

# The Coastal Chronicle 1

13 April 2022

Marin, San Mateo, San Francisco and Santa Cruz counties of California

## Pacific Coast Winter

Except where noted, all photos in this newsletter were shot in January, February or March 2022. The map locations in boxes like the one on the right correspond to the numbered places on the map on the third page. For more information about a particular picture, see the captions on pages 16 and 17.

*Evening paraglide*

Thornton State Beach  
Map location 1

# *Pacific Coast Winter*

I live in a coastal region whose picnic-any-day weather is a cover story for persistent drought and whose inspiring mountain- and seascapes disguise the violent earthly upheavals that created them. The first is a largely a result of an ocean current, and the second is Saint Andrew's fault for the crack in the Earth's crust that was given his name in Spanish.

Together, this current and this fault have and do interact in ways that affect the lives of everyone who lives here in the largest and most insignificant ways. Without them, there would be no Wine Country or oaks in Oakland. No salmon or halibut. No valley of silicon or of heart's delight.

The Pacific Ocean is cold here, at least in relative terms. The California Current – the eastern sweep of the great North Pacific Gyre that circles clockwise within the confines of the Equator, Asia and North America – gets up to about 60°F / 15°C at its warmest in August-September because it brings cold water down from Alaska. At the same latitude on the U.S. East Coast at Virginia Beach, the Gulf Stream – the western quadrant of the North Atlantic Gyre – brings water up from the south that's about 80°F / 27°C.

Our coastal air here is so cool that it can't hold all the water vapor produced by the ocean evaporating beneath it. Warm air holds more water than cool; that's the "relative" in relative humidity. Along the coast of British Columbia, Washington and Oregon, that means rain. Here it means an omnipresent layer of fog – the "marine layer" – which blankets the land at night and hovers offshore within sight at the height of day.

Every fold in our coastal mountains, every compass orientation of those valleys, every variation in elevation produces a different weather pattern between adjacent places. San Francisco can easily be 20°F / 7°C cooler than San Jose on the same summer afternoon. A cabernet sauvignon grape that grows on one side of a mountain ridge tastes different from one on the other.

Fog flows into some coastal valleys almost every night. The warm, rising air over California's huge Central Valley draws it in from the Pacific. But the coastal air also warms as it moves away from the ocean. As it does, its fog re-evaporates into the air, leaving the Central Valley sizzling beneath clear skies. Nary a cloud will be found over most the width of the state until the air reaches the Sierra Nevada on California's eastern boundary, which is three times higher and much cooler than the coastal mountains. There, the snow falls.

Like the largest ocean swirling above it, the shell of hard rock separating the Pacific's water from the gooey plastic innards of our planet is Earth's largest tectonic plate, the Pacific Plate. Earth is a still-warm soft-boiled egg whose shell / crust is fractured into these plates. They drift where they're dragged by the temperature-driven currents in the goo beneath them. In some places, where the crust is thin or cracked, the goo erupts through volcanoes that circle the Pacific like a ring of fire. Along California's coast, the North American and Pacific plates rub and crumble, piling up literal mountains of rocky debris.

Most of the time, the rough plate edges are locked solidly together. Then, unpredictably, they're not. Something gives and they slip into a new position over a few seconds' time. The trees sway, the pool water sloshes and the brick chimney crumbles until everything locks into a new place. Once again there is stillness, and Dad moves the bed back against the wall.

You can't live here and not be in touch with nature. She reaches out and grabs you.





Epicenter of  
1906 San  
Francisco  
Earthquake

California Current

The numbers and characters in white circles on this map correspond to the locations of the photos in this newsletter and are described in captions on pages 16 and 17.

European Space Agency photo





*Wild mustard*

Half Moon Bay  
Map location 2





## *Coastal hike*

Año Nuevo State Park  
Map location 3

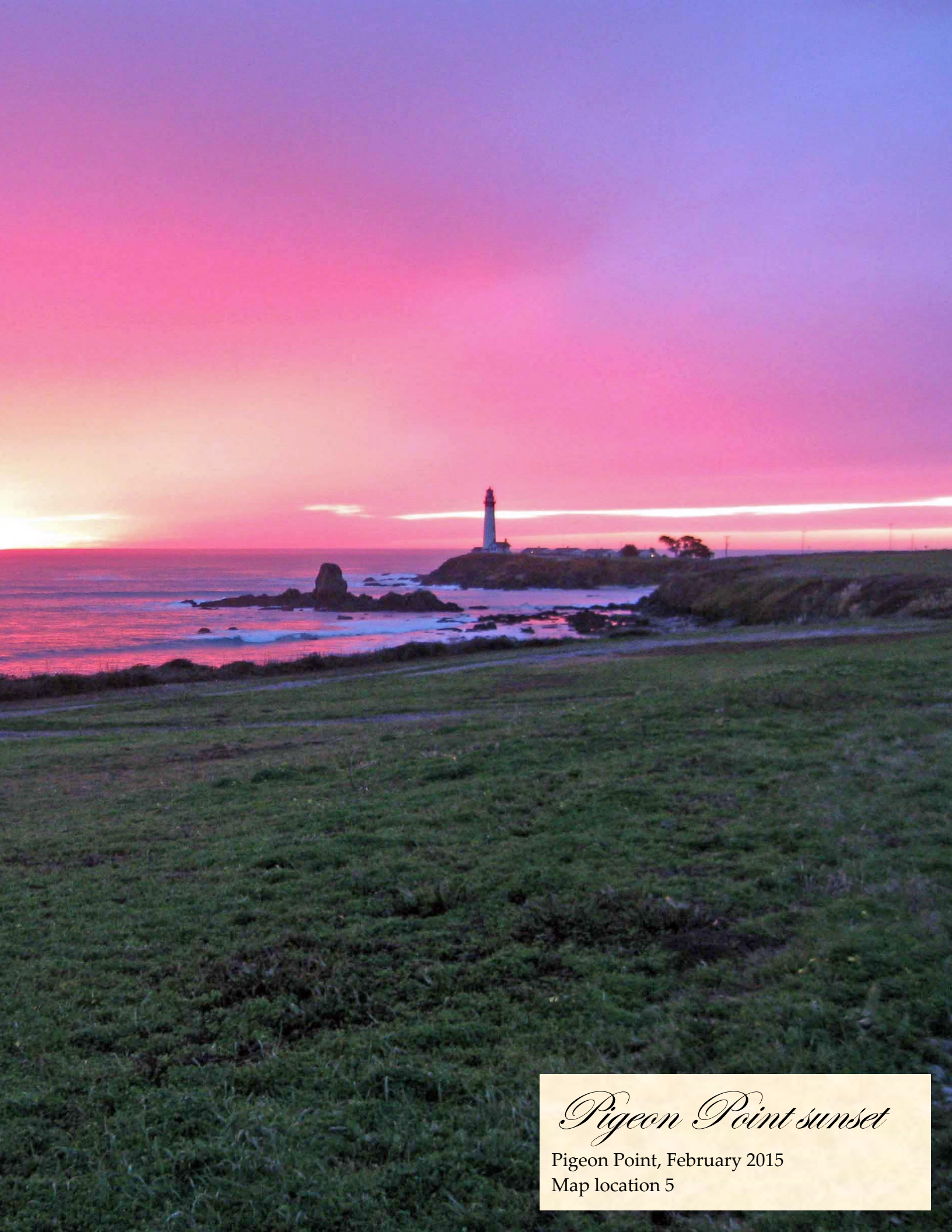




*Prevailing wind*

Montara State Beach  
Map location 4





*Pigeon Point sunset*

Pigeon Point, February 2015  
Map location 5





*Ruffled and flourishing*

Pacific Grove, January 2016

Pacific Grove is south of the map in Monterey County





*Deserted*

Montara State Beach  
Map location 4





*A little lower and to the left*

Waddell State Beach  
Map location 6





*Gimme a place at the beach*

Daly City  
Map location 7





*Clingy to a fault*

Mussel Rock Park, Daly City  
Map location 7





*Tidepool star*

Moss Beach, January 2014  
Map location 8





*Haven't the foggiest*

Marin County anchorage, Golden Gate Bridge, February 2015  
Map location 9





*You light up my life*

Point Bonita, Marin County, January 2014  
Map location ©



# Guide to photos

Photos are listed in order from cover to last page; the large numbers refer to their position on the photo map on page 3.

**1 Evening paraglide, Thornton State Beach** – This beach lies beneath a six-mile /10-kilometer long cliff that stretches from Mussel Rock Park, the high point at the south end in Daly City, and Fort Funston, a World War II-era fortification built to protect San Francisco and now part of the Golden Gate National Recreation Area, at the north. Either spot is a popular place for paraglider and hang glider pilots to launch and soar for hours at a time in the west winds that are forced upward when they strike the cliff face. The dark hill rising from the right end of the horizon is on the north side of the Golden Gate – the water passage between the Pacific Ocean and San Francisco Bay – in Marin County. The line-of-sight view from the photo location north to that hill is roughly along the San Andreas Fault, which slipped in 1906 triggering the San Francisco Earthquake.

**2 Wild mustard, Half Moon Bay** – Wild mustard blooms in February in the fields stretching along the San Mateo County coast at Half Moon Bay and always draws photographers and the people who want to pose for them. While the eastern side of the county is heavily urbanized along the shore of San Francisco Bay, the western side of the Coast Range is agricultural and produces vegetables like Brussel sprouts and pumpkins, wine grapes and livestock. The most valuable crops, however, are flowers and nursery plants.

**3 Coastal hike, Año Nuevo State Park** – This park is named for the ocean point on the San Mateo County coast it occupies. The point was discovered by Spanish explorer Sebastian Vizcaino as his ship passed it on a northbound voyage on New Year's Day (*dia de Año Nuevo*) in 1603. While the park has many hiking trails, it is best known for the breeding colony of northern elephant seals that established itself here in 1961 with the birth of the first known pup and now supports about 2,000 new pups a year. A separate newsletter – The Coastal Chronicle 2 – dealing just with Año Nuevo's elephant seals accompanies this one.

**4 Prevailing wind, Montara State Beach** – Even on calm days like this one, the evidence of prevailing winds off the Pacific is recorded in the permanently bent trees that lean inland.

**5 Pigeon Point sunset** – This lighthouse and the Point Arena light in Mendocino County north of San Francisco are both 115 feet / 35 meters tall, sharing the honor for the tallest lighthouses on the U.S. West Coast. Pigeon Point's original Fresnel lens is a hand-me-down from the Cape Hatteras Light on North Carolina's Outer Banks, which was built in 1802, 69 years before Pigeon Point. I have rarely passed this lighthouse without finding it worthy of a picture stop – the grassy foreground was covered in blooming mustard this winter – but the sky in this shot from 2015 still makes it my favorite.

**Ruffled and flourishing, Pacific Grove (not on map)** – I spotted this California gull near the lighthouse at Pacific Grove on the Monterey Peninsula. The bird impressed me for its persistence in standing its ground against a strong breeze and maintaining its rocky perch despite the photographer who got closer than most birds would allow.



**4 Deserted, Montara State Beach** – This photo was taken from the same spot as “Prevailing wind” three pages ago, but I turned around to look north for this view. I was struck by the absence of any surfers or people fishing on a sunny day, although from the footprints in the sand, it’s obvious they come here often. The tall rock outcropping in the distance is the beginning of the Devil’s Slide section of California Highway 1 – called the Cabrillo Highway in the Bay Area, not the Pacific Coast Highway (PCH) as it is in Southern California. At Devil’s Slide, just south of the beach town of Pacifica, winter storms washed away the highway so many times that in 2013, the state opened a pair of tunnels that bypassed the washout section. The abandoned highway is now part of a hiking trail.

**6 A little lower and to the left, Waddell State Beach** – Not every elephant seal along the coast winds up at Año Nuevo. But if it’s a male seal like this one who found nearby Waddell State Beach, it probably means he lost out in the fighting among bull seals for a harem of females and will scratch and snooze away his winter break on land in loneliness.

**7 Gimme a place at the beach, Skyline Drive, Daly City** – At 5:12 a.m., April 18, 1906, the ground where I stood to shoot this photo jerked northward while the land beneath the houses above the bare hillside in the distance jerked southward. That bare hillside marks the San Andreas Fault, and that jerk was the beginning of an estimated 67 seconds of violent shaking now known as the San Francisco Earthquake, whose epicenter is in view in the ocean beyond. At some points along the nearly 300-mile / 480-kilometer fault segment that ruptured, places on opposite sides of the fault slid by as much as 20 feet / 6 meters relative to each other. Neither Skyline Drive nor these houses existed in 1906. But in years since, families seeking inexpensive coastal property prompted developers to build housing in narrow 50-foot / 15-meter lots right on the fault line. My check on Zillow.com check today showed a typical 3-bedroom, 1-bath house in this neighborhood was valued between \$1 million and \$1.5 million.

**7 Clingy to a fault, Mussel Rock Park, Daly City** – Mussel Rock Park is where the San Andreas Fault crosses the beach south of San Francisco to run down the Peninsula to San Jose and farther southward along the western edge of California. The houses perched along the cliff edge are in the same neighborhood as those in the “Gimme a place at the beach” photo on the previous page.

**8 Tidepool star, Moss Beach** – The “king tides” that happen once or twice a year along our coast, bringing the highest and lowest ocean levels on the same days. They also bring thousands of people to the beach during the low tides to see the marine life in tide pools, like this starfish at Moss Beach.

**9 Haven't the foggiest, Golden Gate Bridge** – It’s not like the Golden Gate Bridge doesn’t get enough camera love, but it’s not like you can do a photo spread of the coast in this area and leave out the bridge, either. The fog, which is as integral to the coast as the bridge, drains the color from the Golden Gate, which is the strait between the ocean and San Francisco Bay, and got its name long before the bridge was opened in 1933. The bridge itself is orange.

**@ You light up my life, Point Bonita** – The U.S. West Coast’s third lighthouse was built to mark the entrance to the Golden Gate in 1855, when California had been a state for only five years, and only six years after the Gold Rush exploded San Francisco’s population from 900 to 20,000. Turned out that the light, built 300 feet above the ocean, was often obscured by fog. A lower light had to be built at the bottom of the cliff. Fog is endemic along the coast, but the Golden Gate is an opening through the coastal mountains through which the ocean winds can blow fog inland.

**(R) One more wave, Pillar Point (next page)** – A couple of surfers try to squeeze in a final wave before sunset. Out of the frame to the right is the fishing harbor of Pillar Point and Mavericks Beach, home of the nearly annual Mavericks big wave surfing competition. The dark band on the horizon line is the incoming marine layer, i.e., fog.





*One more wave*

Pillar Point  
Map location ®