

# Dead Man's Dead Man's Fingers

*Haliclona oculata*

Class: Demospongiae  
Order: Haplosclerida  
Family: Chalinidae  
Genus: Haliclona

## Distribution

It occurs along the coast of North America, from the Gulf of St. Lawrence to North Carolina. Also along coastal areas of Portugal, France, the Netherlands, British Isles, Shetlands, Faroes, Denmark, Sweden, Norway, Spitsbergen, Bear Island, White Sea, Kara Sea.

## Habitat

Sponges are benthic and for the most part occur on bedrock, attaching themselves to firm, solid substrates. They mostly grow in shallow, subtidal and occasionally intertidal habitats, often associated with rather silted water.

## Food

*Haliclona* are suspension feeders. Minute particles of food are filtered from water for consumption.

## Reproduction

Sponges can reproduce either sexually or asexually. Most are hermaphroditic, capable of producing both eggs and sperm.



Remains of sponges can be found along the shoreline.

*Demospongiae*, these sponges are global in distribution. There are well over 7,500 known species with probably just as many yet to be discovered. They are thought to have evolved 500 million years ago. There are several different orders, *Haplosclerida* being one of them. Within this order is the family of *Chalinidae* which contains the genus *Haliclona*. There are a great number of species in this group including *Haliclona oculata*. This is a northern species and is well distributed on both sides of the northern Atlantic. It is common in Nova Scotian waters. At Burntcoat Head they occupy the surrounding coastal area.

They live at the bottom of seas, lakes or rivers and can be found on open coasts and the outer reaches of estuaries, usually in the sublittoral zone. This is the zone between the low tide mark and the 100 m depth. Depths vary with geographic location. The hard substrate is typically located at the base of rock cliffs and consists of outcrops, boulders, and rock debris of decreasing size. They can tolerate low salinity and turbid water with suspended silt. Some (other) species range from intertidal to hadal depths, occupying deep trenches on the sea floor.

Ambient water is drawn into the body of the sponge from the water that constantly passes over their pore covered (ostia) bodies. Excess water and wastes pass out through the excurrent pores (oscula). Microscopic food particles are removed by a specialized collar of microvillia cells. These cells capture the particles for digestion. Digestion is intracellular (by the cells).

Hermaphrodite sponges are able to perform both male and female functions, playing one role at a time. When reproducing sexually sperm is released into the water and taken in by other sponges. Larvae then develop within the parents and are released along with the excurrent water. Sponges can also reproduce by budding off portions of the body.



### Development

Released larvae have an outer layer of flagellated cells used to propel them through water. The inner mass contains many other diversified cells. They are, in a sense, prefabricated juveniles.

### Characteristics

Sponges are animals, not plants. This species of sponge has a branching structure. Finger-like projections grow from a short stalk or base. Usual size is between 10 and 30 cm. These fingers are compressible and flexible. The colour is yellow or light brown, sometimes with a greenish or reddish tinge.

### Adaptations

They have two amazing abilities to regenerate. When pieces (buds) have broken off from a living sponge a new sponge can grow from one of these buds. The internal bud (gemmule) is like a survival pod, holding the cells that will start another sponge. If the parent sponge dies the gemmule survives and grows into another sponge.

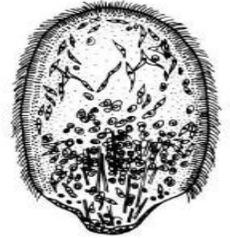
### Status/Threats

Currently these are not under any environmental threat.

### Sightings in Nova Scotia

These grow in Nova Scotian waters just below the low tide line.

The outer hair like cells are capable of whip like, lashing movement allowing the larvae to move about. These free-swimming larvae, after leaving the parent sponge, continue to develop until ready to settle down and become new sponges. They also develop from buds. These buds can be either internal or external. Both types grow into new sponges.



Sponges have no mouth, internal organs or nerves. Instead, their body is full of tiny holes, which help them to eat and breathe. Skeletal structures contain spicules and spongin fibres. Spicules provide support, and spongin fibres form a mesh work to provide firmness to the sponge body. Towards the base the sponge is firmer. They are often mistaken for plants. Pieces of (dead) sponge are commonly found on beaches as their skeletons are strong enough to survive the waves that wash them ashore. They have lost their bright colours but generally retain the shape they had when alive.



They are capable of adapting to local situations. The branches may remain isolated along their entire length. Under sheltered conditions, branches are occasionally flattened, antler-shaped and less numerous. The shape and degree of branching is greatly affected by the strength of the water counter flow, with the many branched form being found in strong currents. They are able to survive in cool and warm ocean temperatures.



Predators include spiny sunstars and sea slugs and some species of fish.

Note. The common name of Dead man's fingers is quite popular. It not only refers to this sponge but also to a species of seaweed *Codium fragile*; a plant and its fruit *Decaisnea*; a coral *Acyonium digitatum*; a fungus *Xylaria polymorpha*, and the gills of some crabs.