**Hippasteria spinosa**

**Common Name(s)**
- Spiny red star

**Habitats**
- Lower intertidal-subtidal

**Distribution**
- Alaska to S. California

**Abundance in Puget Sound**
- Rare in intertidal

**Leptasterias hexactis**

**Common Name(s)**
- Six-ray star

**Habitats**
- Intertidal to 45m

**Distribution**
- Alaska to Washington

**Abundance in Puget Sound**
- Very abundant but inconspicuous

**Pteraster tesselatus**

**Common Name(s)**
- Cushion star, Slime star

**Habitats**
- Low intertidal to subtidal

**Distribution**
- Bering Sea to Monterey Bay, CA

**Abundance in Puget Sound**
- Common but not abundant
## Hippasteria spinosa

**Scientific Name:** Hippasteria spinosa  
**Synonym:** Hippasteria leiopella armata  
**Taxonomy (Phylum, Class, Order, Family):**  
Echinodermata, Asteroidia, Goniasteridae, Valvatida  
**Similar species:** None  
**Distinguishing Characters:** large prominent, tapering spines; red to orange color  
**Natural History Information:** Like *Dermasterius imbricate*, this species has been shown to cause the swimming response in the sea anemone *Stomphia coccinea*.

## Leptasterias hexactis

**Scientific Name:** Leptasterias hexactis  
**Synonym:** Leptasterias aequalis  
**Taxonomy (Phylum, Class, Order, Family):**  
Echinodermata, Asteroidea, Asteriidae, Forcipulatida  
**Similar species:** *Leptasterias pusilla* (small slender sea star)  
**Distinguishing Characters:** Has six arms (but some species may not have all six). Colors can include grey, green, pink, purple, and orange, but tend to be grey to green. Distinguishable from *L. pusilla* by its broader rays at the base that tapers to blunt tips and because *L. pusilla* are only found in California and *L. hexactis* are not found south of Washington  
**Natural History Information:** *L. hexactis* brood their young. The female holds the eggs with her tube feet, covering them with her hunched body. While the female broods, she does not eat.

## Pteraster tesselatus

**Scientific Name:** Pteraster tesselatus  
**Synonym:** Pteraster tesselatus arcuatus  
**Taxonomy (Phylum, Class, Order, Family):**  
Echinodermata, Asteroidea, Spinulosida, Pterasteridae  
**Similar species:** None  
**Distinguishing Characters:** This species has short stubby rays. and can be yellow to tan and gray, sometimes checkered. Has an elevated central pore  
**Natural History Information:** Releases A LOT of thick slime for protection against predators.
### Intertidal Sea Stars

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name(s)</th>
<th>Habitats</th>
<th>Distribution</th>
<th>Abundance in Puget Sound</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pisaster ochraceus</strong></td>
<td>Purple star, Ochre star</td>
<td>Intertidal</td>
<td>Sitka, Alaska to Baja, California</td>
<td>Very common</td>
</tr>
<tr>
<td><strong>Pisaster brevispinus</strong></td>
<td>Giant pink sea star</td>
<td>Low intertidal to 110 meters</td>
<td>Sitka, Alaska to La Jolla, California</td>
<td>Common (more often in bays)</td>
</tr>
<tr>
<td><strong>Solaster stimpsoni</strong></td>
<td>Striped sun star, Orange sun star</td>
<td>Low intertidal to 201m</td>
<td>Japan, N. Alaska to California</td>
<td>Common (more subtidal)</td>
</tr>
</tbody>
</table>
### Scientific Name: Pisaster ochraceus

**Synonyms:** None

**Taxonomy (Phylum, Class, Order, Family):**

- Echinodermata, Asteroidea, Forcipulatida, Asteriidae

**Similar species:**

- *Evasterias troschelii* (Mottled star/False ochre star)

**Distinguishing Characters:**

- Very stiff; network of white spines

**Natural History Information:**

- *P. ochraceus* has a 20 year lifespan. They are an important intertidal predator. They are the most tolerant species of sea star to air exposure.

### Scientific Name: Pisaster brevispinus

**Synonyms:** None

**Taxonomy (Phylum, Class, Order, Family):**

- Echinodermata, Asteroidea, Forcipulatida, Asteriidae

**Similar species:**

- *Pisaster ochraceus, Evasterias troschelii*

**Distinguishing Characters:**

- 5 rays that are the thickest nearest the central disc, has a spines on aboral surface and had pedicellariae. This star grows up to 60 centimeters and has pink coloration. *P. ochraceus* rarely grows larger than 25 centimeters and *E. troschelii* is unlikely to be pink.

**Natural History Information:**

- This sea star can evert its stomach up to 8 centimeters to engulf food and can be found fighting over prey with *Pycnopodia helianthoides*. *P. brevispinus* spawns in Washington state waters in Spring and Summer.

### Scientific Name: Solaster stimpsoni

**Synonyms:** None

**Taxonomy (Phylum, Class, Order, Family):**

- Echinodermata, Asteroidea, Spinulosida, Solasteridae

**Similar species:**

- *Solaster dawsoni*

**Distinguishing Characters:**

- This sea star has 9-12 (usually 10) rays and no pedicellariae. The aboral surface is usually red, pink, or orange with a gray or blue streak down the center of each ray from a patch from the central disk. It can be up to 50 cm diameter.

**Natural History Information:**

- This species has extruded papulae giving them a fuzzy appearance underwater. The star feeds on small sea cucumbers, and may also eat tunicates, brachiopods, and sea pens.
### Solaster dawsoni
- **Scientific Name**: *Solaster dawsoni*
- **Common Name(s)**: Morning sun star
- **Habitats**: Intertidal to 414 meters
- **Distribution**: Alaska to Monterey Bay, California
- **Abundance in Puget Sound**: Not common (large distribution)

### Evasterias troschelii
- **Scientific Name**: *Evasterias troschelii*
- **Common Name(s)**: Mottled star, False ochre star
- **Habitats**: Low intertidal/Subtidal to 70 meters
- **Distribution**: Alaska to Monterey Bay, California
- **Abundance in Puget Sound**: Common

### Asterina miniata
- **Scientific Name**: *Asterina miniata*
- **Common Name(s)**: Bat star, Webbed star, Sea bat
- **Habitats**: Low intertidal to 290 meters
- **Distribution**: Sitka, AK to Baja California Mexico
- **Abundance in Puget Sound**: Uncommon
**Field Guide for the Salish Sea**

**Intertidal Sea Stars**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solaster dawsoni</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

**Taxonomy (Phylum, Class, Order, Family)**

Echinodermata, Asteroidea, Spinulosida, Solasteridae

**Similar species**

*Pycnopodia helianthoides, Solaster stimpsoni*

**Distinguishing Characters**

8-16 rays and no pedicellariae, whereas *P. helianthoides* have 20 or more rays and do have pedicellariae. Coloration is brown or gray, and can be orange or mottled, while *S. stimpsoni* has a orange or pink aboral surface with a gray streak radiating from central disk to the tips of each arm.

**Natural History Information**

This species is a predator on many other species of sea stars which quickly move away from its touch and is also seen consuming sea cucumbers on occasion.

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Evasterias troschelii</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

**Taxonomy (Phylum, Class, Order, Family)**

Echinodermata, Asteroidea, Forcipulatida, Asteriidae

**Similar species**

*Pisaster brevispinus, Pisaster ochraceous*

**Distinguishing Characters**

Rays narrow before meeting with the central disk and has proportionately longer rays than *P. ochraceous* in relation to the central disk while *P. brevispinus* has longer rays overall. Color is variable of gray, blue-gray, greenish, brown, orange reddish (more commonly in Oregon and California) and pale purple.

**Natural History Information**

This species can evert its stomach to a distance of up to half the length of a single ray. Also, in Alaskan waters, the young of Alaskan King Crabs can be found nestled between the rays of this sea star.

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<tbody>
<tr>
<td><strong>Asterina miniata</strong></td>
<td>Patiria miniata</td>
</tr>
</tbody>
</table>

**Taxonomy (Phylum, Class, Order, Suborder, Family)**

Echinodermata, Asteroidea, Valvatida, Granulosina, Asterinidae

**Similar species**

*Mediaster aequalis, Pteraster tesselatus, Dermasterias imbricata*

**Distinguishing Characters**

5 short, webbed rays that are shorter than the central disc is wide. Color is variable ranging from orange, red, purple, brown, dark gray, yellow and green. As well it has no pedicellariae. The aboral surface has a rough texture in comparison to the smooth surface of *D. imbricata*. *M. aequalis* has large marginal plates and *P. tesselatus* secretes an abundance of slime.

**Natural History Information**

This species is an omnivore and scavenger, and is commonly used in developmental studies.
### Scientific Name
**Orthasterias koehleri**

### Common Name(s)
Rainbow Star, Long-rayed Star, Long-armed sea star

### Habitats
Very low intertidal zone to 250 meters

### Distribution
Aleutian Islands to central California

### Abundance in Puget Sound
Common

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### Scientific Name
**Henricia leviuscula**

### Common Name(s)
Pacific blood star, Red sea star

### Habitats
Lower intertidal zone to 400 meters

### Distribution
Aleutian Islands, AK to Baja California

### Abundance in Puget Sound
Common

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### Scientific Name
**Luidia foliolata**

### Common Name(s)
Leafy flat star, Sand star, Spiny mudstar

### Habitats
Intertidal zone to 600 meters

### Distribution
Southeast Alaska to San Diego, CA

### Abundance in Puget Sound
Common in subtidal
## Intertidal Sea Stars

### Orthasterias koehleri

**Scientific Name:** Orthasterias koehleri  
**Synonym:** None  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Asteroidea, Forcipulatida, Asteriidae  
**Similar species:** None  
**Distinguishing Characters:** Grow to approximately 50 cm, arms radius to 21 cm; five slender arms extending from a small central disk.  
**Natural History Information:** They can dig clams out of cobbled bottoms, and use their tube feet to spread apart the outer layer of a clam shell until a small opening is made between the valves. The seas star's stomach is inserted through the opening and the clam digested.

### Henricia leviuscula

**Scientific Name:** Henricia leviuscula  
**Synonym:** Linckia leviuscula  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Stelleroidea, Spinulosida, Echinasteriade  
**Similar species:** Henricia sanguinolenta (Blood star)  
**Distinguishing Characters:** Henricia leviuscula has prominent marginal plates, whereas Henricia sanguinolenta no prominent marginal plates and the rays are thickened at the base, forming creases between them.  
**Natural History Information:** Feeds mainly on sponges or particulates, which stick to mucus on the surface of the body and passed to the mouth. Often has a symbiotic commensal scale worm, Arctonoe vittata. Have ocelli (simple eye capable of sensing light) at the tips of the rays.

### Luidia foliolata

**Scientific Name:** Luidia foliolata  
**Synonym:** Petalaster foliolata  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Asteroidea, Paxillosida, Curculionoidea  
**Similar species:** Mediaster aequalis (Red sea star, Vermilion star)  
**Distinguishing Characters:** Luidia foliolata has conspicuous marginal plates with several spines which are not visible from the aboral (away from mouth) side and pointed tube feet without suckers. While Mediaster aequalis has no spines on its marginal plates and has suckers on its tube feet.  
**Natural History Information:** Luidia foliolata eats the sea cucumber Cucumaria miniata. Is very fragile and many individuals are in fragments.
Field Guide for the Salish Sea
Intertidal Sea Stars

Scientific Name
Mediaster aequalis

Common Name(s)
Red sea star, Vermilion star

Habitats
Low intertidal to 500m

Distribution
Chignik Bay, AK to Baja, Mexico

Abundance in Puget Sound
Common subtidal

Scientific Name
Crossaster papposus

Common Name(s)
Rose star, Snow-flake star

Habitats
Low intertidal to 1200m

Distribution
Alaska to Washington

Abundance in Puget Sound
Common

Scientific Name
Dermasterius imbricata

Common Name(s)
Leather star, Garlic star

Habitats
Intertidal to 91m

Distribution
Sitka, AK to Baja, Mexico

Abundance in Puget Sound
Common (mostly rocky regions)
## Intertidal Sea stars

### Mediaster aequalis

**Scientific Name:** Mediaster aequalis  
**Synonyms:** None  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Asteroidea, Valvatida, Goniasteridae  
**Similar species:** *Pteraster tesselatus, Dermasterias imbricata, and Asterina miniata*  
**Distinguishing Characters:** This 5-rayed sea star has large marginal plates. Aboral surface is covered with circular to oval or hexagonal, flat-topped plates. Can be up to 20cm in diameter.  
**Natural History Information:** Though it feeds upon bryozoans, sponges, and sea pens, this star will also consume detritus or fine matter derived from living organisms by lying on the substrate. This star can also move up to 40cm/min.

### Crossaster papposus

**Scientific Name:** Crossaster papposus  
**Synonyms:** Solaster papposus  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Asteroidea, Spinulosida, Solasteridae  
**Similar species:** *Solaster stimpsoni, Solaster dawsoni, and Pycnopodia*  
**Distinguishing Characters:** This many-rayed sea star has a broad central disk, 8-16 rays, and has abundant scattered spines on the aboral surface but no pedicellariae. Color is rose-red with pink or sometimes yellow to orange and 30cm in diameter.  
**Natural History Information:** This star spawns March to April. Juveniles often cluster subtidally in masses of a tubedwelling polychaete. They grow slowly and reach their maximum size after about ten years.

### Dermasterius imbricata

**Scientific Name:** Dermasterius imbricata  
**Synonyms:** None  
**Taxonomy (Phylum, Class, Order, Family):** Echinodermata, Asteroidea, Valvatida, Asteropseidae  
**Similar species:** *Pteraster tesselatus, Asterina miniata, and Mediaster aequalis*  
**Distinguishing Characters:** This 5-rayed sea star has a smooth reddish brown aboral surface with blue-gray patches or reticulations without spines. It is smooth to the touch because it exudes mucus, and can have a garlic odor.  
**Natural History Information:** The sea star usually swallows its prey whole and digests them internally. Anemones are said to be one of its major prey items, and often causes *Stomphia* (anemone) to swim away when it is threatened by *Dermasterius imbricata.*
Scientific Name
Pycnopodia helianthoides

Common Name(s)
Sunflower star, Twenty-arm star

Habitats
Low intertidal to 435 meters.

Distribution
Alaska to Baja, Mexico

Abundance in Puget Sound
Common
### Intertidal Sea Star

**Scientific Name**  
*Pycnopodia helianthoides*

**Synonyms**  
None

**Taxonomy (Phylum, Class, Order, Family)**  
- **Phylum**: Echinodermata  
- **Class**: Asteroidea  
- **Order**: Forcipulatida  
- **Family**: Asteriidae

**Similar species**  
- *Solaster dawsoni* (Dawson's sun star, Morning sun star)  
- *Crossaster papposus* (Spiny sun star, Common sun star)

**Distinguishing Characters**  
*P. helianthoides* has 15-24 soft, flexible arms; lots of pedecellariae, and many spines projecting from its limp, flaccid tissue; longer spines along ray margins.  
*S. dawsoni* and *C. papposus*, have 16 or less rays, no pedicellariae, and are not as limp as *P. helianthoides*.

**Natural History Information**  
It is the fastest sea star, able to move underwater at the rate of 360 feet per hour. If a predator attacks, it can drop off its arm and send a chemical that causes an alarm response to other sunflower stars in the area.