

The image features a central white rectangular box containing the text 'Starfish' and 'By, Bianca Walian'. The background is a bright yellow square, and the entire composition is set against a white background. Several red starfish are scattered across the yellow square, some overlapping the white box. The starfish are rendered in a detailed, stippled style, showing the texture of their arms and central discs. There are four starfish visible: one in the upper left, one in the upper right, one in the lower left, and one in the lower right. The text 'Starfish' is in a large, bold, black sans-serif font, and 'By, Bianca Walian' is in a smaller, black sans-serif font below it.

# Starfish

By, Bianca Walian

## Starfish A.K.A. Sea Star

Starfish have always been one of the first marine organisms I can identify at any Marine Aquarium. Besides of course, a dolphin, I've always been amazed with how they work, their appearance, and all the different species there are! After researching more about them I love seeing them portrayed as characters like Patrick Star in *Sponge Bob Square Pants* and as Peach in *Finding Nemo*.

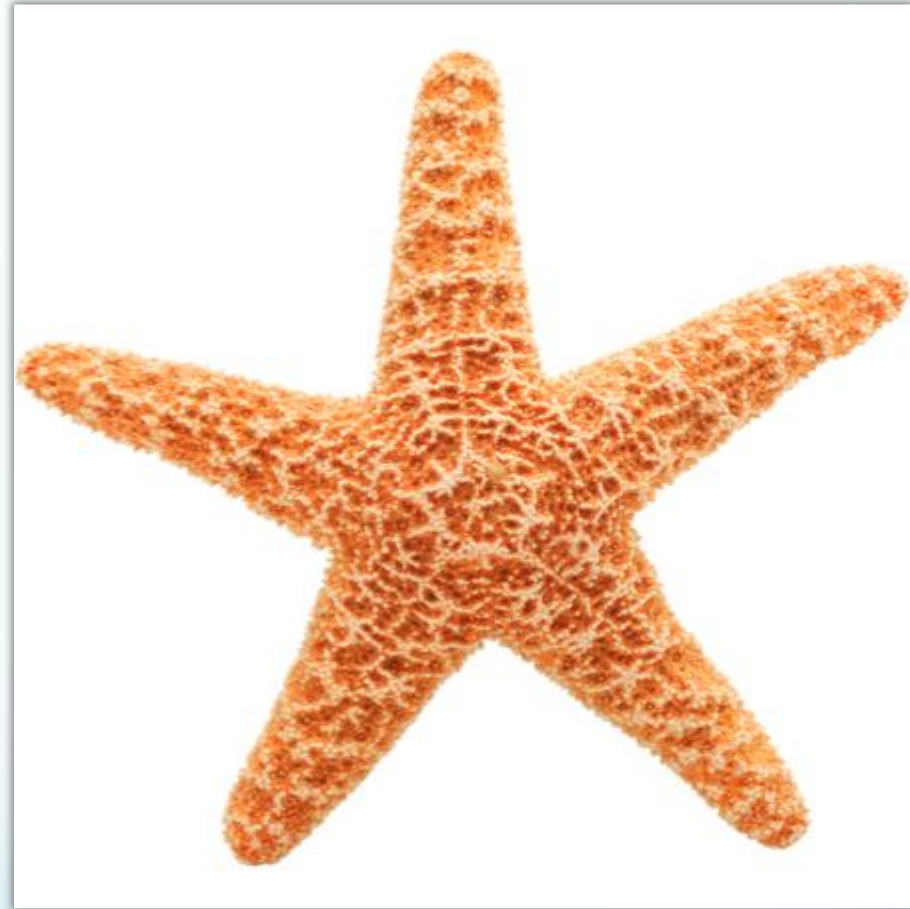


Image By, *Starfish*. N.d. Digital Image. *Culbreth Middle School -Starfish*. Culbreth Middle School. <<http://cms.chccs.k12.nc.us/groups/starfish>>.

Here is a fossil of a Salteraster. Salteraster's were a large and rare type of starfish that lived on shallow sea floors, approximately 443 million years ago.



*Fossil.* Digital image. *Prehistoric Planet Store.* N.p., n.d. Web. <<http://www.prehistoricstore.com/item.php?item=432>>.

# Water Planet

Starfish are heterotrophs which means they get their nutrients from eating. They evolved approximately 450 million years ago in a era called Ordovician. Since they've evolved you can find Starfish in all world oceans.

# Seafloor & Sediments

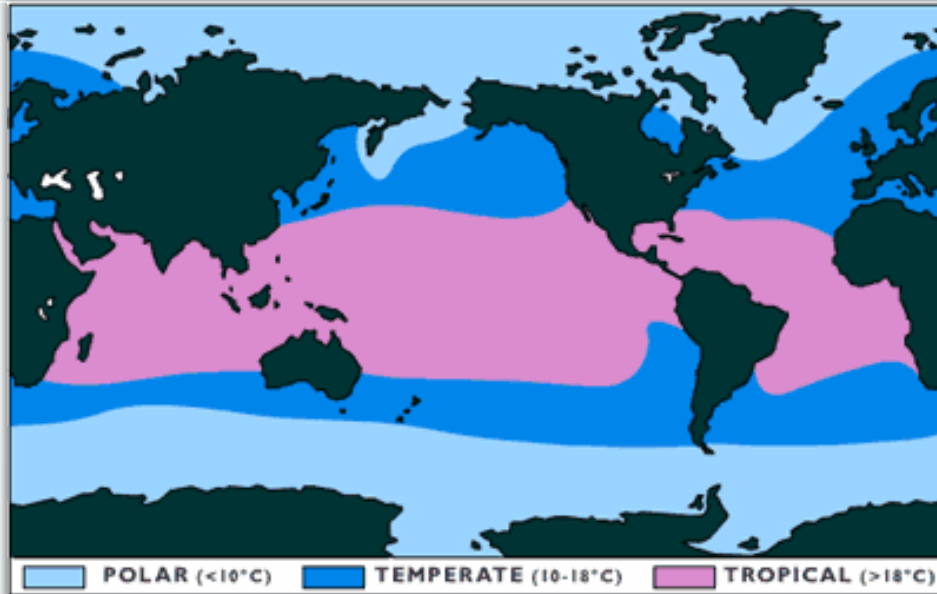
Blue starfish on coral reef, Raja Ampat, Indonesia.

Habitats range from coral reefs, rocky shorelines, tidal pools, kelp forests, sea-grass meadows to the deep ocean floor in mud & or sand.

Starfish are usually found on a hard or rough surface where it is easy for them to be stuck to so no current can easily rip them off.



Factor, Beverly. *Blue Starfish On Coral Reef, Raja*. 2012. Photograph. Raja Ampat Indonesia. *Fine Art America*. 20 Nov. 2012. Web. <<http://fineartamerica.com/featured/blue-starfish-on-coral-reef-raja-beverly-factor.html>>.



Digital image. *Comparing Oceans: Temperate versus Tropical Seas*. Gulf of Maine Research Institute, n.d. Web.  
<[http://www.gma.org/herring/biology/distribution/comparing\\_oceans.asp](http://www.gma.org/herring/biology/distribution/comparing_oceans.asp)>.

## Marine Environment: Seawater

Starfish cannot survive in freshwater, therefore they live in salty seawater. When it comes to where in the world's oceans starfish live, the answer to that is infinite. They can live in the tropical waters near the equator as well as live in polar waters.

I set out to see exactly how close to “home” Starfish can be found. I tagged along with my boyfriend & his friends crabbing & we discovered the Horned Sea Star along the Pacifica Pier!

Who we caught seemed to be a baby & was a little bigger than a quarter

This picture shows us more of what he'll look like when he matures & grows bigger



# Scientific Classification

- ✧ Taxonomic Classification:
  - ✧ Kingdom: Animalia
    - ✧ Phylum: Echinodermata
      - ✧ Subphylum: Asterozoa
- ✧ Scientific Name: Asteroidea
- ✧ Close Relations
  - ✧ Sea urchins
  - ✧ Sea Cucumbers
  - ✧ Sand Dollars
- ✧ Location Classification: Benthos

# Predators

The Starfish really only has three solid predators to worry about:

## I. Sharks

Only sharks that swim near the bottom of the sea eat starfish. Some are :Nurse sharks, Horn Sharks and Port Jackson Sharks. All of these sharks have strong enough jaws to crush the hard bony outer skeleton of the starfish and eat the flesh underneath.

## II. Seagulls

Seagulls like to pick away the bony outer skeleton, and like sharks, eat away at the flesh.

## III. Alaskan King Crab

The Alaskan king crab prefers to tear apart the starfish before consuming it. It will rip the starfish into manageable chunks to make it easier to eat. They are predators because they also hang around coral reefs. If the starfish can get away from the crab with its main body intact, it can regenerate its lost arms later on!



Digital image. *Animal News The Podcast*. N.p., n.d. Web. <<http://animalnewsthepodcast.wordpress.com/2011/12/16/on-the-6th-day-of-xmas-my-true-love-gave-to-me-six-monsters-laying/>>.



Digital image. *Pictures That Actually Made You LOL*. N.p., n.d. Web. <<http://arstechnica.com/civis/viewtopic.php?f=23&t=1110312&start=960>>.



Digital image. *Food & Beverage Online*. N.p., n.d. Web. <<http://www.21food.com/products/king-crab-from-chile-172519.html>>.



# How Starfish Eat!

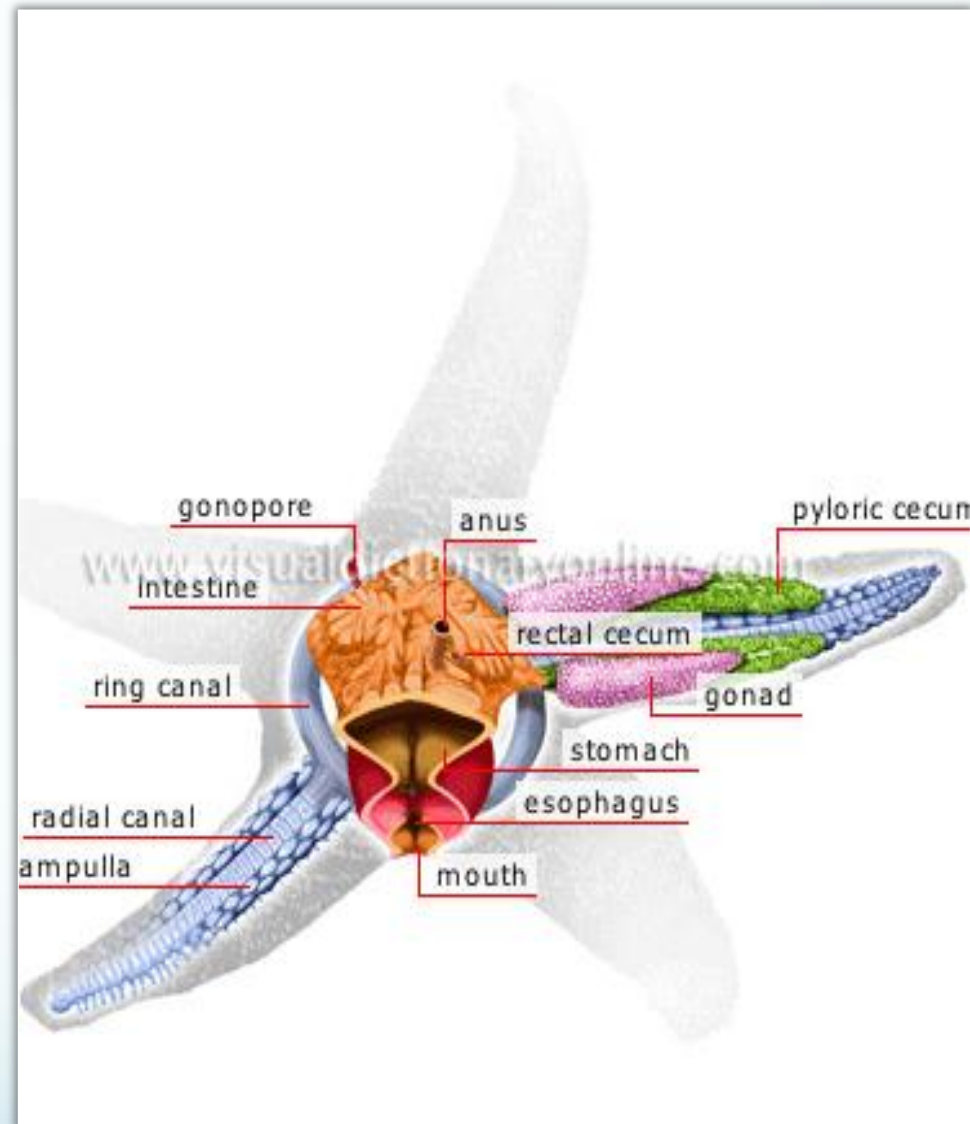
Click On Picture ☺



# How Starfish Eat Continued

As you saw in the video, the Starfish has its stomach & eyes on the **BOTTOM** of its body –backwards how things usually right? The Starfish will slowly center its pray (which can be shellfish, snails, some barnacles, clams, and shrimp) using its tubed feet & slowly make its way to its mouth.

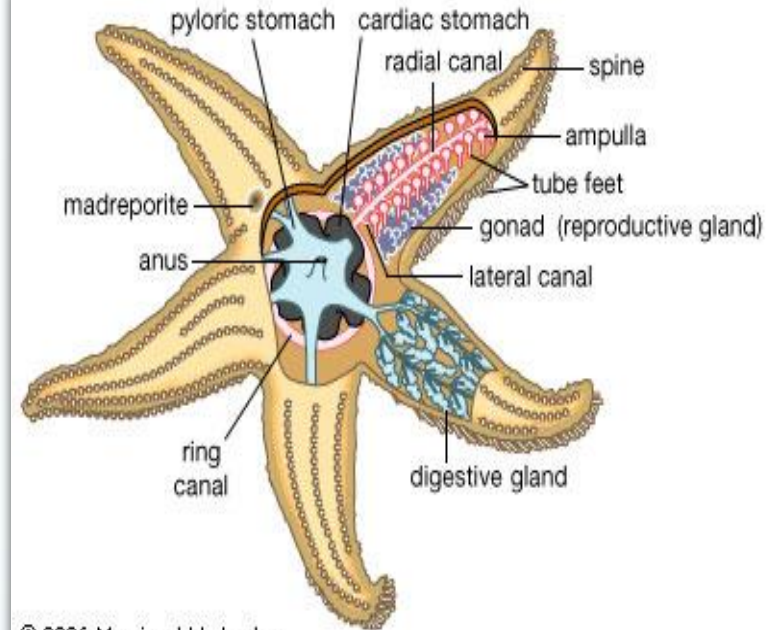
From there, the Starfish will throw out its own stomach directly from its mouth (the sheer looking cloud you saw over the shrimp) over its prey & digest it. After the Starfish digests its food, it retracts its stomach back into their bodies.



Digital image. Merriam Webster. N.p., n.d. Web. <<http://visual.merriam-webster.com/animal-kingdom/simple-organisms-echinoderms/echinoderms/anatomy-starfish.php>>.

# Something Special

- In order to relate to a Starfish's water vascular system you should think about our blood & our with how its works inside their body, thing about our blood & our cardiovascular system. Water is reached to every part of their body bringing nutrients and strength that's later released when they relax.
- As water is drawn into the body, a vacuum is created at the point of entry. Its this that allows Starfish to cling onto rocks and other structures. Currents, waves, & tides don't necessarily bother them.
- If they were to get pushed onto shore (which happens), their water vascular system is their savior. They can survive for some time while the tide is out with the remaining water stored in their system.

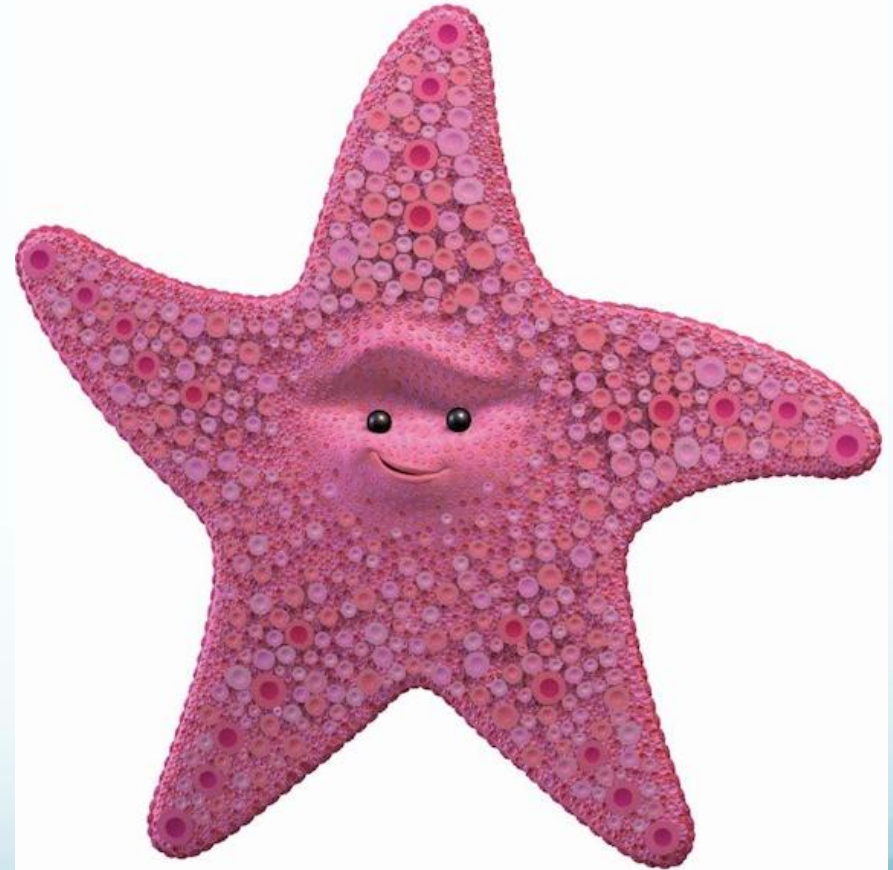


© 2006 Merriam-Webster, Inc.

Digital image. *Animal Plant Wiki*. N.p., n.d. Web.  
<<http://animalplanet.wikispaces.com/Gabby+%26+Emily's+Invertebrate+Reflection+and+Analysis>>.

# Human Favorites

- Starfish have a positive affect on us humans. We've grown to love them & admire them. They've appeared as characters on a hit TV Show *Sponge Bob Square Pants* as well as Peach (shown) in the huge blockbuster *Finding Nemo*. These creatures will always be a sight to see & I hope they'll be with us for the rest of life on Earth.



Digital image. *We Want To Be In The Tank Gang*. N.p., n.d. Web. <<http://blogs.disney.com/oh-my-disney/2013/04/30/we-want-to-be-in-the-tank-gang/>>.

# Bibliography

- *Echinodermata Spiny-skinned Animals: Sea Urchins, Starfish, and Their Allies*. N.p., n.d. Web. <<http://tolweb.org/Echinodermata/2497>>.
- *Starfish Sea Star*. N.p., n.d. Web. <<http://animals.nationalgeographic.com/animals/invertebrates/starfish/>>.
- *In What Kind of Environments Do Starfish Live In?* N.p., n.d. Web. <[http://www.ehow.com/info\\_8379661\\_kind-environments-do-starfish-live.html](http://www.ehow.com/info_8379661_kind-environments-do-starfish-live.html)>.
- *ECHINODERMS*. N.p., n.d. Web. <<http://www.starfish.ch/reef/echinoderms.html>>.
- *ECHINODERMS: THE SPINY ANIMALS!* N.p., n.d. Web. <<http://www.oceanicresearch.org/education/wonders/echinoderm.html>>.
- [http://www.youtube.com/watch?v=ygDjkQTWAEc&feature=em-share\\_video\\_user](http://www.youtube.com/watch?v=ygDjkQTWAEc&feature=em-share_video_user)