

A Quasi-Nature Walk through the Corte Madera Creek Marshes

by Sam Wilson

2003

Don't worry about getting your feet wet on this outing; the Corte Madera Creek estuary is pedestrian friendly. The levees and railway embankments constructed over the years in the low-lying Corte Madera/Larkspur shore area provide high and dry trailways. And the hydrological manipulations that attempt to control the interplay of tides and stormwater flows are almost as fascinating as the wildlife you'll encounter.

A good place to start is the parking lot in back of Macy's, at the southeast corner of the Village Shopping Center, from which you take the crosswalk toward the Bay. This puts you at the end of the southern reach of Shorebird Marsh, where a long, straight-and-narrow channel of water disappears into culverts. This is "restoration" (a.k.a. "enhancement") country, where the meanders of bayside sloughs are sometimes straightened for expediency's sake; in this case to facilitate the flow of winter stormwater toward the Bay.

Walking northward, you'll find that the channel extends for few hundred yards before it widens into the main body of Shorebird Marsh. The view is often obscured along the way by thick growths of fennel, a non-native species that dominates many levee-top areas around the Bay.



Muzzi Marsh, Corte Madera

The channel runs parallel to a particularly low-lying stretch of highway 101, which sometimes—when unusually high tides and intense winter stormwater flows co-occur—takes a bath. But flooding used to be more frequent here, before Shorebird Marsh was developed as a floodwater catchment basin in the 1980s. Modified for this purpose as part of the deal for permitting construction of the Village Shopping Center, Shorebird Marsh was also designed to provide habitat for native wildlife. It works fairly well, although it's asking quite a bit of such a highly modified estuarine environment to serve both functions.

Shorebird Marsh is rather sparsely vegetated to be considered a fully functioning marsh. It is notably lacking in the "emergent" vegetation—that is, vegetation that spans the transition between inundated and upland elevations—which is characteristic of natural marsh environments. One might expect, for example, that upright-growing species including cordgrass and alkali bulrush, which typically occupy similar habitat in the Bay Area, would be prevalent here. But low tides in Shorebird Marsh expose a vast expanse of unvegetated mud flats. Apparently the natural tidal cycle has been so disrupted that wetland plants can't cope here.

The birds don't seem to mind, though; in fact certain of them appear to find refuge in the broad, naked expanse of mud. White pelicans, for example, are particularly fond of hanging out on a raised islet that was designed into the marsh's topography. The white pelican, whose black-tipped wings make it one of the most visually striking of bird species, is less common in the Bay Area than the brown pelican and is also more shy. It's a migratory species that winters here and has arrived somewhat early this year. You can get a drive-by view of them from the parking area provided for just this purpose, along the frontage road north of the Village Shopping Center. Many other species of waterfowl find refuge and sustenance in Shorebird Marsh, including Forster's tern, for which the area has been groomed to provide breeding habitat.

If you keep walking along the trailway for about a mile beyond the start, you'll arrive at the heart Shorebird Marsh, where tidal and stormwater flows are controlled by a system of pumps and a tide gate. During periods of peak tidal flows, egrets and herons tend to skulk around the swift-flowing waters at the tide gate, apparently waiting for fish that have been caught unawares by the current.

The Corte Madera Public Works Department controls tidal flows into and out of Shorebird Marsh to keep water levels low during the winter rainy season, thus maximizing flood storage capacity. More tidal action is allowed in the summer, but still less than in surrounding areas with natural tidal flows. In the summer, the maximum tide level is kept relatively low to accommodate breeding Forster's terns, which, accustomed to the artificially low winter tide levels, tend to nest too low in the intertidal zone.

To move on to other areas of the marsh complex, head back down the trailway toward where you started, until you come to the first left turn you can take (about 100 yards south of the tide gate/pump station). This levee-top trail will first loop back in a northward direction until you reach the long, narrow, man-made channel that joins Shorebird Marsh to the Bay. Here the trail turns eastward, taking you on a heading toward Point San Quentin.

To the north, across the channel, you'll see a broad expanse of nearly pristine salt marsh—the Corte Madera Ecological Reserve—with the characteristic array of Bay Area intertidal plant species. These include yellow-flowering gum plant (a member of the sunflower family) at the highest tide level. At successively lower levels the dominant vegetation includes salt grass, which bears a resemblance to crabgrass; pickleweed, a segmented succulent; and cordgrass, which has to grow stiff and tall to keep its seed-head above water at high tide.

To your right, on the south side of the channel, the ecosystem is entirely different. This is a large, 72-acre plot, totally surrounded by levees, and therefore, dry at this time of year. The vegetation it supports is largely exotic, including such plants as pampas grass, Harding grass, and acacia.

It might seem odd that such an area would persist here, when all that would be necessary to return it to intertidal wetland habitat would be to breach the levee, but there are historical as well as environmental explanations for its persistence. At the time of the construction of the Larkspur Ferry terminal, the Golden Gate Bridge District used the area to dump construction spoils, and the plan was to continue using the area as a dredge-spoils dumping ground, until the Sierra Club and Marin Audubon Society pointed out that much of the area had become a functioning seasonal wetland and thus subject to protection under the Clean Water Act. The same environmental groups also took the Bridge District to task because the ferry wake was eroding the outer edge of the intertidal areas in the vicinity of the ferry terminal.

The upshot is that the Bridge District has agreed to mitigate by returning five acres at the northern end of the former spoils-disposal area to saltmarsh. The remaining 67 acres will remain essentially as is for the time being, in order to maintain it as seasonal wetland and wildlife habitat. Enhancement activities on the northern five acres are scheduled to begin about a year from now.

As you continue to walk along the levee, you'll head directly toward the prison for a couple hundred yards then round a bend and walk south for about a mile, paralleling the trailway taken on the outbound leg. To the west, pickleweed and cordgrass dominate a broad swath of saltmarsh, which also extends south of the former spoils-disposal area. This southern expanse of saltmarsh is known as Muzzi Marsh.

The westward walk along the top of the levee between Muzzi Marsh and the former disposal area brings you back to where you started—where the long, narrow extension of Shorebird Marsh disappears into culverts. Actually the direction of flow here doesn't enter the culverts but instead emerges from them.

There are a total of three culverts: two that enter the canal side-by-side and a third that is off by itself. The paired culverts collect surface stormwater flows from areas east and west of highway, and the third culvert receives water that is pumped from a stormwater catchment basin south of Muzzi Marsh. Before you take the crosswalk back to the Macy's parking lot, you might want to check out this area, but I'll leave that bit of exploration to you.

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