

PEATDUSTER

Volume 53-3 Page 1

Delta-Sierra Group Newsletter

July August September 2022

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



The Sierra Club - Explore, Enjoy and Protect the Planet

Owning, Driving, & Charging An EV Is Finally Worth It!

August 22, 2022 @ 7pm per Zoom

Presented by Kris Ibarra & hosted by Delta-Sierra Group

Free and Open to All Interested Viewers

With gas prices out of control, combined with expanding charging networks, and lowering cost of battery manufacturing, it has never made more sense to trade your gas car for an electric vehicle. Keep more money in your pocket, never pump gas again, and consider an EV today!

Kris Ibarra is the Director of Imaging & Public Relations for the Tesla Owners Club and a Member of Electric Vehicle Association, both for San Joaquin Valley.

We are starting up a new season to reach out with our membership meetings. We hope you join us on the Zoom link. Registration is required for this meeting and it will be recorded. Our goal is to convert the digital recording to a YouTube video and upload it to our website. Please see the announcement on Page 5 for National Drive Electric Week.

FYI - There will not be a meeting in September.

Now, here is your Zoom Link:

<https://us02web.zoom.us/meeting/register/tZMsduigqj8iGtKx8GFZZ7Mz1lGlnzJoscxJ>



Drive Electric Earth Day Event in Manteca April 2022

COASTAL CLEANUP DAY

Site Captains for Delta-Sierra Group &
First Unitarian Universalist Church of Stockton
Want you to join us for the 20th Annual San Joaquin County
International Coastal Cleanup Day

We will meet Saturday, September 17, 2022 at the Northwest corner of Pacific Avenue and Brookside Drive at the Triangular Parking Lot. Cleanup is from 9 am to 12 noon; Registration starts at 8:30 am

Delta Sierra Group and the First Unitarian Universalist Church of Stockton will provide site captains for the San Joaquin County Coastal Cleanup event. Our site will once again be the Calaveras River at Pacific Avenue and Brookside Drive. Attendees should meet at 8:30 am for sign-in and instructions.

Please wear closed-toe shoes, a hat or visor, and sunscreen. If you can, please bring your own garden gloves, refillable water bottle and reusable bucket. Disposable gloves, water, and trash bags will be available at the site. Masks are strongly recommended. We work in teams of two or three.

We will have waiver forms the morning of this event, but if you download and bring the completed form found here it will help save time:

<https://www.coastal.ca.gov/publiced/ccd/waiver.pdf>

Minors must have signed waivers from their parent or guardian:

https://www.coastal.ca.gov/publiced/ccd/Waiver_English_Minor.pdf

Over the years several participants have told us that this is a great educational outing for their kids and grandchildren. It is always exciting because you don't know what you will find!

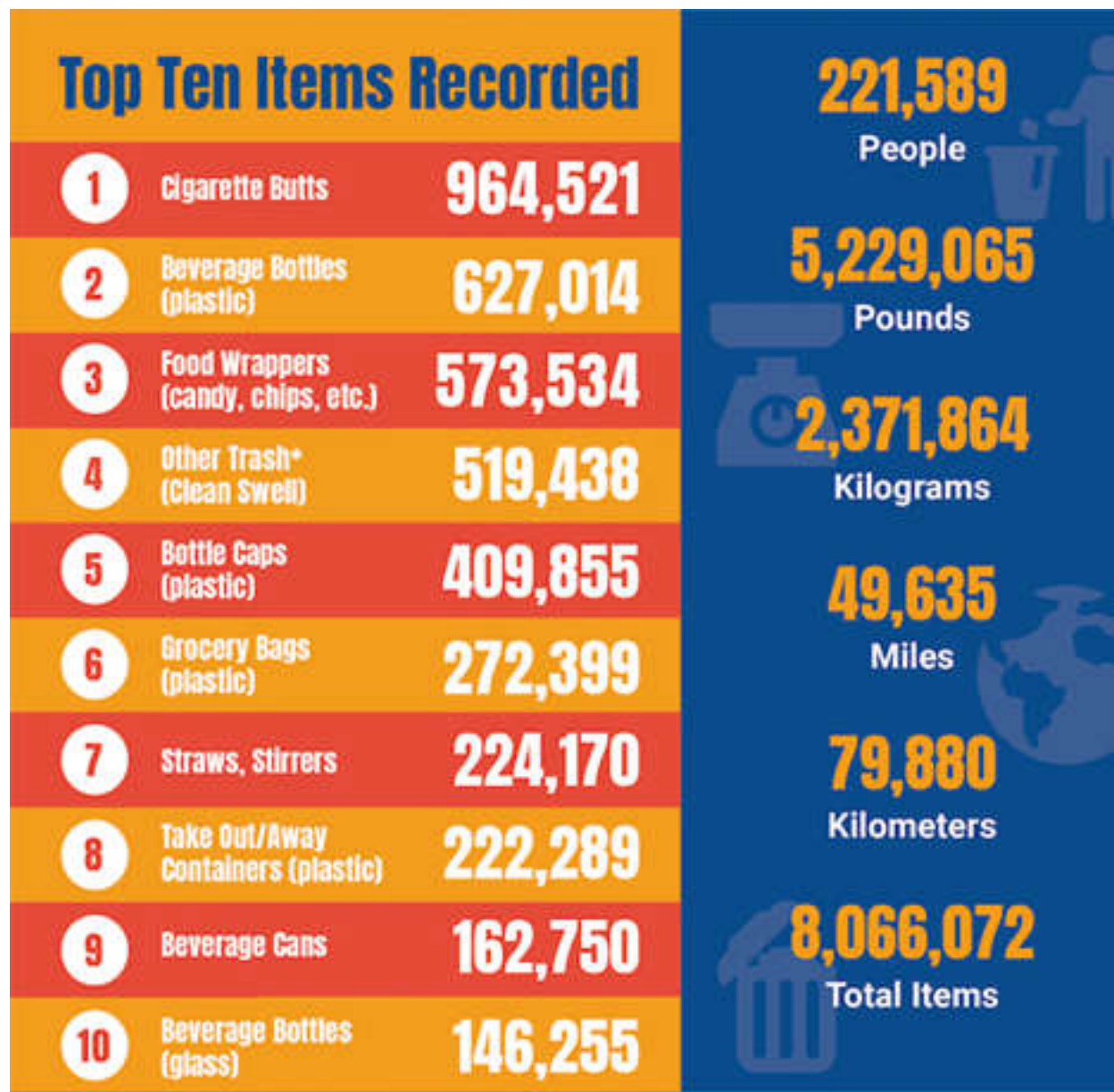


Please practice & promote the responsible use of ecosystems & resources.

We know that ocean trash is a serious pollution problem that affects the health of people, wildlife and local economies. Even though we are inland and don't live near the beach, trash travels downstream via inland waterways, storm drains, sewers, and then, if not removed, this debris will end up in the ocean. Join the world's largest volunteer effort for our ocean and waterways by participating in the International Coastal Cleanup event.

If you would like more information, please contact Dick Abood at rabood@pacific.edu.

2021 RESULTS



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National Drive Electric Week EV Equity Ride & Drive

Saturday, September 24, 2022 10:00 am -1:00 pm
West Valley Mall 3200 North Naglee Road Tracy, CA

This event will include multiple electric cars on display, rides in electric cars, test-drives in electric cars, and related exhibits. The Delta-Sierra Group will be tabling at this event so swing by our table and say Hi! Here is a link with more information about this event:

<https://driveelectricweek.org/event?eventid=3063>

You should attend this event to help make yourself a better educated consumer and a knowledgeable climate change advocate. Why? Because the Inflation Reduction Act of 2022 was passed on August 7, 2022 and it has a number of provisions that which could help reduce heat-trapping emissions such as carbon dioxide, by roughly 40% by 2030, a significant step toward ur climate goals. Also the act contains tax credits.



Ouch! Patricia Meyer Green Valley, Arizona

Waterwise Garden Project First Unitarian Universalist Church of Stockton

In May 2022, the First Unitarian Universalist Church of Stockton completed an ambitious conversion of its church yard to a waterwise demonstration garden in collaboration with the Master Gardeners of San Joaquin County and California Water Service. Research indicates that replacing lawns with waterwise landscaping reduces water usage by 50 to 75%. Funding for the project was provided through the Cal Water Lawn-to-Garden and Spray-to-Drip rebate programs:

<https://conservation.calwater.com/program/turf/overview>

which provide \$3.00/square foot of turf removal and \$.50/square foot for spray to drip irrigation conversion. These programs are available to Cal Water commercial and residential customers.



This three month volunteer-based project was led by Delta-Sierra Group members Dick Abood and Jeri Bigbee and included six phases - turf removal, weed mat installation, irrigation valve replacement, planting, drip line installation and barking. A total of 5547 square feet of turf was removed by a contractor and volunteers using a sod cutter. We were fortunate that an environmentally-friendly farmer in the

area volunteered to take the sod that was removed. That saved considerable cost, since the only other option would have been to dump it at the landfill. After the turf removal, a professional grade weed mat was installed to reduce weed growth. The next step was to convert the existing spray irrigation system to a drip system for the entire yard, including all existing vegetation.

We used Cal Water approved valve replacements with pressure regulators and half-inch dripline tubing with varying flow rates and emitter spacing to deliver water to the plants and trees.

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Waterwise plants selected from the Cal Water approved list found with the link shown below and in consultation with a San Joaquin County Master Gardener were then planted. This list is a massive collection of plants in Microsoft Excel showing the Botanical Name from A to Z, then the Common Name, Coverage in square feet and whether it is a California Native or Bamboo, Bulb, Grass, Groundcover, Perennial, Palm, Shrub, Succulent, Tree, or Vine. You may want to save it for other purposes.

https://conservation.calwater.com/assets/public/downloads/Qualified_Plants.xlsx

Finally, two inches of bark mulch was spread, as required by the Lawn-to-Garden program. The total cost of the project was less than \$10,000. This affordable project reflected the congregation's environmental focus and served as a model for the community. Visit the garden at 2737 Pacific Avenue in Stockton.

Editor's Note: California Water Service Group is a private company and is listed on the New York Stock Exchange at about \$55 a share and is considered a high-quality Dividend King, with 54 consecutive years of dividend growth. It is regulated by the the California Public Utilities Commission. Cities like Stockton which also have public water service are regulated by your city council who you get to choose with your vote. Water quality for both public and private services is regulated by the State Water Resources Control Board.

We would like to advise you that Calwater's rebate program is an amazingly good deal for Stockton customers. We looked on the web for similar programs by other water purveyors didn't find much. The City of Manteca asks us to follow our Governor's request to voluntarily reduce water consumption by 20 percent The City of Stockton offers a Conservation Kit. The City of Tracy may still be offering a rebate for changing your toilet from a 3 or 1.6 gallon per flush to a 1.28 gallons per flush. Personally I don't know why we don't consider standards like you find in Denmark, Germany and probably other Northern European countries where you find dual flush toilets. They permit selection between different amounts of water for solid waste or liquid waste.

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California's Groundwater AEM Program

The California Department of Water Resources is using helicopter-based technology, technically called an Airborne Electromagnetic Data Collection aircraft, to gather information about the state's groundwater aquifer structure to support drought response and the implementation of the Sustainable Groundwater Management Act.

The surveys will be of groundwater basins in the San Joaquin Valley in Kern, Tulare, and Kings Counties, specifically in White Wolf, Kern County, Tulare Lake, Tule, and Kaweah.

During the surveys, a low-flying helicopter tows a large hoop with scientific equipment about 100 feet above the ground surface. The survey is based on responses of the ground to the propagation of electromagnetic fields from an alternating electric intensity and magnetizing force. A primary or an inducing field is generated by passing an alternating current through the wire hoop acting as a transmitter coil placed over the ground.



Survey data creates an image of the subsurface down to a depth of about 1,000 feet below ground surface and provides information about large-scale aquifer structures and geology. This information supports the implementation of local groundwater sustainability plans, which can help local agencies sustainably manage groundwater during drought.

You can watch a short 2-minute video about this program at this link:

<https://www.youtube.com/watch?v=HMSZdzz0rUE&t=2s>

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Dos Rios Ranch State Park

Nestled between the Tuolumne and San Joaquin rivers, Dos Rios Ranch Preserve near Modesto will be California's first state park in 13 years. Although Cambria State Marine Park, the state's first state marine park, was created in 2010, we believe 13 years refers to Fort Ord Dunes State Park created in 2009.



A group called River Partners has spent 40 million dollars from 11 funding sources over the past 10 years to make what this 2100 acre preserve is today. As they proudly announce on their website, this is California's largest flood-plain restoration project. River Partners report they are designing a habitat that goes far beyond single-species or single-suite focus. The site addresses provisions for riparian brush rabbit, riparian woodrat, Swainson's hawk, Central Valley Chinook salmon, steelhead trout, least Bell's vireo, yellow warbler, sandhill crane, and the entire suite of neo-tropical migratory songbirds.



RIVER PARTNERS

With Dos Rios, California will have 280 State “somethings” where something includes State parks, beaches, recreation areas, natural reserves, historic parks, properties, vehicular recreation areas, historical monuments and marine parks. They also maintain more than 1200 State Historic Markers and 29 National Historic Landmarks. An example of that would be Hearst San Simeon State Historic Monument.

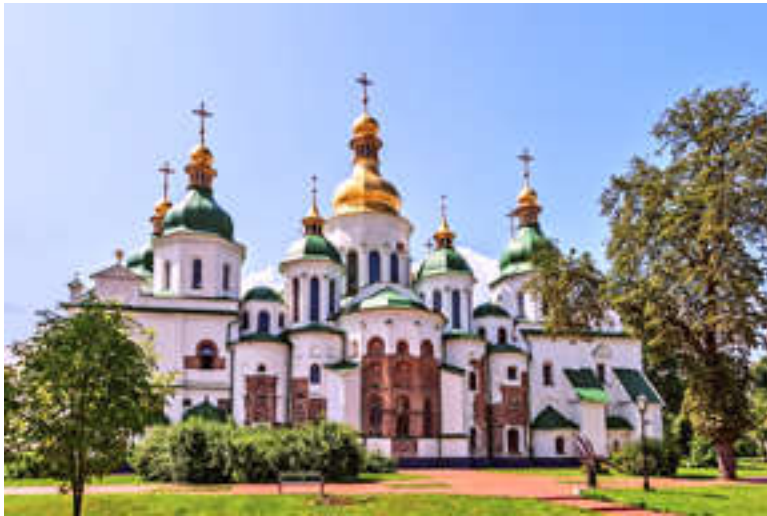
“Parks belong to all Californians,” said State Parks Director Armando Quintero. “The potential of acquiring Dos Rios Ranch Preserve as a state park is especially notable because the San Joaquin Valley has the fewest state parks and least open space per capita in the entire state. Access to dozens of miles of hiking and biking trails, day use areas for families and groups, and fishing along the Tuolumne and San Joaquin rivers that converge within the property are some of the amenities and activities that Californians will be able to enjoy.”



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FROM THE EDITOR

It would be remiss of us if we ignored the fact that in the middle of a pandemic and disasters due to climate change, a war is taking place in Ukraine. The United Nation says some 5300 citizens have been killed; 7300 wounded and close to 12 million citizens have fled Ukraine. Another 7 million have been displaced from their homes. However, the United States and Ukraine estimate higher numbers.



The news doesn't tell us that Ukraine has 7 UNESCO World Heritage Sites, 36 zoos, 2 aquariums, 647 museums, 49 national parks and 23 nature reserves, and well over 200 historic cultural sites. Many of these places and landmarks are destroyed or severely damaged. We are helpless to say something that will provide some comfort.

However, perhaps a short story that might serve as a guideline. I once was working as a project engineer in Kuwait under the direction of a Canadian project manager. We were a staff of Danish, British, Irish and Scottish engineers with a support staff of Indians from the Goa region of India (West Coast). We received word that our manager was going to be "let go" only because our company wanted to give the job to a Danish manager when he finished his project in Saudi Arabia.

The entire staff was devastated. I went to see him and asked what I should do? What should we all do? The next day he flew back to company headquarters in Copenhagen, also my home. I never saw him again, but I never forgot what he said, "I want you to carry on."

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We at Delta-Sierra Group are doing exactly that. We continue to try to make a difference by doing what we can do best and hope that all the things we cannot do will somehow be resolved. We now have the help of Ethan Kissock who is the new community engagement coordinator with the Sierra Club's new environmental justice and tobacco control campaign. Ethan is assisting us with technical support that includes our Zoom meetings, email system, improving the website and creating a Facebook page.

Vice Chair Paul Plathe served as Membership Chair for many years keeping our lists and email organized but is now transitioning to enjoy more time for his bicycling and hiking travels. Many, many thanks to him for keeping us so organized. Another new volunteer, Jeri Bigbee, is taken assuming this a prominent volunteer role assisting our Executive Committee. She has already demonstrated her organizational skills during some internal meetings we had via Zoom. In addition Jeri accepted the task of and is coordinating our list of emails for our members by connecting with the new national database in Salesforce.

So far during the last quarter we hosted four Zoom Presentations and co-hosted a series of Climate Change presentations focused on the issues facing our region. April was a busy month when our members participated at in-person outreach events. These included an Environmental Literacy Event hosted by the San Joaquin County Office of Education at the Durham Ferry Site, Drive Electric Event in Manteca, Tracy Earth Day and Stockton Earth Day.

We continue monitor environmental activities by participating in the AB617 Community Steering Committee Emissions Reduction Plan, by monitoring issues coming before the Stockton Planning Commission, the Stockton City Council, and the Port of Stockton, groundwater issues, and by collaborating with other organizations about the explosion of warehousing and the subsequent increased truck traffic such as the Mariposa Project, and the Mossdale Landing project, and projects in Manteca, Tracy, and Lathrop. We all should be thankful that we have one person on our team that has the education, the background and experience and most of all, the passion and desire to handle much of the workload as a professional, and that is Mary Elizabeth, Conservation Chair.

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Member Paul Plathe serves on the San Joaquin Council of Governments Citizens Advisory Committee following the transportation issues and planning for the future of our county. Member Ned Leiba participates in the San Joaquin Valley Air Pollution Control District Citizens Advisory Committee monitoring ongoing efforts to improve our unhealthy air quality and member Jim Marsh has almost 10 years of work and data and work collected on the Native Grass Restoration site on an area of the levee of the Calaveras River levee behind the University of the Pacific.

Our members are involved and active but we need more help. Is there one of these projects or perhaps a new issue that you've observed that you might work with us on? We would welcome you on our team. We are also seeking a member to serve as the alternate on the San Joaquin Valley Air Pollution Control District Citizens Advisory Committee.

Editor's Note: We have failed to say anything nice about our Chair, Margo Praus! She is the person that keeps our organization together. She is the person to go to for coordinating our activities. Finally, she spends hours, perhaps days, reviewing the content of this newsletter. I thank her for that.

First In The Nation

In our own San Joaquin Valley and based on a research conducted by University of California Merced graduate students, the Turlock Irrigation District, last March approved a pilot project for placing solar panels over a stretch of canal to reduce water evaporation. Covering the 4000 miles of California's canals could reduce evaporation by as much as 82 percent, saving about 63 billion gallons of water a year. The solar panels would generate 13 gigawatts of renewable power. To keep this in perspective, a family of 4 uses 12,000 gallons a year for bathing, cooking, washing, and watering for about 5,250,000 homes. 13 gigawatts is enough energy to power about 9,750,000 homes per daylight day. By covering a short length of canal they will collect realistic data about the cost of construction and maintenance for a larger scale project.



On The Cover

One reader told us the cover on the last Peatduster was dismal. Frankly, it was depressing. Yet, it served to convey without exaggeration the grave news we presented on climate change. But, couldn't we find a colorful cheery cover? We hope the giraffe meets this request. What is it like to see this odd creature for the first time? They are curious, have big eyes and big eyelashes. When they wink, they seem to be flirting with you! In fact, giraffe in Spanish is translated to *la jirafa*. "La" represents a feminine singular noun.



Are giraffes endangered? Yes. Giraffes are undergoing a silent extinction, having declined 40 percent over the past 30 years. There are now approximately 68,000 left in the wild. The remaining herds are fragmented and face a multitude of threats, from habitat loss to poaching.

The International Union for Conservation of Nature (IUCN), the standard for assessing endangerment, has found that giraffes are vulnerable, meaning they face a high risk of extinction in the wild. And for some of the nine subspecies, this risk is imminent. For example, the Kordofan giraffe has lost 90 percent of its population since the late 1980s and is down to just 2,000 individuals in the wild. Similarly, the Nubian giraffe population is down 98 percent and lives only on protected lands in Kenya. According to the IUCN, both subspecies are critically endangered, which means they face an extremely high risk of extinction in the wild, including albino giraffes.



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World Ranger Day



July 31 was World Ranger Day. We announced it in an email early in July because we knew this newsletter wouldn't be out until August. I wanted to write something contrasting the law and order duties of American rangers with those in Africa and Asia. However, I'm not informed well enough for that, but my initial research revealed some interesting facts.

Some federal park rangers have authority to enforce laws and regulations in their respective parks as do police in your city. In some places they have jurisdiction on tribal lands by agreements. All rangers and lifeguards who work for California State Parks are Peace Officers.

Federal law-enforcement rangers wear body armor and carry guns, tasers, pepper spray, batons, and handcuffs and are trained to defend themselves. They also may have a canister of bear spray that provides at least seven seconds of spray duration and 30 feet or more of spray distance.

California park rangers have similar duties and carry similar tools of the trade. The current sidearm of the California State Park Peace Officer is the Smith & Wesson M&P, the current patrol rifle is the Colt AR-15 Model LE6920, and the current patrol shotgun is the Remington Model 870 Police Magnum.

To protect wildlife and prevent poaching, African and Asian rangers adopted old, battle-tested guns such as the AK-47 assault rifle or other models such as FN (Fabrique Nationale Herstal) and FAL (Fusil Automatique Léger) as well as shotguns. (You would be very surprised if you quizzed Wikipedia to learn how many gun manufacturers there are on this planet!) Since a high number of the victims amongst Rangers are due to wild animals, their rifles must be effective against both criminals and big game.

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Shooting an animal that is supposed to be protected is an extreme response in a self-defense situation, yet it happens and in such a situation the size of the bullet makes the difference. Small caliber bullets lack the stopping power required to halt a charging animal, which explains why most Rangers carry guns designed for 39 mm or 51 mm ammunition.

This old photo shown below was taken with my Rollei 35 in a dark alley in Hong Kong. All alleys are dark because Hong Kong Hong Kong has over 9,000 high-rise buildings and they block sunlight to the lower levels. Even though the international trade in ivory has been banned since 1990, some **30,000** African elephants are still killed by poachers each year, out of a continent-wide population of about 400,000 according to a 2020 source.



I guess there are more than a couple hundred elephant tusks in that pile. Divide by 2 and you have the number of elephants that gave their life in order to compliment someone's home with tusk carvings.

Shops in Hong Kong openly displayed such works in the shop-front Windows. Ivory and horn "harvested" before 1975 can be legally traded internationally if there's evidence of its provenance - but that can be as limited as a statutory declaration from the owner. Pre-1975 items can be sold domestically without any legal requirement to prove their age or provenance.



The International Ranger Federation publishes a honor roll on their website listing the names of rangers that lost lives in the line of duty each year protecting wildlife and national parks. About 42 percent of the rangers who died in the past year were killed by poachers and 17 percent by wild animals. More than 500 rangers that died of Covid have not been included. You should download and check out the PDF list for 2021. United States had its share of fatalities:

<https://www.internationalrangers.org/meet-our-rangers>



You probably didn't know it, but one of America's most famous Park Rangers was the speaker at one of meetings back in July 2000. Yes, Shelton Johnson, a park ranger with the U.S. National Park Service, drove down from Yosemite for our meeting. I recall he was dynamic, enthusiastic and a captivating story teller. And story telling is an important talent as Rangers provide not only public safety law enforcement but also public education through interpretation.

From Wikipedia we learn that Johnson was born in Detroit in 1958. He is of African-American and Native American ancestry began his career in Yellowstone National Park in 1987. He still works in Yosemite National Park and as of 2021 he had worked in Yosemite for 28 years of his 35-year career.

He had numerous appearances in the Ken Burns documentary mini series *The National Parks: America's Best Idea*. His book, *Gloryland*, was published by Sierra Club Books in San Francisco in 2009. These terrible photos were taken with Sony's second generation digital camera called the Mavica.



California High Speed Rail

The San Joaquin Regional Rail Commission was excited to announce that it was awarded \$57 million from the Transit and Intercity Rail Capital Program towards extending its Valley Rail Program from Ceres to Turlock. Valley Rail is a joint program that includes improvements and expansions of both ACE and Amtrak San Joaquins that is focused on service between the San Joaquin Valley, Sacramento, and the Bay Area.

EXTINCTION IS FOREVER AGAIN & AGAIN & AGAIN

You can find a stuffed Dodo bird at the Natural Science Museum in London. When you see it for the first time you might laugh because it does look silly like the cartoons that have depicted its theatrical role from the island of Mauritius in the Indian Ocean, the only place it was ever found.



A little searching on YouTube will lead you to videos of the Tasmanian Tiger or Thylacine as it is sometimes called. It looks like a dog you would want as a pet to keep the American Pit Bull Terrier population at bay, but it is really a cat. Here's a video link:

<https://www.youtube.com/watch?v=6gt0X-27GXM>



If you visit the Ueno Zoo near Tokyo you will find a long line of 22 cages containing pheasants from around the world. Near the center cage is the beautiful Golden pheasant. You might notice the hackles on the neck are the type you used to tie the Royal Coachman trout fly. Included in this collection is our Ringed-neck Pheasant

originally imported from China. (Most times this bird is commonly called Ringneck Pheasant.)

These are great examples of diversity. Numerous valid studies support the fact that up to **one million** species are at risk of extinction because of human activities, according to a United Nations report released in May 2021. Yet, over the past couple years several new species have been discovered. Mind you this is not about a new population of animals, birds, plants, reptiles, fish or insects et al that suddenly appeared on the earth. They have been on the planet all along, but just have been found to be different. When a distinct difference is spotted, they get a new name, their own unique name.

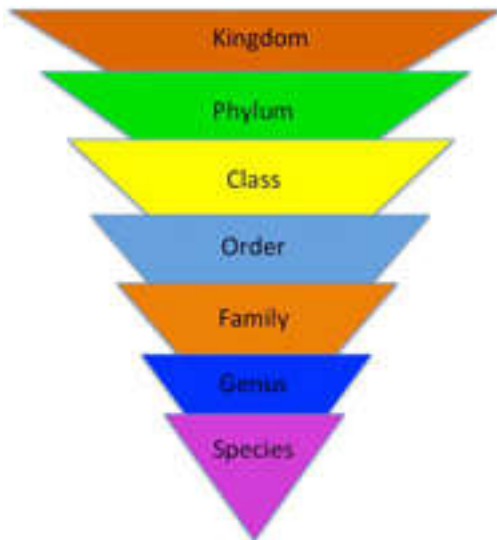
Taxonomy is an unusual profession. You would think it is associated with the Internal Revenue Service, California Franchise Tax Board or H&R Block. You don't see too many signs saying, "Help Wanted - Taxonomist. Must know the difference between a *Ursus arctos horribilis* and a *Crotalus atrox*." A taxonomist is a person who names species. OK, test your skills - how many different species are shown on this World Wildlife Fund bookmark? Hint: Use the PDF page slider to enlarge the graphic. The answer appears on Page 21.



Unique may be an understatement for such a profession and don't tell me taxonomists don't have a weird sense of humor! Professional etiquette prevents scientists from naming species after themselves, according to Michelle Nijhuis in her book, *Beloved Beasts - Fighting For Life in An Age Of Extinction*. "However, they have with much enthusiasm, continued the Linnaean tradition of naming species after friends, enemies, and heroes.

There is a species of horsefly named after Beyonce (*Scaptia beyonceae*)*1, a spider after David Bowie (*Heteropoda davidbowie*)*2, a termite after the Colombian artist and political satirist Fernando Botero (*Rustitermes boteroi*)*3, a tiny neon-purple fish after the fictional African nation ruled by the Black Panther (*Cirrhilabrus wakanda*)*4, and a millimeter-long tropical beetle after the young Swedish climate activist Greta Thunberg (*Nel- loptodes gretae*)*5. Obviously, these photos are not to scale.





General
↓
Specific

Although the International Code of Zoological Nomenclature forbids the coining of names that would be “likely to give offence” to their eponyms or the public, there are species of slime-mold beetles named after President George W. Bush, Vice President Dick Cheney, and Secretary of Defense Donald Rumsfeld out of admiration for their principles, not because they look like beetles. They are *Agathidium bushi*, *Agathidium cheneyi* and *Agathidium rumsfeldi*.

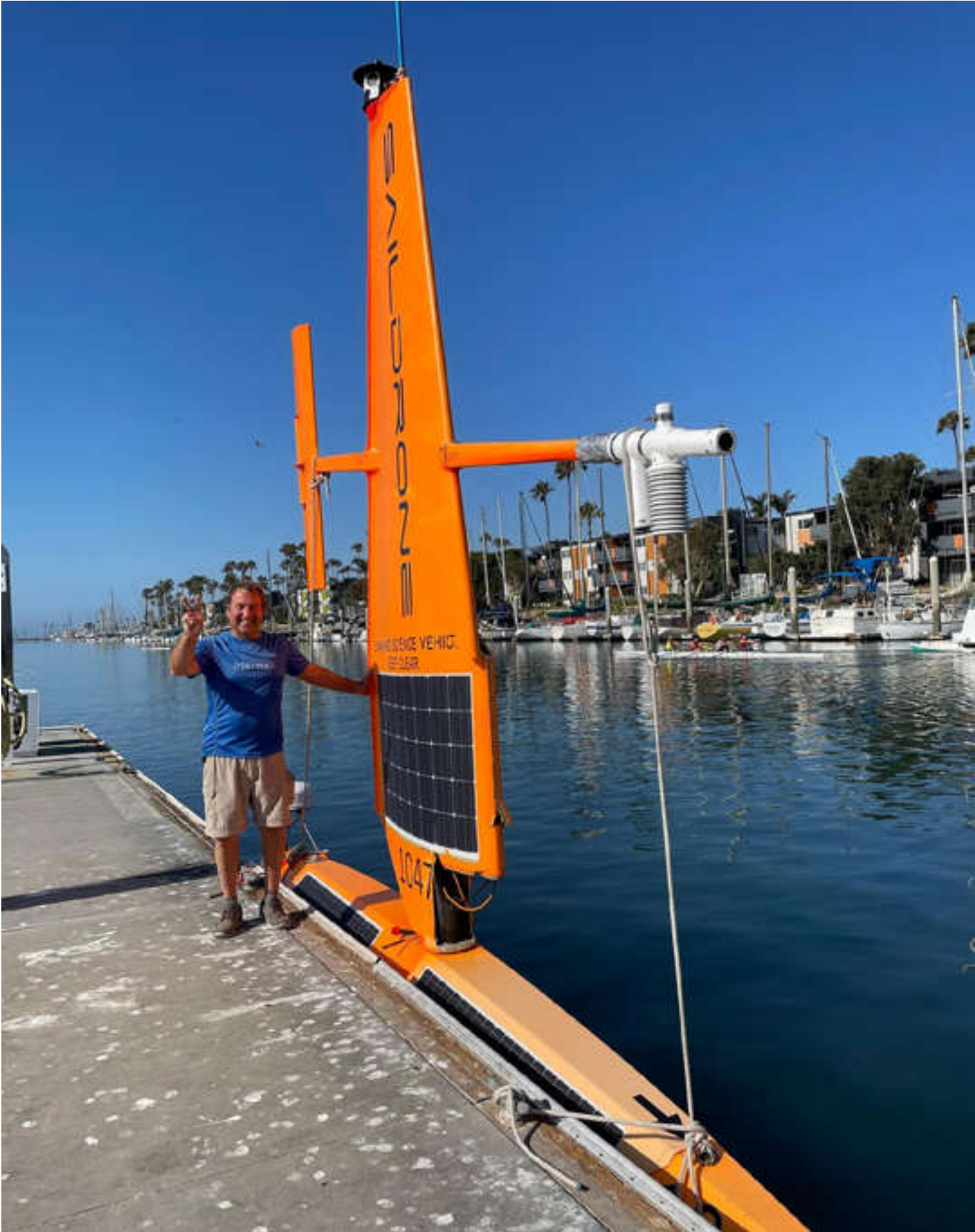
A little searching gets you a few more. In early 2017, a moth with feathery yellow head scales was named *Neopalpa donaldtrumpi*.



Even David Attenborough recently was honored with the name. *Auroralumina attenboroughii* is the earliest known animal with a skeleton has been discovered in Leicestershire, England, and is thought to be one of the first cnidarians, a group including coral and jellyfish, and dates back over 560 million years.

Answer to the quiz: We find a butterfly, giraffe, tiny frog, blue bird, two pandas (count as one species), bamboo eaten by mother panda, two emperor penguins (count as one species), red parrot, gorilla, tortoise (on land), bird hitchhiking on tortoise, plant (maybe lemon balm), small bird, toucan, zebra, green parrot, elephant and red lemur =18.

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SAILDRONES

The picture on the previous page shows Mark, an extended family member, who last year sailed his ship 450 miles west of the Channel Island to fetch this saildrone and tow it back to Ventura, California. The craft wasn't hard to find because it sends out its earthly coordinates. I just had to learn more about these amazing crafts and present it in our Peatduster.

We're very familiar with aerial drones. Sometimes you get a glimpse of one during a football game when another camera catches one down low among the players. Unmanned military drones have been used for years in Iraq and Afghanistan. The film industry uses them to capture those wide views of the car chase, but we haven't heard a lot about robotic saildrones that dominate our oceans. Would you be surprised if they are designed and manufactured right up the road from us in Alameda California?

More attention was given to these craft when on September 30, 2021 Saildrone Explorer SD 1045 was approximately 450 nautical miles northeast of Puerto Rico. There it encountered Hurricane Sam, one of the most powerful hurricanes of that season. SD 1045, a 23-foot vessel, was directed to enter that Category 4 storm that generated 50-foot wave's and 120 mph winds. It was sent to gather data from inside the hurricane by the National Oceanic and Atmospheric Administration. You might want to watch this one minute video showing what SD 1045 recorded.

<https://www.youtube.com/watch?v=b5WFUnwyt4>



The United States navy is now testing a saildrone in the Persian Gulf. In August 2019 SD 1021 arrived in the United Kingdom from Bermuda after 75 days at sea. On its return trip across the Atlantic, SD 1021 took the direct northern route, sailing predominantly upwind and against the current, completing the 3402-nautical miles in just 68 days.

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There are different saildrone models for different purposes. For example Saildrone Explorer is designed for autonomous collection of ocean and climate data for extreme durations up to 365 continuous mission days. It has a 15 foot mast; the draft is 6 feet and it travels at 3 knots per hour. One of its missions involved collecting CO2 measurements during the world's first Antarctica circumnavigation sailing over 13,670 miles in 196 days.

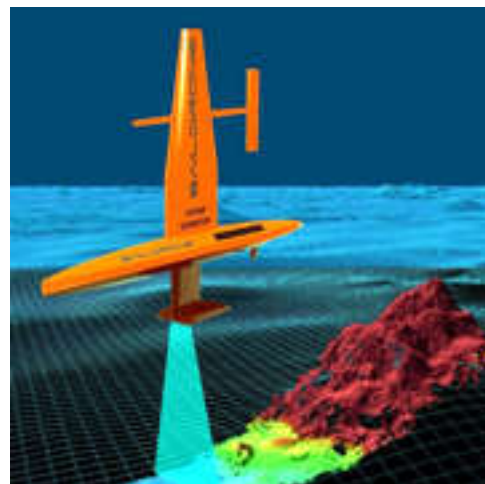
Saildrone Voyager is larger. The hull length is 33 feet; wing, 11 feet, and draft, 7 feet. It is designed for autonomous International Hydrographic Organization compliant surveys (hazards to be shown on nautical charts), mapping, and ocean data collection for depths to 300 meters (1000 feet). Its mapping speed is 5 knots.

By comparison Saildrone Surveyor is huge. It is 72 feet long, the wing is 44 feet high and it has a draft of 11 feet. It is designed for autonomous IHO compliant surveys, mapping, and ocean data collection for depths to 7000 meters (23,000 feet).



All these saildrones can be equipped with different measuring and recording devices. All are equipped with solar panels. A detailed view of Surveyor might get you ready to ask questions. It is offered with these options: positioning, deep-water bathymetry, shallow water bathymetry, wind speed & direction, barometric pressure, ocean currents, fish biomass, sound velocity profiler, and a surface sound velocity probe. I don't think it has a CD player.

Any entity, including companies or governments, can hire a saildrone for \$2,500 per day to collect oceanic data about specific oceans or regions. This is cheaper than ship time which can cost \$30,000 or more per day.



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Saildrone Forecast

You can use your mouse to home in on waters surrounding the seven continents. The website <https://www.saildrone.com/category/company> says "Saildrone Forecast is a beautiful and accurate weather app that uses the same data expertise we use to manage our fleet of ocean drones. Get hyper-local current and future conditions presented on an easy-to-use weather map, glanceable tables, and scrollable graphs." Link below:

<https://forecast.saildrone.com/?lat=31.396&lng=-115.35&z=4&l=ecmgfs|wind>

Sierra Club Misses An Opportunity

Remember the old days when we were called "tree huggers" and macho guys had a bumper sticker on their truck that said, "Spotted Owls Taste Like Chicken" because we were trying to protect the habitat from clear cutting for the owls? Now with the massive number of forest fires we've had over the past 5 years, that attitude toward us has changed.

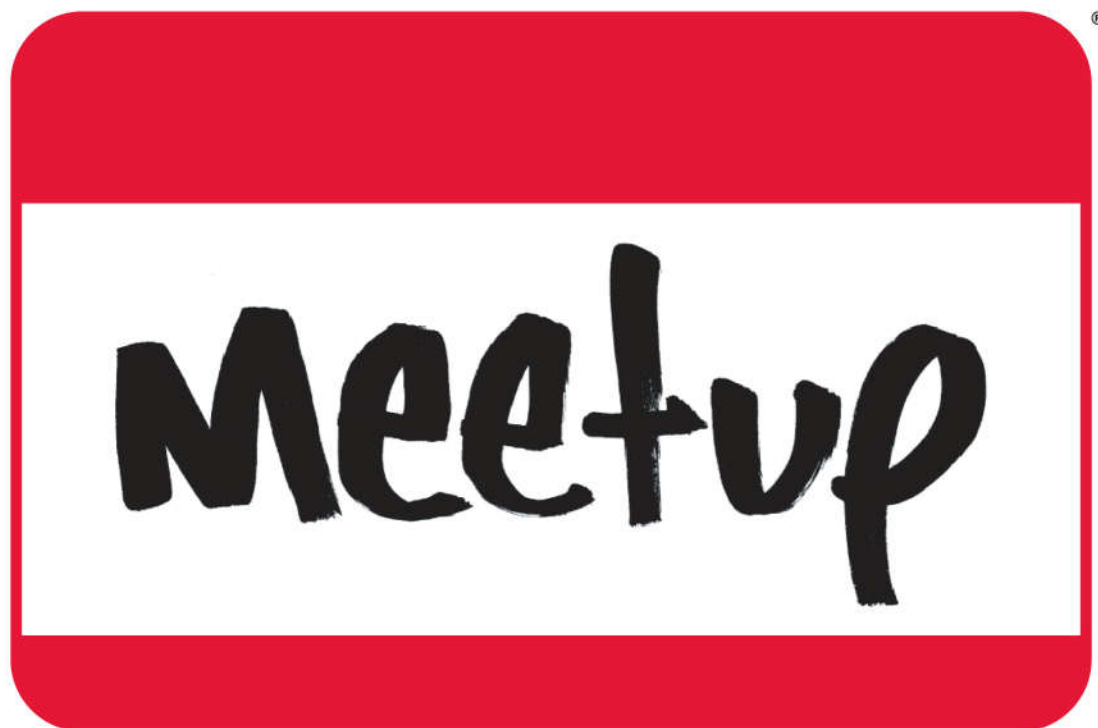
We could have capitalized on this situation, but Scotland already beat us to it. On Friday 22nd July 2022 at Ardtornish and as part of the Morvern Games Week, the first Inaugural Scottish Tree Hugging Championships were held. Ardtornish is a Highland estate in Scotland located on Lochaber's Morvern peninsula. Ardtornish House is famous for its gardens and the estate is the location of the ruined Ardtornish Castle and the still-inhabited Kinlochaline Castle.

The event was billed as "fun and family-friendly" with the aim of celebrating the natural environment to "promote an understanding about the benefits of trees and nature for health and wellbeing." Competitors were able to try their hand at three categories - Speed Hugging, Dedicated Hugging and Creative Hugging. (Could this replace speed dating?)



Stockton, Modesto & Sonora Sierra Club Groups
Find us at this active link:

<https://www.meetup.com/S-M-S-SierraClub/>



We have been in operation since October 2011 and now have 2339 members.



Please practice & promote the responsible use of ecosystems & resources.

Executive Committee

Please use the following email address to contact any members of your Executive Committee or volunteers. In the subject line please include the name of the person or persons you wish to contact.

deltasierragroup1@gmail.com

Chair & Program Chair: Margo Praus

Vice Chair: Paul Plathe

Membership Chair: Jeri Bigbee

Treasurer & Chapter Delegate: Richard Abood

Secretary: Open

Conservation & Outings Chair, Chapter Delegate Alternate & Website: Mary Elizabeth

Committee Member: Knute Momberg

Non-Voting Volunteer Positions:

Newsletter Editor: Robert Evans

Friends of the Calaveras: Jim Marsh

SJVAPCD-CAC: Ned Lebia

The expiration of Executive Committee member terms are as follows: Margo and the Secretary position terms expire December 2022. Knute and Dick terms expire December 2023. Paul and Mary terms expire December 2024. (The Chair, Vice Chair and Chapter Delegates must be Executive Committee member.)

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THE LAST PAGE

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A fundamental part of human nature is to want to pass something on to the next generation that symbolizes our values, be it a cultural tradition or material goods earned over a lifetime of labor. If my daughter inherits a damaged planet, wracked by heat waves, befouled with a plastic tide, and witness to waves of climate migrants fleeing uninhabitable lands, what does that say about the values my generation cultivated in its dogged pursuit of perpetual growth?

Aryn Baker, TIME Magazine's Africa Bureau Chief

Explore, enjoy and protect the planet