

THE TIDINGS



LAKE MERRITT INSTITUTE

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Photo: Trestle Glen Arm with aeration fountain; Ms. Dana Fox, Esq.

DR. CARLTON RETURNS TO THE LAKE ...AND BRINGS THE SMITHSONIAN !

Dr. James Carlton, Professor of Marine Sciences Emeritus, Williams College, and the original discoverer of the now scientifically famous Lake Merritt, ½" long, amphipod "hopper" (See "The Tidings" Sept. 2016) has teamed up with the Smithsonian and returned to Lake Merritt to perform a 50-year study of marine life with specific interest in invasive species.



Dr. Carlton's partner at the Smithsonian is Dr. Andrew Chang, BA. in Marine Sciences from Williams College (they met there in 1998), and PhD. in Ecology from UC Davis. Dr. Chang leads the Smithsonian Environmental Research Center (SERC) in Tiburon, which since 2000 has maintained a laboratory on San Francisco Bay, at San Francisco State University's marine research center and teaching facility, the Romberg Tiburon Center. Work at the center is focused on research on coastal ecosystems. They also track commercial shipping traffic.

The 50-year study will be an examination of common marine "biofouling" by filter-feeders and other invertebrates in Lake Merritt in 2016, compared to the species present in the 1960s. Most of the alien species were transported to the bay while attached to ship's hulls or sucked into ballast tanks. Many regions of the bay now have almost 97 percent of the organisms and 99 percent of the biomass made up of introduced species.

(Photo: Dr. James Carlton examines a fouling plate)

(Continued)



(Photo: Dr. Chang and
Encrusted fouling plate)

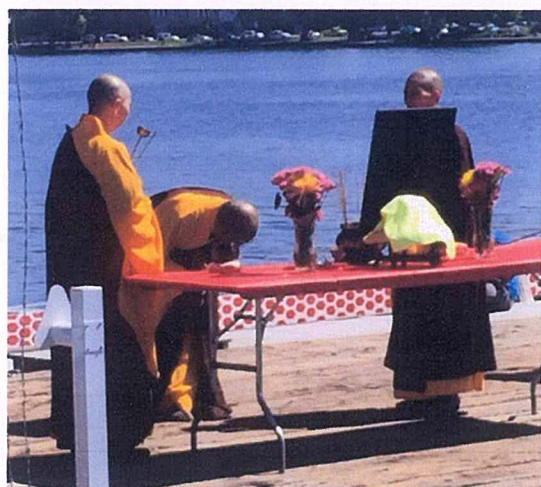
Dr. Carlton and Dr. Chang are conducting the study by deploying “fouling panels” at specific locations around the lake. The fouling panels are 8” square steel plates with small single holes drilled at their centers. Ropes are inserted through the holes and knotted so that all plates can be dangled from docks to a uniform depth of 3 feet. The plates are then examined every few months to see what species of creatures have attached themselves, as well as their total biomass.

Biological invasions; the establishment of species beyond their historical range; are a major force of ecological and evolutionary change. Thus, the study will focus primarily on invasion dynamics. Overall, the study will: (1) characterize patterns of marine invasion across space, time, and taxonomic groups; (2) develop a mechanistic understanding of the processes that drive observed patterns; (3) advance predictive capability about the establishment, spread, and impacts of non-native species in marine ecosystems; (4) evaluate the efficacy of management strategies to limit the establishment and impact of invaders; and (5) understand the roles of species interactions, including predator-prey and host-parasite relationships, in marine communities.

Drs. Carlton and Chang will publish the results of their study in a peer-reviewed scientific journal as well as share the results with the many stakeholders who have been involved in the preservation, conservation, restoration, and management of Lake Merritt. 🌊



DRAGONS IN THE LAKE! — Last September 17th & 18th the surface of Lake Merritt was over-run with yet another introduced species: Chinese dragon boats! Kaiser Permanente, and other local corporate sponsors, together with the California Dragon Boat Assoc. (CDBA), staged the 21st Annual Northern California International Dragon Boat Festival. The event is one of the largest dragon boat festivals in the U.S., and attracted over 120 teams, novice to advanced, and included 2,000+ participants from schools, colleges, and other local organizations; as well as from overseas.



The roots of the dragon boat races go back over 2,000 years ago to the southern provinces of China. Dragon boats are large, canoe-like craft made of wood, colorfully painted, and with elaborately carved dragon’s heads in front and carved tails in back. The crews consist of between 16 to 24 paddlers and a steersperson who also beats a rowing cadence on a traditional Chinese drum.

The festival opened with a traditional Chinese ceremonial lion dance and Chinese drumming. More significant was the traditional eye-dotting ceremony. The carved dragon heads are delivered completely finished except for the painting of the pupils; thus they are said to be “asleep”. After Buddhist monks completed prayers and blessings, they then painted the pupils on

all of the dragon’s heads eyes; thus “bringing them to life”. In all it was quite a festive, well-run event. 🌊

CLIMATE CORNER – WHY THIS ELECTION IS THE MOST IMPORTANT ON THE PLANET – Editorial by Richard Bailey, PhD., Founder, Board Member – In what has become a common refrain this year, August, 2016, ranked as the hottest August on written record, according to recently released data published by NASA.

There is no doubt about it, Arctic sea ice is shrinking at a record rate. The collapse of Arctic sea ice is a stark reminder of the power of climate change to radically transform our planet. The sharp decline in arctic sea ice, which normally reflects sunlight back into space, is like losing a global cooling system the equivalent size of half of the lower 48 states. Simply stated, our planet is quickly losing its ability to cool itself.

In the mountains above San Bernardino, the Blue Cut Fire consumed 30,000 acres in a single day, jumping an eight-lane interstate, spawning fire tornadoes, and erecting a wall of flame nearly 90 feet tall. "It moved with an intensity and a ferocity that veteran firefighters haven't seen before", said San Bernardino County fire chief Mark Hartwig.

A 2016 report from the National Academy of Sciences states plainly, "An increase in fire risk in California is attributable to climate change." If emissions continue unchecked, an earlier report found, days of extreme-fire risk in California are projected to increase by a factor of six by the end of the century. "We're looking at potential holocausts of fire that are unlike anything we have now," says Char Miller, a professor of Environmental Analysis at Pomona College. (Rolling Stone, Sept. 2016).



How long will it be before this fire scenario plays out in the Oakland hills again?

Which presidential candidate would protect you from climate enhanced fire storms?

(A U.S. flag hangs in front of a burning structure; more than 500 homes were destroyed by the Blue Cut fire. U.S. Air Force photo by Master Sgt. Christopher De Witt)

In the article "The Election" (Rolling Stone, Sept. 2016) "The Republican nominee has staked out wildly inconsistent stances on issues from immigration to taxes, but has firmly denied the threat of global warming, which he has blasted in tweets as "bullshit" and a "hoax." In an interview on CNN last September, Trump insisted flatly, "I don't believe in climate change." Trump vows to "cancel" the Paris Climate Agreement, to "rescind" the Obama administration's Climate Action Plan, to "save the coal industry" and "to ask TransCanada to renew its permit application for the Keystone Pipeline." As for the EPA? "We are going to get rid of it in almost every form," he has said. "We're going to have little tidbits left."

In perhaps the sharpest issue contrast of the presidential race, Hillary Clinton calls climate change a "defining challenge of our time." She has outlined an agenda to slash carbon emissions by 80 percent by 2050 and vowed to make the United States "the world's clean-energy superpower," starting with a campaign to install half a billion solar panels. Clinton's plans focus on empowering states and cities, reflecting the reality that Republicans in Congress have gridlocked climate legislation on the Hill as formidably as they've stymied gun control."

We are already paying a carbon tax in the form of billions of dollars spent to cope with climate disasters. It would be far better to enact a carbon fee and dividend than to keep paying tax dollars for disaster relief.

What to do? Vote: You know who for. Contribute: To efforts to elect climate friendly representatives. Join: The Citizens' Climate Lobby (it is free; there is no membership fee and it is gaining strength). We are all in this together.



THE FIRST MIGRANTS AT THE LAKE – Hilary Powers –

The Fourth Wednesday bird walk saw several first-of-season or just plain unusual birds in September. Expected newcomers included an Eared Grebe on the lake and flocks of White-crowned Sparrows and a Yellow-rumped Warbler in the park, but the bird of the day was a brilliant yellow female Western Tanager – only the second of the species we’ve seen since I started keeping records – eating fruit in one of the trees near the bowling green.

We also had two aerial dogfights: a couple of American Crows harassing a juvenile Cooper’s Hawk back and forth overhead and a Common Raven flashing by in close pursuit of a Red-tailed Hawk, making it look small. That was only the third raven since 2009, so the first assumption was that it was a crow – in which case, what could it possibly be chasing? No hawk

smaller than a crow looks like that. But some independent birders joined us at that point and said they’d had a good chance to hear the croak and see the diamond-shaped tail: raven for sure!

The last three or four pairs of Double-crested Cormorants were feeding near-fledglings in the island trees. Do late-season birds like these babies have a harder time surviving the winter than their predecessors in the nests? No way to tell – at least in this colony, they’re not being banded. The post-season prospecting session was well under way despite the cormorants’ continued occupation: several Western Gulls were sitting in or near the empty nests and poking around for crunchy bits, and a Snowy Egret settled into the center of the largest tree like it was sizing up a home (It’d be really good if the egret rookery were to start up again.).

The species count was up to 34, despite missing a lot of expected regulars: no robins, no wrens, no House Sparrows even. Not that anyone was complaining – the weather was splendid, just the warm side of perfect after two days of blistering heat, and the birds were behaving and misbehaving all around (didn’t mention the two Western Gulls trying to drown one another), and all in all it was a truly lovely day at Lake Merritt. 🐦

HAPPENINGS AROUND THE LAKE -

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 for what are always fascinating introductions to lake birdlife.

CAMRON-STANFORD HOUSE: “Slough, Cesspool, City Jewel” Exhibit. See: <http://www.cshouse.org/>

OAKLAND HERITAGE ALLIANCE: Lectures/Tours: “The Real Jack London”, “Panache Lighting Studio Tour”, “African-American Freedom Trail”. See: www.oaklandheritage.org/

OMCA: “Bees: Tiny Insect; Big Impact”; through June 2017. See: <http://museumca.org/>

EDITOR: Ray Perman - “The Tidings” is published by the Lake Merritt Institute (LMI) for the purpose of publicizing the work of the organization, as well as providing articles of interest regarding the environment, and natural and anthropological history of Lake Merritt, and its surroundings. Comments and contributed articles are welcome. Please feel free to contact me directly: [“rgperman@gmail.com”](mailto:rgperman@gmail.com) 🐦

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