CELEBRATE EARTH DAY SAFELY!
The earth has a fever – we don’t want you to!

A persistent high fever is one symptom of the disease Covid-19 caused by the Sars-CoV-2 virus. The earth itself, environmentalists note, can be said to have a fever caused by the carbon dioxide we humans put in our atmosphere. The years 2019 and 2020 included the hottest months in recorded history. While global warming still constitutes the greatest threat to human civilization on our planet, we are now overwhelmed by a pandemic disease, Covid-19, that has overshadowed every other concern in our daily lives.

Because of the pandemic, the Lake Merritt Institute has cancelled our annual Earth Day Community Clean-up and is issuing this plea: Continue to stay home and practice social distancing according to the current public health guidelines. Let’s celebrate the 50th anniversary of Earth Day on April 22nd in creative and safe ways so that we can stay inspired to work together to save the planet for the long haul.

Oakland Public Works (https://www.oaklandca.gov/topics/oakland-earth-day-2020) and the Oakland Unified School District as well as many regional nonprofits, call for Earth Day activities that can be done at home while sheltering in place (go to suggestions linked above). If you do go outside, be sure to follow the social distancing requirement of at least 6-10 feet between people and wear a face mask to protect yourself and others. Take advantage of Mayor Schaaf’s “Slow Streets” policy to walk in the middle of the street along the 73 miles of roadway newly closed to cars. If you do, check out the condition of the curbside storm drains that deliver carelessly dumped chemical and trash pollution to Lake Merritt. Make a note – and join us in cleaning the lake and storm drains when it becomes safe to do so again.

LMI in MARCH: 4,440 gallons of trash were removed from the lake in MARCH. Total gallons collected in 2020 is 9,720 gallons. *The City will henceforth measure trash in gallons not pounds.

LMI Director James Robinson and Staff hosted 94 volunteers, made one educational presentation and attended one meeting. 0.93 inches rain were recorded by LMI rain gauge.
THANK YOU TO OUR EARLY MARCH VOLUNTEERS! These volunteers helped out before the shelter-in-place took effect. Boy Scouts of America Troop 4, Piedmont, CA. Special thanks to Executive Director James Robinson, and LMI Staff who voluntarily continue work. We appreciate your efforts and community spirit. Great Job!

Boy Scouts of America, Troop 4 of Piedmont, California

Great job, Scouts!

A sad day. Photos by James Robinson
THANK YOU FOR SHELTERING IN PLACE AND SOCIAL DISTANCING! This month, we want to thank Mayor Schaaf, our city council and administrators, our governor, our county health department and the Center for Disease Control for their leadership during the novel coronavirus outbreak. We also want to thank everyday citizens who heeded their advice and enjoyed Lake Merritt while social distancing.

Please **STAY HOME AND SAVE LIVES!** If you need to go outside, check the latest guidance from the CDC.
CITY PARKS
USE THEM, DON'T ABUSE THEM

- Avoid group gatherings
- Stay 6 feet away from others
- Stay home if you have symptoms

Stay home. Save lives. #BEATCOVID19
oaklandca.gov/covid-19
The City Nature Challenge is on, but different this year

Every spring since 2016, the California Academy of Sciences has sponsored the San Francisco Bay Area’s participation in an international citizen science competition called the City Nature Challenge. Cities competed to record the most observations of species within their areas.

Because of the COVID-19 public health crisis, the 2020 City Nature Challenge will be different. Participants are expected to fully comply with public health guidelines provided by their local governments, as they are changing in real-time (Lakeside Park). Individual safety and public health are the utmost priority. To discourage risky behavior, the event will not be a competition. People are encouraged to investigate biodiversity in their own homes, backyards and neighborhoods. According to biologist Menno Schilthuizen, in his book titled Darwin Comes to Town, the urban environment is a “pressure cooker” of evolution these days. The City Nature Challenge results could yield scientifically interesting observations.

Lake Merritt offers a marine habitat with a fascinating collection of species in the heart of the city. However, this is not the time to congregate in the park! The 2020 Lake Merritt BioBlitz was called off. But it is fine to capture photos with your smart phone while walking the lake or down your local “slow street” keeping 10 feet away from other citizens and uploading them to the iNaturalist website. iNaturalist provides directions for making an “at home” project for the CNC, and other ways to participate safely in the event.

To participate go to https://citynaturechallenge.org/

Ready for the 2020 City Nature Challenge?

The Tidings editor presented The Lake Merritt Institute’s Clean Lake Program as an example of citizen science at recent OUSD Earth Day webinar.
Distanced Birding at Lake Merritt - by Hilary Powers – Golden Gate Audubon Society

The March 4th-Wednesday Golden Gate Audubon walk was cancelled, like pretty much everything else in this first month of the recognized pandemic, but I strolled down to the usual starting place at the usual time. (Strolled ‘cuz I left the spotting scope home – scopes want to be shared, and there’s no way to share a scope and maintain social distancing and surface cleanliness – meaning I wouldn’t have to slog back up the hill with it. And with all the news of beach closures, I didn’t like the chance of the entry being blocked to cars – which it wasn’t, but the exercise was good.)

Anyway, one intrepid birder joined me for much of the walk, carefully hovering six feet away, and we saw or heard 42 species of birds – more than in any of the past three years, despite the reduction in eyes and optics on the hunt – mainly because the weather was rather better than in preceding March trips. Partly cloudy, meaning partly sunny, and often without cold winds....

The first biggest observation: the island trees held zero nesting cormorants. The remnants of last year’s nests clung to the branches, but no one was rebuilding. We did see half a dozen Double-crested Cormorants on the floats, including one with beautiful white crests like an Easter Bunny costume, so maybe April will see some action. On the other hand, another cormorant on the floats was so pale it looked like a new-fledged juvenile; maybe they’re nesting elsewhere this year.

Lots of courting action on the lake: Two male Common Goldeneyes were trying to impress the same female with the length of their necks (a drake can reach his tail with the back of his head, even though they usually look like they don’t have necks at all), and several pairs of Eared Grebes were swimming side by side and showing off their gold and copper and steel party clothes, some of the flashiest among North American birds. Ruddy Ducks were everywhere – the most numerous bird on the lake – and many of the drakes lived up to their name for a change: brilliant russet backs to go with their black caps, white cheeks, and sky-blue bills.

Hank-the-Rescue-Pelican had a friend, a first for March since 2010 (and that may have been a misguided checkmark for Helen, the lake’s previous rescue pelican). Hmmm. Hank can hope, and so can we, but the chances aren’t good. Meanwhile, Snowy Egrets fished wherever we looked, standing in the water to shake their golden toes in hopes of attracting edible attention, occasionally turning to chase one another with their crown feathers fanned out like fright wigs. And a Black-crowned Night-Heron flapped briskly toward the Children’s Fairyland side of the park carrying a stick – I couldn’t find it later but fondly believe it meant to nest within the park boundaries and not in downtown Oakland.

Featherless bipeds around the lake were mostly keeping their distance, except for a few pairs of adults with small juveniles who probably shared nest space away from the lake. Most startling observations for the species: two adult males (not together) walking along nose-down in actual paper books.
Most of the predicted feathered species showed up in the trees, though I had to rely on my admittedly unreliable ears for the Chestnut-backed Chickadees and Bewick’s Wrens. Almost everyone spotted jumping through the branches turned out to be a Yellow-rumped Warbler, many in their most brilliant black-gold-and-gray party clothes, but there were a lot of crested gray Oak Titmice as well. And the air was buzzing with Anna’s Hummingbirds, including one perched against the sky and looking like an alien creature: the gorget and forehead feathers, usually almost magenta, shone crimson and metallic gold instead. I posted a what-could-it-be note to a local birding list, but the next message I opened was an Audubon newsletter that started with a pic of an Anna’s displaying exactly that view.

Wonders everywhere, even among old friends – as is only fitting for a day at Lake Merritt....

**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. ***

**WATER QUALITY REPORT**
March 28, 2020
The dock was deserted because of coronavirus. The students were all at home distance learning on their iPads and tablets. There was no one to do the water testing……. But WAIT! The Plankton Were Talking…….”

Dissolved Oxygen top 7 parts per million (ppm) / bottom 8 ppm (high)

pH top 7/bottom 7 (normal)

Salinity top 32 parts per thousand (ppt) /bottom 30 ppt (high).

Water Temperature top 14.5 degrees Celsius (58 degrees Fahrenheit)
top/ bottom 15 deg Celsius (59 degrees Fahrenheit) (normal)

Water Clarity (Secchi) >1.55 meters (Clear)

The Plankton Were Talking by Dr. Bailey, FOCUS ON LAKE MERRITT, The Montclarion, 1997 is included below after the Climate Corner..

**ERRATUM:**

The Tidings sincerely regrets and apologizes for the omission of credit on this photo (left) published in the January Tidings. The photo shows a red-eared slider seeking escape from the salty water of Lake Merritt on the back of a drowned raccoon. The photo is by local nature photographer Lyla Arum.
This issue of “Climate Corner” diverts from our long-term climate emergency to the current virus crisis. While some draw comparisons between planetary climate disruption and the corona virus, these two threats to civilization differ vastly in time scales. Our trajectory for climate disasters is now playing out on a decadal, perhaps infinite timescale. This pandemic will play out in months, perhaps a few years. By then, we will defeat the virus. Here’s how we will do it.

Some of the best minds on the planet are now working together to thwart Mr. Corona. Using our electron microscopes, we are staring at it eyeball to eyeball (as if the virus had an eye). We are analyzing it using computer algorithms, genomics, biochemistry, medical technology, volunteers, the profit motive, multiple testing protocols, test tubes, and petri dishes etc. to determine every possible detail of how it is put together, how it works, and what are its vulnerabilities.

Scientists are working hard (but not feverishly). We are tearing those little buggers apart. We are sticking our noses into its business (well, not figuratively). Ah, Mr. Virus, you have lots of spikes that latch onto cells so you can stick your RNA inside my nostril tissue. Hmm, these spikes use proteins. We know how to stop those proteins from working. We can block field goals, and we can block your spikes. Give us a few months and there will emerge from our laboratories a vaccine. Ha: The virus cannot even say the word. It does not know what we are planning to do to it. We are going to stomp that sucker flat and confine it to the dust bin along with polio and other dumb diseases.

We will defeat this virus because we have a brain, and it does not. Yes, it can and does mutate, like starships change their shield frequency. But we are a clever species. We are watching it and can respond to each random flip of a nucleotide sequence.

The key here is to “give us a few months.” During that time, we will suffer some losses because this is war. But as in war, the sacrifices of the many can accumulate into a defense. But this defense must not be porous. We know that beach parties allow you to slip in behind our lines, so we must be vigorous in holding the line. If we are all patient and resist the temptation to cheat, we will reap the rewards of a stronger civilization with one more immunity in our back pocket.

Hopefully along with that immunity will come a realization that this will happen again, and we must be better prepared. After experiencing bird flu, SARS, etc. China thought they had erected a system that would prevent this. The problem was that mid-level politicians in China sugar-coated the warnings from doctors. Not until whistle blowers alerted high levels of government did the scope of the problem become apparent. By that time, the measures needed had become drastic. China’s best medical planning was upended by politicians.

In like manner, we must not let those with “other agendas” hijack what needs to be done in preparation for not only the next pandemic, but all illnesses as well. The following are critical:

- Nations need to have their own supply chains for everything hospitals must have.
- Agencies designed to prepare for pandemics, and illness in general, must not be dismantled, as they were by the current administration.
• Reports from our intelligence agencies must be made public, not just given to congressional committees, as happened in February.
• Science must prevail over electoral advantage.
• Those who encourage ill behavior because of their own mental illness must suffer the scourge of social distancing; distance them all the way to political oblivion.

If you hold the line, think how grand it will be when you can finally visit that favorite restaurant, meet a friend in a pub for a beverage, travel anywhere at any time. It is worth waiting for.

We have seen what ignorant politicians can do to our freedom, our health, and our lives. To prevent them from doing it again, the most important thing we must do is to ensure that everyone has equal and free access to health care, for if not, those who don’t will infect all of us.

We don’t want to go through this again.

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The Plankton were talking

It had to happen. And where else but at Lake Merritt, a place where those things that live wild in the water are closer to humans than perhaps anywhere else on earth.

Charles Ford (Director of Environmental Studies at Merritt College) and Titus Kress (a dock attendant and computer science major at UC-Berkeley) were working late one night in the classroom. Charles was peering through the microscope, fussing over the seemingly not-so-random movement of a phyto (plant) plankton sample taken from the Lake that night (most samples are taken during the day, and this night sample was behaving differently).

The pattern of motion repeats itself said Charles. It almost seems like they are trying to communicate with us — like the bees do with their dance after they’ve found a new pollen source.

Hmm, mused Titus. Perhaps we can analyze it. Titus was re-configuring the bank of computers that were networked in the classroom. What if we route the microscope image into the computer camera, and then to the scanner? We could connect the output to the random pattern program, and from there to the new voice operator that mimics human speech.

Charles was always up for an experiment, even at 1 a.m. Let’s try it, he gushed.

In minutes Titus had hooked up the apparatus. At first the speaker just said — Bozly Boozly Brizangapon. That sounds like James Joyce said Titus, as he adjusted the frequency modulator. The next words were astounding, and will certainly put Lake Merritt on the map along with the great discoveries of Atlantis, Booneville and Lake Woebegone. The Plankton were talking.

“You are too big,” came the message.

“And you utilize energy inefficiently.”

Wow, said Charles. How perceptive, said Titus.

“Why do you not worship the sun” said the tiny plants?

Well, we did at one time said Charles, but we stopped. I’m not sure why — something to do with gasoline I think.

And why does your kind make all these plastic bags and things that will not decompose into simple elements that life can use? Well, er ... It has something to do with money, said Titus — so some people can have more of it. We don’t want your money said the plankton. We would rather have energy — that’s more important.

Why did you destroy the marshes? Why do you build docks and not maintain them? Why do you pollute the Lake with soap from the Storm drains?

Ugh ... Said Charles. Well some people don’t know any better, said Titus. But we’ll teach them said Charles.

And so he did — taking the little plankton samples with him to schools around the country. The “Message of the Plankton” was spread far and wide. Soon it will be at your school, in your home, and even on TV. Watch for it.
References for April Tidings

Updates on Covid-19 Guidelines:
COVID-19 is an emerging, rapidly evolving situation.
Get the latest public health information from CDC: https://www.coronavirus.gov.
Get the latest research from NIH: https://www.nih.gov/coronavirus.

To Go Outside or Not? Safely Getting Outdoors During Coronavirus Shutdown
By Marissa Ortega-Welch • Mar 20, 2020

Slow Streets:

Alternative Earth Day Activities:
City of Oakland  https://www.oaklandca.gov/topics/oakland-earth-day-2020
Oakland Unified School District Earth Day Webinar April 15th  Slides
https://docs.google.com/presentation/d/1B5nZABOIbbGnLRVnPSE_raHc4x0uehQ12_TOI8QDweE/edit#slide=id.g35f391192_00

City Nature Challenge
Darwin Comes to Town: How the Urban Jungle Drives Evolution by Menno Schilthuizen
TED talk https://www.youtube.com/watch?v=kahNzNhflgk

Climate Corner:
How to prepare for the next pandemic.
https://www.thehindubusinessline.com/specials/pulse/how-to-prepare-for-the-next-pandemic/article29538339.ece

Additional casualties of the pandemic:
Roll-back of our Environmental Laws passed after the first Earth Day in 1970

World Health Organization suspends anti-polio campaign
The COVID-19 pandemic is imperiling the worldwide, 3-decade drive to wipe out polio. In an unprecedented move, the Global Polio Eradication Initiative (GPEI) has recommended suspending polio vaccination campaigns to help stop the spread of the novel coronavirus.
https://www.sciencemag.org/news/2020/04/we-have-no-choice-pandemic-forces-polio-eradication-group-halt-campaigns

SPRING! Time for Mallard ducklings at our Lake – photo by Kerstin Firmin, iNaturalist