

PEATDUSTER

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Delta-Sierra Group Newsletter

July - September 2021

Visit us at www.sierraclub.org/mother-lode/delta-sierra



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TRIBUTE TO DALE STOCKING

Our dear friend and vibrant volunteer Dale Stocking passed away on May 16, 2021. He was 81.

We received the following email and decided to print it without much modification.

Subject: Sad news

It is with heavy heart that I share the news I've just received. Dale Stocking passed away last night just after 11pm.

A brilliant man, a decent man, and one of the very best people I've ever worked for. He really cared about his staff and his patients. He had treated thousands of patients over the years. I still run into people who knew him from his practice. He loved a challenge.

Active in peace and justice movements, the Sierra Club, the San Joaquin Dental Society. Loved to fish and hike Sierra peaks. Lived out a dream by moving to Arnold several yrs ago and being a ski instructor there until this winter. Recently relocated to a senior living facility in Hughson.

Had brain tumor surgery about 10 days ago after many years of successfully battling cancer in new ways. This time it didn't go well.

For one who truly deserves to rest in peace, Martha Tipton.

Reflections by Margo Praus

Dale was serving as both the Chair and Treasurer for the Delta-Sierra Group Executive Committee, when his health forced him with his wife Gale to move out of Stockton, California to Arnold near his beloved Calaveras Big Trees State Park. It left a huge gap in our volunteer staff and a great loss to our group's history. He was so aware of what was going on in the community and could help with clarifying issues to others. He usually knew where our tabling equipment was (and how to set it up!). While I agreed to sign on the dotted line saying that I would take on the role of Chair, it had never been my plan. Dale remained my "go-to" person for information, insights, and ideas on how to move forward, and he often advised me on the best way to approach an issue or a particular person--as well as when to let things rest!

I was so pleased that he was able to ski most of the 2019-2020 ski season until COVID 19 shut everything down. He talked so enthusiastically about how much he loved teaching skiing, especially those little beginners! Even in June 2020, I called him for advice on a particular issue and he was excited to participate in our Zoom calls and as usual, had good ideas for ways to proceed. He is sorely missed and forever loved.

Nan Ballot Writes

I do have vague memories of Dale's participation (struggle) to make the Stockton General Plan, I believe it was until 2035, have limits to sprawl and to focus on "infill". At the Board meetings he always shared the updates of progress as well as the next stage of his game plan. He appeared to relish the struggle, especially each positive step forward. Those meetings always ended with an upbeat perspective, even when the outcome looked dubious, a characteristic of his management style. The current city limits at Eight Mile Road and the green space between Lodi and Stockton, rather than suburban sprawl between, are just a small part of Dale's efforts. I truly wish that I had a more detailed memory of his efforts because they were many, all making this community a better place to live. I continue to miss him. Thank you Dale.

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Robert Evans Remembers...

Dale was everything to Delta-Sierra Group. He was Chair, Conservation Chair and our Outings Leader. He was actively involved with the Motherlode Chapter. But did anyone really know Dale Stocking? I can't say I did, but I can tell you a few things about a person who I admired and had the fortune of seeing how carefully he approached a problem or issue. I was on the Executive Committee for Delta-Sierra Group and sometimes challenged Dale's logic on a matter we were dealing with. I know he enjoyed such confrontations because he would smile in a certain way, and then carefully choose his words before he spoke knowing he had

already anticipated my questions and comments. Dale was a complicated person keen on detail and was never condescending.

I worked as the fire protection engineer for the Stockton Fire Department and sometimes consulted with our building inspectors. Dale was involved with a remodel project for his dental office and I heard one inspector complain, "That guy is really anal, but if I ever need any work on my teeth, he's the one I would go to." I also recall on a private outing near Silver Lake Dale spotted that my boot laces were untied and he jumped down and tied those laces in a double knot. Yep, that was Dale.

In 2003 I represented City of Stockton B and C managers and supervisors in negotiations with OMI/Thames for the privatization of the city's water and wastewater systems. It wasn't just about losing dedicated employees, but both Dale and I were concerned about losing institutional knowledge.

Dale also discussed the economics of scale that the City Council failed to recognize. With OMI's takeover, a substantial portion of city vehicles and equipment would not be serviced by city staff anymore and there is a cost associated with unused buildings and truck lifts and qualified employees who would lose their jobs.

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Sierra Club won the lawsuit and Dale Stocking commented, "Water management is too important to be left in the hands of private companies who answer to shareholders and not to the people whose water they control," says local Sierra Club volunteer Dale Stocking. "We hope this will serve as an example and inspiration for communities around the country."

He had a general knowledge of the environment, so it was delightful to hear him lecture on the trees, plants, glacial activity, and even the damage we are causing the planet. However, he probably knew too much and it was difficult to get him excited. But, I saw it happen once.

We were making that postpile journey and we had a couple of lag-behinds with us. They of course missed the turnoff to the top of the postpile and wandered off down the canyon. Dale asked me to head down the ridge and try to get their attention from above. I traveled about a half mile and was yelling for them, but we didn't make contact. Instead I found this incredible outcrop of pure white quartz. I went back to report to Dale and all he wanted to do was see that rock formation. Boy, was he excited! We spent about a half hour trying to figure how the quartz fit into a landscape of granite and columnar basalt. Again, that was Dale! (By the way we did catch up to that couple on our way out.)

In 2002 Dale Stocking compiled a scholarly dissertation on the history and geology of the Machado Postpiles. By now you shouldn't be surprised that it is the result of extensive research and that it includes topography maps, photographs, discussion about glaciers and lots of other details. I have a digital and paper copy and Delta-Sierra Group hopes to honor Dale by making his work available as a public domain document.

Dale was first a friend and second, a mentor. As a mentor he was a teacher. I still practice one of his lessons. Once I came to a meeting with a bright idea. I mentioned it to Dale and he said, "Robert, that's a great idea. Why don't you take ownership of it and report back?" It is the volunteers like Dale who take ownership that makes us proud to be members of the Sierra Club.

Dale, you will always be in our memories.

FROM THE EDITOR

Earth Day week April 22, 2021 was one to remember. Black Americans and the rest of America won a bitter-sweet victory in the trial for the murder of George Floyd. President Biden hosted a two day climate summit where he committed to reducing America's contribution of greenhouse gases by half by 2030. Several other countries made similar commitments.



And we were introduced to the new director for the Environmental Protection Agency, Michael Regan. Someday we just may refer to persons like Michael Regan for their talent without mentioning their race, but the news media has reported he is the first African American to head the EPA.* He has a sparkling personality and is full of enthusiasm and energy – the perfect person for the job. (*Fake news! See Page 11.)

I wish I could find an old school house black board and take a piece of chalk, or maybe a whole box, and write “climate change” 1000 times and be done with it. That entire week all we heard was climate change, climate change, climate change. Get used to it.

I'm sticking with the Bill Gates scenario. The planet gets 51 billion tons of greenhouse gas in our atmosphere every year; it stays there 300 years or more and the we must get to a zero contribution by 2050. Some of us won't be around to witness that day, but our descendants will. President Biden's goal to limit greenhouse gas is a good one, but it is grounded on a 2005 baseline, not 2020, so it is a reduction of about 40%, still not bad, but still not good enough.

We have discussed cement and quicklime so much in the last Peatduster that we want to take you on a road trip to an abandoned lime kiln located in the Eastern Sierra. Maybe we'll talk about plastic pavers, manatees, extinction and wind turbines or just let the wind carry us away.

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Meetings, Activities, Outings?

Delta-Sierra Group has not yet developed a policy for open meetings for realistic, logical reasons. The COVID 19 virus in all its various mutated forms is still rampant throughout our cities, not everyone is vaccinated and some people do not intend to be vaccinated.

This is the latest update from Sierra Club National: “The Sierra Club has extended our current COVID-19 operational response through July 4, 2021. This means all national, chapter and shared offices will remain closed, with rare exceptions for urgent business continuity needs. Travel, in-person meetings, public events and outings will remain on hold through at least July 4, 2021 as well.”

We would very much like to hold our October joint meeting with San Joaquin Audubon and we’ll make that decision around September.

We received a nice email concerning Coastal Cleanup Day from Kristy Smith, Administrative Assistant for San Joaquin County Public Works Water Resources Division. This in part is what she wrote:

“I am happy to say that plans for a revamped 2021 Coastal Cleanup event have begun! This year we are working to introduce a Hybrid Model for Coastal Cleanup, promoting family only cleanups each Saturday throughout the month of September and focusing on our own neighborhoods, schools and local parks. As we all know, any debris in our neighborhoods can find its way to our storm drains and eventually to our waterways. At home cleanups will still make a huge impact on our waterways and hopefully bring our community together during these trying times.

As the COVID situation is an ever changing beast, we do not feel it is responsible to promote large group cleanup events at this time. We all know how much effort goes into planning and coordinating this annual event and with the uncertainty of a full San Joaquin County reopening by September, this Hybrid Model will ensure we are able to hold an event in 2021 and prevent another cancellation.”

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2022 Regional Transportation Plan Sustainable Communities Strategy

Monday, August 23, 2021 @7pm via Zoom

Presented by Timothy Kohaya, Senior Regional Planner,
San Joaquin Council of Governments

Join us for an informative presentation about the 2022 Regional Transportation Plan and review some of the proposed strategies that will be included in the RTP/SCS. It maps out how the region will integrate transportation and land use, with the goal of providing transportation options to help the region grow in a financially and environmentally responsible way. The decisions made that are guided by the RTP/SCS will affect the daily lives of those who live and work in the region. Here is the Zoom Meeting link:

<https://sierraclub.zoom.us/j/6756586124>



Timothy Kohaya has worked for almost 30 years with the Sacramento County Planning and Environmental Review Department and in 2020 started to work for the San Joaquin Council of Governments. He has a BA in geography from California State University, Sacramento and is a member of the American Institute of Certified Planners.

Let's get involved!

Prior to our August 23 meeting, you can help us by taking a survey from San Joaquin Council of Governments seeking your input towards a Sustainable Future for the San Joaquin region. They want to know what you think about how to plan community growth and development and which transportation projects should be prioritized. This survey will only take a few minutes, but must be completed by August 15, 2021. On the pages that follow you'll find a link for the survey is in English, then in Spanish for those that prefer that language. Obviously, we really want your input.

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Housing



Transportation



Economy



Technology



Neighborhoods



Climate Impacts

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range vision and investment plan that provides a comprehensive look at future transportation needs in San Joaquin County. The RTP/SCS considers future population growth and housing needs, as well as economic, environmental, and public health goals.

The Plan maps out how the region will integrate transportation and land use, with the ultimate goal of providing transportation options to help the region grow in a financially and environmentally responsible way. It also contributes to California state goals of reductions in greenhouse gas emissions and miles driven on the road.

Below is the link for the English version of the RTP/SCS Phase 2 Survey.

Please help us by taking this survey.

<http://metroquestsurvey.com/m4z0k>

Thank You!



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Alojamiento



Transporte



Economía



Tecnología



Barrios



Impactos Climáticos

El Plan Regional de Transporte / Estrategia de Comunidades Sostenibles (RTP / SCS) es una visión a largo plazo y un plan de inversión que proporciona una mirada integral a las necesidades futuras de transporte en el condado de San Joaquín. El RTP/SCS considera el crecimiento futuro de la población y las necesidades de vivienda, así como los objetivos económicos, ambientales y de salud pública.

El Plan traza cómo la región integrará el transporte y el uso de la tierra, con el objetivo final de brindar opciones de transporte para ayudar a la región a crecer de una manera financiera y ambientalmente responsable. También contribuye a los objetivos del estado de California de reducir las emisiones de gases de efecto invernadero y las millas recorridas en la carretera.

A continuación se muestra el enlace en vivo para la versión en español de la encuesta de fase 2 de RTP/SCS. Ayúdenos respondiendo la encuesta.

<https://live.metroquestsurvey.com/?u=rh07g#!/?p=web&pm=dynamic&s=1&popup=WTD>

¡Gracias!



Practique y promueva el uso responsable de los ecosistemas y los recursos.

World Ranger Day Is July 31, 2021

Probably one of the most under celebrated days of recognition we have is World Ranger Day. Rangers are often taunted with silly questions from the public they may have to answer, but their duties sometimes require them to be super heroes.

Take retired ranger Dr. Nancy Muleady-Mecham who spoke at our October 2020 meeting via Zoom. At times her title changed to Certified Paramedic, Flight Nurse, Registered Nurse, Search and Rescue Specialist, High Angle and Swift Water Rescue Specialist, Structural and Wildland Fire-fighter, Fire Captain, and Federal Law Enforcement Officer. She had to be a good liar too. In her book *Park Ranger* she told a group of campers at Grand Canyon National Park they were holding training exercises when they were actually trying to recover the body of a female that had fallen 600 feet to the rocks below the canyon. (The descriptions of events in her book are extremely graphic and neither exaggerated, nor sugar-coated.)

In 2004, concerned about the dangers park rangers face worldwide, documentary filmmaker Sean Willmore made it his mission to bring real-life stories of park rangers to the public spotlight with his documentary film, *The Thin Green Line*. This film was the catalyst for World Ranger Day and the creation of the Thin Green Line Foundation. This movement has grown and Dr. Jane Goodall, for example, is one of the many Thin Green Line Ambassadors.

You can watch the entire film on YouTube. It is at this link:

https://www.youtube.com/watch?v=3_MwDhmHLm4

(Download a free program called Clipgrab to save the film as an MP4, then copy the MP4 to a USB thumb drive and view it on a larger TV screen.)

World Ranger Day will take place on six continents where many people work in parks and protected areas to preserve landscapes and historic sites. Precious flora and fauna are vulnerable to poaching, urbanization, climate change and other dangers. If you happen to visit a park or protected area this year on Saturday July 31, please observe World Ranger Day by saying hello to park staff and thanking them for their work.

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Drive Electric Week

National Drive Electric Week in Manteca, CA
Saturday, September 25, 2021 10:00 am - 1:00 pm

So far we know vehicles on display will include an Audi e-tron and a Ford Mustang Mach-E. You will have a chance to ride in plug-in vehicles like the Tesla Model S and Tesla Roadster. 15 registered attendees report 253,376 electric miles driven. That's an average of almost 17,000 miles each! At the national level, National Drive Electric Week is a collaboration between Plug In America, Sierra Club, and the Electric Auto Association.

This is an annual national outreach event to heighten awareness of today's widespread availability of plug-in vehicles and highlight the benefits of all-electric and plug-in hybrid-electric cars, trucks, motorcycles, and more.



EL Car Rally Golden Gate Park

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Wikipedia reports that electric cars were among the preferred methods for automobile propulsion in the late 19th and early 20th century, providing a level of comfort and ease of operation that could not be achieved by the gasoline cars of the time. The electric vehicle stock peaked at approximately 30,000 vehicles at the turn of the 20th century.



ELECTRIC VEHICLE EXPO

SAT., SEP. 25th 10AM-1PM

HWY 120

Union Rd.

EXPO

JCPenny

Buss Pro

W. Atherton Dr.

National Drive Electric Week™



Information & Registration: <http://ndew.org/2621>



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EPA Photo Quiz

Who are these people? If you guessed this is the old lineup for the Environmental Protection Agency you are correct. Starting left to right Catherine McCabe Acting 01/20/17 to 02/17/17; Scott Pruitt 02/17/17 to 07/06/18; Andrew Wheeler Acting 07/07/18 to 02/28/19 and for real 02/28/19 to 01/19/21; and finally Jane Nishida Acting 1/20/21 to 03/11/21.

McCabe with only 28 days and Nishida who was just filling in until President Biden picked his choice for EPA director, didn't last long enough to do any damage to EPA. It is enough to say Pruitt, a former Oklahoma Attorney General, built his career on lawsuits against EPA. He began the largest regulatory rollback in the agency's history, undoing, delaying or blocking several environmental rules from the Obama era. However, history might remember him best for his \$43,000 secure telephone booth. Andrew Wheeler really didn't make himself the public spectacle of EPA. He just finished the job by systematically rolling back some 100 environmental Regulations.

During the Trump era, 1600 employees left while 400 joined EPA leaving a nasty exodus gap in the agency's workforce to 14,172, a level not seen since the Reagan administration. (President Reagan was not a fan of solar energy and removed all 21 solar water heaters President Carter had installed in the White House.) So what has the new Director Michael Regan done so far? Why should he be on the environment's A-Team keeping in mind that if he does nothing the planet is better off compared to the former administration's policies and practices? Read on.

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Meet The New Boss Of EPA



From Internet sources we find that Michael Regan was once a career EPA employee, working there for more than a decade under both the Clinton and George W. Bush administrations before returning to North Carolina as southeast regional director for the Environmental Defense Fund. Regan is a native of Goldsboro, North Carolina.

Growing up, he hunted and fished with his father and grandfather in the inner coastal plain of North Carolina. Regan attended North Carolina Agricultural and Technical State University, where he received a Bachelor of Science degree in earth and environmental science. He then attended George Washington University in Washington, D.C., where he received a Master of Public Administration. Michael Regan's wife, Melvina, is the global operations manager for Hong Kong tech giant Lenovo. She holds bachelor and masters degrees. They have one son.

As President Biden announces America is back, EPA is back. You will even find a link for CLIMATE CHANGE on the website: <https://www.epa.gov> (Remember when the other guy said, "Climate change is a hoax invented by the Chinese.") Regan has also included topics he previously announced were personal for him - PFAS, environment justice, and a massive list of state specific issues. Check out California.

This Was EPA'S First African American Boss

To set the record straight from Page 6. Lisa Jackson was the first African American to lead the Environmental Protection Agency. She was appointed by President Obama and served from 2009 to 2013. Born in Philadelphia, Pennsylvania, Jackson is a graduate of Tulane University and Princeton University holding BS and MS degrees in Chemical Engineering.



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Kenyan Lady Recycles Plastic Into Bricks Stronger Than Concrete



Nzambi Matee, a Nairobi-based 29-year-old entrepreneur and inventor is the founder of a startup that recycles plastic waste into bricks that are stronger than concrete. Called Gjenge Makers, her company she initiated with the development of a prototype machine that turns discarded plastic into paving stones at a rate of 1500 a day.

Before creating her company, Nzambi Matee majored in material science and worked as an engineer in Kenya's oil industry. In 2017 she quit her job to start creating and testing pavers, which are a combination of plastic and sand. She gets

the waste material for free from packaging factories and also buys it from other recyclers. Through experimentation, she understood which plastics bind better together and then created the machinery that would allow her to mass produce the pavers.

Thus far, Gjenge Makers has managed to recycle more than 20 tonnes* of plastic waste into paving bricks that come in an array of colors including red, blue, brown, and green. They are incredibly strong and will hold twice the weight of concrete blocks, The startup has also generated 112 jobs for garbage collectors, women and youth groups. (*A tonne is a metric ton and equals 2204.6 pounds.)



Too Hot For You?

Sierra Club Executive Director Michael Brune is concerned about mass extinction of the human kind, but plenty of bugs and a few mammals have already adapted to extreme heat.

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Dromedaries can handle 122 degrees Fahrenheit. That number represents the magic number 50 in degrees Celsius where some Middle East countries say it is too hot for human workers. (During my time in Kuwait the official temperature sign was always stuck at 49 degrees Celsius!)



Ostriches, natives to the savannas of Africa, can easily tolerate temperatures well over 100 degrees F.

The desert tortoise can tolerate ground temperatures as high as 140 degrees F. These reptiles can live 50 to 80 years in hot spots like the Mojave Desert by making burrows underground.



The micro animal called a water bear, also known as a tardigrade, is virtually indestructible. Water bears are one of nature's smallest animals. This is not an insect. They are never more than 1.5 mm long, and can only be seen with a microscope. The water bear can handle temperatures from absolute zero to 212 degrees F. Plus, they can go without food for ten years. They make great pets!

The desert jerboa are smart enough to stay out of the sun by burrowing during the day. The rodents come out at night to enjoy the cooler temperatures and collect food.



While other animals are burrowing during the day where temperatures often reach over 116 degrees F, the Saharan Silver Ant will come out to search for food. The ants will pop out of the ground for ten minute periods of time to grab food.

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Tucked in the deep sea are Pompeii Worms, which stay warm by cuddling up to hydrothermal vents. But these vents are more powerful than your typical apartment space heater, letting out water that reaches temperature 170 degrees and higher.



SW Black Rhino Is Less Threatened

It is good to read the World Wildlife Fund report that the southwestern black rhino is now listed as near threatened in Namibia. Populations of the subspecies of black rhino increased 11% in a 5 year period starting 2012. This subspecies is often mistaken for either the extinct southern black rhinoceros or the not yet extinct southeastern subspecies. To be upgraded to near threatened from threatened is not representing a specific number of rhinos, but rather a trend of improvement in numbers.

However, the species overall is classified as critically endangered (even though the southwestern black rhinoceros is classified as near threatened). Three subspecies have been declared extinct, including the western black rhinoceros, which was declared extinct by the International Union for Conservation of Nature in 2011.



Photo Yathin S Krishnappa

Manatees Are In Trouble

Meanwhile manatees in Florida are hurting. Historical information from the Tampa Bay Times published March 30, 2017 stated that Florida's most endangered species, the manatee, no longer will be called endangered according to the U.S. Fish and Wildlife Service which then came under the jurisdiction of the Trump Administration. They announced that they were reclassifying manatees as merely threatened. They took this step the day after celebrating "Manatee Appreciation Day" on the department's social media sites. This change was made despite a record number of more than 100 manatees killed that year after being run over by boaters.



Recently, manatee deaths have averaged between 400 and 500. Causes of manatee deaths include cold stress and toxic red tides. But about 20% of the deaths are attributed to boat strikes. (593 Florida manatees died in the 12 months of 2020, including at least 90 from boat strikes. The Indian River Lagoon on the Atlantic side of the state accounts for the majority of losses.)

So far 712 deaths statewide have occurred in the first four months of 2021 and are more than the total number of deaths in four of each of the past five years, surpassed only by 2018 when 824 manatee fatalities were recorded. If this rate continues, we could expect two thousand manatees will die and this is roughly one-third of the population.

Here's what is happening. Cold snaps such as the ones Florida had this winter drives manatees to huddle together in warm-water refuges like the shallows of a lagoon. Without a refuge, the cold water can kill them. But their survival in these refuges also hinges on them finding enough seagrass to eat to sustain them until the weather warms up. Since 2009, 58 percent of the seagrass in the lagoon system has disappeared, killed off by excess fertilizer from people's lawns, excess leaking septic tanks, and other nutrient pollution in stormwater that fueled repeated toxic algae blooms. These blooms prevent the seagrass from growing. We wish they could be residents of California and call our state their home.

Endangered Axolotl



If you like diversity, please meet an Axolotl salamander named after Xolotl, the Aztec god of fire and lightning. These fellows hang around the southern part of Mexico City near broken down taco trucks. They are critically endangered and nearly extinct in the wild due to habitat degradation, pollution and some pet trade. They will grow to about a foot long and live 10-15 years. They are of interest for medical research because they can regrow their body parts including their

heart, spine and brains. Organs and limbs can be transplanted from others of their kind without rejection. The hairy look “ears” are gills.

Elizabeth Kolbert - Under A White Sky

This month I finished reading a book by Elizabeth Kolbert, *Under A White Sky*. She’s an environmental and science history writer. She wrote *The Sixth Extinction*; won a Pulitzer Prize for it too. At the very end of *Under A White Sky* which refers to geoengineering, she writes, “This has been a book about people trying to solve problems created by people trying to solve problems.”



One of the problem topics in her book concerns Mojave Desert pupfish. This example from her book caught my attention:

Another desert pupfish, the Owens pupfish, was thought to be extinct, only to be rediscovered in 1964. By 1969, it was just barely hanging on, in a pond the size of a rec room, when, for reasons no one could quite explain, the pond shrank to a puddle. Someone alerted Phil Pister, a biologist for the California Department of Fish and Game, who rushed to the site - a spot known as Fish Slough. Pister collected all the Owens pupfish left at Fish Slough, with the intention of moving them to a nearby spring. They fit into two buckets.

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“I distinctly remember being scared to death,” he would later write. “I had walked perhaps fifty yards when I realized that I literally held within my hands the existence of an entire vertebrate species.” Pister spent the next several decades working to save the Owens pupfish and also the Devils Hole pupfish. People would often ask him why he spent so much time on such insignificant animals.

“What good are pupfish?” they’d demand.

“What good are you?” Pister would respond.”

If you’re like me you probably wonder why these bits and pieces about climate change, extinction of animals, tardigrades, manatees, salamanders and pupfish are discussed in the Peatduster. After all, we live on the Pacific Coast; we have busy lives; we can’t save the world. Yet, exposure to diversity leads to an appreciation of our only planet and its complexities. It impacts all living things, relationships, attitudes and political positions. We need to come together to deal with these crises that we’ll surely leave behind unfinished for the next generation. There is no better agenda than the one you make for yourself when you consider “What good are you?”

Vinyard Wind Project Approved



Avangrid Renewables and Copenhagen Infrastructure Partners participating with financing and project management, will develop Vinyard Wind 1 offshore wind farm off the coast of Massachusetts. With 800 MegaWatts of installed capacity and an investment of 2.5 billion Euros (almost \$3 billion), it is the largest wind farm currently being

developed in the United States. This partnership has selected GE Renewable Energy as its preferred supplier of 84 wind turbine generators.

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The park is 15 miles (some 24 km) south of Martha's Vineyard and 34 miles (55 km) south of the Cape Cod peninsula. Vineyard Wind 1 will consist of an array of wind turbines, spaced 1 nautical mile* apart on an east-west and north-south orientation. Each wind turbine is capable of generating 13 megawatts of power. Power from the turbines is collected by an offshore substation. This is a big deal for America, renewable energy and climate change. *(A nautical mile is 6076 feet and is based on the circumference of the earth, equal to one minute of latitude.)

The complex, which is expected to go into service in 2023, will generate wind power sufficient to meet demand from over 400,000 homes and businesses across Massachusetts. It will also prevent the emission of more than 1.6 million tons of carbon dioxide every year, the equivalent to withdrawing 325,000 vehicles from the roads. In addition, during the life of the project, a total of 3,700 million dollars will be saved in energy costs in the region of New England.

The project will create 3600 full-time jobs and will reduce electricity rates by 1.4 billion dollars during the first 20 years of operation.

A very familiar American company will be building the wind turbines. GE Renewable Energy is a division of General Electric focusing on production of energy from renewable sources. They are a global company which this project needs with headquarters in Paris, France.



You probably know that GE surpassed the Danish company, Vestas Wind Systems, in production of wind turbines in 2018 here in the USA and has been leading ever since. (The *windmill* guy didn't know that!)

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Windar Renewables will be responsible for manufacturing the wind turbine foundations. The contract is worth around 100 million euros (\$120 million) and will create approximately 400 jobs at the plant in Asturias, Spain.

Vineyard Wind has entered into an agreement with Italian company Prysmian Group worth 200 million euros (\$239 million) to design, manufacture, install and commission the submarine cabling system that will connect the offshore wind farm with the Continental US power transmission grid. The project will require a total of 134 kilometres (83 miles) of high voltage alternating current electric cable.

LM Wind Power, a GE Renewable Energy Business, is a world leading designer and manufacturer of rotor blades for wind turbines, with a global manufacturing footprint that includes blade factories in Brazil, Canada, China, Denmark, India, Poland, Spain, France, Turkey and the United States.

Leaked Climate Change Report (We're Doomed)

A 4000 page draft report Intergovernmental Panel on Climate Change scheduled for publication in 2022 was leaked to the Agence France Presse June 23, 2021. You could have missed this because of all the other news that week. Derek Chauvin was sentenced to 22.5 years for killing George Floyd. Portland, Oregon was expected to get unheard of record temperatures at the weekend. A 12-story condo just collapsed at Surfside, Florida and about 164 people are assumed dead. The Director of National Intelligence issued a 9-page Preliminary Assessment for Unidentified Aerial Phenomena. (UAP now replaces UFO.) Something is out there.

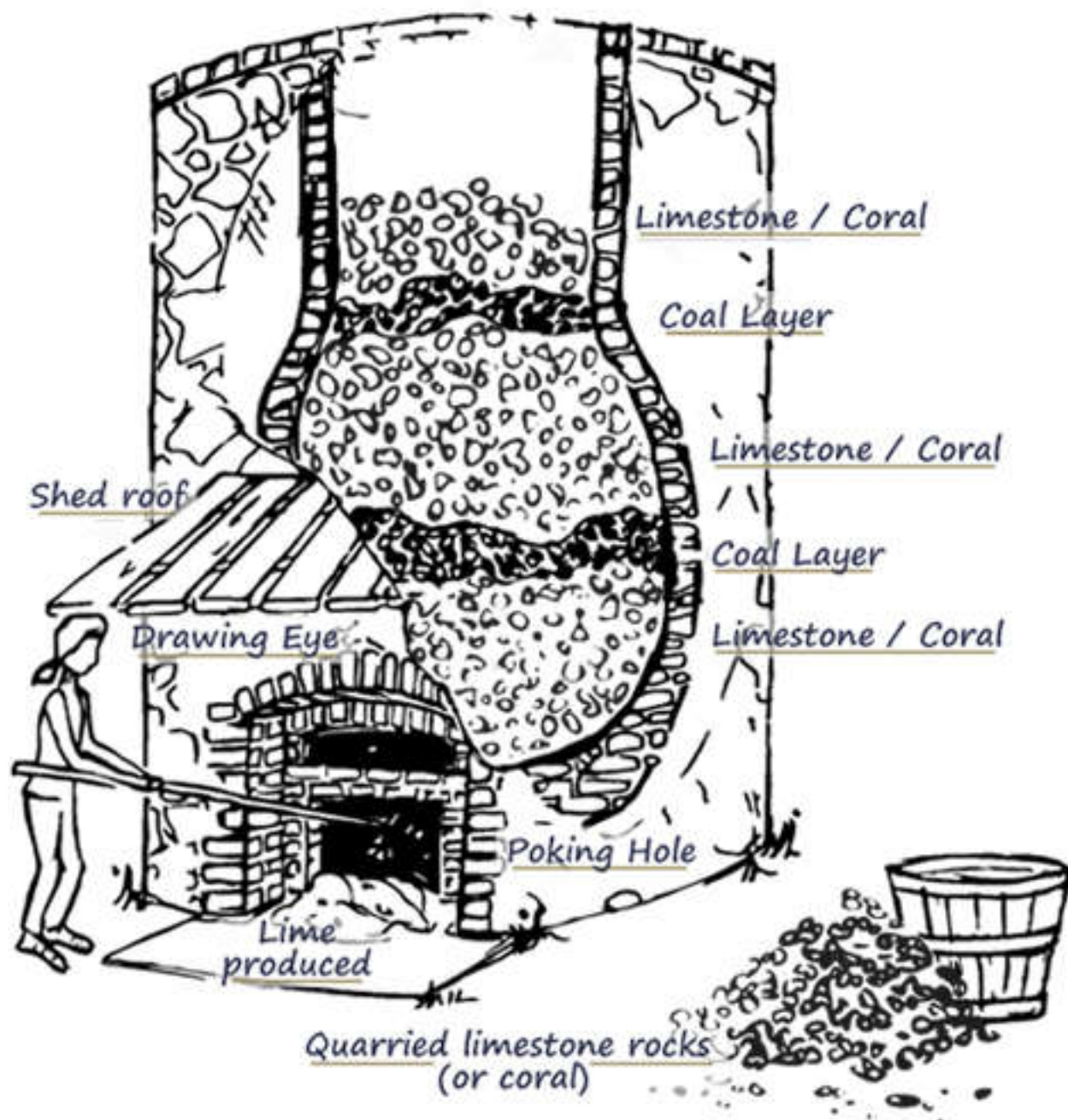
The draft report was not good news. Species extinction, more widespread disease, unlivable heat, ecosystem collapse, cities menaced by rising seas and other devastating climate effects are accelerating much more than estimated. The IPCC immediately issued a back-pedaling statement that the report is a draft and needs addition tweaking and clarification. Nevertheless, the fine print conveyed a sinister message; “Life on Earth can recover from a drastic climate shift by evolving into new species and creating new ecosystems.” “Humans cannot.”

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More About Cement Vs Lime

(Than You Want To Know)

Lime is a generic term for quicklime (CaO) and hydrated lime (Ca(OH)_2) through the calcination of limestone. Portland cement gets its name from inventor Joseph Aspdin, of England, who patented the basic process in 1824. He named it for the resemblance of the cement when set to portland stone, a limestone from the Isle of Portland. It's easy to get lost in the chemistry of these materials, but they all start with limestone also called calcium carbonate.



Limestone is almost everywhere. In its purest form it is called chalk and you get the Cliffs of Dover. Visit the limestone chamber in Carlsbad Caverns and you find stalactites hanging down. These crystals are made of calcite, a hard form polymorph of calcium carbonate (CaCO_3). By hard we mean only 3 on the Mohs scale of hardness. Did you notice that white deposit on your bathroom faucet? It's probably calcium carbonate.

When limestone is heated to about 900 degrees Celsius (1650 degrees F) that process separates limestone into a corrosive, unstable solid we call lime (calcium oxide) and carbon dioxide gas. A lime kiln is used to produce this lime. In recent years, limestone has seen an increase in its use as a cement additive to reduce our carbon footprint. This is due to the relatively lower CO_2 output during the process in comparison to Portland cement manufacture.

If you read the last Peatduster you would have learned that if you make one ton of Portland cement you get one ton of carbon dioxide in our atmosphere and the world makes a lot of cement. (Without going overboard a good 3000 psi concrete mix would have 1 part cement, 3 parts sand and 3 parts aggregate. Hoover Dam is made with 4,360,000 cubic yard of concrete. A cubic yard of concrete weighs 4050 pounds. There are 2000 pounds in a ton. So I get 1,261,286 tons of carbon dioxide dumped into our atmosphere for 300 years or more. Is the math correct?)

The pros for Portland cement are high strength, quick set time strength, sets underwater and is less expensive. The cons include no flexibility and bad for the environment. Meanwhile for lime we find flexibility, a slow set time, permeability, workability and compared to Portland cement, is better for the environment.

There are a few other places in California where you can find lime kilns. Limekiln State Park on the Big Sur coast contains four lime kilns from an 1887–1890 lime-calcining operation. The Olema Lime Kilns at Point Reyes National Seashore were built in 1850. These kilns were reportedly fired only a few times, and have lain abandoned for some 140 years. Look for the Charcoal Kilns just south of Lone Pine off of Highway 395. The Santa Cruz Lime Kilns are located near UC Santa Cruz and the Pogonips. Wildrose Charcoal Kilns are located in Death Valley.

Journey To A Lime Kiln

The lime kiln we will visit is located on the eastern side of the Sierra Nevada Mountains. It is near the route of the Bodie Railway and Lumber Company founded February, 1881. The purpose of this railroad that has changed names several times was to supply Bodie with lumber from Mono Mills for buildings, firewood for heat and for the steam engines that powered the stamp mills.

At the kiln lime was burned from chemical deposits of calcareous tufa which had been formed by springs rising beneath the waters of Mono Lake. This lime was sold for use at the cyanide plants in Bodie for as much as \$35 a ton. The last recorded lime production was in 1913.

Mono Mills was a two-story structure capable of processing 80,000 board-feet in a single 10 hour shift. Like Bodie, it burned wood to power a steam engine for cutting the wood. However, when the Hydroelectric Power Plant was built at Green Creek, and with reduced gold production in Bodie, Aurora and Masonic, the demand for lumber and fuel wood diminished. Bodie and the surrounding mills and mines needed less firewood, and so on September 7, 1917 the Bodie & Benton Railway was abandoned and sold for scrap. Mono Mills shut down the same year.



Internet Photo

You have chosen to take the Sonora Pass road to get there. Highway 108 is a very poor choice of course, because there are sections of road that are so steep and so narrow that you'll wish you had gone out of your way and had taken Highway 50, or better yet, Interstate 80. Sonora Pass is at a mere 9623 feet, while the highest point on Highway 50 is 7377 feet. Interstate 80 is only 7239 feet at Donner Summit.

There are also easier, safer routes. Carson Pass (8652 feet) on Highway 88 to Minden, Nevada is easier. However, if you take the shortcut through Markleeville, then the turnoff over Monitor Pass (8314 feet), it will be faster and just as scenic. There is a sign at the Monitor Pass junction that leads you to believe that Stockton is only a hundred miles away. It is.

In that case you would have used Ebbetts Pass (8730 feet). If you have more time, you might choose to take Highway 99 south, then Highway 140 to Crane Flat, then turning east for Tioga Pass (9943 feet) out of Yosemite. At any time these passes can be closed due to snow, landslides, or in recent times, fire. Fall with the colors before Halloween is an excellent time to visit.



The Sonora Pass corridor probably occurs after the Pinecrest Lake area and the one-horse town of Strawberry. Several roads lead off to the south leading you to the trailhead for Emigrant Basin and even Waterhouse Lake. This lake has no inlet. When I was there, we found a lot of water snakes along the north shore. They were easy to catch and none of them were rattlesnakes!

A short ride east, you come to the turnoff for Eagle Meadow. It's only an hour's drive starting on a good paved road, then changing to a terrible road that crosses a stream to find the great Bennett Juniper shown on the cover. Don't worry; you'll make it. This remarkable tree is the largest known juniper tree in the United States and is located on the 3 acres of land the original owner deeded to Save the Redwoods League. At 3000 years old, it is still a toddler compared to California's ancient bristlecone pines which are more than 4000 to 5000 years old.



Get back to Highway 108 and continue east. A rocky outcrop in the distant is call the Dardanelles. The Dardanelle Resort burnt down in the fire of 2018, but it is in the process of reinventing itself from the ashes.

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It was the last place on the highway where you could buy important supplies like gasoline and ice cream. A little further on you come to the Clark Fork turn off. It is a great place for family camping and fishing. The road is only 9 miles long and dead ends at Iceberg Meadow. It originally was a pack trail and could have been the pass over the Sierra Mountains but the Sonora Pass road was an easier route.

Not far past the Dardanelle Resort, you will find the must-visit Columns of the Giants that rival Devil's Postpile National Monument located near your destination at Mammoth Mountain. The columns were created when molten lava flowed into an ancient riverbed and collected behind a natural dam. As it cooled, it hardened and shrank, splitting into multi-sided, vertical columns.



The entire Sonora Pass corridor is an adventure land and jumping off point for other destinations. The US Forest Service designated a massive nearby area as the Emigrant Basin Primitive Area in 1931 and that became the Emigrant Wilderness on January 4, 1975. Backpack to Sword lake and you'll discover freshwater jelly fish.

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At Kennedy Meadows you really start to climb. A section of the road has a 26 percent grade. There was a time that if you made this journey in a Volkswagen older than a 1961 model you would have to stop and place the transmission in first gear to be able to make one particular sharp steep curve. In 1961 VW designed a new transmission. Even so, you still might have to stop and let your passenger out because the newer 40 horse power engine couldn't haul them around the curve and up the grade. That curve is still a test for modern cars.

Have you forgotten this journey is about visiting a lime kiln? Over the Sonora Pass you can find petrified wood. I saw a chunk of it weighing 2 or 3 tons in the backyard at a house in Stockton. Things change as you descend downward. It is dryer and there are fewer streams. Finally you come to Marine Corps Mountain Warfare Training Center and you think Highway 108 dead ends at Highway 395. Not so; it joins Highway 395.



It's probably getting late. There are motels in Bridgeport and further down the road in Lee Vining which is the east entrance to Yosemite via Tioga Pass. The Bridgeport Inn is nice, however my visits to the Mono Basin were for 10 to 14 days so I rented a cabin at Mono Village. Take Twin Lakes Road and it ends at Upper Twin Lake. Definitely explore your options before you take this journey and make reservations. Be prepared for deer crossing the roads, bears and wild horses. Please take this advice seriously.

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Passing through Bridgeport and not too much farther you see the turnoff for a ghost town now called Bodie State Historic Park. This is another must-see attraction. Plan on spending a day there. It might be the only place where you can hear German, Danish, French and Italian spoken as well as a little bit of English. Further on you come to the steep grade down to Mono Lake and the town of Lee Vining.



Take time to visit the Mono Basin Scenic Area Visitor Center. It has great restrooms, a book store and excellent displays. You can learn about the alkali flies that carpet the Mono Lake shoreline, providing food for millions of migratory birds. These flies were also harvested by the indigenous Kutzadika'a tribe that occupied Mono Lake Basin. As you leave, take a quick left on Mattly Avenue (probably still a gravel road) and visit the History Museum and the upside down house. You are getting closer now as you continue south on Highway 395, but you need to make a few detours to Highway 108 to keep the location of the lime kiln in perspective.



Continuing south you pass the Highway 167 turnoff heading for Nevada. Just a little farther is the Highway 108 turnoff for Benton. It passes cinder cones and an old volcanic crater, and eventually offers access to the South Mono Lake Tufas.

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Back in the 1850's Mono Lake was much higher. It was fed by the Owens River and a few small snow-fed creeks. In fact, the tufas were underwater back then. Things changed when the City of Los Angeles diverted water from the Owens River and sucked Owens Lake dry. This became the largest source of PM10 pollution in the United States. Airborne particulate matter is not a single pollutant, but rather is a mixture of many chemical species. Those with a diameter of 10 microns or less are inhalable into the lungs and can induce adverse health effects.

A 1994 lawsuit required the Los Angeles Department of Water and Power to relinquish some of the Owens River back into Mono Lake with the goal of establishing the lake elevation at 6392 feet. Due to drought the lake is 12 feet below that level. If it drops another foot, a land bridge occurs between Gaines, Negit and Paoha Islands where colonies of California Gulls nest. While you get to see the tufas, the coyotes get to feast on eggs and chicks.



After visiting the tufas, go just a couple miles more and stop at the historic site of the Mono Lake Mills. This is where the Bodie and Benton Railroad started. It is possible to drive north along the east side of Mono Lake from this area to Highway 167, but don't do it. It will take several hours and you will get stuck in the sand. However, you can still find old wood ties from the railroad if you dare to try!

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Instead drive back to Highway 167. Note: Take time before you leave home and use Google Earth to find the lime kiln. It is located on the north side of Highway 167 on Dobie Meadows Road, a good dirt road. It winds north and west. If you find yourself at the Bodie Railroad Monument, you have gone too far. Head back and find another dirt road. Finally, you will see the kiln.

(Story and photos by Robert Evans.)



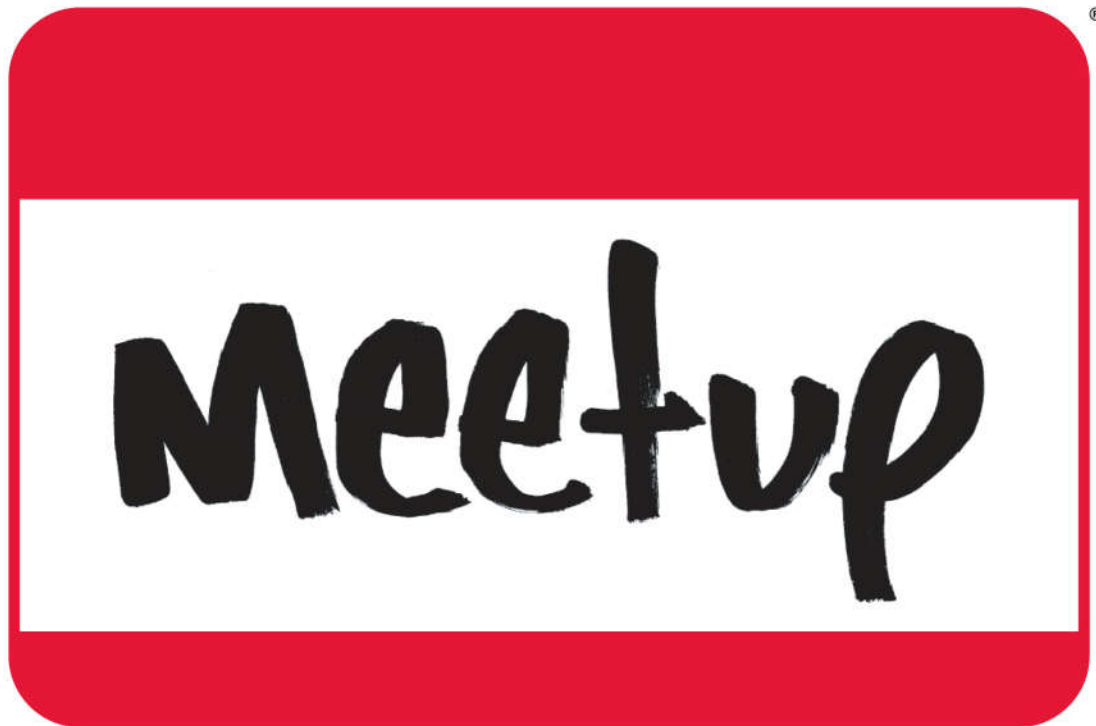
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Stockton, Modesto & Sonora Sierra Club Groups
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We have been in operation since October 2011 and now have 2084 members. California COVID restrictions are being relaxed, so please visit our website.



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