

# WANTED ALIVE! WHITE ABALONE

**Name:** White Abalone  
(*Haliotis sorenseni*)

**Status:** Critically Endangered



White abalone can be found in coastal waters of Southern California to Baja, Mexico.

They are important kelp forest architects that help to maintain healthy understory communities by eating algae.

You can help by reporting your sightings to

[www.FindingHal.org](http://www.FindingHal.org)



@Orlando\_Panicker



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# Calling All Divers!

Help us find white abalone on your next dive!  
Your observation could contribute to the conservation of this endangered species in the Southern California Bight.



**Identify and Photograph the White Abalone**  
Look for beige tentacles and tissues, and 3 - 5 open pores. Take a photo! Include a scale bar if possible.

**Please, Don't Touch!**

Touching the abalone can cause serious injury to the animal... and they're critically endangered.



**Location, Location, Location!**

Record the coordinates of the abalone's location (latitude, longitude). Take note of its location on the rocky reef.



**Record Your Depth and Habitat Features**

They typically occur between 30-60 feet, but can be shallower or deeper. Record if the abalone was in a rocky area, a crevice, and/or with algae.



**Post Your Sighting, and Get Rad Swag!**

Upload your observations on our website & receive a prize! For more information and tips for identifying abalone, visit our website or scan the QR code to the right.

<https://findinghal.org>



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# Identification Guide



Abalone species	Average Depth (ft)	Tentacle color	Epipodium		# Open Pores
<b>GREEN</b>	0 - 30	green	green-brown	lacy	5 - 7
<b>RED</b>	20 - 100	black	black	lobed	3 - 4
<b>PINK</b>	20 - 120	black	mottled black & white	lacy	2 - 4
<b>PINTO</b>	0 - 130	green-brown	mottled green-brown	lacy	3 - 6
<b>WHITE</b>	15 - 200	beige-yellow	beige-yellow	lacy	3 - 5

Find an abalone? Photograph it  
with this scale bar!

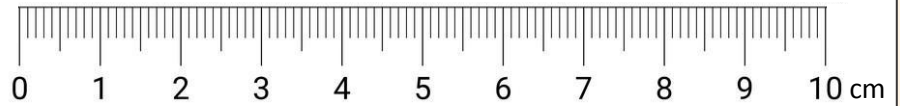


Photo Credits: White abalone by NOAA SWFSC / Green, Red, and Pink abalone by Oriana Poindexter / Pinto abalone by Swalker\_ADFW

Card created in cooperation with the National Marine Sanctuary Foundation under federal award NA18NMF4540003 to support White Abalone Citizen Science Monitoring

# Black Abalone

*Haliotis cracherodii*

Black abalone are identified by their blackish-blue shell and jet-black epipodium and tentacles. The shells are smooth with a pearly white interior, little to no muscle scar, and sparse algal growth.

There are five to nine open respiratory pores, flush with the shell surface. Black abalone live from the intertidal zone to 20 ft deep, where they shelter in crevices between boulders.

## POPULATION STATUS

Endangered <sup>1</sup>

## MAXIMUM SIZE

Up to 8 inches <sup>3</sup>

## LIFESPAN

Up to 30 years <sup>1</sup>

## DEPTH RANGE

Intertidal to 20 feet <sup>4</sup>

## GEOGRAPHIC RANGE

Point Arena, CA to  
Bahia Tortugas, MX. <sup>4</sup>

## SHELL COLORS

Blackish-blue, sometimes  
faded. Smooth texture. <sup>3</sup>



## BODY COLORS

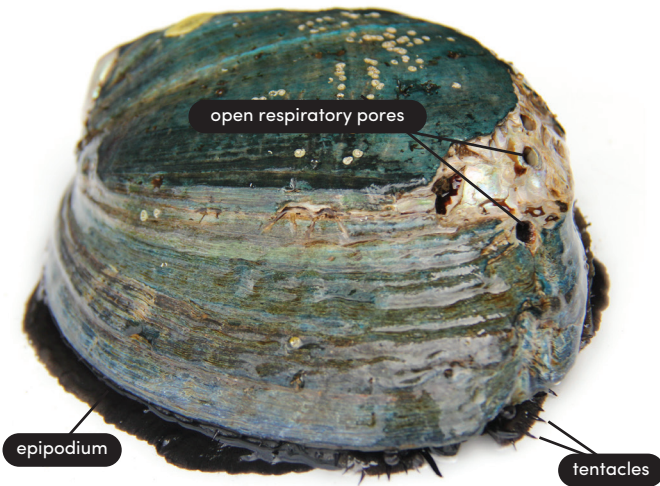
Body, epipodium and tentacles jet black. <sup>3</sup>

## PREFERRED HABITAT

Coastal and offshore island intertidal areas, found on exposed rocky shores with deep crevices. <sup>2</sup>

## HARVEST INFORMATION

Recreational & commercial wild harvest is prohibited. <sup>1</sup>

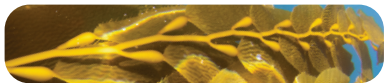


Adult black abalone at the NOAA Southwest Fisheries Science Center.



Black abalone sheltering in a crevice at low tide in Central California.  
Images: Oriana Poindexter, unless noted otherwise.

### ASSOCIATED ALGAL SPECIES <sup>2</sup>



**GIANT KELP**  
*Macrocystis pyrifera*



**FEATHER BOA KELP**  
*Egregia menziesii*



**BULL KELP**  
*Nereocystis leutkeana*  
Image: [Sophia McCoy, Florida State Univ.](#)

### REFERENCES

- 1 74 FR 1937.
- 2 76 FR 66806.
- 3 Cox, 1962.
- 4 Neuman et al., 2010.



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# Flat Abalone

*Haliotis walallensis*

The flat abalone is one of the least-seen abalone on the Pacific West Coast. Aptly named, this species uses its uniquely flattened profile to hide deep in crevices or underneath boulders.

The shell exterior is variable, red with patterning in blue, green and white. The interior has light pink iridescence and lacks a muscle scar. The four to eight open respiratory pores are oval and slightly raised above the shell surface. Their epipodium has distinctly raised papillae, which are bumpy to the touch.

## POPULATION STATUS

Declined <sup>1,4</sup>

## MAXIMUM SIZE

Up to 7 inches <sup>2,3</sup>

## LIFESPAN

Unknown

## DEPTH RANGE

Subtidal to 70 feet <sup>2</sup>

## GEOGRAPHIC RANGE

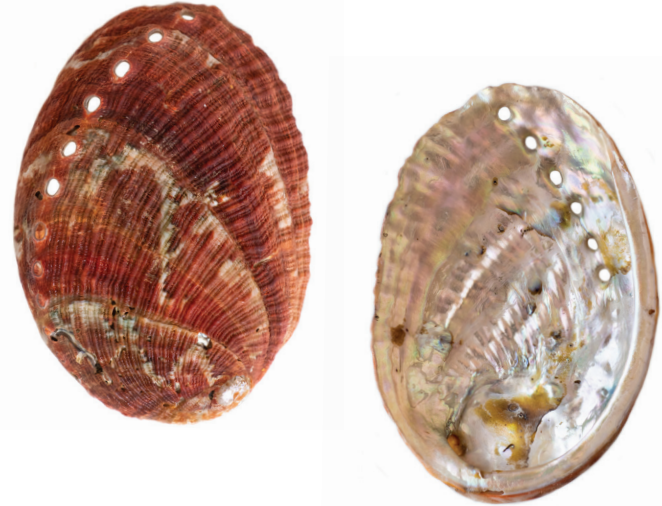
Newport, OR to San Benito Island, Baja California, MX. <sup>3</sup>

## SHELL DESCRIPTION

Brick red, with blue-green and white mottling or spiral streaks. <sup>3</sup>

## PREFERRED HABITAT

Subtidal in northern part of range, to 70 feet in southern portion. Found deep in crevices, below boulders. <sup>2</sup>



## BODY DESCRIPTION

Body mottled yellow & brown. Epipodium alternating yellow & brown, lacelike. Tentacles dark green. To the touch, epipodium is bumpy, covered in raised papillae. <sup>2,5</sup>

## HARVEST INFORMATION

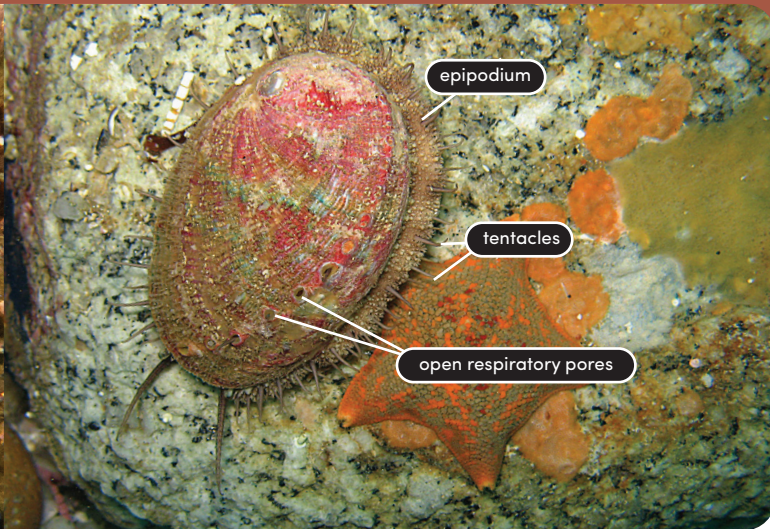
Recreational & commercial wild harvest is prohibited. <sup>1</sup>



A flat abalone on a boulder with crustose coralline algae in Northern CA.

Image: Kevin Joe.

Other Images: Oriana Poindexter, unless noted otherwise.

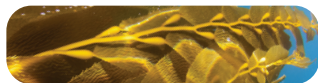


A flat abalone clings to the underside of a boulder in 40 ft of water. Central California.

Image: Dwayne Dinucci. Originally published in

Abalone: Worldwide Haliotidae (Geiger & Owen, 2012).

### ASSOCIATED ALGAL SPECIES



#### **GIANT KELP**

*Macrocystis pyrifera*



#### **BULL KELP**

*Nereocystis leutkeana*



#### **SEA PALM**

*Postelsia palmaeformis*

#### **REFERENCES**

- 1 CA Dept of Fish & Game, Abalone Recovery & Mgmt Plan, 2005.
- 2 Cox, 1962. 3 Geiger & Owen, 2012. 4 Rogers-Bennett, 2007.
- 5 Owen et al., 1971.



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# Green Abalone

*Haliotis fulgens*

Green abalone are the species most commonly encountered in Southern CA. They are most often found from the low intertidal to 30 ft deep, in or near rocky crevices.

They can be identified by their green tentacles and mottled cream and brown epipodial fringes. The shell exterior has spiral ribbing but is often encrusted, with bright blue-green iridescence inside. The 5 to 7 open respiratory pores are round and slightly raised.

## POPULATION STATUS

Declined

## MAXIMUM SIZE

Up to 10 inches<sup>3</sup>

## LIFESPAN

30 years or more<sup>4</sup>

## DEPTH RANGE

0 to 60 feet<sup>3</sup>

## GEOGRAPHIC RANGE

Point Conception, CA to  
Bahia de Magdalena, MX<sup>4</sup>

## SHELL DESCRIPTION

Olive green to reddish-  
brown. Low spiral ribbing.<sup>2</sup>

## PREFERRED HABITAT

Rock crevices, under rocks, other cryptic spaces<sup>4</sup>

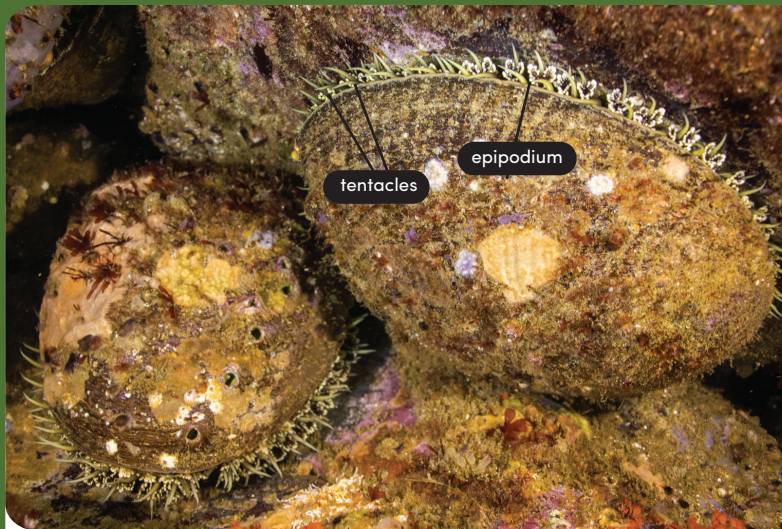


## BODY DESCRIPTION

Body, tentacles green. Epipodium mottled cream & brown.<sup>3</sup>

## HARVEST INFORMATION

Recreational & commercial wild harvest is prohibited.



Two adult green abalone shelter in a crevice in 15 feet of water.



A green abalone in the intertidal zone, exposed to air at low tide.  
Images: Oriana Poindexter, unless noted otherwise.

### ASSOCIATED ALGAL SPECIES <sup>2</sup>



**GIANT KELP**  
*Macrocystis pyrifera*



**FEATHER BOA KELP**  
*Egregia menziesii*



**SURF GRASS\***  
*Phyllospadix* spp.  
\*not an alga

#### REFERENCES

- 1 CA Dept of Fish & Game, Abalone Recovery & Mgmt Plan, 2005.  
2 Cox, 1962. 3 Geiger & Owen, 2012. 4 NOAA Fisheries Species Profile.



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# Pink Abalone

*Haliotis corrugata*

Pink abalone are identified by their highly corrugated shell surface and sharply scalloped edge. Their bodies are black with an intricately mottled, lace-like black and white epipodium.

They sport 2 to 4 highly elevated open respiratory pores. Pink abalone are most common from about 20 to 70 feet deep, on rocky reefs in areas with giant kelp beds.

## POPULATION STATUS

Declined

## MAXIMUM SIZE

Up to 9.5 inches<sup>3</sup>

## LIFESPAN

Up to 30 years<sup>1</sup>

## DEPTH RANGE

20 – 180 feet<sup>3</sup>

## GEOGRAPHIC RANGE

Point Conception, CA to  
Bahia Tortuga, MX<sup>2</sup>

## SHELL DESCRIPTION

Green to reddish brown.  
Highly corrugated texture.<sup>2</sup>



## BODY DESCRIPTION

Body & tentacles black, epipodium black and white, mottled and lace-like.<sup>2</sup>

## PREFERRED HABITAT

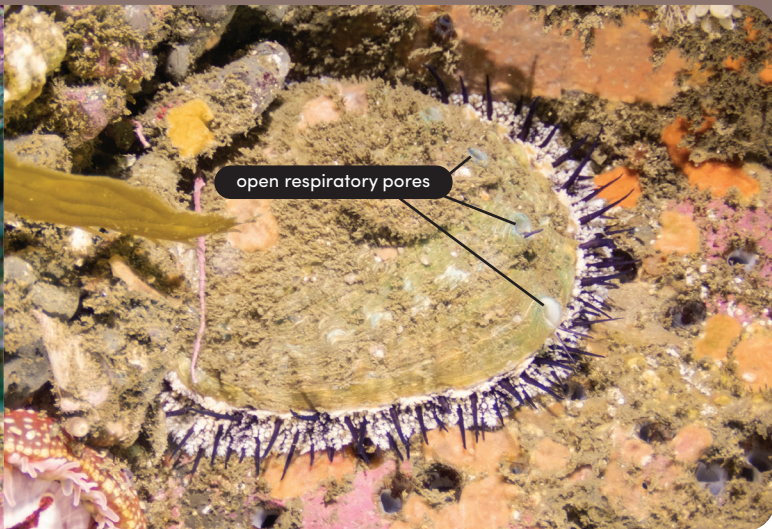
Rocky reefs in areas with giant kelp beds.<sup>3</sup>

## HARVEST INFORMATION

Recreational & commercial wild harvest is prohibited.



An adult pink abalone in a boulder crevice.

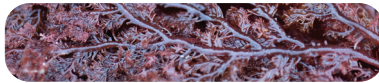


A pink abalone seen from above in 45 feet of water off San Diego, CA.  
All Images: Oriana Poindexter

### **ASSOCIATED ALGAL SPECIES**<sup>1</sup>



**GIANT KELP**  
*Macrocystis pyrifera*



**SEA COMB**  
*Plocamium pacificum*



**SOUTHERN SEA PALM**  
*Eisenia arborea*

### **REFERENCES**

- 1** CA Dept of Fish & Game, Abalone Recovery & Mgmt Plan, 2005.  
**2** Cox, 1962. **3** Geiger & Owen, 2012.



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# Pinto Abalone

*Haliotis kamtschatkana*

Formerly considered two separate species, the pinto abalone is now accepted as one species with two visually distinctive morphological types.<sup>1</sup>

Northern type has a lumpy shell surface, with colors including red, green, orange, white. Apex is elevated and shell is elongated in shape, with three to six open respiratory pores.

Southern type has spiral ribbing on the shell and is more spherical in shape, with colors including brown, pink and blue and four to seven open respiratory pores.

## POPULATION STATUS

Declined<sup>4</sup>

## MAXIMUM SIZE

Up to 7 inches<sup>3</sup>

## LIFESPAN

15 to 20 years<sup>5</sup>

## DEPTH RANGE

Intertidal to 120 feet<sup>5</sup>

## GEOGRAPHIC RANGE

Salisbury Sound, Alaska to Bahia Tortugas, Baja CA, MX. Types mix in Central CA.<sup>5</sup>

## SHELL DESCRIPTION

Highly variable in color, texture. Red, orange, green, pink, blue, white. No scar.<sup>3</sup>

## PREFERRED HABITAT

Intertidal and cryptic in the northern part of their range. More exposed and to depths of 100 feet in southerly areas.<sup>6</sup>

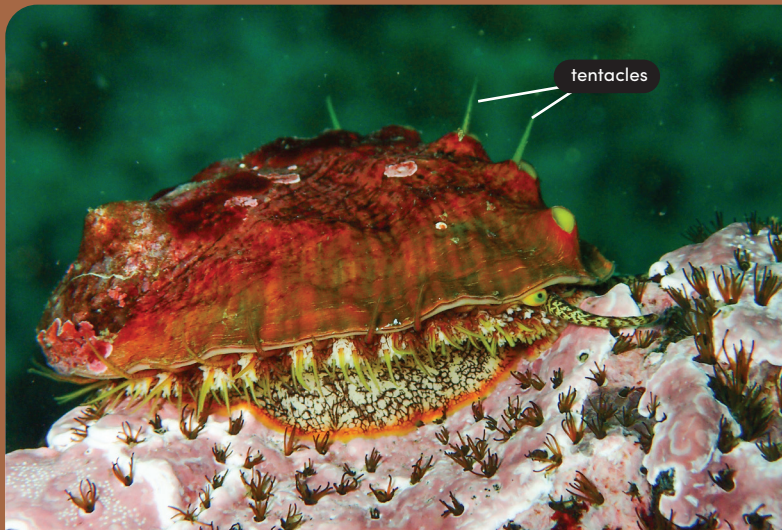


## BODY DESCRIPTION

Southern type mottled beige-brown body, yellowish tentacles. Northern type mottled greenish-brown body and tentacles. Bright yellow visible through respiratory pores.<sup>3</sup>

## HARVEST INFORMATION

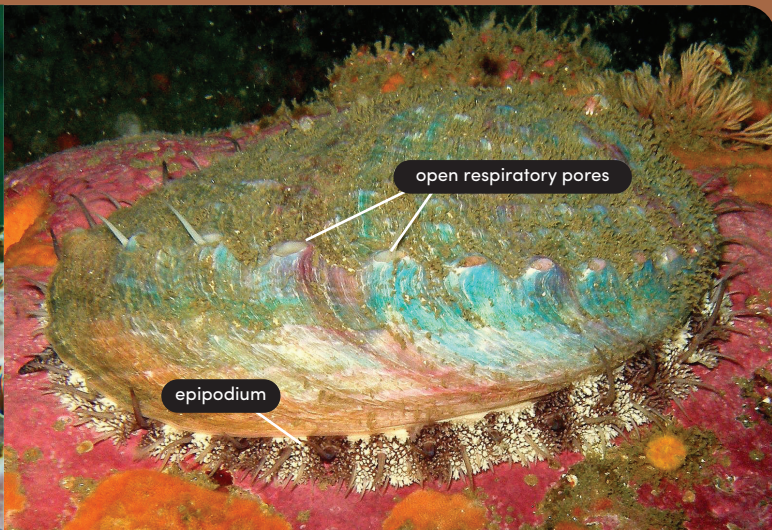
Recreational & commercial wild harvest is prohibited.<sup>6</sup>



Northern type in 35–40 feet of water off of Northern California.

Image: Jonathon Centoni.

Other Images: Oriana Poindexter.



Southern type in approximately 60 feet of water off of San Diego, CA.

Image: Dave Rudie

### ASSOCIATED ALGAL SPECIES



**OAR WEED**

*Laminaria* spp.

Image: UC Berkeley Herbarium



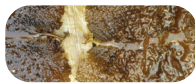
**GIANT KELP**

*Macrocystis pyrifera*



**BULL KELP**<sup>3</sup>

*Nereocystis leutkeana*



**FRINGED SIEVE**

*Agarum* spp.

Image: centralcoastbiodiversity.org



**'CCA'**

*Corallina* spp.



*Lithothamnion* spp.

Image: NOAA/SWFSC

### REFERENCES

- 1 Owen & Rafferty, 2017.
- 2 Cox, 1962.
- 3 Geiger & Owen, 2012.
- 4 Rogers-Bennett, 2007.
- 5 NOAA Species Directory: Pinto Abalone.
- 6 CA Dept of Fish & Game, Abalone Recovery & Mgmt Plan, 2005.



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# Red Abalone

*Haliotis rufescens*

This is the world's largest abalone species. Red abalone are identified by their red-rimmed shells and black bodies. The shell surface is lumpy and generally encrusted, while the interior has colorful iridescence and a prominent muscle scar.

The three to five open respiratory pores are oval and slightly raised above the shell surface. They can be found from the intertidal zone down to rocky reefs 100 feet deep.

## POPULATION STATUS

Declined<sup>1</sup>

## MAXIMUM SIZE

Up to 12 inches<sup>3</sup>

## LIFESPAN

Up to 30 years<sup>1</sup>

## DEPTH RANGE

Intertidal to 100 feet<sup>1</sup>

## GEOGRAPHIC RANGE

Sunset Bay, OR to Bahia Tortugas, MX including offshore islands.<sup>3</sup>

## SHELL COLORS

Brick red, sometimes banded green or pink. Lumpy texture.<sup>2</sup>

## PREFERRED HABITAT

Intertidal in the northern part of their range, or rocky reefs, boulders, and kelp beds in southerly areas.<sup>1</sup>



## BODY COLORS

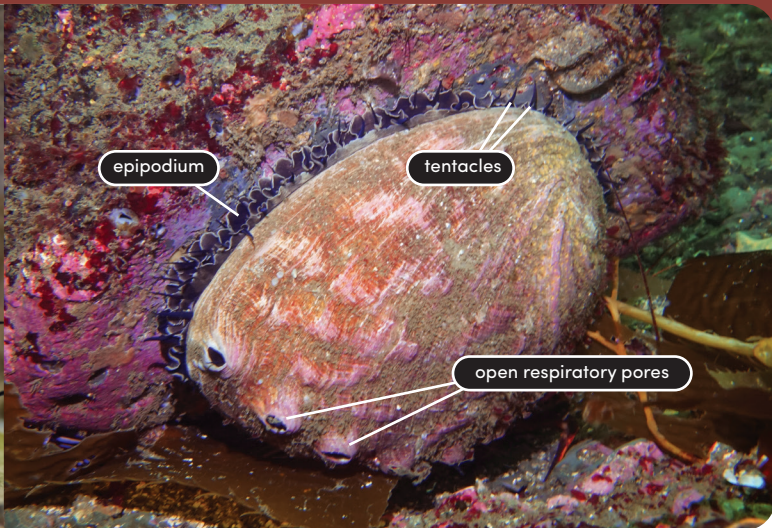
Body, epipodium and tentacles are black, occasionally with white marble-like streaks.<sup>3</sup>

## HARVEST INFORMATION

Wild harvest is prohibited. Recreational fishing is closed through April 2026. Commercial fishing was closed in 1997.<sup>4</sup> Red abalone are sustainably farmed in California.



An adult red abalone at The Cultured Abalone Farm in Goleta, CA.



An adult red abalone clings to a boulder in 60 ft of water off San Diego, CA.  
 Images: Oriana Poindexter, unless noted otherwise.

### ASSOCIATED ALGAL SPECIES <sup>1</sup>



**GIANT KELP**  
*Macrocystis pyrifera*



**FEATHER BOA KELP**  
*Egregia menziesii*



**BULL KELP**  
*Nereocystis leutkeana*  
 Image: Dwayne Meadows, NOAA/NMFS/OPR



**ELK KELP**  
*Pelagophycus porra*  
 Image: U.S. National Park Service.



**SEA LETTUCE**  
*Ulva* spp.  
 Image: NOAA Tech Memo NMFS-AFSC-389

### REFERENCES

- 1 CA Dept of Fish & Game, Abalone Recovery & Mgmt Plan, 2005.  
 2 Cox, 1962. 3 Geiger & Owen, 2012. 4 CDFW, Red Abalone Draft FMP.



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# White Abalone

## *Haliotis sorenseni*

White abalone can be identified by their beige, lace-like tentacles and epipodium, and 3 to 5 open respiratory pores. The shells are reddish, lightweight with pearly interiors and no muscle scar.

In the wild, white abalone are very well camouflaged by encrusting organisms and algae, making their tentacles, epipodium, and open pores the most reliable characteristics for identification.

### **POPULATION STATUS**

Endangered <sup>5</sup>

### **MAXIMUM SIZE**

Up to 9 inches <sup>7</sup>

### **LIFESPAN**

30 to 40 years <sup>1,10</sup>

### **DEPTH RANGE**

15 to 200 feet <sup>9</sup>

### **GEOGRAPHIC RANGE**

Point Conception, CA  
to Punta Abreojos,  
Baja California, MX. <sup>6</sup>

### **SHELL COLORS**

Variable when encrusted.  
Reddish brown with spiral  
ribbing if cleaned. <sup>4</sup>

### **PREFERRED HABITAT**

Require rocky substrate. Live on rocky reefs, solitary outcrops in kelp forests, near sand-rock interface where drift algae accumulates. <sup>3,8</sup>

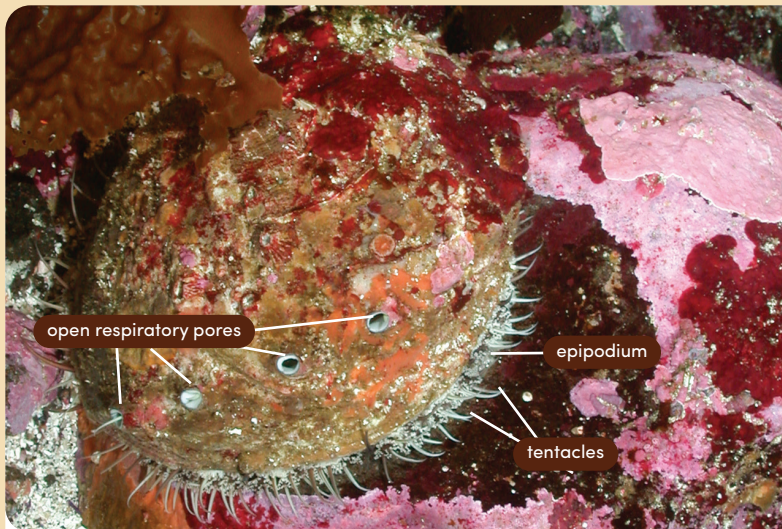


### **BODY COLORS**

Body yellow, orange traces.  
Tentacles & epipodium beige, lace-like. <sup>4</sup>

### **HARVEST INFORMATION**

Recreational & commercial wild harvest is prohibited. <sup>5</sup>



Adult white abalone in the wild. Image: NOAA/SWFSC.



Adult white abalone in 60 feet of water off San Diego, CA. Images: Oriana Poindexter, unless noted otherwise.

### ASSOCIATED ALGAL SPECIES <sup>2, 3</sup>



**GIANT KELP**  
*Macrocystis pyrifera*



**OAR WEED**  
*Laminaria farlowii*  
Image: UC Berkeley Herbarium



**FRINGED SIEVE**  
*Agarum fimbriatum*  
Image: centralcoastbiodiversity.org



**DULSE**  
*Palmaria spp.*



*Rhodymenia spp.*



**'CCA'**  
*Corallina spp.*



*Lithothamnion spp.*  
Image: NOAA/SWFSC

### REFERENCES

- 1 Andrews et al., 2013.
- 2 Burton et al., 2008.
- 3 Butler et al., 2006.
- 4 Cox, 1962.
- 5 66 FR 29046.
- 6 Hobday & Tegner, 2001.
- 7 Howarth, 1987.
- 8 Lafferty et al., 2004.
- 9 Stierhoff et al., 2012.
- 10 Tutschulte, 1976.



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