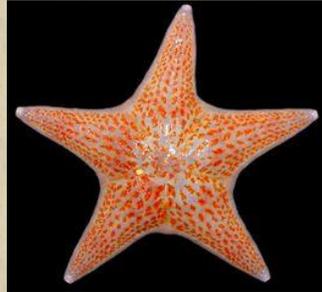


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NORTHWEST WILDLIFE PRESERVATION SOCIETY

Leather sea star

Dermasterias imbricata



By Aurora Hicks Beach

Leather sea stars are a member of the echinoderm family, which also contains sea urchins and sea dollars. The most commonly found sea stars have five limbs; however, there are species with 10, 20 and even 40 limbs.

Characteristics

The leather sea star gets its name from the mucus that makes its skin feel smooth like wet leather. Unlike other sea stars it does not have spines but instead papulae or clumps of gills that are a brighter red/brown colour, with the edge of the animal being blue/grey. It has five arms that protrude from its central part that contains its mouth and stomach. On the base of these arms, it has two rows of tube feet that it uses to move around. Leather sea stars are about 15 cm in length (6 inches) however, they can grow to 30cm (12 inches).

Leather stars, like other sea stars don't have blood but they use sea water to pump around their body. They also swallow their prey whole and digest it internally.

It also has the nickname garlic starfish as it has a strong smell of garlic.

Life Cycle

The leather star can reproduce sexually and asexually. The female releases her eggs into the water to be fertilized by the male's sperm, which is also released into the water. The fertilized eggs are yellow or orange in colour and they are carried away by the current.

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Habitat

Leather stars are found from Alaska to southern California. They can be found from the shallows of the intertidal zone down to 91m (295ft).

Behaviour

These sea stars eat a wide variety of food, depending on what type of habitat they live in. For example, on the open coast the sea star will consume mostly plumose anemones and tunicates. In areas that are exposed due to the tide, the sea star will eat sea squirts and sea anemones. Whereas, in more sheltered areas that contain more sea cucumbers, sea pens and sponges, the sea star will consume these.

In order to hunt for food, the leather star has sensors at the end of each arm that can detect prey. However, some sea anemones have adapted and when they sense the chemicals produced by the leather star, they can detach themselves and float to safety.

When a leather star finds food, it pushes its stomach out through its mouth and uses the enzymes in the stomach to digest the food into a liquid form and then pulls the stomach back into the body.

Threats

The status of the species is not listed.

Leather stars are preyed on mostly by sea gulls and sea otters. However, sea otters only take bites or a single limb which allows the sea star to grow another one and continue with its life. Leather sea stars make up at least 50% of the morning sun star's diet.

Habitat destruction has decreased certain populations of starfish.

What We Can Do To Help

- Do not litter on land or in the water. Help clean up the environment – see <http://www.northwestwildlife.com/gcsc2004.php> for an article on the NWPS involvement in the “Great Canadian Shoreline Cleanup” campaign.
- Dispose of toxic substances such as antifreeze, batteries, and paint responsibly. Municipalities usually provide special disposal facilities for these types of things, as putting them down drains can be extremely toxic.
- Reuse and recycle whenever possible.
- Buy organic food – this supports farmers who are trying to preserve the environment by not using chemical pesticides and herbicides.
- Volunteer to help organizations like the Northwest Wildlife Preservation Society,
- Join the [Great Canadian Shoreline Cleanup](#)
- Take the time to learn about wildlife. Take a walk and observe the wildlife around where you live.

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- Make sure the seafood you eat is sustainable with [OceanWise](#), [Seafood for the future](#) and Seafood Wat

Where & When to view the animal

Leather sea stars can be found occasionally in tide pools or on a dive around the British Columbian coast.

Bibliography

Web Resources:

Toronto Zoo a profile of the Leather sea star

<http://www.torontozoo.com/ExploretheZoo/AnimalDetails.asp?pg=459>

Tennessee aquarium details on the leather sea star

<http://www.tnaqua.org/our-animals/invertebrates/leather-sea-star>

An overview of the Leather sea Star

<https://www.inaturalist.org/taxa/63382-Dermasterias-imbricata>

Details on the Leather sea star

<http://oceanscape.aquarium.org/explore/species/leather-star>

A study on the Leather sea star

http://www.seastarsofthepacificnorthwest.info/species/leather_star.html

Photograph courtesy of Zipcode zoo http://zipcodezoo.com/index.php/Dermasterias_imbricata

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