to narrow the neck of the bell has the bell itself contacts. This help to eject water out of the bell with greater force, enabling a box jellyfish to swim quickly - up to 6kph - the pace of a walking man.

### Tentacles

Chirodropids have more than one tentacle appearing in each corner. They often appear to have rings, or bands around the tentacles. Each of these bands contains large numbers of stinging cells. These rings may be coloured - e.g. some of the tentacles of *Chironex box* jellyfish may be coloured mauve, or yellowish, although most are an opaque brown colour.

The tentacles are elasticised - i.e. they can be pulled up (contracted) to be thick and short - just a few centimetres long, or may be long and thin and extended out up to 10 times the length of the contracted tentacle. E.g. the tentacles of *Chironex* may be thick, contracted and 10cm in length when it is actively swimming, or may become thin and fine, extending up to 3 metres in length

behind the bell whilst it is slowly pulsing through the water fishing for its prey. Unfortunately it is usually at this time that a human victim may blunder into these tentacles, which are so fine as to be almost impossible to see in the water, thus being stung extensively as the fine tentacles wrap around their legs.



## **Carybdeids ("Box") jellyfish (one tentacle per corner)**

### **Bell**

The bell is box-shaped, similar to the chirodropids. The bell size varies greatly, with the smaller species being less than 1/2mm and the larger specimens being up to 14cms (140mm). The shape also varies greatly with the bells of some carybdeids being almost rocket-shaped (narrowing at the top), to a square shape, and even greatly extended, with a length of up to 50cms (500mm). Similar to chirodropids, the bell is usually transparent, making them very difficult to see in the water.



### **Tentacles**

Similar to chirodropids, the tentacles are elasticised and may be short and thick and close to the bell, or thin and fine extending up to 10 times the contracted length. Overall length obviously depends on the size of the bell itself.

Tentacles are similar to chirodropids and usually a brown or pinkish in colour, and surrounded by bands of the nematocysts.

## **Hydrozoans - Physalia**

These are not actually jellyfish like those described above. However, they do have nematocysts (stinging cells), they are common stingers worldwide, and are usually regarded as jellyfish by the bathing public. They are considered as jellyfish for simplicity in this book, although scientifically they are actually called Siphonophores, and are a hydroid colony.

There are two types of Physalia -

1. Physalia utriculus - having one long tentacle. This species is very common in Australia and go by the common name of Bluebottle
2. Physalia physalis - - having many long tentacles. In the Northern Hemisphere, particularly in the Atlantic, they are called the Portuguese man-o-war . This species is also present in Australia, and to distinguish the single-tentacled species from the multi-tentacles species, the latter has been called the Pacific man-o-war

### **Float**

In Physalia there is no muscular contracting bell. Rather there is a float, which is gas-filled (a mixture similar to air but containing more Carbon monoxide) and sits on the surface of the water.

Similar to a jellyfish bell, it does have muscular fibres, but does not contract to propel Physalia through the water. However contraction of the float can cause the float to be raised and shaped - almost like setting a ship's sail, enabling Physalia to be blown across the water. The weight of the tentacles beneath then acts like a keel, making the whole animal well adapted to its sailing role across the high seas.

