

LAKE ELEGY

-Water Pollution in Los Angeles, a Photographic Journey in 3 Parks

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*To our dearest Mom, Diana Chen
and all active environmentalists who keep fighting for our home, the planet earth
without whom, this book would have never been accomplished*

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Foreword © 2022 Xiaoze Xie

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Foreword

In 2020, high school students Cheery and David Chen, sister and brother, embarked on a journey to photograph three parks in Los Angeles County where they live: Peck Road Water Conservation Park, Whittier Narrows Recreation Area, Los Angeles County Arboretum and Botanic Garden. However, they did not pay attention to California's beautiful water landscapes as one might expect, but instead focused relentlessly on subjects that were disturbing and repulsive: polluted waters, discarded rubbish, dead fish, tortoises and birds. The collection of photographs presented in this volume were taken from 2020 to 2022, largely overlapping with a time when the world was devastated by the COVID-19 pandemic.

For this project, entitled "Lake Elegy," Cheery and David approached their subjects from a variety of viewpoints and perspectives, and constructed an alarming picture of the environmental crisis through a rich range of images. Among them, "portraits" of dead fish, tortoises and birds are the most captivating and disturbing. In one ambiguous image of a fish whose spine is exposed above the surface of the water, one cannot tell whether it is slowly turning its body or it is in fact dead; whereas in another image, the broken shell of a tortoise reveals the flesh in disintegration. Unlike the dead animals carefully arranged and presented in 17th-century Dutch and Flemish still-life paintings, the creatures captured in these tragic photographs were ignored and left to decompose in nature, inspiring a strong sense of empathy. In the close-up views of individual objects such as cans, bottles and other waste, the bright artificial colors of commercial packaging are set in stark contrast with the dull, sickening tones of murky waters. These photographs are uncanny "still-life" from our everyday life characterized by immediate satisfaction, constant consumption and desertion. Among the range of detritus, the most provocative is perhaps discarded transparent vinyl gloves submerged in water, suggesting the almost invisible trace of the human hand, and metaphorically, the cause of environmental destruction.

Keen observers of details and textures, Cheery and David are also sensitive to composition and space. They sometimes zoomed out for wider views and to include more context. In some images, the curvilinear forms of floating industrial waste or invasive duckweed resemble coastal lines and aerial views of the earth, creating an ambiguous sense of scale. In others, cans and bottles and other artificial objects viewed from afar are almost indistinguishable from the surrounding pieces of driftwood and natural elements, altogether they form an all-over pattern of small dots and lines verging on abstraction. With commendable formal refinement, these are some of the most sophisticated and poignant images in the collection.

"Lake Elegy" embodies a strong sense of social responsibility and a distinctive tragic quality, and brings to mind photographs of manufactured landscapes by Edward Burtynsky, and Robert Polidori's documentation of nuclear radioactive zones of Pripyat and Chernobyl. As Cheery and David's concept and artistry continue to develop, what is of real importance is their courage to face destruction, death and disintegration, their commitment to sustainability, and the determination to carry out such a weighty project in a short period of time, and at a relatively young age. In these compelling photographs, critical gaze, contemplation, and confrontation give us a sense of hope.



Xiaoze Xie

Paul L. & Phillis Wattis Professor in Art
Stanford University

July 12, 2022

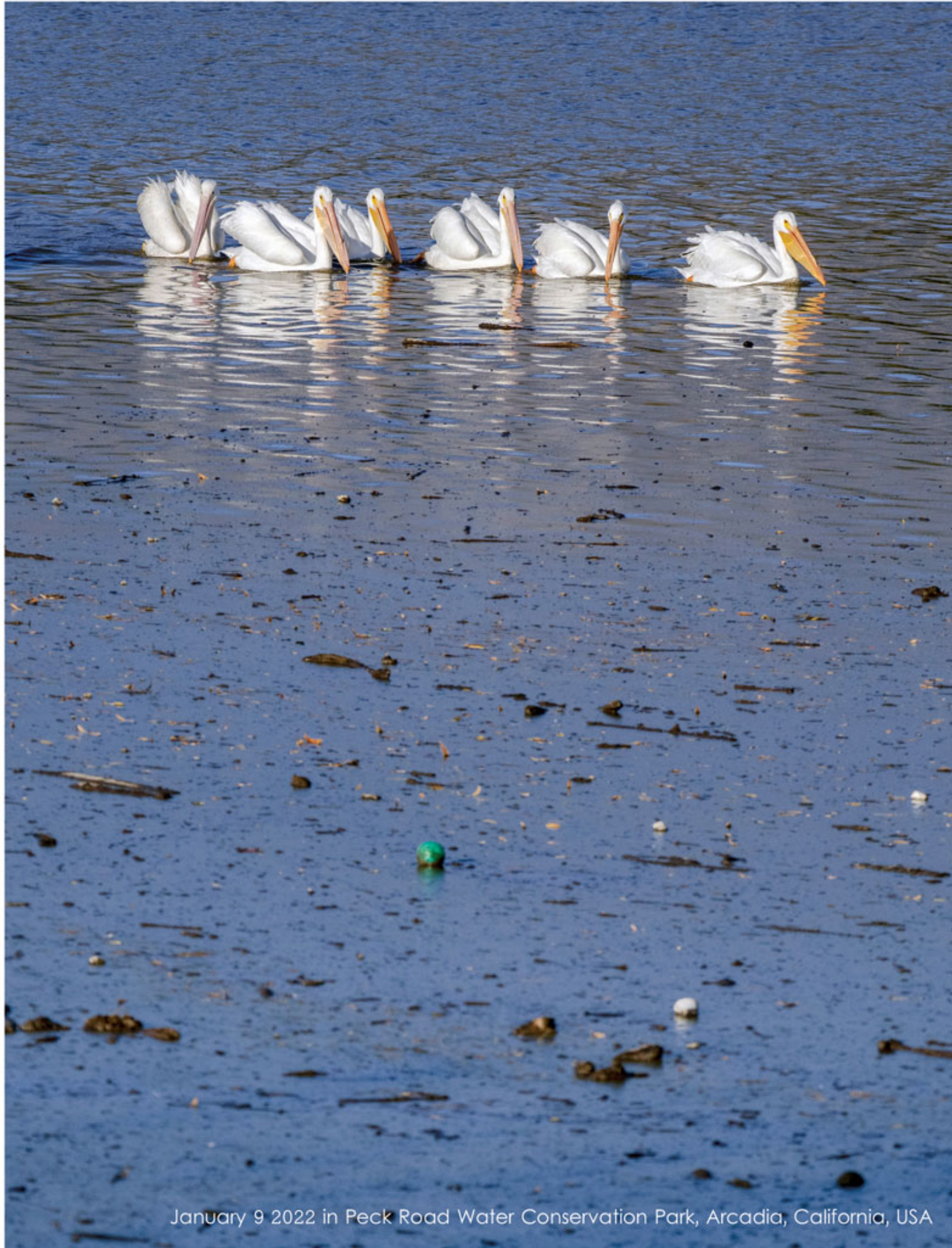


October 29, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



"Death was in that poisonous wave,
And in its gulf a fitting grave"

The Lake — To — by Edgar Allan Poe



January 9 2022 in Peck Road Water Conservation Park, Arcadia, California, USA

"NO SWIMMING OR WADING" The sign said, in all capital letters. Under it, there was another sign marked in red "WARNING! DO NOT EAT FISH FROM LAKES" In the north, the snow-capped San Gabriel Mountains lay down quietly under an azure winter sky. Down the slope, it is the north part of the Peck Road Park Lake.

The Peck Road Park lake was originally a gravel pit. It was converted to a lake and park for recreational use in 1975 by Los Angeles County. Inflows to the Lake include stormwater runoff from nearby Sawpit Wash, Santa Anita Wash, and flood water diversions from the Santa Fe Flood Control Basin. Most rain and snow fall in California from November through April. It fills the river and lakes. According to the state government, "California's third year of drought is marked by the driest winter months in 100 years. The period over January to March experienced the least rain and snow on record for any of these months in California". This is a symptom of global warming. As the Earth's average temperatures rise, evaporation rates increase, making more water available for precipitation in some areas but contributing to drying in others. The southwestern United States, including California, are the places that most likely experience meteorological drought. With much less rainfall and floodwater from the San Gabriel Mountains, the Peck Road Park Lake was half empty this winter.

We could see part of the lake bottom, littered with empty plastic bottles, styro-foam cups, used vinyl gloves, broken surgical masks and other trash. On the west side of the lake, a fleet of pelicans were swimming serenely in an endearing formation. From time to time, they scooped fish from the green shallow water, apparently ignoring the warning signs posted by their human advisors. On the east bank of the lake, a great egret was strolling elegantly among the trash, looking for food. Near the waterfront, there was a dead American coot, rotting. Most likely the bird was choked by the trash it mistook for food and starved to death. Nearby, there were some dried fish, their eye sockets already empty, and their mouths gaping. It looked as if they were singing: singing a silent elegy for themselves, and for the lake.



April 14, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



September 13, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



December 6, 2020 in Peck Road Water Conservation Park, Arcadia, California, USA



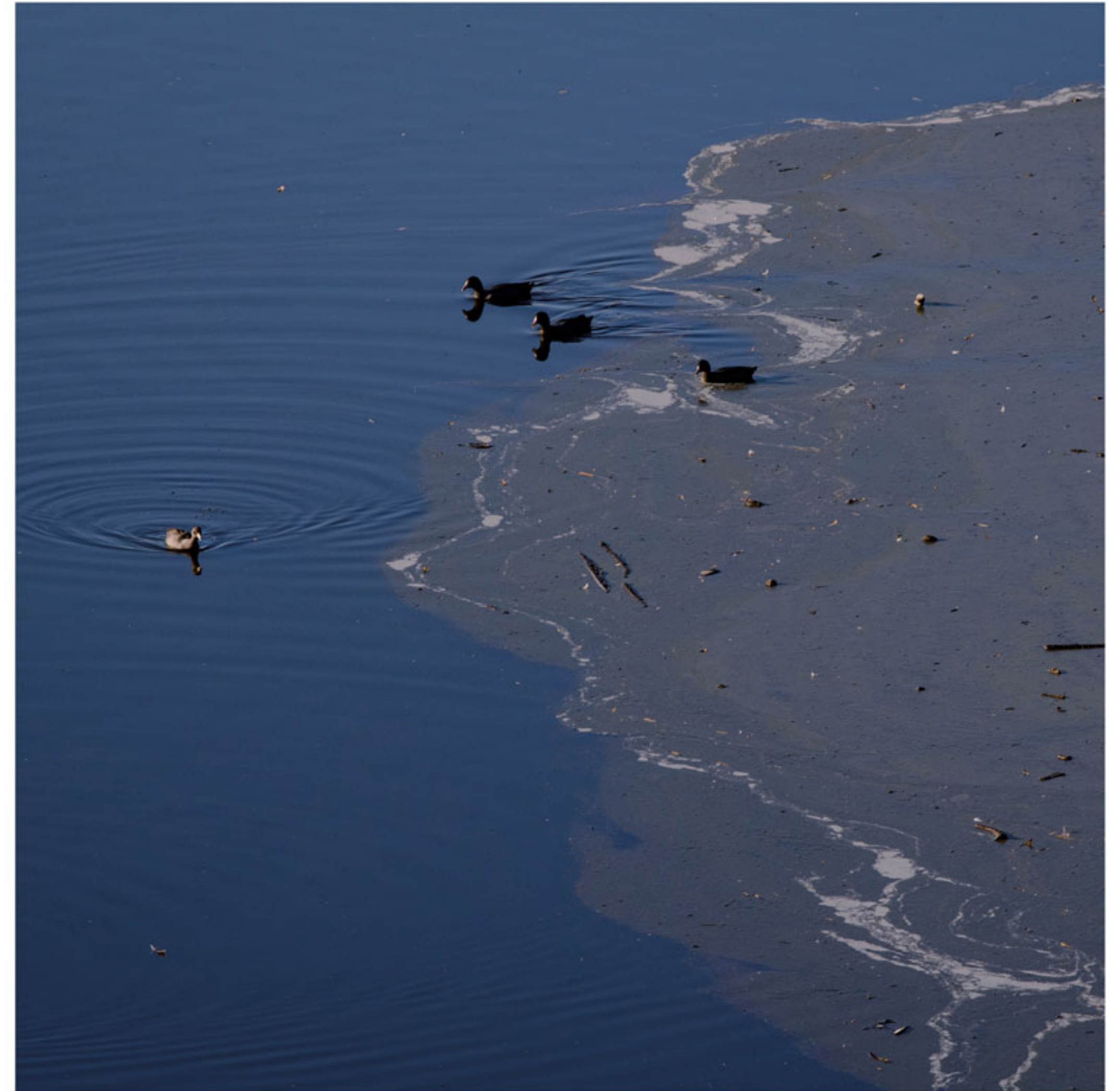
April 12, 2022 in Whittier Narrows Recreation Area, South El Monte, California, USA



July 9, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



November 14, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



November 25, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



June 29, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



September 13, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA





"All the mission bells will ring
The chapel choir will sing
The happiness you'll bring
Will live in my memory
When the swallows come back to Capistrano
That's the day I pray that you'll come back to me"

When The Swallows Come Back To Capistrano by Leon T. Rene

Cliff Swallows faithfully return to Mission San Juan Capistrano in Southern California every spring in mid March. They migrate 6,000 miles from Argentina. The town of San Juan Capistrano will have an annual festival, celebrating the return of the swallows with visitors from all over the world, a tradition since the early 1930s.

In the book *Capistrano Nights*, Father St. John O’Sullivan, Pastor of Mission San Juan Capistrano from 1910 to 1933, told the story how the swallows first came to call the Mission home. One day, while passing a newly built hotel, Father O’Sullivan saw the hotel owner was knocking down the swallows’ mud nests under the hotel eaves with a long pole. The poor birds were darting back and forth, screaming about the destruction of their homes.

“What in the world are you doing?” O’Sullivan asked.

“Why, these dirty birds are a nuisance and I am getting rid of them!” the hotel owner responded.

“But where can they go?”

“I don’t know and I don’t care,” he replied, slashing away with his pole. “But they have no business here, destroying my property.”

O’Sullivan then said, “Come on swallows, I’ll give you shelter. Come to the Mission. There’s room enough there for all.”

It seemed that the birds listened to him, as Father O’Sullivan discovered the swallows busy building their nests outside Father Junipero Serra’s Church the very next morning.

The story of Swallow and Mission San Juan Capistrano might be fictional, but the lakes and wetlands of Southern California do serve as the sanctuaries for many of the migrating birds and home to diverse wildlife.

During the last 2 years, we frequented Peck Road Water Conservation Park, Los Angeles County Arboretum, and Whittier Narrows Recreation Area. All 3 parks are located in San Gabriel Valley in Los Angeles County. In the lakes of these parks, we saw sandhill cranes, surf scoters, and white pelicans, which were visitors from the northern states, even Canada. Some of them, just like humans, found the US so wonderful and became permanent residents, for example, Canadian geese and Egyptian geese, which stay here year-round. The birds we saw the most are still the native species, like American coots, mallards, muscovy ducks, herons etc.

With immaculate white plumage, black legs and brilliant yellow feet, the slender snowy egret is one of the most elegant migratory birds in California. In the 19th century, the long breeding plumes of snowy egrets were prized by millions of people as decorations for women’s hats. The feathers were in such high demand that the birds were hunted to almost extinction. Finally the plume trade was curtailed in the early 20th century within North America as the concerned citizens took action. With the protection of the Migratory Bird Treaty Act of 1918, snowy egrets not only survived but thrived. They can now be found throughout the US. But the biggest continuing threat to snowy egrets and other waterfowls is habitat loss.

Before the advent of modern dams, the San Gabriel River ran across a vast alluvial flood plain. The river’s channels shifted with winter floods and formed extensive wetlands along its perennial course. This was a relatively scarce source of fresh water in this arid region of North America. Before the Spanish coloniza-

tion, the native Tongva people and their ancestors had lived in the San Gabriel River basin for thousands of years, relying on the abundant fish and other wildlife in riparian habitats.

About 175 years ago and just 5 miles away from Whittier Narrows Recreation Area, the Battle of Rio San Gabriel occurred at a ford of the old San Gabriel River, which is named Rio Hondo now. This battle during the Mexican-American War sealed the fate of California.

The battle was fought between about 350 Californio militia led by Jose Maria Flores, Mexican Governor of Alta California, and about 600 American soldiers and marines commanded by General Stephen Kearny and Navy Commodore Robert Stockton.

Outnumbered and poorly armed, Flores' only hope was to attack the Americans while they were crossing the San Gabriel River. On the afternoon of January 8, 1847, The Americans marched through the knee-deep San Gabriel River under musket and cannon fire by the Californios. They lost momentum as their boots and artillery were sucked into the quicksand bed of the hundred yard crossing. On the previous day, Flores positioned two nine-pounder cannons, sharpshooters, mounted lancers, and horsemen squadrons on a fifty-foot-high bluff above the ford. But the Californios' low-grade powder and poor aim inflicted few American casualties. Inspired, Stockton rallied his struggling troops, personally charging into the water to rescue one of his sinking cannons and shouted: "Quicksand be damned, come on boys!" The Americans took cover on the river edge. Stockton personally helped unlimber and direct the artillery, which silenced both Californio cannons. The battle had lasted an hour and a half. Flores withdrew his smaller force. The battle was decisive in the campaign for control of Los Angeles, and

Alta California. California was formally ceded to the US in the Treaty of Guadalupe Hidalgo signed the next February between the US and Mexico.

The San Gabriel River is now just a dry riverbed, covered in gray cement for most time of the year. It is no longer an actual river that could serve as a natural barrier of defense in wars.

Before urbanization began in the early 1900s, water from the San Gabriel River was heavily used for irrigation and ranching by Spanish, Mexican and American settlers. Eventually much of the watershed was transformed into industrial and suburban areas of greater Los Angeles. Severe floods in the early 20th Century spurred the government to build a system of dams and debris basins. Much of the lower San Gabriel River was channelized with riprap or concrete banks. Spreading grounds and other works, like Peck Road Water Conservation Park and Whittier Narrows Recreation Area, were created to capture stormwater runoff and recharge the groundwater for urban use.

All these developments helped Los Angeles become the second largest city in the US, but at the same time caused much trouble to wildlife as their habitat decreased drastically. The San Gabriel River used to have the largest runs of steelhead trout in Southern California. Steelhead once migrated over 60 miles upriver from the Pacific Ocean to spawn. Nowadays as the river dried up and the flood-control dams were erected, we can rarely find any steelhead in the San Gabriel basin.



March 1, 2020 in Whittier Narrows Recreation Area, South El Monte, California, USA



November 22, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



November 27, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



November 28, 2020 in Peck Road Water Conservation Park, Arcadia, California, USA





February 14, 2022 in Peck Road Water Conservation Park, Arcadia, California, USA



March 7, 2022 in Peck Road Water Conservation Park, Arcadia, California, USA



February 23, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



February 14, 2022 in Peck Road Water Conservation Park, Arcadia, California, USA



December 31, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



March 16, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



November 9, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



July 9, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



July 18, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA





June 29, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



September 13, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



June 29, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



October 10, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



March 22, 2021 in Peck Road Water Conservation Park, Arcadia, California, USA



December 12, 2020 in Peck Road Water Conservation Park, Arcadia, California, USA





“So the animal quartet led the Creators to Broken Place where they found corn growing in abundance. The Creators realized at once that this was the key ingredient that had been missing. It was exactly what they needed to make the kind of creatures they had hoped to place on Earth. The Creators got busy right away. They mashed corn into meal and used it to make four strong, handsome men who became known as the Four Fathers. Then they ground more corn into a liquid. The Creators offered the new potion to the men they had just made. The men drank it, and suddenly they had muscles and energy. While the men slept, the Creators made each one a wife as beautiful as the men were handsome. ”

The Creation of People According to the Popol Vuh
Mayan and Aztec Mythology by Michael Schuman

According to the Maya creation story, the creators finally made humans they wanted with corn, which was the staple food of Mayans. You might not be a believer in mythology, but it is true that we are what we eat.

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Fish is filled with omega-3 fatty acids, vitamins and all kinds of minerals. The American Heart Association recommends people to eat fish at least twice a week. However, lots of fish contain traces of methylmercury, DDT, Chlordane, PCBs, or other chemical compounds, which can cause serious health problems.

Mercury occurs naturally in fossil fuels like coal. When people burn these fuels for energy, the mercury becomes airborne and eventually settles into bodies of water like lakes and rivers. Microorganisms in these water bodies can change it into methylmercury. Then it builds up in fish and shellfish in the water. As small fish are eaten by larger fish, concentrations of these harmful chemicals increase along the food chain. This process is called biomagnification. So we should not eat large predatory fish for a true healthy diet.

Published on September 27, 1962, *Silent Spring* by Rachel Carson documented the environmental harm caused by the indiscriminate use of pesticides, especially DDT. This book shocked the public in the US. It led to a nationwide ban on DDT, and the creation of the U.S. Environmental Protection Agency in the 1970's.

But chemicals like DDT, PCBs (banned in 1979) and Chlordane(banned in 1988), could be strongly absorbed by sediment and lipids, and can still be found in sediment of rivers, lakes and oceans even after so many years.

Scientists from UCLA analyzed fish tissue concentrations of total DDT, PCBs and Chlordane, using largemouth bass from Peck Road Park Lake in the 2000s. Although the average DDT concentration is 25% lower than the Californian Fish Consumption Guidelines (FCG), one of the three samples exceeded the FCG. They also found Chlordane concentrations are consistently above the FCG. The worst is the PCBs concentration, which is 10 times greater than what is stated in the FCG. That is why the park discourages people from eating fish from the lake!

Although the lakes of the 3 parks we visited varied in sizes, they have one thing in common: they get their water mostly through the stormwater runoff from the surrounding urban areas. The urban runoff includes petroleum products we used for our cars and trucks, pesticides and fertilizers we used in our gardens and lawns. Pesticides are poisonous to the wildlife. Fertilizers can cause eutrophication of the lakes. The harmful algal blooms caused by fertilizers may result in oxygen depletion of the water body after the bacterial degradation of the algae. Low levels of oxygen in the water is the most common cause of mass fish deaths.

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Humans are not the only victims of these harmful chemicals. When water birds are exposed to these toxic compounds by eating the contaminated fish, it results in a number of adverse effects on their reproductive potential, such as deformities and lethality of embryos. These effects have, in turn, caused declines in birds' populations.

Chemical toxins may pose a danger to the wildlife in the long term. The more imminent danger is the trash in and around the lake. Trash, and especially plastic, can harm wildlife in two main ways: ingestion and entanglement.

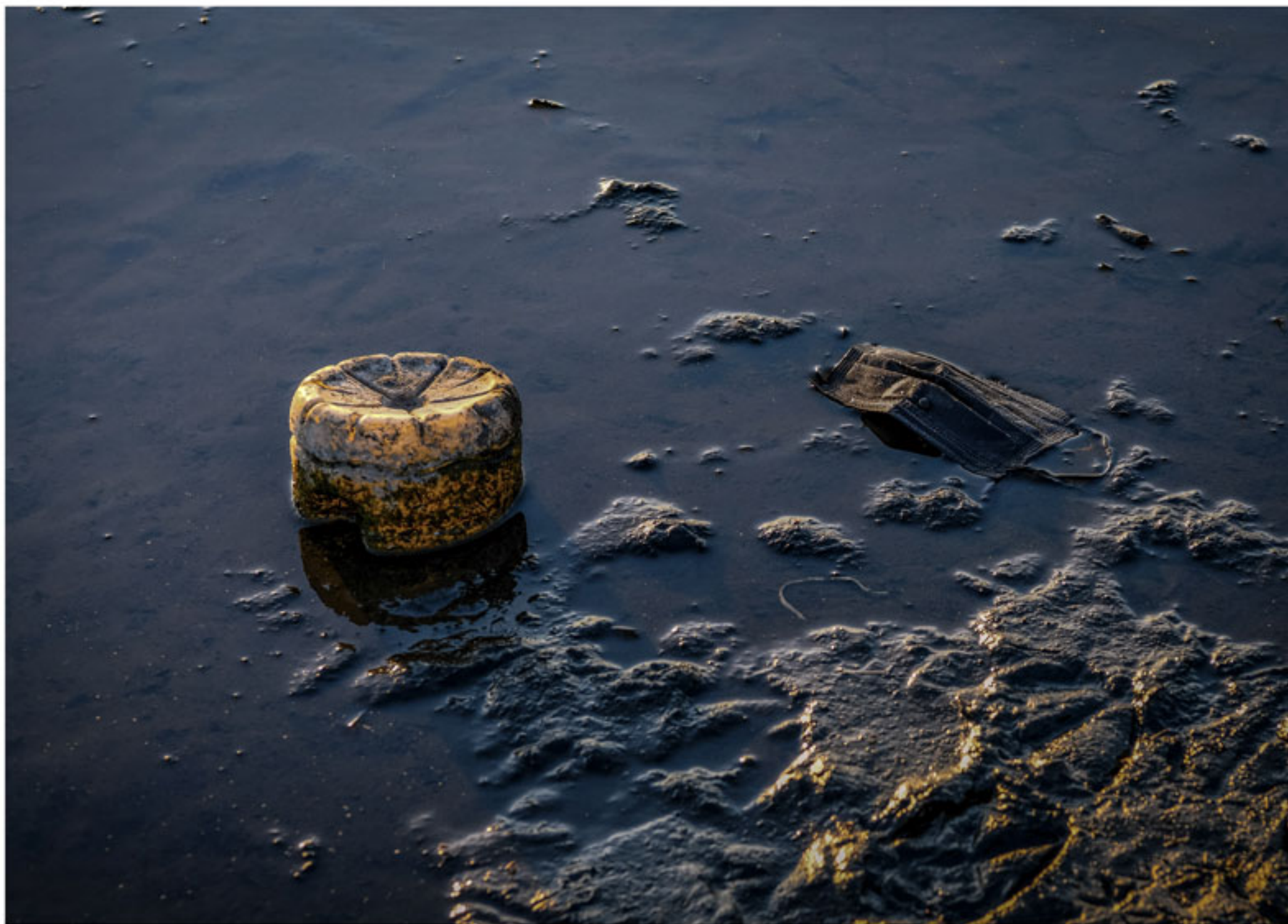
Plastic debris in the mud or floating in the water might look like food for many birds. Making things worse, plastic may even develop food-like smells that attract birds and other wildlife. Plastic can cut soft tissues and damage internal organs when ingested. Swallowed plastics are often too big to pass through the animals' digestive systems and cannot be broken down. Plastics can accumulate in animals' stomachs as a result, causing them to stop eating and eventually starve to death.

Entanglement is another widespread threat. Animals in the wetlands can get caught in discarded shopping bags, plastic pack rings for soft drinks and other plastic items. This can hamper the animal's ability to hunt, feed their young, and

escape predators. Entangled pieces of plastic can also cut into their skin, causing infection, and even loss of a limb.

According to a study by the EPA, the major source of trash in Peck Road Park Lake is due to litter. People intentionally or accidentally discard their trash in the lake or surrounding watershed. Trash is deposited throughout the watershed and carried to various sections of the lake via storm drains. Total trash amount is linearly correlated with precipitation. Trash can also be blown into the lake directly. Different uses of the park are responsible for different degrees of trash impairment. For example, areas with picnic tables generate more trash than parking lots. Total trash amount is also linearly correlated with the visitor numbers in a certain time period.

Another example of impact imposed by human recreational activities on environment can be seen at the upper streams of the San Gabriel River. Although undeveloped, these areas are subjected to heavy recreational use and are impacted by trash, debris, E. Coli and heavy metals. Each weekend, the Forest Service has to remove about four hundred 32-gallon bags of trash from the East Fork alone!



April 3, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



December 6, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



February 23, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



April 12, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



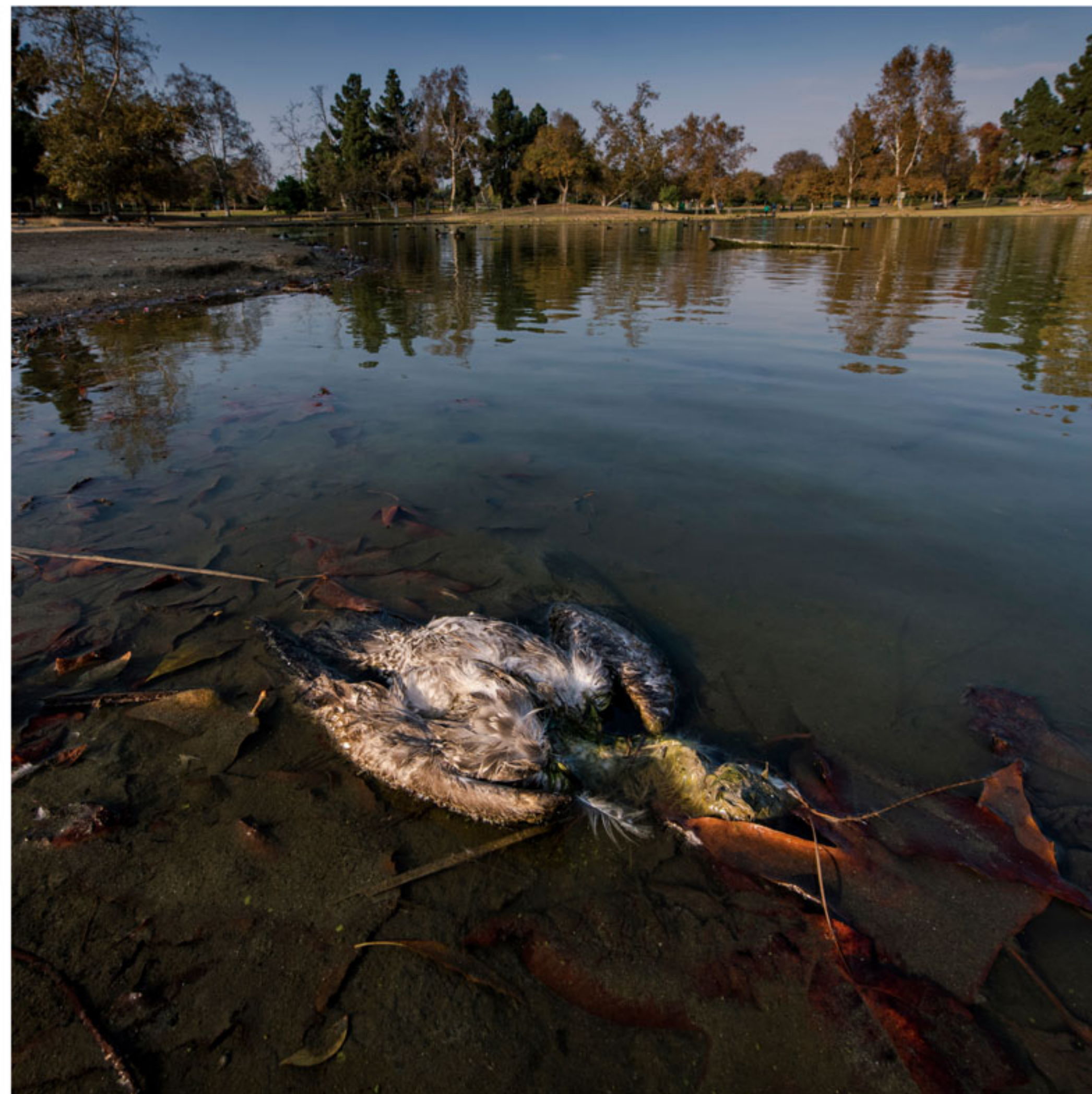
March 16, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



April 12, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



March 22, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



December 12, 2020 in Whittier Narrows Recreation Area, South El Monte, California, USA





March 29, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



July 18, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



May 15, 2020 in Whittier Narrows Recreation Area, South El Monte, California, USA



April 12, 202 in Whittier Narrows Recreation Area, South El Monte, California, USA



February 3, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



February 23, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA





February 18, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



March 16, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



March 22, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



December 12, 2020 in Whittier Narrows Recreation Area, South El Monte, California, USA



March 29, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



April 12, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



February 24, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA



July 18, 2021 in Whittier Narrows Recreation Area, South El Monte, California, USA





Don't spit in the well, you might drink from it later.
-Russian Proverb

Protect the environment.
Conserve wildlife.
Act now!

About the Authors



Cheery and David Chen are siblings. They live in Los Angeles, CA. Both are attending Harvard-Westlake School. Cheery is a senior and David is a junior.

They are compassionate, always caring about the well-being of the community.

When COVID-19 hit the US, the medical system was heavily impacted and police officers risked their lives every day to maintain the social order. Cheery and David witnessed this situation and were genuinely moved. They decided to do whatever they could do to help the community. A non-profit organization named C&D Global Humanity Foundation was formed by them in 2020. The foundation is committed to the well-being and advancement of the community. In 2 years, the foundation donated one million medical gloves to medical professionals throughout Los Angeles county, and more than 20,000 surgical masks to Covina Police Department and San Gabriel/Pomona Valley Parents' Place.

During the COVID-19 pandemic, hate crimes towards Asians rose tremendously, and Cheery and David decided to stand out. With the endorsements from Congressmen, Congresswomen, and other leaders from different communities, Cheery and David successfully held a press conference named "Asian Teens Voices Matter TOO!"

They are also concerned about human sustainability and global ecosystem.

Cheery and David took up photography as a hobby while in middle school. They spent two years going out to take photos about pollution and the negative impacts on wild animals. They brought us a very unique perspective that we don't see regularly. Their unique perspectives will spark more ideas in us to help the world we live in and people on this planet. They started a photography club at Harvard-Westlake School to promote photography skills and the spirit of environmental protection. During the last 2 years, Cheery and David led and coordinated field trips every month to local parks and lakes, and tried to capture the dark sides in our environment. They captured dead fish and tortoises affected by pollution, white wastes floating on the lake, massive oil pollution in the ocean and volunteers working so hard to clean the oil pollution by the beach.



Acknowledgments

We would like to express our deepest appreciation for the team behind this first book of our own. For those who helped with making this book happen, Professor Xuhui Hu of Peking University, Tenured Professor Xiaoze Xie of Stanford University, our chief mentor Michael Yang, our photography mentors Bin Xu and Yuhong Huang, translator Miao Fang, our Harvard-Westlake photography club's members, Harvard-Westlake Dean Mrs. Cuseo, we thank you for all the efforts and dedication. Most importantly, we cannot express enough thanks to our mom and family, without your unconditional support, we would never have the courage to conquer the difficulties during the process and make this happen.