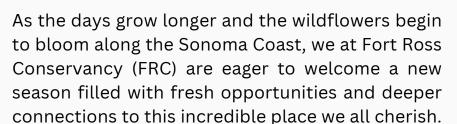


Foreword

IAN TAYLOR, EXECUTIVE DIRECTOR



This year, we are embarking on exciting new initiatives to enhance your experience at Fort Ross State Historic Park. We are reimagining our interpretive storytelling to ensure that the diverse voices and histories of this land are woven together in a way that is engaging, inclusive, and thought-provoking.

We are also expanding our events and community partnerships. Mark your calendars for a summer festival (theme to be announced later) on July 26, where we'll celebrate the intersection of creativity and conservation along our beautiful coastline.









OPEN DAILY 10:00 AM - 4:30 PM

This issue

Updates and Events
PAGE 3

Mendonoma Whale & Seal Study: Gray Whale Update

PAGE 4-5

Marine Ecology
Program:
Book Now for 2025
PAGE 6

Helping Kelp PAGE 7-10

Volunteer Opportunities PAGE 11

Wildlife Sightings
PAGE 12

And don't miss the Harvest Festival on October 18th, a Fall gathering honoring the region's rich agricultural traditions.

Thank you for your continued support. Your passion and involvement make everything we do possible. We look forward to seeing you soon—whether in the redwoods, along the bluffs, or at one of our upcoming events!

With warm regards,

Ian Taylor Executive Director Fort Ross Conservancy

Support FRC while grocery shopping at Oliver's!

Ask for a FREE community card at <u>Oliver's Market</u> in Santa Rosa, Windsor, and Cotati and Oliver's will donate 3% of your purchase to FRC! During registration, select Fort Ross Conservancy as your chosen non-profit.

Your gift will help us to:

- Inspire the next generation of ocean stewards by enriching our Marine Science Program with cutting-edge equipment and scholarships for underserved schools.
- Support conservation initiatives in FRSHP
- Expand accessibility across trails and facilities, so everyone can experience the beauty and history of Fort Ross.
- Foster partnerships with diverse communities to amplify the stories, cultures, and voices that make Fort Ross truly unique.



Updates

Winter weather continues!

Opening hours and accessibility in Fort Ross State Historic Park may vary over the winter during winter storms. Strong winds and heavy rains are causing downed trees and landslides. As the State Historic Park may be closed, please check our social media pages for updates before visiting when storms are forecast. Keep safe!

Summer Festival - July 26!

It's back!! The Fort Ross summer festival is returning after a 5 year hiatus with a new theme on the last weekend of July! Spread the word and keep an eye out for the theme which will be announced soon.

New Greenhouse

We are ready to start restoring butterfly habitat! We will be building a greenhouse next to the visitor center this spring. We are fortunate that many of the Fort Ross Staff have a green thumb and we are extremely grateful to the volunteers who have joined us to help.

New Instructors and Staff

We would like to welcome Jianna Satore to FRC as well as Keira Monuki and Zoe Brumbaugh who study marine science at UC Davis and the Bodega Marine Labs. We have a great team for the Marine Ecology program this year!

Salt Point Visitor Center

We are looking for volunteer support this year to reopen the beautiful Gerstle Cove Visitor Center. See page 11 for more information.



Mendonoma Whale & Seal Study: Gray Whale Update

Scott and Theresa "Tree" Mercer

Since 2014 we have been been observing and documenting the presence of marine mammals in the coastal waters of Northern Sonoma County and Southern Mendocino We do 90% of our County. from the Point observations Arena Lighthouse Peninsula. This is a great vantage point, the peninsula juts about two miles from Highway One, out into the ocean.



Many of the migrating grays that have been closely navigating the coastline "turn the corner" at the tip of the peninsula by the lighthouse and briefly travel a short distance offshore to the west, before correcting their course to the south and continue their southbound travel. It is truly remarkable to watch many of these migrators get themselves on a 180 degree heading and slowly disappear from our view. Remarkable too is that the distance from the lighthouse to Unimak Pass is 2,162 miles. Unimak Pass is the "gateway" into the Bering Sea and beyond to the Beaufort and Chukchi Seas. The three major feeding grounds for gray whales. These migrators still have about 1000 more miles to travel to reach their wintering calving and mating grounds. The travel speed is 4-6 miles per hour and they travel 24 hours per day.



Our migration numbers so far:

We began slowly, evident to changes in the ecology of the Arctic Oceans due to climate change. With ice melting, whales may be able to venture farther and wider than before in search of the amphipods they prefer to feed on. This means a longer travel south when the southern migration begins.

Gray Whale Update

So, for December we counted only 8 southbound. But for January we documented 354 headed to the Baja lagoons.

For February, so far, as of 13 February we have seen 382 southbound and one northbound, our first, and seen at Gerstle Cove in Salt Point State Park in Sonoma County. Our highest Southbound count in one day was 35 on 16 January. The majority of southbounders were seen between January 13-24.

All of the reported counts from the Baja Lagoons so far this season, especially for numbers of calves are way down this year. For example, on 4 February 2025, 17 grays including one calf were counted in San Ignacio lagoon. On 4 February 2012, 125 grays including 38 calves were counted. On 4 February 2017, 121 grays were documented including 27 calves.



DONATE

Book Now for 2025

Book a Marine Ecology Program for your class today!

We have already received 26 MEP bookings for 2025 and can't wait to start school programs this February!

Fort Ross School partnership

This year we are pleased to announce we are partnering with Fort Ross School thanks to support from STEMpire Scholars. The students will have full access to the marine ecology including additional learning materials and multiple MEP field trips throughout the year. We can't wait to get to know the students and give them the ultimate MEP experience.



"It was so fun...never in my life did I think I would touch any sea life because I don't go to the beach much" -8th grade, Oakland School

"I learned that Sea otters were hunted out of the area, and that Sea urchins took over the kelp forest. My favorite activity was when we used the binoculars to see the Sea lions and Seals."

-7th grade, Rohnert Park School



MEP Homeschool Day! JUNE, DATE TBD

All homeschooling families and associations are welcome!

We would like to invite all homeschool families interested in the MEP to join us for a special hands-on program to see and learn about marine mammals, invertebrates and kelp forests! The date will be chosen in consultation with participants.

We are offering the program at half price of \$25 per student for the day with financial assistance available.

To register email mep@fortross.org

Helping Kelp

Kelp forest restoration in Sonoma

We are thrilled to be working with NOAA's Kelp Forest restoration team and supporting their efforts to bring kelp back to Fort Ross Cove!

Since 2014, over 90% of kelp forests have been lost along the Northern California Coastline with impacts to both wildlife and people. Agencies and communities are researching the best methods for kelp restoration building on the best available science in this new field, to help kelp forests reestablish.

The kelp restoration project in Greater Farallones National Marine Sanctuary is a collaborative effort. It is being led by Greater Farallones Association, NOAA's Greater Farallones and Cordell Bank National Marine Sanctuaries, and NOAA's Office of Habitat Conservation. There are 23 other partnering organizations involved including FRC.

Why is restoration important?

Restoration is important within national marine sanctuaries as these national treasures are America's

most iconic natural and cultural marine resources. The Office of National Marine Sanctuaries is required by law (<u>The National Marine Sanctuaries Act</u>) to carry out activities to maintain, protect, and where appropriate restore and enhance natural habitats, populations and ecological processes. The boundaries of Greater Farallones National Marine Sanctuary expanded in 2015 to include the entire Sonoma Coast region, adding vital protections and access to support for efforts like this project.

Restoring ecosystems enhances and protects wildlife and the livelihoods of people who depend on them. Restoring kelp will help the return of marine life and important ecosystem services, support the fishing industry, strengthen food webs, and renew the beauty of these underwater forests. Among other things, kelp forests produce oxygen we breathe, store carbon, and may help to prevent coastal erosion.

With the loss of kelp, the coast is now dominated by sea urchin barrens, a new stable state where kelp regrowth is difficult. Purple sea urchins are tough and opportunistic with an incredible capacity to survive when food is scarce. They are ravenous and when new kelp starts to grow, they are ready to pounce! Because it is unlikely kelp forests will come back naturally, proactive management is needed.



How is kelp being restored?



Site selection

Fort Ross Cove, Ocean Cove and Timber Cove were selected using aerial drone surveys, subtidal ecology assessments and for their accessibility. The remnant kelp patches look dark in the water from above (right: Timber Cove) indicating refuges where kelp has persisted.





Reducing grazing pressure

So far, 318,733 urchins weighing 27,475 lbs have been removed from Fort Ross Cove by local commercial divers. Two divers can collect 2800 lbs of urchins in just one day (right)! Sea urchins are taken to a composting facility or given to FRC for use in education programs.





Growing kelp

Greater Farallones Association kelp restoration specialists grow kelp in tanks at University of California, Davis Bodega Marine Lab (left) so that spores can settle on twine for outplanting (right). Hundreds of baby bull kelp will grow on one roll of twine.





Outplanting kelp and monitoring

The twine with bull kelp is unravelled and placed at restoration sites (Left: Fort Ross Cove) to grow (Right: Mendocino). Kelp cover, urchin density and the recovery of other fish and invertebrate species are being monitored and compared to control sites with no restoration efforts.



Abbey Dias

Urchins for education

Sea urchins collected by the urchin divers are being used in the MEP to teach students about kelp forest ecosystems. Students measure the weight and height of sea urchins and can dissect them to look at their anatomy and measure their gonads, collecting data in a similar way to the NOAA researchers. This is a fantastic way to connect students with kelp forest conservation efforts and the restoration process.



"I loved touching the urchins, and seeing [the] many amazing historical buildings in Fort Ross. I learned about how the sea urchins are overpopulating, and eating all the kelp. I hope the [kelp forest] ecosystem comes back because I love sea otters."

-7th grade student

Why the Twine?

Bull kelp is an annual species that reaches maturity within one year and grows as fast as 10 inches in a single day. It typically dies off in the cooler months when it can be seen washed up in winter storms. The hope is that the kelp on the twine will grow into reproductive adults where they will act as a "spore bank" that will disperse to grow kelp in neighboring areas.



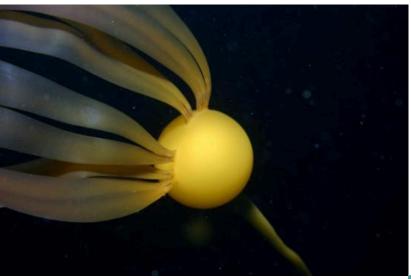
The fur trade and kelp loss: What is the link to Fort Ross?

Sea otters, a key predator of purple sea urchins, were extensively hunted in the early 1800s for their soft, valuable fur. At Fort Ross, 9366 sea otters were caught over just 11 years until few remained (Table 1). The substantial reduction in catch over just a few years reflects the immense hunting pressure and lack of population recovery. Globally, the sea otter population dwindled because of the fur trade. Sea otters declined from an estimated 300,000 to just ~2,000.

Year	Sea Otter
1809-11	8,000
1812-14	877
1815	153
1816	97
1817	55
1818	13
1819	71
1820	22
1821	35
1822-3	43

Table 1 Sea Otter Catch of Ross Counter, 1812-23

Sources: De Roquefeuil, 1823, I, pp. 25-6; Document 234.



rarely seen along California, Oregon and Washington with the exception of two populations. One is near Monterey Bay, CA, where 50 sea otters that escaped the hunt were discovered in 1938. The other is between Destruction Island and Cape Flattery, WA, where otters were successfully reintroduced in 1969. Reintroducing sea otters is complex and an attempt in Oregon in the 1960s was unsuccessful.

Today, sea otters are endangered and are

Removing sea otters weakened the food web in the kelp forest ecosystem. The now critically endangered sunflower sea star became the purple sea urchin's only predator on the North West Coast. When the sea star wasting syndrome caused ~5.75 billion sunflower sea stars to perish in 2013, the purple sea urchin was freed from predator control. Finally, a marine heatwave brought increased ocean temperatures to the region from 2014-2016. Together, these three stressors created the perfect storm for a surge in sea urchins and the loss of kelp.



Volunteer Opportunities

Fort Ross State Historic Park

Volunteering is a great excuse to get outdoors and come down to the coast. If you are a bird nerd, love hiking, teaching, interested in marine mammals, or enjoy tide pooling and gardening, we have a number of opportunities to get involved with.

The perks | Log your hours as a California State Parks Volunteer 40 hours = a district day use pass for the next year. 200+ hours = a statewide day use pass for the next year.

GERSTLE COVE VISITOR CENTER

We are hoping to reopen the visitor center overlooking Gerstle Cove in Salt Point State Park but to do so we need your support! We are looking for volunteers to interact with campers and visitors to the park. The inside has beautiful murals of local wildlife and taxidermy.



DOCENTS

Help with hands-on activities in our education programs, lead tours, or interact with visitors inside the Fort or within the park. Volunteers help our visitors and students to appreciate and connect with the cultural and natural history of the spectacular Sonoma Coast.

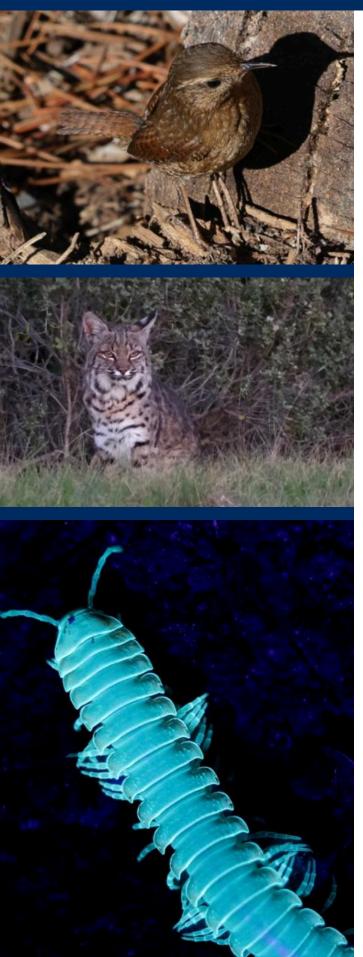


PLANT SURVEYS AND NURSERY

Help us survey, grow, and plant blue violets to restore habitat for endangered silverspot butterflies. In spring, surveys will start in the spring and we will be setting up a greenhouse to grow plants! We are also looking for people interested in surveying butterflies in summer.



Email <u>dioned@fortross.org</u> for more information and to sign up!



WILDLIFE

SPOTTED ON THE COAST

>>> PACIFIC WREN

December 1

This pacific wren joined iNaturalist user Ethan C at the picnic tables when he was looking for mushrooms in Salt Point State Park.

>>> BOBCAT

January 9

We have spotted one or multiple bobcats near the Fort and visitor center a number of times lately! They were seen waiting at the edge of an open grassy area at dusk. - Dione Deaker, FRC



November 2024

Spotted by iNat user solaurele, this beautiful salamannder is listed as "near threatened" on the IUCN redlist and as "vulnerable" in the US.

SEE YOUR PHOTO HERE Post photos taken in Salt Point or Fort Ross State

Parks on iNaturalist or email them to mep@fortross.org

>>> CHERRY MILLIPEDE

January 6, 2025

This millipede, *Xystocheir* dissecta, captured by Anyagor (iNat) exhibits UV fluorescence! When threatened, they can release a hydrogen cyanide gas.

