

YZC Animal of the Month, March 2014

Pearly Nautilus

Nautilus pompilius



This beautiful shell belongs to an animal called the Pearly Nautilus. This is a member of the Cephalopod Molluscs, the same group of animals that includes octopuses, squid and cuttlefish. When you see the live animal, you can see the similarity with octopus and squid, with the tentacles and large head. Their shell protects them from predators, but has another important role: keeping these animals afloat.

This shell has had one side cut away to show the structure

inside. You can see that rather than being a continuous space, this shell is made up of a series of chambers. The animal lives in the big chamber at the end. As the animal grows it builds a new, larger chamber in front and builds a wall behind it. Look carefully and you can see that the walls between the chambers are pierced with a tube. This held a thread of the animal that stretched back through the chambers called the siphuncle. The siphuncle is able to alter the amount of seawater in the chambers. Pumping out seawater causes the gas dissolved in the water to bubble out to fill the space. This makes the animal more buoyant – it floats higher in the sea. Nautilus tend to rise to around 150m below the sea surface at night to feed, and sink deeper in the daytime to stay away from predators. The greatest depth a Nautilus has been found at is 703m. Their shells break under the pressure of the water above them at 800m.