







# California Inverts & Algae, Part 3

Fishinar 9/14/2015, Jonathan Lavan – Instructor

Questions? Feel free to contact me at [jonathan@REEF.org](mailto:jonathan@REEF.org)

## Arthropods & Echinoderms

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|---|---|
| <p><b>REEF</b> <b>1. Brown Rock Crab</b><br/>Up to 6 in. (carapace)</p>  <p>Chad King</p>            | <p><b>Robust, Brown with dark spots on undersides of legs.</b></p>  |
| <p><b>REEF</b> <b>2. Coonstripe Shrimp</b><br/>To 5.5 in.</p>  <p>Chris Grossman</p>               | <p><b>Large, translucent brown to green body with dark brown, reddish or black markings. Sometimes has blue stripes and white spots. The legs and antennae are strongly banded.</b></p>   |
| <p><b>REEF</b> <b>3. Masking/ Sheep Crab</b></p>  <p>U. Goretz 12</p>                              | <p><b>Large, robust spider crabs with shells covered in spines and tubercules.</b></p> <p><b>Masking-</b> Often covered with other invertebrates and algae which it affixes to its carapace for camouflage.</p> <p><b>Sheep-</b> Can be twice as large as Masking</p> |
| <p><b>REEF</b> <b>4. Northern Kelp Crab</b><br/>Up to 3.5 in. (carapace)</p>  <p>Janna Nichols</p> | <p><b>Smooth brown to reddish, shield-shaped carapace, long thin pincers and walking legs ending in sharp points.</b></p>   |

**5. Red Rock Shrimp**

Up to 2.75 in.



Kevin Lee

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Small, bright red body with dark and light bands. They are cleaners of other animals.

**6. Spiny Lobster**

Up to 24 in.



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Covered in spines with long whip-like antennae. No claws.

**7. & 8. California and Warty Sea Cucumbers**

Up to 20 in./10 in.



Steve Lonhart



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**California-** Large, brown, red or yellow, and often mottled in color. Long body with many rows of tube feet along entire length of bottom side. Have what appear to be spikes over much of body but are soft to the touch.  
**Warty-** Covered with small black-tipped papillae (raised bumps) otherwise looks very similar to California.

**9. & 10. Bat Star and Leather Star**

Up to 8 in./12 in. (diameter)



Janna Nichols



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**Bat-** Very common in California, comes in a variety of colors. Lack spines so they appear very smooth. Has “bat-like” webbing between arms.

**Leather-** Smooth with leathery skin. The background is blue-gray with red or orange markings.

**11. & 12. Giant Spined Star and Sunflower Star**

Up to 22 in./36 in. (diameter)



Deb Karimoto



Steve Lonhart

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**Giant Spined-** Classic looking Sea Star. Blue circles surround each spine.

**Sunflower-** One of the largest sea stars. Up to 3 feet in diameter with 20-24 arms.

**13. Spiny Brittle Star**

Long erect spines along each arm and on the center. They come in a variety of colors from tan to yellow.

**14-17. Sea Urchins: Crowned, Purple, Red & White**

Up to 7in./3.5 in/9 in./3 in. (diameter with spines)



Chris Grossman

Mike Brennan

Carl Gwinn

Carl Gwinn

**Crowned**- Large with Long Black Spines.

**Purple**- Average with short purple to lavender spines.

**Red**- Large with longish red to purple spines.

**White**- Small with short white to greenish spines

**18. Eccentric Sand Dollar**

Up to 4 in. (wide)



A flattened Sea Urchin covered in tiny spines. Lavender-gray to red-brown to purple.