Rolland Verreet, *Archaias angulatus* (Fichtel & Moll, 1798)

Inspiration Artist: Roland Verreet

Age Range: Primary

Subject Areas: Art, Science (Marine Biology)

PHOTOGRAPHING FORAMINIFERA

NATIONAL GALLERY CAYMAN ISLANDS

DART

MINDS INSPIRED

In this Packet

In this lesson inspired by our *Luminescent Forms* exhibition (Grand Cayman 2014, Little Cayman and Cayman Brac 2019-2020), students will learn about foraminifera, tiny ancient life forms that make up much of our sand-structure. They will read about Roland Verreet, an artist who has captured these forams' natural beauty through photography.

In a follow-up art activity, students will create their own composition of Foraminifera by drawing clusters in unique forms.

*This lesson is best achieved with the guidance of a parent or guardian

What are Foraminifera?

Foraminifera are tiny life forms that can be found in oceans all across the world. They can also be called 'forams' for short.

When these forams die, they leave behind a skeleton shell called a 'test' which is very small - they can be anywhere from 0.05mm to 0.5mm!

These tests make up much of the sands that wash onto our shores and form the sea bottom.

When magnified, sands are beautiful mixtures of crystals, shells, and even skeletons, all revealing secrets from the landscapes that created them.

Why are they important?

Scientists think that Foraminifera are an important part of the marine food chain: they feed on tiny plants and animals that cannot be eaten by worms or fish. Foraminifera themselves are food for fish and other larger animals.

Foraminifera are very sensitive to changes in their environment such as water temperature or the amount of salt in the water. By studying forams, scientists can understand more about the health of coral reefs over time, changes in water conditions and even the ages of rocks!

Roland Verreet, *Calacarina hispida* (Brady, 1876)

Photographs of Forams by Roland Verreet

Roland Verreet, *Cymbaloporetta plana* (Cushman 1924)

Roland Verreet, *Quinqueloculina* sp, 2014

Photographs of Forams by Roland Verreet

If foraminifera are so tiny, how can they be photographed?

German engineer and artist Roland Verreet used a powerful microscope to look at sand from the Cayman Islands more closely. He realised that it was made of these tiny foraminifera!

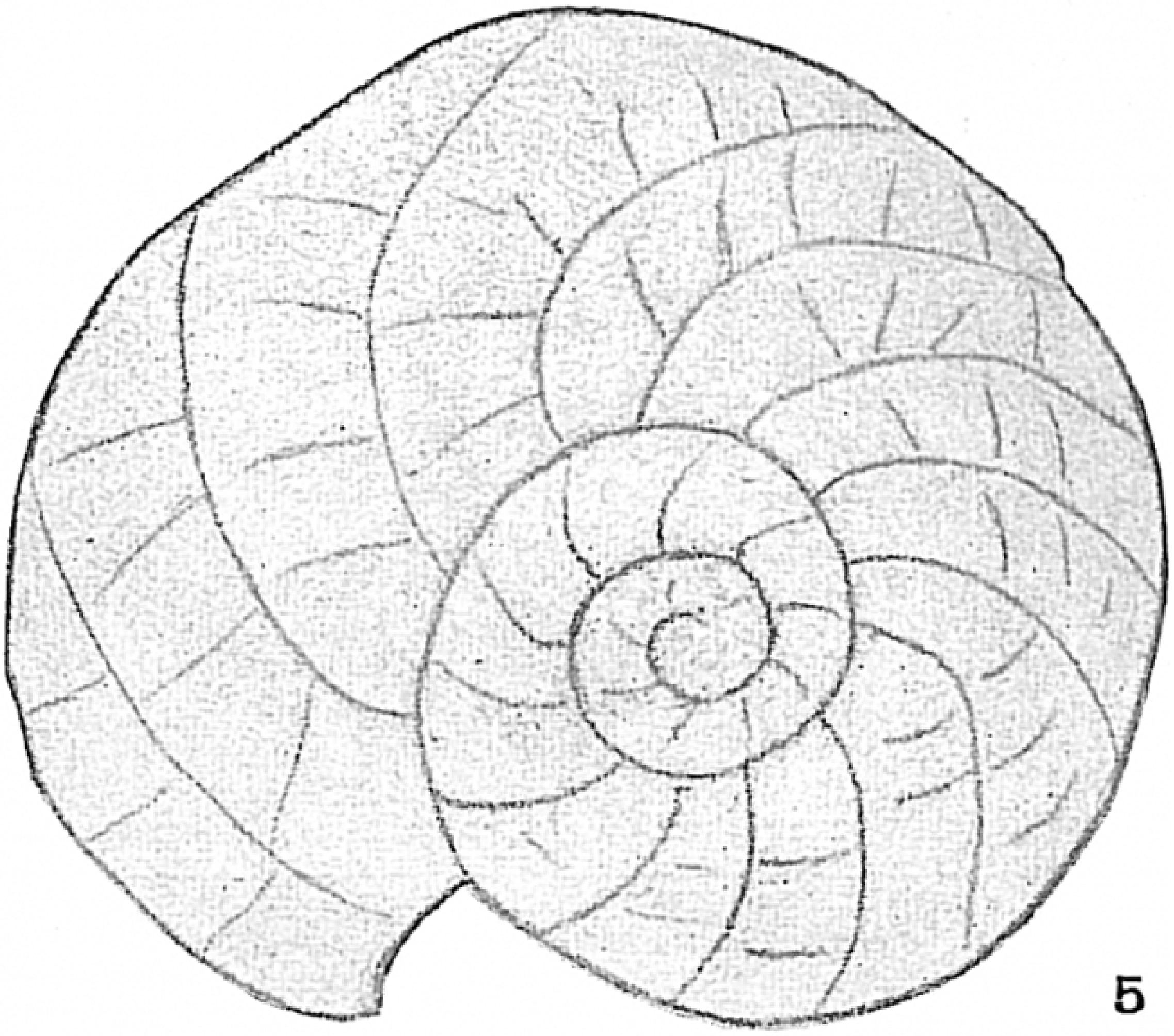
Roland was fascinated and began a very long process of cleaning, studying and photographing the forams.

He enjoys studying the history and science of these creatures, and the mathematics behind their shapes, forms and patterns.

Foraminifera have natural patterns that are beautiful to look at. In art, we call the repetition of these lines and shapes 'rhythm' because they give a sense of movement.

Find out more at: https://www.nationalgallery.org.ky/whats-on/exhibitions/luminescent-forms-art-under-the-microscope-in-cayman-brac/

Colour It In!



As you colour, what repeated lines or patterns do you see?

Colour It In!

As you colour, what repeated lines or patterns do you see?

_____

_____

Art Activity: Make Your Own Forams

Take a look at these foraminifera. In the box on the next page, draw your own forams using these pictures as inspiration. Imagine that they were still alive. What colours do you think they would be?

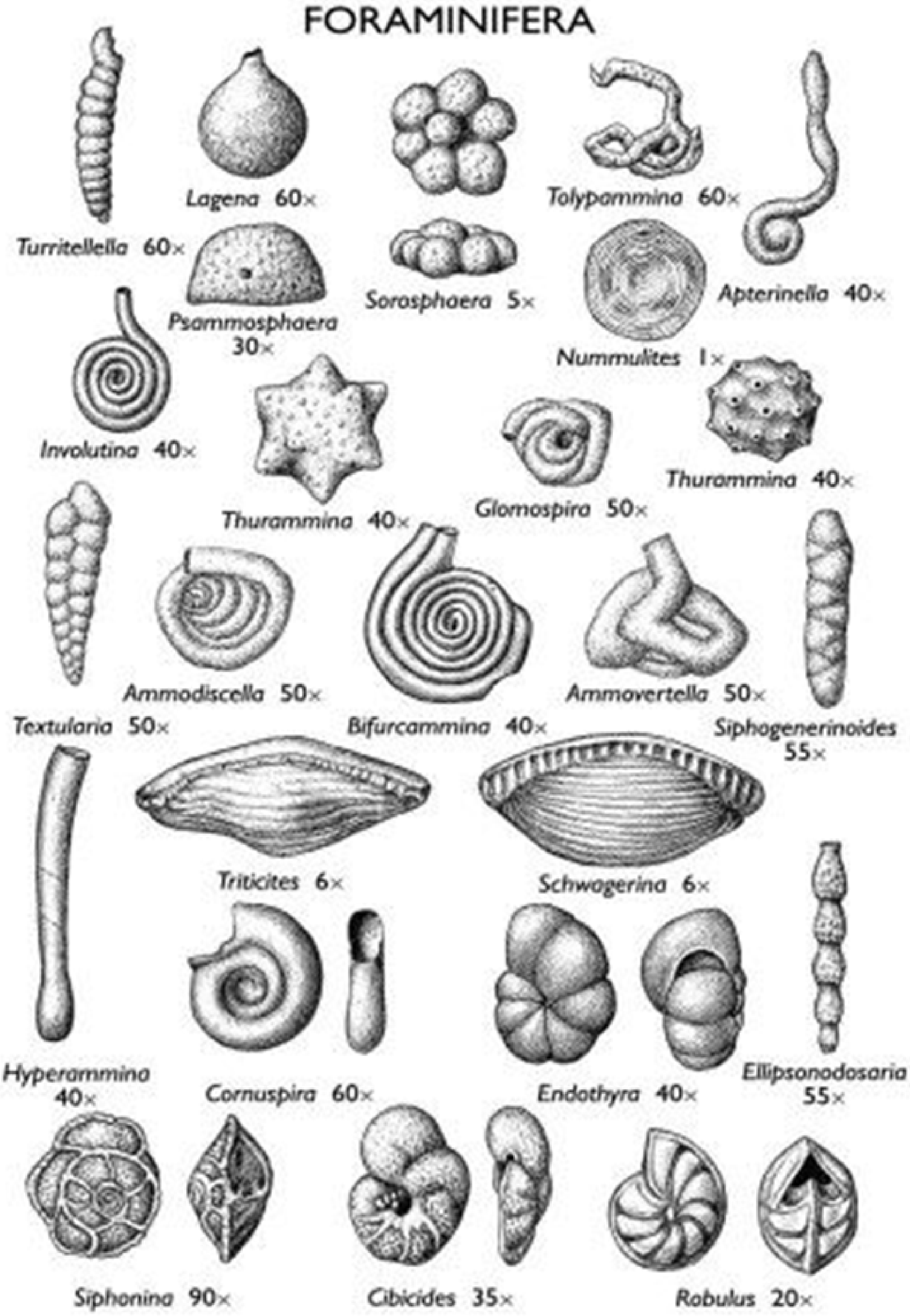


Image source: http://isgs.illinois.edu/outreach/geology-resources/foraminifera