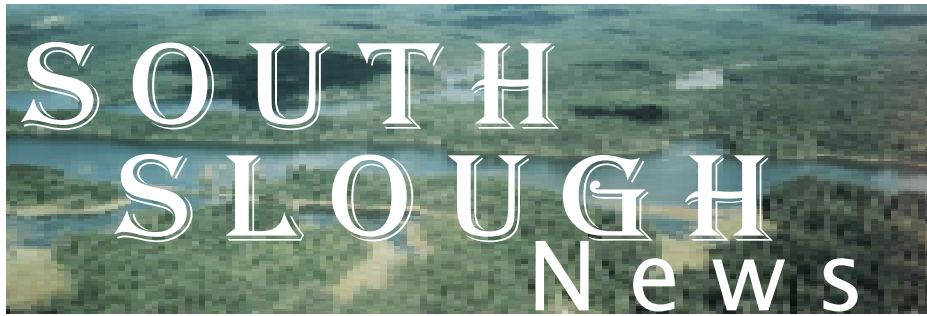


Summer
2011



The Newsletter of **South Slough
National Estuarine
Research Reserve**
and the
**Friends of
South Slough
Reserve, Inc.**
Charleston, Oregon



Paddlers Get the Feel of a Native Canoe

South Slough's new canoe, with a company of five paddlers and a skipper, slipped up on two tall sailing ships moored along the Coos Bay waterfront on a recent, crisp April morning.

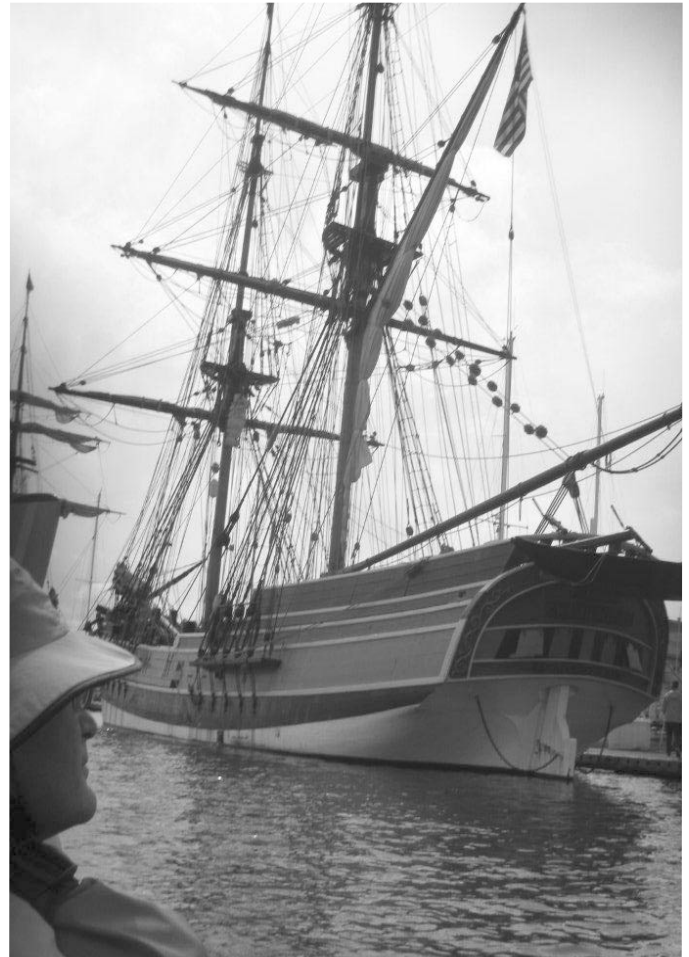
It was the first trip on the city-side of the bay for this canoe, although it has likely been seen travelling on the lower bay near Charleston, and in the mouth of the South Slough waterway.

Our craft was a replica of a traditional, native American dugout canoe, typical of those used by northwest native Americans to travel and hunt along the coast. The Friends of South Slough contributed to its purchase, and South



Paddlers practice their paddle strokes before making a trial run of the Coos Bay waterfront in South Slough's new, replica, native American canoe.

credit: Nina Gee



A paddler eyes tall sailing ships as South Slough's new native American-style canoe explores the Coos Bay waterfront.

credit: Nina Gee

Slough paddling guides have been getting familiar with its handling. Soon they'll begin using the canoe for tours of the South Slough inlet.

Our crew of volunteers was excited to be with education assistant Joy Tally, who would pilot us across the bay and near to the towering, twin-masted replicas of European sailing ships—the same sort of ship that would have been greeted by tribal canoes during early

Continued on Page 7

Waves From Tsunami Wash Charleston Boat Basin But Cause Little Harm

By John Bragg and Steve Rumrill

The March 10 earthquake that devastated the coast of Sendai, Japan triggered a catastrophic tsunami that produced a wave at least 24 feet high. Its progress across the ocean was documented by the National Oceanic and Atmospheric Administration (NOAA), which uses a network of ocean buoys positioned around the Pacific Ocean to track and analyze tsunamis.

The network provided real-time data depicting the tsunami as it traveled across toward the U.S. Within half an hour of the earthquake, the Pacific Tsunami Warning Center in Ewa Beach, Hawaii, predicted both the arrival of the tsunami in Charleston and its expected height, with stunning accuracy.

The center issued tsunami warnings for the entire West Coast. The tsunami struck Charleston the following morning at 7:14, nine and a half hours after the quake occurred, as the center had predicted.

Because of the warnings, coastal communities in Washington and Oregon were able to evacuate potentially vulnerable areas before the tsunami arrive, although Depoe Bay, Charleston and Brookings, and in Crescent City, California, reported damage to docks and boats. Residents took the threat seriously, and the local evacuations proceeded smoothly.

“Much of the damage was caused by the massive amount of water that was surging in and out of the harbors,” said Steve Rumrill, South Slough research coordinator.

Tsunami-driven waves surged in and out of Charleston harbor for several hours.

Rumrill said it was fortunate that the arrival of the first tsunami surges coincided with low tide. The waves made the 4,700-mile journey from Japan at an average speed of 522 miles per hour. Water level monitoring gauges operated

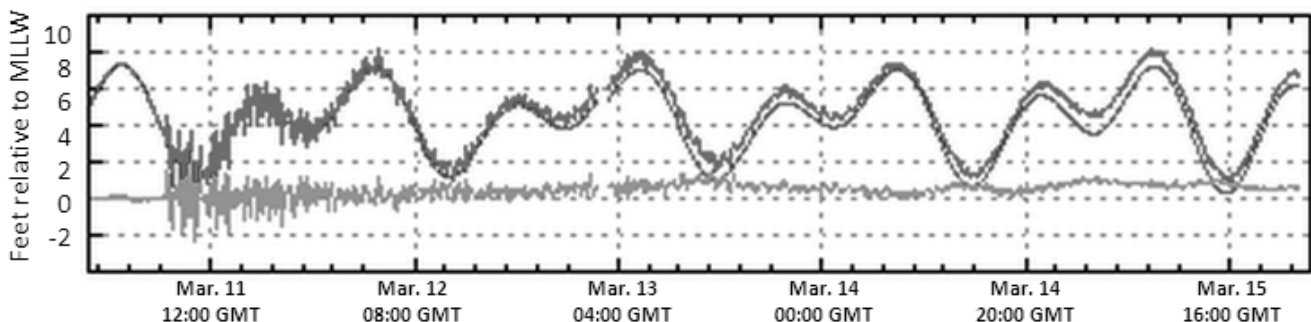
by South Slough Reserve and a NOAA tide gauge in Charleston measured and recorded the height of the tidal waters above mean lower low water.

Lonne Mays, a Charleston resident, watched the tsunami surging from the safety of his home overlooking Joe Ney Slough.



The tsunami waves flooded into the Charleston Boat Basin, and the surging water flowed over the boat ramp piers.
credit: Steve Rumrill

The tide had been flowing outward as usual, when it “suddenly reversed and began flowing back” into the bay. Mays said the strange behavior of the tide made the bay seem slightly otherworldly as the waves washed in at out. “It was eerie and surreal.”



The graph traces the motions of water in Charleston during the tsunami. The top line traces the normal tidal rhythm and the disturbance caused by the tsunami. The lowest line measure the difference between the normal tide and the tsunami wave.
credit: NOAA

People, data loggers, and a skiff are required equipment for monitoring water level at South Slough

By John Bragg

Scientists at the South Slough National Estuarine Research Reserve use several precise measuring instruments to determine the height of the water in the slough. Staff members Ali Helms and Adam DeMarzo maintain and monitor the gauges as part of their responsibility for South Slough ongoing System-Wide Monitoring Program, which monitors water quality, biotic resources and meteorological conditions throughout South Slough.

The pair are a common sight on the slough in all kinds of weather. They can be seen piloting a skiff around the slough as they check periodically on the stations to exchange equipment, batteries and data loggers.

Their primary tool is a YSI Model 600 datalogger attached to the bottom of a log piling located near the mouth of Coos Bay. This meter uses an underwater pressure sensor to record water depth every 15 minutes.

The second instrument is an acoustic tide gauge that is located on the U.S. Coast Guard dock in Charleston. It's operated by the National Oceanic and Atmospheric Administration's National Water Level Observation Network.

The tide gauge records water level measurements every six minutes and sends them a NOAA office in Seattle, where the data are used to predict daily changes in the tides.

Tips for Tsunami Safety

Tsunamis cause rapid changes in water level and unpredictable, dangerous currents in harbors and ports. While deadly near shore they are imperceptible in the open ocean. NOAA advises that vessels should not return to port if they are at sea and a tsunami warning has been issued for the area.

An earthquake is a natural tsunami warning. If you feel a strong quake, do not remain close to shore. If you hear report of a distant earthquake be aware of the possibility of a tsunami. Listen to news reports for additional information.



Ali Helms readies a water monitoring data recorder.

credit: John Bragg

- Install a NOAA radio in your home or vehicle to receive tsunami warnings automatically.
- Remember, a tsunami is not a single wave, but a whole series of waves. The first wave may not be the most dangerous.
- The danger from a tsunami can last for several hours after the first wave has passed.
- A tsunami may come as a series of waves marked by a repeated retreat and advance of the ocean.

Students Battles Invasive Plants in Mingus Park

Reprinted from the Coos Bay World

By Alice Campbell

Marshfield Pirates pillaged Mingus Park for invasive plants April 21-22.

By ridding the park of more than 200 wheelbarrow loads of invasive species like ivy, holly and reed canary grass, the students will help native species thrive without competing with the invaders and better supporting wildlife.

‘It’s a kind of piracy that’s good for the community,’ said Tom Gaskill, education coordinator at the South Slough National Estuarine Research Reserve.

While other science classes were in Mingus Park, chemistry classes cleaned up Marshfield as part of a week’s worth of events centering on Earth Day today.

Students enjoyed the field trip, even though it meant about a half hour of labor.

‘It’s better than notes, way better than notes,’ said Taylor Dornbusch, an honors biology student.

He said he had never thought about invasive species before spending time pulling reed canary grass and learned a lot from the project and the classroom studies that went along with it.

One thing he’ll pass on to others: ‘If you don’t know what it is, you shouldn’t plant it,’ he said.

The goal is to get students thinking about long-term environmentalism and connect them to where they live, said Trish Mace of the Oregon Institute of Marine Biology. She helped secure grants from Oregon Community Foundation’s Gray Family Fund and Pacific Power to put the project together and purchase supplies.

The city of Coos Bay, AmeriCorps NCCC and the South Slough also were involved.

‘GREEN MACHINE’ HELPS OUT WITH TRAILS, TREES AND TRASH

Staff Report

Volunteers from AmeriCorps have been helping South Slough’s maintenance and stewardship staff with a number of tasks this spring.

Members of the team call themselves the “Green Machine”. Since they began working in March, the Green Machine has helped with trail maintenance and grounds-keeping. Their chief focus, though, has been to plant Port Orford cedar saplings in a series of test plots.

It’s part of an experiment to learn whether certain varieties of cedar are resistant to an infectious disease that quickly kills cedar saplings. Port Orford cedar (*Chamaecyparis lawsoniana*) grows in a narrow coastal belt from Coos Bay to northern California and east into Douglas County.

The species is not endangered. One of the problems is that new Port Orford cedars sprout and grow so prolifically there’s always plenty of opportunity for new infections to take hold.

South Slough is working with the Forest Service to learn whether some varieties of cedar, including specimens from the reserve, might bear genes of resistance. If disease-resistant strains can be selected for, scientists might be able to lessen the overall impact of the disease, said Stewardship Coordinator Hans Klausner.

Scientists from the Forest Service’s Genetic Resources Center in Dorena are monitoring the cedar plots.

‘The experiment will help us determine to what degree the cedar genotypes collected and grown by the Dorena Center are disease resistant,’ said Klausner.

The results will apply to South Slough’s own forests as well. South Slough’s forest management plan calls for restoring or protecting cedar where possible throughout the reserve.

The Green Machine also rebuilt portions of the Ten Minute Trail. They assisted the Friends of South Slough, Inc., with native plant sales, and helped out removing weeds and debris from popular paddling routes in Winchester Creek.

AmeriCorps is a program of the National Civilian Community Corps, for men and women ages 18–24.

Their mission is to strengthen communities and develop leaders through direct team-based national and community service.

Teams complete service projects in all 50 states and some U.S. territories, in partnership with nonprofit organizations, state and local agencies, and community groups.

‘They understand the importance of volunteerism,’ said Volunteer Coordinator Deborah Rudd.

‘They’ve gained experience and have the training they need to effectively tackle a multitude of issues.

Team members include Angela Smith, Jacksonville, IL; McKenna Collins, Hart, MI; Casey Ashlock, San Diego, CA; Celia Olson, Tomahawk, WI; Molly Moran, Danville, VT; Joshua Masterson, Sherborn, MA, and crew leader Meg Lynch, Holden MA.

A second AmeriCorps team will visit South Slough in June and help out with additional stewardship, maintenance and education projects.

Gallery to Feature Works of Mother and Daughter Artists in June



An impression of the rocky coast at Shore Acres State Park is among the works to be shown by artist Katherine Andreasen.

This summer South Slough Reserve is exhibiting paintings by mother and daughter artists whose work is inspired by northwest history and lore, as well as their own family's heritage.

Paintings by landscape artists Katherine C. Andreasen of Coos Bay, and Anna Bishop of Roseburg, will be on view in the Interpretive Center auditorium on Seven Devils Road June 11 to July 30.

Katherine enjoys painting seascapes. She said her work reflects her love of her family's and Coos County's seafaring past.

She said she often finds inspiration for her subjects, such as fading evidence of the county's nautical past, inquiet backwaters, along the rocky coasts, and even along rural byways: A dory, for example, land-locked and forgotten, tied to a roadside tree miles away from salt water; a salmon troller tied to a piling in a quiet

tidal channel.

Daughter Anna is a registered nurse at Mercy Hospital in Roseburg. Her paintings are of rural Umpqua Valley. Both women prefer working with acrylics.

Katherine works at the South Slough Reserve. She said the Andreasen family has traditionally worked in the maritime occupations.

"My father was born in Norway and my grandfather – Anna's great grandfather – began his career as a sea captain in Norway," she said.

"He continued that occupation after he emigrated with his family to San Francisco," around 1900.

Her father served in the Merchant Marines before World War II, and again during the Vietnam War.

Her brother Henry recently retired after working 25 years as a pilot for the Alaska State Ferries. Their work will be on display through July, said Public Involvement Coordinator Deborah Rudd.

Canoe continued from Page 1

explorations of the Pacific northwest seas.

Our adventure began at the Eastside boat ramp. Standing in two rows on the pier in life vests, we practiced our paddling strokes under Joy's direction.

The canoe seats six. In spite its weight of 240 pounds, the boat pushes through the water with ease, given all that muscle power.

Joy had timed our expedition so that we would not have to paddle against the tide. We crossed Isthmus Slough under grey clouds and slipped up next to the sailing ships—the Lady Washington and Hawaiian Chieftain. We looked up at the looming shapes to see the round iron

bores of cannon that seemed to point right at us.

Cool!

While the crew stared up at the weaponry, Joy worked her paddle with expert strokes to hold our craft steady. Thanks to her leadership and skill, we felt like masters of our paddles.

Meanwhile, strollers on the boardwalk watched and waved to native canoe and tall ships. We waved back. I hoped we had shown off South Slough's new canoe with style and grace.

All too soon, it was time for us to paddle back to Eastside.



South Slough National Estuarine Research Reserve
PO Box 5417
Charleston, OR 97420

www.southsloughestuary.org

Please Join Us...

The Coquille Indian Tribe invites you and your family and friends to the naming of the Friends of South Slough' new canoe.

The 24-foot long, 250-pound canoe is made of fiberglass and modeled after Pacific Northwest Indian dugouts, which were fast and efficient.

In keeping with its heritage, the canoe will be named in honor of Buddy Metcalf and Bob Younker, members of the Coquille Indian Tribe who were

among the earliest to promote ecological habitat restoration.

Buddy Metcalf donated estuarine tidal lands on the South Slough to the Oregon Institute of Marine Biology for study.

Bob Younker served as a leader on the original planning commission to establish and preserve the South Slough as the nation's first estuary sanctuary.

The canoe will be named Chmoosh (pronounced shoo-moosh), in honor of Buddy Metcalf and Bob Younker's tribal name, which means, "Floating Log—Go With the Tide."

The naming festivities will take place at Sunset Bay State Park north end, July 8, from 5-9 pm.

Call 541.888.5558 for more information.



SOUTH SLOUGH SUMMER CALENDAR 2011



JUNE

JUNE 3

FIT FRIDAY HIKE

10 - 11:30 AM

Join us for an invigorating hike along the trails of the Reserve. [Min-4 participants/ Max-12] (free)

JUNE 4

BIRDS ON THE ESTUARY



8 - 10 AM

Explore the shores of Charleston in search of winged wildlife. Interpreter, binoculars and spotting scopes provided. **Meet at the Charleston Visitors Center.** [Max-15 participants] (\$1/birder)

JUNE 9

INTERPRETIVE CENTER TRAINING

1 - 3:30 PM

For anyone interested in estuary facts, fun and front-line customer service. [Min-3 participants/ Max-8] (free)

JUNE 11

TIDE OF THE TODDLERS ~ CRABS

10 - 11 AM

Discover the natural world with your wee one, ages 1 to 5. [Max-15 children](\$1/child)

MOTHER - DAUGHTER ART OPENING

1 - 3 PM

Katherine Andreasen and her daughter Anna Bishop create north-west inspired landscape paintings.(free)



JUNE 15

FARMERS MARKET IN COOS BAY

9 AM - 3 PM

Stop by the South Slough/Cape Aragon Audubon booth.

JUNE 18

PADDLE THE ESTUARY

9 AM - 2 PM

Explore South Slough on a trail that flows with the tide. Provide your own kayak or canoe (no inflatables or pedals), paddles, PFDs, water and lunch. Feet and legs may get wet and muddy at launch points. Driver and shuttle will be provided. [Min-3 boats/ Max-8](\$15/boat)

JUNE 22

SUMMER READING PROGRAM - MYRTLE POINT LIBRARY

9 AM - 3 PM

JUNE 23

FINDING NATURE WALK

8:30 - 10:30 AM

Join a naturalist as we explore one of South Slough's trails. [Max-15 participants] (free)

JUNE 24

BIG CANOE TRIP

9 AM - 12 PM

Explore South Slough on a trail that flows with the tide. We'll provide the canoe, PFDs and paddles. **Meet at the Distant Water Fleet Facility on Troller Lane in Charleston.** Feet and legs may get wet and muddy at launch points. Dress for wind and rain. [Min-4 participants/ Max-6](free)

JUNE 25

CLAMBOREE

10 AM - 6 PM

Visit the South Slough booth at Clamboree in Empire (free)

CREATURE FEATURE ~ CRABS

11 AM - 3 PM

Visit this special exhibit to learn about life in the estuary. (free)

JUNE 28 - JULY 1

ZOEAL SUMMER SCIENCE CAMP

9 AM - 1 PM



JUNE 28

FRIENDS OF SOUTH SLOUGH BOARD MEETING

5 - 7 PM

Members and guests welcome.

JULY

JULY 1

FIT FRIDAY HIKE

10 - 11:30 AM

Join us for an invigorating hike along the trails of the Reserve. [Min-4 participants/ Max-12] (free)

JULY 2

SOUTH SLOUGH BIRDING

8 - 10 AM

Search the Reserve for winged wildlife. An interpreter, binoculars and a spotting scope provided. [Max-15 participants] (\$1/birder)

PADDLE THE ESTUARY

9 AM - 2 PM

Explore South Slough on a trail that flows with the tide. Provide your own kayak or canoe (no inflatables or pedals), paddles, PFDs, water and lunch. Feet and legs may get wet and muddy at launch points. Driver and shuttle will be provided. [Min-3 boats/ Max-8](\$15/boat)

JULY 5 - 8

INSTAR SUMMER SCIENCE CAMP

9 AM - 3 PM



July 8

FOSS Canoe Dedication

5 - 9 PM

In partnership with the Coquille Indian Tribe, FOSS will dedicate *Chmoosh* at Sunset Bay State Park. (free)

JULY 9

TIDE OF THE TODDLERS ~ CLAMS

10 - 11 AM

Discover the natural world with your wee one, ages 1 to 5. [Max-15 children](\$1/child)

JULY 14

INTERPRETIVE CENTER TRAINING

9:30 AM - 12 PM

For anyone interested in estuary facts, fun and front-line customer service. [Min-3 participants/ Max-8] (free)

JULY 16

CREATURE FEATURE ~ CLAMS

11 AM - 3 PM

Visit this special exhibit to learn about life in the estuary. (free)

JULY 19 - 22

MEGALOPS SUMMER SCIENCE CAMP

9 AM - 3 PM



JULY 23

PORT ORFORD CEDAR QUEST

10 AM - 3 PM

Discover the story of the Port Orford Cedar tree at South Slough through a fun and informative, self-guided quest! Bring a picnic and enjoy all summer has to offer. (free)

JULY 26 - 29

DUNGENESS SUMMER SCIENCE CAMP

9 AM - 3 PM



JULY 27

FINDING NATURE WALK

8:30 - 10:30 AM

Join a naturalist as we explore one of South Slough's trails. [Max-15 participants] (free)

FARMERS MARKET IN COOS BAY

9 AM - 3 PM

Stop by the South Slough/Cape Aragon Audubon booth.

JULY 30

BIG CANOE TRIP

11 AM - 2 PM

Explore South Slough on a trail that flows with the tide. We'll provide the canoe, PFDs and paddles. **Meet at the Distant Water Fleet Facility on Troller Lane in Charleston.** Feet and legs may get wet and muddy at launch points. Dress for wind and rain. [Min-4 participants/ Max-6](free)



SOUTH SLOUGH SUMMER CALENDAR 2011



AUGUST

AUGUST 4

CRABBING AROUND

1 - 3 PM

Hear about the amazing life cycle of crabs as we cast a ring from the dock. Learn proper crab harvesting methods and look for crabs along the shore. **Meet at the Charleston Visitors Center.**

[Min-5 participants/ Max-20] (\$1/person)

AUGUST 5

FIT FRIDAY HIKE

10 - 11:30 AM

Join us for an invigorating hike along the trails of the Reserve.

[Min-4 participants/ Max-12] (free)

AUGUST 6

BIRDS ON THE ESTUARY

8 - 10 AM

Explore the shores of Charleston in search of winged wildlife. Interpreter, binoculars and spotting scopes provided. **Meet at the Charleston Visitors Center.** [Max-15 participants] (\$1/birder)



CHERYL JAGNON ART OPENING

1 - 3 PM

Cheryl will display a retrospective of a variety of art forms from her time in Oregon. (free)

AUGUST 10

FINDING NATURE WALK

8:30 - 10:30 AM

Join a naturalist as we explore one of South Slough's trails.

[Max-15 participants] (free)

AUGUST 12

UNDER THE DOCKS

10 AM - 12 PM

Ever wonder about the bizarre creatures residing beneath the docks in Charleston? An interpreter will lead an investigation of the mind boggling diversity of life found below the surface. **Meet at the Charleston Visitors Center.**

[Min-5 participants/ Max-20] (\$1/person)



AUGUST 13

TIDE OF THE TODDLERS ~ SEA STARS

10 - 11 AM

Discover the natural world with your wee one, ages 1 to 5.

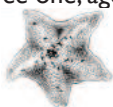
[Max-15 children](\$1/child)

AUGUST 19

INTERPRETIVE CENTER TRAINING

2 - 4:30 PM

For anyone interested in estuary facts, fun and front-line customer service. [Min-3 participants/ Max-8] (free)



AUGUST 20

CREATURE FEATURE ~ SEA STARS

11 AM - 3 PM

Visit this special exhibit to learn about life in the estuary. (free)

AUGUST 23

FRIENDS OF SOUTH SLOUGH BOARD MEETING

5 - 7 PM

Members and guests welcome.

AUGUST 24

FARMERS MARKET IN COOS BAY

9 AM - 3 PM

Stop by the South Slough/Cape Aragon Audubon booth.

AUGUST 26 - 28 OREGON SHOREBIRD FESTIVAL

The 25th Oregon Shorebird Festival will be held at OIMB and South Slough the weekend of August 26-28. Birdwatchers of all skill levels are encouraged to join us and experience first hand the wonder of shorebird migration on the scenic south coast.

For more information visit <http://www.fws.gov/oregoncoast/shorebirdfestival.htm> or call Dawn Grafe at 541-867-4550.

SEPTEMBER

SEPTEMBER 2

FIT FRIDAY HIKE

10 - 11:30 AM

Join us for an invigorating hike along the trails of the Reserve.

[Min-4 participants/ Max-12] (free)



SEPTEMBER 3

BIRDS ON THE ESTUARY

8 - 10 AM

Explore the shores of our estuary in search of winged wildlife.

Meet at the south end of the Mill Casino hotel.

[Max-15 participants] (\$1/birder)

SALMON CELEBRATION

10 AM - 6 PM

Join South Slough staff and volunteers on at the Mill Casino's Salmon Celebration. We'll have a booth all about estuaries. (free)

SEPTEMBER 10

BIG CANOE TRIP

11 AM - 2 PM

Explore South Slough on a trail that flows with the tide. We'll provide the canoe, PFDs and paddles. **Meet at the Distant Water Fleet Facility on Troller Lane in Charleston.** Feet and legs may get wet and muddy at launch points. Dress for wind and rain.

[Min-4 participants/ Max-6] (free)

CREATURE FEATURE ~ FISH

11 AM - 3 PM

Visit this special exhibit to learn about life in the estuary. (free)

SEPTEMBER 17

TIDE OF THE TODDLERS ~ FISH

10 - 11 AM

Discover the natural world with your wee one, ages 1 to 5.

[Max-15 children](\$1/child)

SEPTEMBER 21

FARMERS MARKET IN COOS BAY

9 AM - 3 PM

Stop by the South Slough/Cape Aragon Audubon booth.



SEPTEMBER 24 NATIONAL ESTUARIES DAY

NATIONAL PUBLIC LANDS DAY SHORELINE CLEAN UP 9 AM - 12 PM

Help improve the shoreline of your estuary. Choose from 2 locations, Empire - meet at **Empire Docks** or Hallmark Creek - meet at **Charleston Visitors Center**. Sponsors include SOLV, the city of Coos Bay and the Charleston Community Enhancement Corporation. (free)

NATIONAL ESTUARIES DAY CELEBRATION

12 - 4 PM

Join South Slough and many of our partners in a celebration of all estuaries have to offer at **Empire Docks** in Coos Bay. There will be food, educational activities, games and entertainment. (free)

SEPTEMBER 27

FRIENDS OF SOUTH SLOUGH BOARD MEETING

5 - 7 PM

Members and guests welcome.

ALL PROGRAMS BEGIN AT THE SOUTH SLOUGH NATIONAL ESTUARINE RESEARCH RESERVE INTERPRETIVE CENTER UNLESS OTHERWISE NOTED. LOCATED 4 MILES SOUTH OF CHARLESTON ON SEVEN DEVILS ROAD.

RESERVATIONS ARE REQUIRED FOR ALL PROGRAMS. PLEASE CALL (541) 888 - 5558. PROGRAMS MAY BE CANCELLED DUE TO LOW ENROLLMENT OR HAZARDOUS WEATHER.

ACTIVITY FEES AND DONATIONS COVER MATERIALS AND ARE USED BY THE FRIENDS OF SOUTH SLOUGH RESERVE, INC. IN SUPPORT OF THE RESERVE.

THE INTERPRETIVE CENTER IS OPEN TUESDAY THROUGH SATURDAY FROM 10 AM TO 4:30 PM. TRAILS ARE OPEN DAILY FROM DAWN TO DUSK.

FOR MORE INFORMATION VISIT WWW.SOUTHSLOUGHSTUARY.ORG