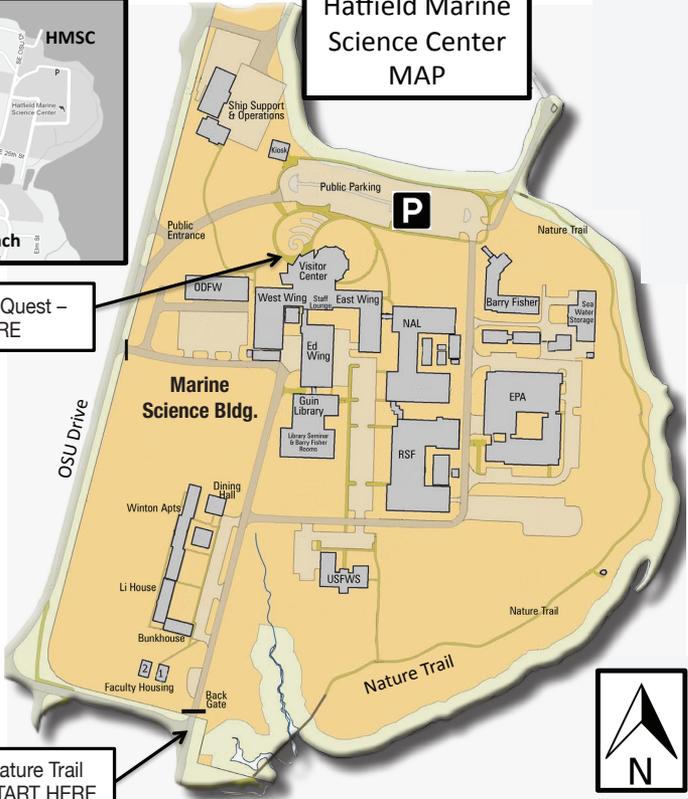


Hatfield Marine Science Center
Nature Trail Quest



Hatfield Marine Science Center MAP



HMSC Tsunami Quest - START HERE



HMSC Nature Trail Quest - START HERE



Quest Partners




Oregon State University



HMSC Nature Trail Quest

Established: July 2012 by Oregon Coast Quests

Box Monitor: HMSC Visitor Center

This Quest covers about 1/2 mile on a paved pathway, and takes approximately 45 minutes to complete. Dogs are not permitted on the estuary nature trail. Bring binoculars for birdwatching, and boots if you want to explore the mud flats. The trailhead for the HMSC Estuary Nature Trail is located between the Oregon Coast Aquarium and the Hatfield Marine Science Center complex. To get there from Newport, drive south on Hwy 101, cross the Yaquina Bay Bridge, get off at the first exit after the bridge, and follow signs to the Oregon Coast Aquarium. Park in the Oregon Coast Aquarium's SEA LION LOT, located at the northernmost end of the facility. Walk away from the aquarium entrance and follow the NATURE TRAIL sign, which will take you east on a short, paved, access road. Begin your Quest at the HMSC back entrance gate.

Follow the directions and collect the clues to fill the numbered squares on page 125. At the end of your journey, the word will help you find the hidden Quest Box. When you find the box, please sign the log book and let us know what you thought of this Quest. Stamp your page as proof of your accomplishment, and then put the box back in its hiding place for the next person to find. Keep the location of the clues and box a secret so the activity can remain fun for all. Enjoy!

Let's begin...

In this place of constant change
between the river and the sea,
freshwater and saltwater meet
in the Yaquina ESTUARY.

To the west, in the distance,
the Yaquina Bridge shows
the location of the sea
from which saltwater flows.

From the east, past the marsh the Yaquina River runs, bringing freshwater runoff from inland mountains.

To begin, find the trail near a colorful sign (not white). At the bottom of the post, a clue hides out of sight.

Write the letter that you find in the square number 1. Now continue your Quest and let's have some fun!

Check out the small cove right next to the trailhead. Is it filled with water now? Or is it drained instead?

The **semidiurnal** tides of the mighty Pacific means water ebbs and flows on a schedule quite specific.

Did You Know?

The Oregon coast experiences semidiurnal tides, which means we have two high tides and two low tides each day. The sea level rises over several hours (flood tide) until it reaches high tide, and then falls over several hours (ebb tide) until it reaches the low tide.

Question for the Curious:

Is the tide coming in or going out right now? How can you tell?

Check your answer with the tide table in the Quest Box at the end of your journey.

Walk quietly down the path toward a pole as tall as a tree. Sometimes ospreys nest on top. What other birds do you see?

You may see great blue herons, great egrets, gulls, or ducks. Many species migrate, so their numbers are in flux.

On the wooden bridge, tree swallows may be peeking out from nest boxes. How many do you see?

Is there life down there in the muddy, narrow trench? What sounds can you hear when you stop near the bench?



Check under the bench
for your next hidden clue.
Write the letter you find
in square number 2.

This is the **salt marsh**.
Note the plants living below.
These are **halophytes**, which means
“salt-loving,” you know.

Jaumea, pickleweed,
saltgrass, owl’s clover . . .
these plants do just fine
when the tide washes over.

At the end of the bridge
stands an evergreen tree.
It’s a Sitka _____;
its first letter is clue 3.

This tree stands in the **upland**
so it skips a salty soak.
“Shake hands” to feel its needles.
But carefully—they poke!

Unlike the plants of the marsh,
the plants here in the upland
don’t need to be halophytic—
though they still must tolerate sand.

Ahead the trail divides,
but stay straight, careful readers.
Going left would lead to Hatfield’s
buildings and bird feeders.

But before proceeding on,
Check the two pine trees.
Clue 4 is hiding low
near the trunk of one of these.



Go forth, find a sign with terms
like “benthic” and “anadromous.”
Does the second letter on the sign
fit space 5? Yes, it does!

Some species spend just
part of their lives here.
But without this estuary
their future would be unclear.

Lots of food, shallow water,
plenty of hiding places . . .
estuaries serve as “nurseries”;
we must protect these spaces.

At the next sign,
you get a better view.
Eyes closed, take a breath.
What does the air smell like to you?

Check the sign. Clue six
of your mystery word
is the second letter in the name
of the crab-holding bird.

Are there birds outside today?
Are they flying? Are they still?
Do you see any birds
Holding food in their bill?

Check off all that you can see:

- Channel marker (red triangle)
- Liquid natural gas tank
- Sailboat
- Residential homes
- Power boat
- Oregon Coast Aquarium
- Weather instruments
- Someone fishing

Birdwatching, crabbing, fishing... this is a place for recreation. Many people live here; others come on vacation.

Who makes a living here in the bay? Try your hand at "I Spy." What can you find today?

After passing the brown wooden shelter, the paving may come to an end. Erosion reclaiming the path requires making amends.

A **dynamic revetment** has been placed along the shore in an attempt to stop the sea from taking any more.

Question for the Curious:

What is a dynamic revetment?

Check your answer with the tide table in the Quest Box at the end of your journey.

The smooth river rocks and snags chained in place were brought here on purpose to transform the space.

Turn around and go back to the shelter, where a sign waits for you. The seventh letter of its title is your 7th clue.

Though you now have all the letters, they look a little strange. To find out where to look next, they must be rearranged:
3 – 6 – 5 – 2 – 7 – 1 – 4

The resulting word tells you where the Quest Box hides! Search low under a circle near its outsides.

Explore the box's contents. Put it back when you're done. Then explore the marsh and mud and continue to have fun.



<input type="checkbox"/>						
1	2	3	4	5	6	7

Stamp page 245 of this book to record your find!

If you enjoyed this Quest, check out the Oregon Coast Quests Book, which contains maps and directions for 28 Quests in 7 counties. For more information, visit the website at seagrants.oregonstate.edu/quests