

Marsh Mailing

Madrona Marsh Preserve and Nature Center

Our New Biofilter: A Giant Leap Forward

—Bill Arrowsmith

Our previous Naturalist, Walt Wright, had a saying that has become a mantra for those who do anything on the Madrona Marsh Preserve: “No Net Harm.” A simple-sounding basic tenet, but this rule has at times been difficult to follow. It means that, in our various efforts to restore and enhance the Preserve, we must be careful not to accidentally do just the opposite. For instance, if you are clearing weeds from around a mature Coast Buckwheat plant and accidentally step on or remove tender new baby plants around it, we have suffered a net loss (harm), for it will take a long time to re-establish them.



Construction of new subsurface biofilter begins with a 110'x35'x6' hole, lined with fabric to form water barrier.

only avoid ‘net harm’, but to actually improve our environment on the preserve – often by removing something unwanted. A case in point: In the summer of 2009 we had a backup at Drain #1 at the southwest corner of the Preserve contaminating the vernal marsh. Investigation showed the backup was the result of someone’s illegally disposing of trash by stuffing it down nearby stormwater catch basins. Fortunately, American Storm Water, the company which responded to this emergency introduced

us to a product of theirs called a Surf Gate, which protects catch basins from illegal access. They even in-

But occasionally we have an opportunity to not

continued on page 2

Annual Meeting of the Friends of Madrona Marsh

**Sunday, January 29, 2012 starting at 3 p.m.
Madrona Marsh Nature Center Meeting Room
3201 Plaza del Amo, Torrance, CA 90503**

(Note: Come early for Tours of our new subsurface filtration system from 2-2:45.—See above story.)

- **Election of 4 Members of Board of Directors**

Candidates:

- **Suzan Hubert**
- **Ellen Peterson**
- **Suzanne Gibson**
- **Bill Arrowsmith**

- **Annual Report from Manager and Naturalist, Tracy Drake**

- **DOUBLE-HEADER PROGRAM:**

1. **Our New Modular Wetland Systems Linear Filtration System**

Mr. Zach Kent, MWS Project Manager, will describe the features and operation of our new subsurface flow filtration system, including its biofilter, and answer your questions

2. **Madrona Marsh Preserve Biological Inventory**

Dr. Emile Fiesler and Dan Cooper will present highlights of their just-completed 18-month biological inventory of the Preserve in the first of a series of talks about their methods and discoveries.

*** Light Refreshments Will Be Served ***

Continued from page 1.

stalled one at Drain #1 gratis, and the Friends installed another across the street near the carwash. Problem solved. No more backups. No net harm—in fact, a net gain.

Right now the City of Torrance Public Works Department is completing a project which is not only “no net harm” but is potentially the most positive environmental step on the Preserve since the City took ownership in 1986. Using funding from the Santa Monica Bay Project, the City is installing a new Stormwater Filtration System next to the drainage basin (sump) at the southeast corner. The system was built and installed by Modular Wetland Systems from Oceanside and is about the size of a large swimming pool (110 feet by 35 feet by 6 feet) and is completely below ground level just north of the sump. A new pump will bring runoff water from the sump up to the filter, then gravity will carry that water through the filter then down a new riprap stone causeway at the northeast corner of the sump, aerating it and exposing it to sunlight. And then... then the process will be repeated, and each time the water is circulated it will come out cleaner. Then, in late spring when we pump water on to the Preserve to allow our brooding birds more time for fledging, that water will be cleaner than it's been in years!

Also, we will continue to circulate runoff water through the filter during the summer and fall so that next year we will start with an even cleaner slate.

Exactly how does this filter work? Well, I can tell you that it's a multi-step process, that uses some very interesting materials as well as plant roots for the filtration process, and that if you want to know more about it, you should come to the Friends' Annual Meeting at the Nature Center on Sunday afternoon, January 29, 2012, at 3 p.m. Our first speaker will be Zach Kent, Project Manager for our filtration system for Modular Wetland Systems. He will have charts, pictures and



The hole is then filled with adsorbent gravel-like stone plus rows of special absorbent media (lighter boxes) in which grass will be planted.



Biofilter complete with special Vetiver grass from India planted. Twelve pipes protruding at far end supply water that has been pumped up from the sump.

the knowledge to answer all your questions. I hope to see you there. Better yet, come an hour early and take a quick tour to see the new Modular Wetlands System Linear Stormwater Filtration System for yourself. Tours will be given from 2 to 2:45 p.m. —B.A.

“Magic” Thanks

The Magic Makers want to thank all of our supporters for making Starlight Magic 2011 a great success. Some people sold tickets; some collected auction donations or kept track of our finances, some people gave us great ideas and some of you attended and had a good time.

Thank you one and all.

We do put the fun in fundraising and we would welcome your assistance for Moonlight Magic 2012. We need creative ideas, donations of interesting items and adventures for auction. We also welcome your emailed suggestions. Our planning meetings are on Thursdays at 10 a.m. at the Nature Center. We will begin our planning for Moonlight Magic 2012 in February. Please contact Suzan at suzanhubert@sbcglobal.net.

—The Magic Makers; Bobbie, Mary and Suzan

Lowe's Donates Christmas Tree

The Friends are delighted to thank Lowe's Hardware on Skypark Drive for donating a beautiful Douglas fir to the Nature Center. This is the second year that Lowe's has supplied a Christmas tree for the Center, and we are very grateful for their generous gift. Do stop by the Nature Center and see it. Thank You, Lowe's!

Marsh Mailing is a quarterly newsletter designed to provide information about activities and upcoming events at or relating to the Madrona Marsh Preserve. Contributions are welcome and may be e-mailed to Diane Gonsalves at gonwild2@yahoo.com or Bill Arrowsmith, TheArrowsmiths@sbcglobal.net, or dropped off or mailed to the Nature Center.

Magic in the Stars

—Bill Arrowsmith

Suzan Hubert thrives on challenge. And so does Mary Garrity. And when Bobbie Snyder joins them, the challenges usually run the other way. Suzan was the chair of last year's tremendously successful fundraising event, *Moonlight Magic*, and Bobbie and Mary were her fellow magicians in the careful year-long planning and multi-month execution. And even though many of us were just hoping we'd break even on the first year of this event, it netted over \$15,000. Superb.

But that made the pressure even greater this year: Could we match last year's success, or had it



Terrific Trio-Happy times at Starlight Magic with trio, Bobbie Snyder, Suzan Hubert, and Mary Garrity, plus Tracy Drake on guitar. Photo courtesy of Mark Comon.

been a fluke? Isn't the economy even worse this year?

Let's add some more to the 'challenge:' How about no good dates with a full moon? And when they did pick a date, our super combo from last year, 'The Vipers,' was not available. Oh, and responding to comments from last year, the magicians made the menu bigger and better and improved the lighting which meant we had to sell even more tickets just to break even. And then there was that pesky program at the Cultural Arts Center the same evening. Then, three weeks before the event, one of our sentinel chickens tested positive for West Nile Virus. Good. More of a challenge.

No moon? No problem, this year we'll call it *Starlight Magic*. No Vipers? No problem, our intrepid trio found 'The Retros' with the same great oldies style music. Worried about mosquitoes? We'll have insect spray available (nobody saw any mosquitoes that night). Starting in early spring, Suzan, Mary and Bobbie met every Thursday to plan strategies, contact donors and assign tasks and ultimately to infect all of us with their enthusiasm. They got the same great

auctioneer, former Councilman Paul Nowatka, to handle the live auction and this year Mark Comon was our emcee. Red Car Brewery came through in spades with delicious chicken barbeque, plus their great micro-brewed beer. And once again we had excellent vintage wine from Pernod-Ricard.

The weather was very cooperative, actually balmy and warm on October 1 (though it had threatened us for a week). Our ticket sellers had done a terrific job, selling all 200 tickets—some via PayPal on our website. The tables were beautifully arranged, and the band took us back to fonder decades as we 200 sipped wine or beer or water and wandered among a vast number of silent auction items, or joined Paul Livio to gaze at planets and stars, or got our barbecue dinner before the auction began. And we talked to each other—and that's perhaps my favorite part of the fundraiser, the really wonderful people I end up talking to; people who, like you and me, love our Preserve and want the best for it.

Mark Comon got everything off to a bouncing start, and after a short presentation by Manager Tracy Drake introduced Paul Nowatka, and the serious bidding began. You couldn't pick a better pair to host this event. And we certainly couldn't afford anyone as good as they are. Thank heaven they both love the Preserve as well, and donate their services. We had more auction items this year, too, fantastic items including Beth Shibata's signature print for *Starlight Magic*, "Hawk in the Sycamore." And yes, even amid the bidding and frivolity, we did "Howl at the M-, umm Stars". At least, the women did. As auctioneer Nowatka said after the men's effort, "That's pathetic!" (Guess we have some work to do before next year.)

As you can gather, a good time was had by all. But what about the money? For that we turn to Friends treasurer Ellen Peterson, who again did a heroic job of tracking all our expenses, donations, ticket sales and event night auction bids. By the way, Thank You, Ellen. We don't say that enough.

Ellen tells us that our expenses this year were almost \$2000 greater than last year; not bad, considering the expanded menu and lighting. And the income? Well, it was greater, also. Much greater. In fact our net profit this year was over \$20,000! That's a 33 percent increase over last year's success.

Challenge met.

Our deepest gratitude to all of you who attended *Starlight Magic*, to all who sold tickets or donated goods or services, or worked the night of the event and, of course, to all our sponsors. And especially to Suzan, Mary, and Bobbie, who made the magic happen.

Community Services Director John Jones swears this year's success was the result of the weekly appearances the terrific trio made, led by Suzan, during orals at City Council meetings. He may be right.

Biota of the Marsh—What Have We Found?

—Daniel S. Cooper

This year marks the end of the “Madrona Marsh Preserve Biological Inventory” that was conducted by myself and Emile Fiesler from late 2009 to this past fall. In that time, we have logged hundreds of field hours at the Preserve, and many hundreds more hours (particularly in the case of Emile) identifying photographs of insects and plants taken there by our team and others, and poring over earlier studies at the site. Starting next year, we will initiate a series of talks at the Preserve and elsewhere to discuss our methods in more depth, and to explain our findings. In advance of that, I wanted to share a few of the notable and relevant discoveries we’ve made in the last couple years.

To briefly summarize our methodology, we approached this inventory by splitting up research on the major species groups (birds, mammals, etc.), and used the results of our contemporary surveys to confirm previous findings of prior reports, including environmental documentation in the 1970s and 80s, and the comprehensive 2005 management plan that pulled together several decades of observations and notes. This exercise resulted in confirmation that several species are now extirpated (i.e., gone) from the Preserve, and revealed that some of the earlier assumptions about the identity of the vegetation here need to be revisited. It also offered a revised interpretation of the habitats present at the Preserve, and, in turn, what its restoration would look like. We also documented numerous species of plants and animals, particularly invertebrates, that had not previously been found here. Below I focus on just two groups, nesting birds and plants, to illustrate some of these findings and the challenges in their interpretation.

For birds, we found “regional” breeding evidence for up to 20 species during spring and summer 2010, but confirmed just 10 species as actually nesting on the Preserve itself. In many cases, birds appeared with young-of-the-year that had not been present earlier in the season, so would have nested off-site. Obviously, the Preserve is a small, isolated area (less than 50 acres of open space), with room for only a few territories of birds, period. Therefore, the turnover in bird species nesting each year might be expected to change dramatically. For example, taking the case of California towhee, only one or two pairs may actually nest each year, maybe none in other years. If in one year, one towhee pair does not nest for whatever reason, this could reduce the number of nesting species by 10% that year. This illustrates the importance of repeating these surveys at a regular interval, if just to “take the pulse” of the Preserve to see if the same species are re-nesting here year after year, and to gauge

turnover in the bird community. Some of the species suspected of nesting nearby, but not on the Preserve itself, such as House Finch, probably nest onsite in some years, but were simply not doing so during our intensive work in 2010. Indeed based on the notes of local birder David Moody, fluctuation in the number of nesting species seems to be the rule; for example, he recorded 28 species as nesting at the Preserve in 2006, while just 8 species apparently did so the year before (2005). [Of course, consistency in data-collection may come into play in this case; our surveys obviously did not extend back to 2006]. Still, it is worth noting that during the 1970s, a comprehensive, well-annotated species survey by local birding legend Shirley Wells confirmed just 13 species nesting on the site, fairly similar to our 10, indicating that the overall number of bird species may not have significantly declined in the last few decades. Not surprisingly, several birds that she found nesting here in the 1970s are long gone as breeders in the entire South Bay area, including Loggerhead Shrike and Western Meadowlark; even Killdeer has not nested at the Preserve in recent years, and may only occur as a migrant. By the same token, many species nesting today were not doing so historically, such as Allen’s Hummingbird.

In the case of plants, we set as our goal to collect at least one specimen of every plant species on the preserve, with identification help provided by Andy Sanders of the University of California, Riverside, a known authority on Southern California flora. Andy has graciously agreed to permanently house all the Madrona specimens, which now number close to 230, and will be around 250 by the time final identifications are completed in 2012. More than 60 of these plant species had not been included in any previous plant lists for the Preserve, and were not listed in the 2005 Habitat Management Plan. Many of these “new” species are native, naturally-occurring taxa whose presence had either been overlooked, or were called other species, based on poor illustrations or photographs in existing books (even more so than for birds, plants often look “nothing like the one in the book!”). In all, we documented over 80 native, naturally-occurring species at the Preserve, though some are extremely difficult to identify, even for good naturalists. Somewhat disturbingly, a dozen species known from a cache of older (1976) specimens from Madrona Marsh housed at the tiny Cal State Long Beach Herbarium (now inactive) appear to have been lost in the intervening years, including some vernal pool species such as bracted verbena (*Verbena*

Continued on page 8.

Shirley's Turn

—Shirley Turner

Insects Inspire Stickier Tape

The tricks insects use to walk up walls or suspend themselves from ceilings have been incorporated into a new stronger tape that can be repeatedly peeled off surfaces and reapplied. Researchers in Germany developed the silicon tape with thousands of tiny, flat-tipped hairs, mimicking those on insects' feet and legs, which give bugs a disproportionately large surface contact area to grip even rough surfaces. Their patterned tape was at least twice as difficult to peel off as flat tape made with the same material.

Drones Flock Like Birds

The newspaper *Investors Business Daily* (IBD), frequently reports Trends in Science. In November they reported a study on birds flocking which showed that military drones could be made to do the same. Researchers in Switzerland have found a way to make small, fixed-wing planes fly together, migrate and avoid crashing. The swarms can be used for imaging and mapping the ground and in the future may be used for search and surveillance missions. *[Editor's note: Shirley brought this interesting story to our attention so we found a report of the original study at [Wired.com](http://www.wired.com), with the information which follows.]*

The swarming behavior is based on a three-dimensional algorithm, developed in 1986 by Craig Reynolds, that represents the movements of schools of fish and flocks of birds. In the algorithm, as in real flocks, the individual agents behave simply. They respond to their close neighbors without considering the movements of the group. Yet out of the noise, larger

patterns emerge, coherent and beautiful.

The researchers found that flocking requires three things: You need to move with the same speed and direction as your neighbors, you need to avoid hitting them and you need to stay close. Then they added a fourth ability: migration. With this ability, the robot swarm can travel to a set location, making them more useful as search and surveillance tools. (<http://www.wired.com/wiredscience/2011/09/flocking-robots/>)

Wrinkles

Another story in IBD dealt with wrinkles on the gecko's foot which led researchers at Brown University and in Korea to insert folds in super thin (nanoscale) films. They discovered unusual results: wrinkles on super-thin films have hidden long waves, and folds in such films produce nanochannels, like thousands of tiny subsurface pipes. (<http://www.sciencedaily.com/releases/2011/11/111122230924.htm>)

Perhaps they can be used to make smaller computer chips. Turn ideas around and upside down. Think visually—a reason to study biology. There are 4 books titled "Think Visually." One by Dr. Stephen P. Reed is excellent.

"The more original a discovery, the more obvious it seems afterward." —Arthur Koestler, author, on Innovation.

Editor's Note: As we searched for more information to fully understand Shirley's stories, we ran across this site which we think both you and Shirley will enjoy. It contains a video from July, 2011, of a robot that actually flies just like a bird: http://www.ted.com/talks/a_robot_that_flies_like_a_bird.html

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Madrona Marsh Preserve and Nature Center

Schedule of Events*

December 2011-March 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				10 am- Tyke Hike (fee) 10:30am-12:30pm- Propagation Society	10-11:30-am- Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 10 am-12 n- "Magnificent Manzanitas,"/Dr. Vadheim 6:30-8:30 pm-Star Party
4	5 CLOSED	8:30 am-Tour d'Torrance 10 am-12 n-Weeders 6:30-8:30pm- "Magnificent Manzanitas," Dr. Vadheim	7 10 am-12 n-Habitat-Weeders	8 10:30 am-12:30 pm-Propagation Society 6:30-8:30 pm- Flavored Vinegar for Holidays (fee)	9 10-11:30-am- Friday Fun*** (fee) Artist Recept, Betty Fenton**	10 8:45 am-12 n-Habitat Restor. & Student Serv. Learning 6:30-8:30 pm-Night Hike (fee)
2 - 4 pm-Second Sunday Science- "Ancient Reptiles"/ Bob Carr (fee)	12 CLOSED	13 10 am-12 n-Weeders 9-11 am-Mornings on the Marsh	8 am- Bird Walk/ Bob Shanman 10-12 n-HabitatWeeders 6:30-8:30 pm-FOMM Board Meeting	15 10:30 am-12:30 pm-Propagation Society	16 10-11:30-am- Friday Fun*** (fee) Betty Fenton Exhibit Ends**	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 10 am-12 n-Wreath Making (fee) 10 am-Nature Walk
18 10 am-Nature Walk	19 CLOSED	8:30 am- Tour d'Torrance 10 am-12 n-Weeders 7 pm- Audubon Meets	21 10-12 n-HabitatWeeders	22 10:30 am-12:30 pm-Propagation Society	23 CLOSE AT NOON	24 CLOSED FOR CHRISTMAS HOLIDAY
25 CLOSED FOR CHRISTMAS HOLIDAY	26 CLOSED	27 10 am-12 n-Weeders	28 10-12 n-Weeders	29 10:30 am-12:30 pm-Propagation Society	30 10-11:30-am-Friday Fun***(fee)	31 8:45 am-12 n-Habitat Restor. & Student Serv. Learning

DECEMBER

*All activities and classes meet at the Madrona Marsh Nature Center, located at 3201 Plaza del Amo (between Maple and Madrona) on the north side of the street. **See Artists Corner, page 9. ***No fee charged for Friday Fun , but reservations are required. For the latest event information, consult website, www.friendsofmadronamarsh.com.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 CLOSED FOR NEW YEARS DAY	2 CLOSED	8:30 am- Tour d' Torrance 10 am-12 n-Weeders	4 10 am-12 n-Habitat Restoration Weeders	5 10 am- Tyke Hike (fee) 10:30 am- 12:30 pm- Propagation Society	6 10-11:30-am- Friday Fun***	7 8:45 am-12 n-Habitat Restor. & Student Serv. Learning 10 am-12 n- "Garden Tasks"/ Dr. Vadheim
2-4 pm- 2nd Sunday Science "Birds of Winter"/Tracy Drake(fee)	9 CLOSED	9 am-Mornings on the Marsh 10 am-12 n-Weeders 6:30-8:30 pm- "Garden Tasks," /Dr. Vadheim	8 am- Bird Walk/Bob Shanman 10 am-12 n-Weeders 6:30-8:30 pm- FOMM Board Meeting	12 10:30 am- 12:30 pm- Propagation Society	13 10-11:30-am- Friday Fun***	14 8:45 am-12 n-Habitat Restor. & Student Serv. Learning
15	16 CLOSED	8:30 am- Tour d' Torrance 10 am-12 n-Weeders 7 pm-Audubon meets	18 10 am-12 n-Habitat Restoration Weeders	19 10:30 am- 12:30 pm- Propagation Society	20 10-11:30-am- Friday Fun***	21 8:45 am-12 n-Habitat Restor. & Student Serv. Learning
22	23 CLOSED	24 10 am-12 n-Habitat Restoration-Weeders	25 10 am-12 n-Habitat Restoration Weeders	26 10:30 am- 12:30 pm- Propagation Society	27 10-11:30-am- Friday Fun***	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 10 am-Nature Walk 2-2:30-pm-Storytime for Kids 8-10 pm-Star Party
10 a.m- Nature Walk 3 pm-Annual MMFriends Mtg.	30 CLOSED	8:30 am- Tour d' Torrance 10 am-12 n-Habitat Restoration Weeders Eun Cho Painting Exhibit Begins	31			

JANUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			10 am-12 n-Habitat Restoration Weeders	10 am-Tyke Hike (fee) 10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv.Learning 10 am-12 n- "Low & Northerly" / Dr.Vadheim
5	6 CLOSED	8:30 am-Tour d' Torrance 10 am-12 n-Weeders 6:30-8:30 pm-"Low & Northerly" /Dr. Vadheim	8 am-Bird Walk/Bob Shanman 10 am-12 n-Weeders 6:30-8:30 pm-FOMM Board Meeting	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv.Learning
12 2-4 pm- 2nd Sunday Science-"Endangered Species"	13 CLOSED	9 am-Mornings on the Marsh 10 am-12 n-Weeders	10 am-12 n-Habitat Restoration Weeders	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee) Cho Reception**	8:45 am-12 n-Habitat Restor. & Student Serv.Learning 8-10 pm-Night Hike
19	20 CLOSED	8:30 am-Tour d' Torrance 10 am-12 n-Weeders 7 pm-Audubon meets	10 am-12 n-Habitat Restoration Weeders	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 10 am- Nature Walk 11-11:30am-Storytime for Kids
26 10 a.m- Nature Walk	27 CLOSED	10 am-12 n-Habitat Restoration-Weeders	10 am-12 n-Habitat Restoration Weeders			

FEBRUARY

*All activities and classes meet at the Madrona Marsh Nature Center, located at 3201 Plaza del Amo (between Maple and Madrona) on the north side of the street. **See Artists Corner, page 9. *** No fee charged for Friday Fun, but reservations are required. For the latest event information, consult website, www.friendsofmadronamarsh.com.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				10 am-Tyke Hike (fee) 10:30am-12:30pm-Propagation Society	10-11:30-am-Friday Fun*** (fee) Cho Exhibit Ends**	8:45 am-12 n-Habitat Restor. & Student Serv.Learning 10 am-12 n- "Delightful Dudleyas" /Dr. Vadheim
4	5 CLOSED	8:30 am-Tour d'Torrance 10 am-12 n-Weeders 6:30 pm-"...Dudleyas" Dr. Vadheim Shibata Exhibit Begins**	10 am-12 n-Habitat-Weeders	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv.Learning 9am-12n-Arbor Day
11 2 - 4 pm-Second Sunday Science-"Reptiles...Oh My!" (fee)	12 CLOSED	10 am-12 n-Weeders 9-11 am-Mornings on the Marsh	8 am- Bird Walk/ Bob Shanman 10-12 n-HabitatWeeders 6:30-8:30 pm-FOMM Board Meeting	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 9am-4pm- "Generation Earth"
18	19 CLOSED	8:30 am-Tour d'Torrance 10 am-12 n-Weeders 7 pm- Audubon Mtg.	10-12 n-HabitatWeeders	10:30 am-12:30 pm-Propagation Society	10-11:30-am-Friday Fun*** (fee) Beth Shibata Artist Reception**)	8:30-10:30 am-Birding by Ear 8:45 am-12n-Habitat Restor. & Student Serv.Learning 10 am-Nature Walk
25 10 am-Nature Walk	26 CLOSED	10 am-12 n-Weeders	10-12 n-Weeders	10:30 am-12:30 pm-Propagation Society	10-11:30- am-Friday Fun*** (fee)	8:45 am-12 n-Habitat Restor. & Student Serv. Learning 7-9 pm-Star Party

MARCH

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bracteata) and sea-purslane (*Sesuvium verrucosum*). However, it is possible they occurred just to the west, across Maple Avenue, when that area was cultivated fields and grassland prior to its development into condominiums in the 1980s.

One of the most significant botanical discoveries was our finding a huge population of a globally-rare aster, the southern tarplant *Hemizonia parryi* ssp. *australis* on the Preserve, a species ranked as 1B.1 by the California Native Plant Society (“Rare, threatened, or endangered in California and elsewhere, and “Seriously endangered in California”). Our mapping in September 2010 estimated nearly 50,000 plants across more than 12 hectares at Madrona Marsh, mainly in low-lying and briefly-flooded alkali soils, but also along well-used dirt roads throughout the site, where it co-occurs with another species of native tarplant, *Hemizonia fasciculata*, which has smaller flowers free of nasty spines. Unfortunately, southern tarplant had been misidentified at the Preserve in past literature (as the non-native *Hemizonia pungens*), and its significance was little-appreciated until recently (the Madrona population may be one of the largest, if not the largest, left on Earth).

Stay tuned for more news on these and other species when our final report is released. And thanks for your patience!

Thieves Steal From Marsh

Reprinted courtesy of the Daily Breeze, Nov. 11 issue.

Burglars broke into the Madrona Marsh Nature Center and Preserve in Torrance and stole about \$10,000 in power machinery, officials said Friday.

The theft occurred sometime after the preserve closed at 5 p.m. Thursday and before employees arrived at 7:30 a.m. Friday, Torrance police Lt. Devin Chase said.

Investigators believe burglars cut open the outside gate, and then drove a truck with an attached trailer into the 43-acre preserve, located at 3201 Plaza del Amo.

Madrona Marsh is considered one of the last remaining vernal marshes in Los Angeles County and is largely funded by a nonprofit organization.

The thieves allegedly pried the hinges off of several storage sheds and looted them.

A Husqvarna riding lawnmower, worth about \$6,000, was taken along with chainsaws, weed trimmers and other tools, Chase said.

“Over \$9,000 in maintenance tools were taken,” Chase said. “It appears from tire tracks that they used a large truck with a trailer.”

Investigators have asked anyone with information about this crime to call Torrance police detectives at 310-618-5570.

—Sandy Mazza, *Daily Breeze* Writer

We would like to express our sincere gratitude to the following corporations that sponsored our 2010 Moonlight Magic AND 2011 Starlight Magic Fund Raisers:

ExxonMobil

Toyota

Your support allowed us to assemble and execute the most successful fund-raising events in the 40-year history of the Friends of Madrona Marsh.



The Oak Tree and the Ash Tree

—Tracy Drake

Dedicated to Neal Teague and Doris Forrest

In the heat of the summer all the major annual maintenance of the Preserve gets done. Tons and tons of tules are removed and hauled away and new paths through the tules are created; the entire Preserve is mowed just a little at a time, and hundreds of trees are pruned. It is a lot of work—work spanning all 45 acres of the Preserve.

The work in the wetland area holds back natural succession, the process by which wetland areas can fill in with plants until a major rain event floods the land and rips the plants from the ground (this does not happen locally anymore) or all the plants grow to maturity creating a woodlands and that—in time—dies, and the land becomes a wetlands once more. Much of the work is done by hand by staff and volunteers. It's hot and dirty work but when the rain comes in a few months, the water will fill in the wetlands and all of us will enjoy the beauty of the Marsh again The uplands will fill with lush green grasses and wildflowers and the fragrance of spring will delight the senses.

Just inside the front gate of the Preserve there are a few small Coast Live Oak trees. Oak trees are uncommon locally so these are particularly noticed by visitors who know about trees and by nearly all of our long-standing volunteers. Lately I gaze at those trees and remember Neal Teague. He passed recently, and we all miss him. In all, he volunteered for nearly 30 years—worked thousands of hours. He was a man of the morning as I usually saw him arrive at 6:30 a.m. and work till about 9:30 a.m., three days a week. His small pale white car would often be the first thing I looked for when I arrived at the Center. He did everything.

He, by hand, a frail man over 75 years old, pounded the tines of our weeding tools straight—weekly. He kept all of our garden carts in working order, often disassembling ones beyond repair to keep others working. He made sure every tree on the Preserve was watered properly during the summers and fixed the irrigation to the trees as the sprinkler heads would often get mowed over. He communicated with me via fax. A list of his maintenance concerns would be waiting for me—he was always willing to help get those tasks done. And he pruned the Oak trees so that they would grow thick and strong. He was like an Oak tree to me—unflappable. Oak trees, even in fierce wind, will not sway. Like them, he too was completely unflappable in his dedication to the Preserve.

Thirty years. That's a long time. Thank you Neal You will be remembered.

Not far from the Oak trees, across the street, near the corner of Sepulveda and Maple, there is an Ash Tree. Tucked in between a few evergreen trees its salmon colored blooms are brilliant and cheerful this time of year. Every morning I see the tree and for the last several weeks it has become how I remember another lost volunteer—Doris Forrest. She worked at the reception desk in the Nature Center, Friday, 1-4 p.m.; for about five years. It's a hard shift to fill because it is a very busy time. But she was perfect for it. Cheerful and light, everyone loved talking to her—and she to them.

At the beginning of her shift she would pull from the rack the entire set of upcoming event fliers so she had all the information she needed when people called to ask questions about our programs. She took on many projects from tracking the fliers and making sure they were all current, to sorting through piles of data, making sure we included all necessary information in reports. But, at 3:30 p.m., she needed to be done with all projects and alone at the reception desk. This was the time when her husband Bill, another long-time volunteer and Board member, would come in and bring her a cup of coffee from Starbucks. He came in to see her every single Friday after bowling. They would talk with the grace and beauty that comes when a couple has been together for so long. She laughed—A LOT! Both of them would, and then they would go home. Her laughter echoes in my imagination now, every time I see that Ash tree.

Thank you Doris, we will remember you too

Artists Corner

Works of local artists and photographers inspired by the beauty of the Madrona Marsh are regularly on display at the Nature Center. Everyone is invited to attend each artist's reception where the artist talks about his/her work or gives a demonstration. Snacks and beverages are served.

Through December 16 - **Betty Fenton**, "*Wings & Things*." Artist Reception, Friday, December 9, 6:30-8:30 p.m.

January 31-March 2, 2012 - **Eun Cho** "*A Painting Exhibit*." Artist Reception, Friday, February 17, 6:30-8:30 p.m.

March 6-April 20 - **Beth Shibata**, "*A Photography Exhibit*." Artist Reception, Friday March 23, 6:30-8:30 p.m.

If you would like to display your art at the Nature Center, please call for more information: 310-782-3989.

Birds of the Preserve

Lists were compiled by Tracy Drake

October 1, 2011

Mallard	Western Kingbird	Wilson's Warbler
Snowy Egret	Cassin's Vireo	California Towhee
<i>Northern Harrier</i>	Warbling Vireo	Chipping Sparrow
Sharp-shinned Hawk	Steller's Jay	Clay-colored Sparrow
Cooper's Hawk	Western Scrub-Jay	Brewer's Sparrow
Red-shouldered Hawk	American Crow	<i>Vesper Sparrow</i>
Red-tailed Hawk	Common Raven	Lark Sparrow
American Kestrel	Violet-green Swallow	Savannah Sparrow
<i>Merlin</i>	Barn Swallow	Song Sparrow
Peregrine Falcon	Bushtit	Lincoln's Sparrow
Common Gallinule	House Wren	White-crowned Sparrow
American Coot	Marsh Wren	Dark-eyed Junco
Wilson's Snipe	Blue-gray Gnatcatcher	Western Tanager
Western Gull	Ruby-crowned Kinglet	<i>Blue Grosbeak</i>
California Gull	Western Bluebird	Lazuli Bunting
Caspian Tern	Hermit Thrush	Red-winged Blackbird
Rock Pigeon	Northern Mockingbird	Western Meadowlark
Mourning Dove	European Starling	Brewer's Blackbird
<i>Common Poorwill</i>	Orange-crowned Warbler	Great-tailed Grackle
Anna's Hummingbird	Nashville Warbler	Brown-headed Cowbird
Allen's Hummingbird	Common Yellowthroat	House Finch
Downy Woodpecker	<i>Magnolia Warbler</i>	Lesser Goldfinch
Northern Flicker	Yellow Warbler	<i>Lawrence's Goldfinch</i>
Willow Flycatcher	<i>Chestnut-sided Warbler</i>	American Goldfinch
Pacific-slope Flycatcher	Palm Warbler	House Sparrow
Black Phoebe	Yellow-rumped Warbler	Orange Bishop
Say's Phoebe	Black-throated Gray Warbler	Nutmeg Mannikin
Ash-throated Flycatcher	Townsend's Warbler	
Cassin's Kingbird	Hermit Warbler	

November 1, 2011

Canada Goose	Downy Woodpecker	Yellow Warbler
American Wigeon	Northern Flicker	Yellow-rumped Warbler
Mallard	Black Phoebe	Black-throated Gray Warbler
Double-crested Cormorant	Say's Phoebe	Townsend's Warbler
Great Egret	<i>Tropical Kingbird</i>	Spotted Towhee
Snowy Egret	Cassin's Kingbird	California Towhee
Black-crowned Night-Heron	Cassin's Vireo	Chipping Sparrow
<i>White-faced Ibis</i>	Western Scrub-Jay	Lark Sparrow
White-tailed Kite	American Crow	Savannah Sparrow
Northern Harrier	Common Raven	Song Sparrow
Sharp-shinned Hawk	Northern Rough-winged Swallow	Lincoln's Sparrow
Cooper's Hawk	Tree Swallow	White-crowned Sparrow
Red-shouldered Hawk	Bushtit	Dark-eyed Junco
Red-tailed Hawk	House Wren	Lazuli Bunting
American Kestrel	Blue-gray Gnatcatcher	Red-winged Blackbird
Merlin	Ruby-crowned Kinglet	Western Meadowlark
American Coot	Hermit Thrush	Great-tailed Grackle
Western Gull	American Robin	House Finch
California Gull	Northern Mockingbird	Lesser Goldfinch
Rock Pigeon	European Starling	<i>Lawrence's Goldfinch</i>
Mourning Dove	Cedar Waxwing	American Goldfinch
<i>Black-chinned Hummingbird</i>	Orange-crowned Warbler	House Sparrow
Anna's Hummingbird	Nashville Warbler	Orange Bishop
Allen's Hummingbird	Common Yellowthroat	Nutmeg Mannikin

Note: *Italic* = rare or unusual on the Preserve

South Bay Native Plant Corner

—Dr. Connie Vadheim, *CSU Dominguez Hills*



Arroyo Willow
Salix lasiolepis

The days are short and temperatures colder—winter has come to the Preserve. December is often the true beginning of the rainy season. While other trees are dormant—or just starting to green up – the Arroyo Willow (*Salix lasiolepis*) begins to bloom. Like most Southern California native plants, Arroyo Willows are exquisitely sensitive to the year cycles of rain and drought. And this species is triggered to bloom at the beginning of the rainy season.



Arroyo Willow is one of the large trees found on the Preserve. You can distinguish it from other willows by its leathery leaves that are shiny above & whitish below. The thick waxy leaves help to conserve water. You will observe that Arroyo Willow grows in areas that dry out first. The other large willow species (Red and Goodding's Black Willow) tend to grow in the wetter areas of the Preserve.

Willows belong to the same family as the cottonwoods, so they are 'cousins' to the two cottonwood

species at the Preserve. All willows are dioecious—there are separate male and female trees. Willows produce hundreds of tiny flowers tightly packed along special flower stems (called catkins). In Arroyo Willow, the catkins stick upward, sometimes appearing like a row of candles along the branch. You can easily tell the sexes apart by looking at the catkins. The male flowers are bright yellow with pollen (see picture) while the female flowers are green. Female flowers produce the fluffy wind-borne seeds that are released in spring.



Arroyo Willows are an important source of winter nectar. Bees and early butterflies literally swarm the flowers. You can often hear the drone of honeybees. Willows attract a number of other insects and are larval food for Tiger Swallowtail butterflies. Many birds perch, nest and eat insects in these stately trees and hummingbirds line their nests with the seed fluff. In short, our Arroyo Willows provide key habitat in the South Bay, where large native trees are scarce. They also help to purify the water in the Preserve, along with the other wetland plants. Their roots hold the soil and filter water. Even the old dead trunks provide food for soil bacteria and fungi which recycle nutrients back into the soil. What a great habitat plant!

Learn more about local native plants at our "Out of the Wilds and into Your Garden" series on the first Saturday of each month. Plant Information Sheets and Plant Lists are also available at the Nature Center.

Donations of \$100 or More

DATE	WHO	DONATION
8-20-11	Shelley Lavender	\$100
10-1-11	Kathleen & Edward Lahey	\$100
10-11-11	Bill & Virginia Hilker	\$100
10-29-11	Lucia Johnson	\$200
10-25-11	Hermosa Garden Club	\$300

—Ellen Peterson, Treasurer

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