

THE TIDINGS



LAKE MERRITT INSTITUTE

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Summertime at Lake Merritt



Championship trophy; Photo by John Kirkmire

The nation’s first wildlife refuge at Lake Merritt witnessed a record tumult of human activity this month. Besides the grand Warriors NBA Championship Celebration, there were Festivals, barbecues, Marathons, two Regattas, multiple Keep Families Together rallies and marches, Oakland Municipal Band concerts, glittering fireworks and pounding noise from July Fourth revelers in the surrounding neighborhoods and more. With all that, the amount of trash the Clean Lake Program removed from the lake was less than last year 1,540 pounds versus 2,260 pounds last year.

The challenges this month, according to James Robinson, Executive director of the Lake Merritt Institute, have been unabated dumping and continued impacts of homeless encampments. Shopping carts from local businesses and Lime scooters have also been pulled out in record numbers.

Wildlife has managed to carry on amidst the growing urban population surrounding it thanks to the help of concerned citizens who love the lake and volunteer to clean it each week. The Hilary Powers of Golden Gate Audubon Society reports in her column below a record number of bird species observed on the July fourth Wednesday bird walk. However, a study cited in July’s National Geographic (Why the birds you don’t see are fading away) found that sea birds, one of which spends time at the lake, are in peril. “Seabirds are being devastated by predators, fishing, and climate change. Saving them begins with knowing more about them.”

The Golden Gate Audubon Society plans to address the need for public awareness in a program at the Rotary Nature Center when it reopens later this year called “Birds Are Natural Ambassadors for Nature, Science, Art, & Community.” The GGA will provide programs for all ages which nurture STEM education (science, technology engineering and math) and foster stewardship of Lake Merritt, the watershed, the Wildlife Refuge and the Pacific Flyway. According to the proposal, “The RNC is a perfect venue for connecting people to the phenomenon of avian migration along the Pacific Flyway right at Lake Merritt, a lagoon linked to the estuarine ecosystem. Birds are the most charismatic of messengers for all sorts of dynamic learning opportunities to connect with Nature, learn about life science, climate, water, and so much more.”

LOVE YOUR LAKE!.....

LMI IN JUNE: 1,540 lbs. of trash were removed from the lake in June totaling 15,420 pounds total so far in 2018! LMI Director James Robinson and LMI Staff hosted 145 volunteers, made 2 educational presentations. (0.00” rain recorded LMI rain gauge)

Smithsonian Scientists Continue Monitoring Life at the Lake



At right: Dr. Andrew Chang from SFSU's Smithsonian Environmental Research Center with Bryant La, Katie Noonan (The Tidings Editor) and SFSU student intern.

Lake Merritt is an estuarine arm of San Francisco Bay and an important research stop for Dr. Andrew Chang and his lab who monitor the changing invertebrate fauna of the Bay. In June, Dr. Chang and his intern set out settling plates to attract the motile larvae of organisms that eventually attach themselves to solid surfaces, seawalls and docks, and spend most of their lives as adults stuck to that spot (they are called sessile). The research team will return in the fall to collect the plates and census the organisms that have grown on them. The scientists track climate change and invasions from other parts of the world.

Katie Noonan plans to collaborate with Dr. Chang to make **Monitoring Life** a regular activity for youth at the Rotary Nature Center when it opens this fall. Bryant participated in invertebrate monitoring in 2017 and is now off to college.



Above: Mediterranean mussels festooned with sea anemones and delicate pink sponges grow on sides of floating docks. Mind the goose poop and take a look!

Ray* of Hope – THANK YOU, SUMMER VOLUNTEERS!

...in honor of late Tidings Editor. Ray* Perman



Trash in the water does not take a vacation, unfortunately. It's a good thing volunteering with The Lake Merritt Institute's Clean Lake Program continues full swing throughout the summer.

Note the enthusiastic group at left wearing Jameson t-shirts and identifying themselves as "Keep America Clean!" **Youth Going Green** and **Dictionary.com** also pitched in.

In all, one hundred and forty-five folks have donated their time to remove trash from the lake last month in addition to our U-Clean-It self-organized teams, and LMI A-TEAM regulars. We appreciate your efforts and community spirit. Great Job!

If your group would like to clean-up the lake, you can schedule a clean-up event by emailing LMI's Executive Director James Robinson - lmi@netwiz.net. See details at <http://www.lakemerrittinstitute.org/>. You can also drop in at one of the two weekly scheduled clean-ups at 10:30 on Tuesdays and 10 a.m. on Saturdays at the LMI Office at 568 Bellevue Ave, Oakland, CA 94610

Please send a photo of your group cleaning the lake to ktnoon@aol.com. See color photos online at lakemerritt.org under LMI, and at our website: lakemerrittinstitute.org

June Busting out at Lake Merritt By Hilary Powers – Golden Gate Audubon Society

The dozen happy birdwatchers who braved a chilly morning for the latest Golden Gate Audubon 4th Wednesday walk were treated to the biggest day tally in several years – 40 species, instead of last year’s 33 or the 32 and 29 in the two preceding June walks. Most startling: a Peregrine Falcon plunged at one of the cormorant nest trees (failing to spook anyone into flight and flapping off behind the next island); we haven’t seen a peregrine on any 4th-Wednesday walk as far back as 2009, when my records begin. It may have been trying for a Mourning Dove (not seen here for more than a year) – that would make a more reasonable meal than a cormorant, and two were hanging onto the upper branches, literally for dear life.



Peregrine falcon.
Photo by Lee Aurich

The cormorant nests were mostly empty; the third round of nesting seems light this year, but 10 or so had new families starting, so the show will continue for another couple of months. The lighter traffic in the trees opens things up for others: the queenfisher (female Belted Kingfisher) was back for the first time since last March. Not necessarily the same bird, of course, but it seems likely – we almost never see more than one, and that one is virtually always female.



At left: Mourning dove. Photo by John Kirkmire

Other lake and lakeside birds included both Brown and White Pelicans, the first Green Heron in several months (exit, pursued by raccoon), and hundreds of molting Canada Geese. Hundreds may seem like a lot, but it’s been thousands in the not-too-distant past. Geese lose all their flight feathers at once every year and come to the lake as a safe place to regrow them; dunno why its popularity is declining. A family of Western Bluebirds hung out in the trees and on the lawns beyond the goose brigade below the playground, and a couple of hummingbirds (probably Anna’s but too high and fast to be sure) chased each other over the treetops like a pair of fighter jets.



Brown Pelican plunge-diving;
Photo by Wikipedia.

In Lakeside Park (across Bellevue) the duff under the trees was jumping with Dark-eyed Juncos, one feeding a baby Brown-headed Cowbird more than twice its mass, and several Brown Creepers fossicked up the trunks. Robins and Black Phoebes were everywhere, along with another family or two of Western Bluebirds, and the red and yellow rosebushes by the fountain were adorned with some of the brightest House Finches ever seen, plus some Lesser Goldfinches.



American White Pelican.;
Photo by Lee Aurich

All told, we saw or at least heard all but three species ever recorded on more than one or two other June walks, and picked up several more that have rarely or never shown up: a very good day indeed, even for Lake Merritt (where the standard is very high), and it even turned warm and sunny enough for the goldfinches to be splashing in the sensory garden rock fountain at the end....***

AUDUBON BIRDWALKS AT THE LAKE: Join bird expert Hilary Powers any fourth Wednesday of the month for a free “Birdwalk” at the lake. Muster at the geodesic bird cage near the Nature Center at 9:30 a.m. for what are always fascinating introductions to lake birdlife.***

SEA OTTERS – IN LAKE MERRITT? A Guest editorial by Dr. Richard Bailey

Note: “Climate Corner” will return in August

It cannot happen now, but if improvements could be made... in the future...

Sea otters, once near extinction in North America, have made a comeback. As described in “Return of the Sea Otter” by Todd McLeish (Sasquatch books, 2018) this iconic, lovable, keystone species can once again be found from southern/central California to Canada, the Aleutian Islands, and northern Japan. Hunted relentlessly for their uniquely dense fur, these resilient animals have shown an ability to adapt to changing times, and have enhanced environments where they were once absent.

Although I know of no written records of their existence in Lake Merritt, it is quite likely that they did inhabit San Francisco Bay and the estuary we now call a lake before the arrival of Spanish explorers. Archeological records confirm their existence in the Bay prior to the fur trade. In 2015, a young male lived in Richardson Bay near Tiburon for several weeks, and their range extends to the north. You may think of them as being tied to kelp forests, but about 25% of their habitat in the central part of their California range is sandy sediment, with little or no kelp. We need to look no further than the Elkhorn Slough National Estuarine Reserve in Moss Landing, CA to realize that they do quite well in an estuary, even one that receives high levels of nutrient runoff from adjacent farmland.

The big story however, is how sea otters have transformed the environment around them in a positive way. After thousands of their pelts were shipped to China during the last two centuries, sea otters were considered absent from Monterey Bay. But one day a fisherman spotted an unusual animal just to the south. It’s a sea otter, said his companion, but don’t tell anyone. Protected from hunting, the remnant population slowly increased in size and repopulated the Bay, feeding voraciously on abalone, crabs, and sea urchins, animals that feed on kelp. As the number of otters grew, so did the kelp, and now Monterey Bay is a fabulous forest of kelp, sheltering countless species of fish, invertebrates, seabirds, whales, and orcas. This transformation of an ecosystem by manipulation of prey that feed on other plants or animals, is known to biologists as a “trophic cascade.”

In Elkhorn Slough, a different type of trophic cascade occurred. When otters moved into the Slough in the 1980’s, eelgrass (a type of underwater grass) was in decline due to fertilization of the waters from nearby farms, which stimulated the growth of algae on the leaves, thus choking the larger plants. Research scientist Brent Hughes found that, before the otters arrived, rock crabs were feeding on invertebrates (like the sea hares we sometimes see in Lake Merritt) which eat algae from eel grass leaves. When the otters began feeding on the crabs, algae eating critters thrived, as did eel grass beds. In a fortuitous, natural experiment, the otters left the slough for a while in the 1990’s, and the process reversed itself. Today, with a thriving population of otters in the slough eel grass beds are among the healthiest of any on the west coast. Hughes also found that the reduction of crabs also benefited the adjacent salt marshes.

What does this have to do with Lake Merritt, a eutrophic estuary that can be compared to Elkhorn Slough? Although our estuary is different, it has had extensive beds of widgeon grass (another type of underwater grass) in recent years. It also has populations (sizes unknown) of estuarine animals like crabs, sea hares, sea slugs, shrimp, worms, etc. The problems include episodic periods of low levels of oxygen at the bottom (which undoubtedly limit invertebrate populations) and pollution from urban runoff. Progress has been made in solving these ills, but much more could be done. For example, the aeration system proposed by prominent scientists a few years ago would prevent zero to low oxygen conditions, thus opening the bottom of the Lake to colonization by more life forms. Urban runoff controls including chemical filters and a net across the mouth of Glen Echo Creek (able to be raised above the bridge during huge storms) could improve water quality to the benefit of all Lake life, including waterfowl. Who is to say that these improvements would not create a habitat that sea otters might once again find suitable?

Even with such improvements, a formal program of reintroduction is unlikely, given current federal policies. But if recent range expansion continues, one day a pair of sea otters might find their way to the Lake Merritt Estuary. Imagine the excitement! Gondola rides would be overflowing; docks at the Lake Chalet might have otter spotter telescopes to watch them drift among areas where sea grass would be allowed to grow (away from boating areas). The revitalized Rotary Nature Center could participate in otter research and education.

But first, there is work to be done in getting Lake Merritt removed from the list of impaired bodies of water; work to prevent periods of low oxygen; work to eliminate the worst parts of urban runoff, and work to say that, yes, that would all be worth it to have a keystone species in our backyard, especially one that looks as cute as this. (photo by Sharon Blaziek)



EVENTS AT LAKE MERRITT: Check lakemerritt.org for a Calendar of events and organizations active at Lake Merritt.

July 21st Saturday - Splash Into Summer Open House - FREE boat rentals 1-3 pm (no regular rentals 12-4 pm)

REFERENCES in the July Newsletter articles

Lost at Sea: Why the Birds You Don't See Are Fading Away

<https://www.nationalgeographic.com/magazine/2018/07/seabird-crisis-conservation-birds-oceans/>

See all accepted proposals for Rotary Nature Center Programming here:

<https://communityforlakemerritt.org/2018/06/18/rotary-nature-center-meeting-report-june-2nd-2018/>

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