We Dedicate This Issue In Loving Memory of Gretchen Ingmanson

Words by Duke McPherson  
CIR Co-Founder

“The thing that struck me the most about her was her generosity: in her spare time, she contributed time and effort into at least three non-profit organizations. That doesn’t count the many other worthy groups that she supported.”

“I think the two events which impressed her the most were going out to San Nicolas Island and working with CIR under Kevin Thompson planting cactus in the howling winds.”

“At least, you could get a hot shower afterwards and kick back in Nick Town. It wasn’t like that with the trip to Santa Barbara Island where she and others had to load everything onto rocks from an unsteady boat and carry, among other things, their own drinking water.”

“She brought that event up in conversation the most. I was always impressed when she came back with stories of roughing it, something that reminded me of the work that I did out on Santa Cruz Island when I was younger.”

“Gretchen was one of an army of stalwart volunteers who not only went into battle once but returned repeatedly. I saw that many times when I trucked volunteers up the canyons to the field station on Santa Cruz Island.”

“Her generosity and eagerness to contribute to the health of the planet are what I continually see in volunteers who are willing to extend a helping hand (and back) to that great effort called habitat restoration.”

“She was a rare breed and is missed by many.”

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Operations Manager, Doug Morgan is seen here in the backcountry. Doug is an integral part of making our backcountry trips, field work, and educational volunteer opportunities come to life. Doug provides invaluable support and knowledge to the entire CIR team.
At some point toward the end of a busy 2021, I rather suddenly realized that CIR had been in existence for nearly 20 years. One-third of my life had gone by in that time, and it was the most productive and personally satisfying time of my nearly 60 years.

The organization had survived the pandemic, we had just helped save 101 acres of the San Marcos Foothills from development, we had active projects in two national forests and along a large section of the Santa Clara River, and we were working on dozens of other habitat restoration projects across a three-county region.

We were busy, but we also had 20 years of accomplishments to look back on proudly, and we have a bright future. It was time, I thought, to remind our friends and community of our two decades of hard work and to look forward and plan for the next 20 years, which, if I am lucky, I will also be around to experience as a principal of CIR.

I also found myself thinking about the next 50 years, and what the world might look like 100 years after my birth, and how much I wanted CIR to outlast my lifetime and be around to take on the challenges of a quickly changing planet. That was a lot for me to take in. I realized that I am reaching old age and that the future could well be perilous. I decided that the next 20 years of CIR’s history and of my life needed to be even more productive than the last. My next thought gave me a lot of hope. The first 20 years were consumed with the myriad of tasks needed to build a non-profit organization, so over the coming decades, CIR was well positioned to make an even greater impact.

In so many ways the last 20 years or so had flown by. One day at the end of the last century, I was riding in a jeep on Santa Cruz Island with Steve Junak, an expert in the botany of the Channel Islands, who would become a great friend and personal mentor.

I had visited the island many times, but with Steve’s inspirational talks about island ecology and endemic species, I was seeing the Island (and the natural world) in a totally different light. I also found myself unconsciously questioning the direction my life was taking. I was gainfully employed, but I found myself blurring out the most important question of my life.

I asked Steve, “How does someone work out here?” I was curious intellectually, but the question also came from an undercurrent of dissatisfaction with the boring way I made a living as a minor partner in a software company. This was more than a year before the dot-com
crash happened which eventually put me out of a job.

Steve took me seriously. He started talking to me about how someone could enter biology as a profession, even relatively late in life.

We had about an hour more to drive together, and every 10 minutes or so he would bring up different aspects of careers in biology and how I could get involved with them even without a university degree. I found myself kind of regretting that I asked him the question because I felt like I was wasting his time.

I was not actually thinking of changing careers (I was too risk-averse for that at the time) but the more he talked, the more I found myself thinking that working in such a wonderful place like Santa Cruz Island would be quite amazing, and maybe even possible for someone like me.

It was a quaint thought, but I mostly put it out of my mind for the next year and a half.

However, I did start studying the Channel Islands and visiting more of them, plus studying botany and ecology on a mostly informal basis. Well, the dot-com crash did happen, and eventually our software business was no more. Over the next couple of years, with the help of folks like Darlene Chirman and Cristina Sandoval and the mentorship of Steve and many other inspiring teachers at the Santa Barbara Botanic Garden and Santa Barbara City College, I founded CIR along with Duke McPherson.

Just one inspirational trip and one off-the-cuff question utterly changed my life and the lives of many, many people who have been involved with CIR for the last 20 years. Several of our employees started working for us, first as volunteers with no formal environmental experience, and then went on to important jobs in related professions.

Our experience with halting the development of high-end homes and instead turning the land into a nature preserve has really made me realize how seemingly simple things can actually be very consequential.

So, recently, when I was standing at a trail fork on the San Marcos Foothills, which by now, without the intervention by many, including CIR would have been paved roads called the intersection of Via Gaitero and Via Terrazzo Roads, I looked across the channel at Santa Cruz Island and felt very grateful.
As Channel Islands Restoration celebrates our 20 year anniversary, we strive to create an even bigger and better operations team! CIR is always encouraging growth among its staff and is lucky to have such a strong crew in the field, in the office, and working to restore native habitats.

Kelle Green is back as our Nursery Manager! Kelle worked for CIR for years prior to 2020. She has grown over 35,000 plants for us in the past on the Channel Islands and mainland. Her years of native plant growing experience make her a perfect fit for this job and we are happy to have her on our team again!

We have recently hired a Staff Ecologist, Aaron Kreisberg! Aaron will be leading the Research Department at CIR where he has started, and will continue, to help manage and research 100 acres of grassland on the San Marcos Foothills West Mesa. He will be completing his Master of Environmental Science and Management, specializing in Conservation Planning, from the Bren School at UCSB this June.

We are excited to have him in this role, as he has past experience working with us as a Field Technician, as well as for other organizations such as South Coast Habitat Restoration, Santa Barbara Audubon Society, and Santa Barbara Adventure Company.

Holly Wright has been promoted to our Field Projects Administrator! Holly started with CIR in as a Field Technician in 2017 and was later promoted as a Project Manager where she ran highly important projects in the Angeles National Forest, along the Santa Clara River, helping her gain an extensive knowledge of riparian systems. In her new role of Field Projects Administrator, she will be taking on grant and report writing alongside Aaron Kreisberg and Doug Morgan, Operations Manager.

We also have three new members joining the CIR Board of Directors!

Carol Gravelle and Connie Jenkins have spent much of their time in the past volunteering with Kelle Green at the San Nicolas Island Nursery and plan on assisting in seed collection this summer on SNI.

Scott Orlosky has spent many hours on the weekends at the San Marcos Foothills collecting various data to assist in creating a management plan for the West Mesa.

Growing our team is a great start to the year, and we are excited to see where it will take us in the future!
Thank You to Our Supporters!

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In addition to supporting habitat restoration, your donation will give you access to tiers of donor benefits, which include invitations to private events, merchandise, virtual talks, and of course our sincere gratitude.
Double Your Impact For Matching May!

Hello Channel Islands Restoration Supporter! The San Marcos Foothills symbolize a new phase in our history. While we continue to restore native habitats, recruit volunteers, and educate communities, we are also responsible for managing the West Mesa. Protecting these 101 acres ushers in a new dimension to our work and adds to our 20 years of restoration, education, research, and collaboration experience. This new era is especially important this Matching May.

We invite you to give to Channel Islands Restoration as part of Matching May, our month-long fundraising campaign. Your contributions are matched dollar for dollar up to $20,000. Together, we can achieve our goal of raising $20,000 for 20 years of CIR. Please scan the code below or visit cirweb.org/donate to make your gift today during this critical time. Thank you for supporting Channel Islands Restoration and for making our 20th year even more impactful.

Ken Owen
Executive Director
& the Channel Islands Restoration Team

Scan The QR Code
To Contribute Today

Natives from left-right: Lazuli Bunting, Sara Orangetip, California peony, Sawtooth Goldenbush, Anna’s Hummingbird, Anise Swallowtail
Looking Toward The Future With CIR
An Interview with Gregory Giloth, Vice President

CIR: What is your favorite plant, island, native species, or any other facet of nature?

GG: The island silver lotus was introduced to me on San Nicolas Island. When it blooms, it’s one of the prettiest wildflowers I have seen. My favorite islands are San Nicolas, Santa Cruz, and Santa Rosa Islands. San Nicolas is one I feel connected to because I’ve been there so many times. Santa Cruz because it’s the biggest and most diverse island and there are just so many different things to do there. And Santa Rosa because I’ve done work out there on very special projects. It’s harder to get to Santa Rosa Island but that makes it a bit more interesting.

CIR: So you have taken many trips out to San Nicolas. That’s remarkable.

GG: Yes, and that’s being flown there

CIR: What’s that trip like?

GG: The trip is easy because the Navy flies you out of Point Mugu, and it’s 23 minutes out and back. We can go out at 8 in the morning, come back at 3 in the afternoon and still get a full day’s work in.

CIR: Let’s invert the question in a way as another icebreaker. What is your least favorite invasive species?

GG: I have a bunch of them, but one easy: Tamarisk. Tamarisk is from my work in the Sisquoc River and all the things we’ve done in the Santa Barbara backcountry. Tamarisk is a nasty plant and very invasive and one you feel pride in removing. It is a scourge.

CIR: What makes it a scourge?

GG: It’s hard to get out. if you get it early, it’s not a problem. When the trees get established, their roots go 30-40 feet in the ground and that’s why we had to resort to cutting them as low to the ground as we could and then using a National Forest Service approved shrub killer. That’s really the only way to get rid of them. The big problem is they get into a watershed and just soak up the water. A project like this [removing tamarisk], it’s overwhelming when you first see it, but I also see that, working with guys like Doug

Channel Islands Restoration Board Members Carol Gravelle and Greg Giloth
CIR: Tell me about how you first learned about Channel Islands Restoration. What was it about the organization that resonated with you?

GG: I had retired in 2013 and I was looking for something to do. Getting out to the Channel Islands interested me, and though I didn’t know all of what I was getting into, I heard about CIR and that they were signing up volunteers to do plant removal on SNI island as well as planting native species around the recently established wind turbines that had disturbed the soil. This was September 2015, so almost 7 years since I’ve been working with CIR.

CIR: Now all those trips to San Nicolas, have those all been since 2015?

GG: Yes, I’d never been on the island. So it’s all with CIR and the Navy.

CIR: You’ve been to the islands so many times, so are there a few memorable trips or experiences that stick out?

GG: My most memorable trip was working on the Cloud Forest on Santa Rosa Island. I don’t remember exactly when we were out there, but it was 3-5 years ago now that we started this program. The cloud forest is not what you think of as a forest; we’re talking about 10-15 oak trees at the top of the highest point on SR Island. The introduction of sheep and cattle grazing knocked down a lot of the native grasses under these trees and eroded the soil significantly. In fact, on a lot of these trees, you’ll see roots out of the ground 3-4 feet. It was our job to go up to the Cloud Forest on Soledad Mountain. It is an hour trip up the road from the island nursery, to get there, and then it’s an hour back. We put in a lot of plants, a lot of oaks, many straw bundles. In the last 2 years it’s made a huge difference. It’s stopping the erosion and saving and protecting this cloud forest that had become endangered.

CIR: What was making the Cloud Forest endangered?

GG: The wind was eroding the soil around the trees so we were trying to protect them and we’ve had some positive results, and now that this has been funded for 3 more years, we can really change the whole story up there and keep the forest going and see new trees grow in as well. The reason they call it a cloud forest is because in the summer, the fog comes in, surrounds the trees and provides moisture that drips down to the ground and keeps them viable.

CIR: So you’re rebuilding the island to repurpose it in a way.

GG: And CIR played a big part in the first three years of stopping the erosion.

CIR: What keeps you committed to CIR?

GG: The initial mission for native plant restoration and non-native plant removal. That’s the whole core and basic purpose of what we do. The non-native situation has been getting worse for years.

CIR: How so?

GG: It’s just been let go for too long. The islands are a perfect experiment of this; they were native until ranchers arrived with cattle and sheep. Those cattle and sheep brought non-native seeds over from the mainland, and now we have so many species that are not endemic to the island and not helpful. There are grasses that will grow and overwhelm the native grasses and wildflowers on the islands.

CIR: Thinking about that, what’s it like to know what you’re doing is going to have a massive impact for the future?

GG: That’s the whole point: I know that these things I’m doing, I will not see much impact in my lifetime. I will not see a change. But, I know that if we keep doing them, and future generations keep doing them, they’re going to come around. Geologic time is hundreds, thousands, millions of years, and human lifetimes are what, 80 years? It’s just different and you have to work with it.

CIR: What has been most gratifying about your relationship with CIR? How has CIR most impacted your life?

GG: Basically, when I retired, there were lots of things I could do to feel good and fill my time. I think the most fun – and thing I miss most from actual working
- was the people I worked with. Not just the employees around me, but my customers, but this gets me back and lets me meet new people and new organizations. Working on the island, you’ll meet people from the military, from different organizations, and people out doing different projects.

That’s the interesting thing about working with volunteers: the quality of volunteers we have attracted is extremely high. I haven’t met many people who just want access to the island and nothing else.

**CIR: How have you seen CIR grow in the time you’ve been involved, from your first trips in 2015 to now?**

GG: It’s been 7 years since I started, and CIR is reaching a critical point. The mission is pretty simple, but it was run by a small group of people before. As the organization grew larger and got involved with projects like Foothills Forever, the organization needed to grow as well. By that, I meant the processes and the responsibilities need to grow too. That’s the biggest thing we’re running into right now and something we have to accomplish alongside fundraising. I think Foothills Forever really changed the perspective.

**CIR: How so?**

GG: The size of the campaign and the capability that, all of a sudden, CIR may now be in a situation to own land and manage property. That’s different from restoring property under a contract. It adds a whole new level of responsibility to the organization, and a whole new level of fiduciary responsibility.

**CIR: As you look ahead to CIR’s next 20 years, what is a particular interest area or initiative you’d like to be involved with?**

GG: Financial stability of CIR. What I am engaging in with board members, is how we’re going to implement an annual fundraising capability and how to get other members of the community up to speed on investing in our future.
CIRs Continuing Legacy Of Environmental Education

Cindy Kimmick
CIR President

CIR has come a long way since I “discovered” it on an internet search in 2005 while looking for ways to volunteer on the Channel Islands. If you told me back then that 16 years later, CIR would have an integral role in a coalition that raised $18.6 million in 90 days in the middle of a global plague, it would have been hard to believe!

With so many worthy environmental issues vying for our attention these days, it is hard to know which one to support. What attracted me to CIR initially was the powerful combination of restoration and environmental education, both of which are desperately needed. Neither is enough by itself, but the two in combination for service learning can have a powerful impact, since restoration work entails exposure to nature. My background in environmental education started when I became a docent at the Los Angeles Zoo in 1992, volunteering to tour K-12 students, college classes, and other groups. Since I was working at the Zoo at the time, I was able to keep my schedule flexible and tour inner city school children during the week. I discovered that they were equally excited to see squirrels and peacocks as the more exotic animals in the zoo collection.

Discussing this with my fellow docents made me realize how little exposure these children from urban neighborhoods had to nature and wild spaces. As time went by, we shared ways to educate and keep their attention, dovetailing squirrels and peacocks into discussions about our animal collection, and later went on to use those animals as stepping stones to talk about plants and ecosystems, when the Zoo was certified as a botanical garden in 2002.

Just before the term “nature deficit disorder” was coined by Richard Louv in his book “Last Child in the Woods” (2005), I helped my children’s elementary school set up a family camping trip to Malibu Creek State Park. After setting up camp, we started off on a short hike, and found that while my children had no problem ascending the fairly steep, sandy path up a small hill to get to the main trail, the others in the class couldn’t make it up the same segment. The children down below were asking, “how did you get up there?” to which my kids responded with confusion, “we walked.” The kids at the base of the slope tried again, unsuccessfully. I asked my daughters (then in 2nd and 5th grade) to think about how they walked up the hill and to explain it to their classmates, and they finally came down to demonstrate how to lean forward, keeping your weight on your toes. These simple skills are not as universal as we would think, and this showed me how easy it is for those of us who regularly spend time outdoors to take nature for granted.

I’ve continued to explore nature-based education over my years with CIR, working with school groups on the islands and mainland, using CIR projects as the basis for classes, and building up animal and plant artifacts for CIR tabling and events. Most recently, I took a Universal Design for Learning in environmental education course, to better accommodate diverse learners, which we hope to utilize on the San Marcos Foothills. If you, or someone you know is interested in helping out with education, we have a number of opportunities available, virtually and in-person.

**We’re looking for:** Restoration volunteers willing to take National Park Service training to become volunteer NPS work leaders the next time training is offered. Virtual and in-person education and outreach volunteers. Prospective docents for the San Marcos Foothills

As restrictions ease from COVID and island trips become possible, please help us spread the word to schools and youth groups; we still have some grant money for underserved school groups and can work with schools who don’t qualify for the grants.

If you’re interested in becoming an education volunteer and/or a volunteer work leader, please feel free to contact me, Cindy Kimmick, at cindy@cirweb.org.
Snapshots From Our 20 Years Of Restoration

1. Exploring San Miguel Island.
2. Lazuli Bunting, a native bird.
3. Smiles on Santa Cruz Island.
4. A volunteer group on SNI.
5. Volunteers have some fun!
6. Water Canyon Beach on SRL.
7. A CIR Field Staff with a vest.
8. Cloud Forest. work on SRL.
9. Restoration on Anacapa Island.
10. A coyote roams the Foothills.
11. Volunteers in Carpinteria.
12. Sheep on the SMF Preserve.
I often joke to my friends (and most strangers who will speak to me if we are being honest), that Naturalists are the only group of people that will take courses from each other for fun for the rest of our lives. As part of the frantic group of people that make that “joke” a fact, I was thrilled to see that Channel Islands Restoration was offering an entire month of educational tours of the San Marcos Foothills West Mesa! I, of course, proceeded to sign up for them ALL.

First up was my “Nature Tour with Scott Orlosky”. I am glad I signed up for that to be my first tour, as that was a great introduction to the area by someone whose daily life is embedded into that mesa, from early morning birding to using the trails for running.

This ended up being a truly eclectic tour and as a newbie, I appreciated that. It is on this hike that I learned about the ground-nesting birds in the area (for which he brought an example of a nest his daughter so kindly mailed him) while questioning if a pepper tree could actually split open a rock, identify fox scat, and discuss that some hoof shapes are better for grasslands than others. It seemed as if every time a bird rustled by or we saw a stone, Scott had a story or connection, and I was eager to learn all of it. The familiarity of the presenter with his subject created an experience that made me know I was about to follow through with the rest of the events.

“Grassland Ecology Walk with Cindy Kimmick” was next, and I would probably say that when I was signing up, I was most excited about this one. When you have zero knowledge about something, you can only go up, so I knew this was going to be a win. I was shocked at how someone could just glance down and name 4 different species of grasses and be able to tell us their adaptations, history, and their role in the ecosystem.

Cindy juxtaposed the importance of saving this native grassland to the worldwide plight of grasslands, using Mongolia as an example and the dangers its vast steppe faces due to overgrazing and climate change. The thrilling part of this day for me was finding a new location of native California Meadow Barley (Hordeum brachyantherum ssp. californicum) bearing witness to the mapping process in real-time made it feel like I was watching something special. Geology rocks! And as someone who has taken lessons from Susie Bartz before, I know this is true. On “Geology Walk”, we did a brief
orientation to the area utilizing various visual tools such as pre-marked maps, or laminates that showed changes in geologic formations over time. While Susie created handouts for the walk, some of the visuals came from her fellow geologists, who we got to hear about too. Learning about the geologic community in the area who have discussed not only Santa Barbara as a whole, but the Foothills specifically in their quest to find out “why” and “how” made taking this tour a much more connected experience. As we were on the actual walk, there were plenty of opportunities to stop and make guesses as to different processes we were seeing, and being able to bounce ideas off of our peers only made waiting for the answer more fun.

Last but not least on my list was the “Natural History Tour with Ken Owen”. This ended up being another on my journey that just ‘had good timing,’ and a great way to summarize the lessons of the prior three weeks. On this walk, we learned more about the interrelation of the topics on the previous tours, as well as what felt like an inside peek into the ecosystem.

We often hear about how important natives are to an area, but hearing Ken acknowledge that there were non-natives housing populations of birds that needed them so therefore a section would be saved, confirmed the feeling that every angle of preservation was being looked at. As anyone who has taken an ecosystem management course will remember, the flora and fauna network is not a linear equation to be solved. It is a nuanced puzzle that requires knowledge, wisdom, and care… exactly what this organization is providing.

So thank you, Channel Islands Restoration, for nurturing stewards who so enthusiastically put me on my journey to help the cause at the West Mesa of the San Marcos Foothills Preserve. You let my Earth Month be the interactive experience that is so important to the connection of the lands.

The passion of every person who volunteered to educate shone through, and I have no doubt that it is exactly that spirit that will attract more like-minded people, and help this community of nature lovers grow into the force that we need to keep preserving and loving our lands.
This past March, Channel Islands Restoration was presented with a unique opportunity. As recently managers of the San Marcos Foothills “West Mesa,” our organization was quickly tasked with providing land management and habitat restoration for this grassland open space, to help improve its ecological conditions and protect the native plants and animals who call the land home.

However, scientific studies and research that pre-dated our involvement were sparse. Although surveys had been conducted more than two decades ago characterizing the amount of native bunch grass present on the West Mesa, much of the ecological landscape was likely to have changed over such a long period of time.

If we were going to implement future habitat restoration projects that would benefit the fauna and flora that frequent the West Mesa (and the Preserve as a whole), then we would first need to create updates on previous findings. This meant conducting our own scientific research about the land and its inhabitants.

In addition to an on-going bird survey that will continue throughout 2022, our immediate need was to map the native bunch grass on the West Mesa. More specifically, we wanted to pinpoint the location and quantity of purple needlegrass (Stipa pulchra) and wild hyacinth or “blue dicks” (Dipterostemon capitatus) two of the most abundant native plants that grow on these 101 acres.

Blue dicks are a common native, perennial herb found commonly on the Foothill’s grasslands and in many locations in California. During the dry season, they will die back to their underground bulbs. They’re easily discernable by their flowers that are light blue to dark purple. They were commonly gathered by the Chumash people as a food source.

However, by and large the most common native grass on the West Mesa is purple needlegrass. This native “bunchgrass” is California’s state grass and a keystone species among many grasslands across the state. It is a perennial grass found in large stands on the West and East Mesas and is also found in scattered locations and planted at restoration sites. Purple needlegrass flowers are smooth to the touch with a distinctly purple appearance that becomes more prominent in the spring.

On the Foothills, purple needlegrass can easily be confused with ripgut brome (Bromus diandrus) a common, non-native annual grass found throughout the Preserve and many places across the state, particularly in disturbed places and along trails. With more than 100 acres to comb for our two distinct native plant species and invasive look-alikes
in the area, we knew that we had to come up with proper protocol and procedures to efficiently complete our task. Although daunting, this project would prove essential to better understand the grassland environment and determine best practices moving forward for ensuring a sustainable and healthy ecosystem on the West Mesa.

Grasslands are important for many reasons. They provide habitat for insects, birds, and mammals. There are also numerous wildflowers that depend on grasslands to thrive. Due to disturbances such as development, agriculture, and the introduction of non-native species, over 90% of grasslands have been lost in California. As early rains had brought plants of all kinds to bloom already, our window of opportunity to identify the native plants was closing fast and we needed to count immediately. With hardly any funding, we got to work mapping the native grasses.

In an incredible lift, over 200 volunteers contributed to our mapping survey and gave their time to make a significant difference for the success of our future restoration projects. The West Mesa was separated into 50-meter x 50-meter squares (plots) which were then surveyed for purple needlegrass and blue dicks using a professional survey app loaded on cell phones. This technology enabled volunteers to find and map their plots with accuracy, simply using their phones and satellite data. Our staff would then review the data for any inaccuracies or potential mishaps. Volunteers worked only in plots that had a relatively low density of the plants we were mapping, because people could literally spend weeks counting each plant in some areas of the West Mesa.

Areas that contained higher densities of native plants (about 10% total for the plot or more) were mapped by CIR staff with a high-precision global navigation satellite system (GNSS) tool to be counted later with a different technique. We used a standard botanical surveying method where each mapped area (called polygons) were classified into a range of density percentages that the native plant covers. Using one-meter x one-meter squares made from PVC tube (called quadrats) volunteers and staff then counted the number of plants in representative samples in multiple quadrats of the polygons that were in same range of plant density.

We then took an average of the count and extrapolated the total number of plants in the whole polygon. As an example, one of the larger polygons is a little over 3,700 square meters, and it has approximately a uniform density of plants. We counted the number of plants in 37 one square meter quadrats within the polygon (one percent of the total) in randomly selected locations. We counted an average of 218 needlegrass in one percent of the polygon, so that is roughly extrapolated for 21,800 needlegrasses in the wider area polygon. The estimated amount of needlegrass in the polygon was determined by dividing the count of needlegrasses (218) by the area measured (37 square meters) and then multiplying the average amount of needlegrass per square meter (8.59) by the size of the polygon (3700 square meters). This was the last step in our survey, and it enabled us to count the high-density areas with good accuracy in a reasonable amount of time.

Overall, our mapping survey was a resounding success with almost all the plots mapped in the span of just a few weeks. However, this project has left Channel Islands Restoration in need of additional funding to cover the cost of staff time and support additional research.

If you can contribute to our efforts on the West Mesa and the Preserve, please consider a donation to our Matching May campaign that is currently on-going. Thank you again to all the volunteers and staff that helped support our survey that will help create a better future for the Foothills.
Each spring the Channel Islands Restoration crew head into the Angeles National Forest to treat invasive species on the western edge of the Sierra Pelonas just east of I-5.

To the west is the inaccessible Sespe Condor Sanctuary and to the east it is just as rugged. A few miles north, the San Andreas fault bisects this path. There are a lot of challenges there and some of them are the actual work that our team is paid to do.

This route is the path of least resistance between the coast and the inland desert for everything; weather, animal migrations, electrical transmission lines, trucks and cars, oil and gas pipelines and the California Aqueduct.

In 1918, before the I5 bulldozed a path through the mountains, The Old Ridge Route Road, (ORR) was completed allowing early motorists to travel from Los Angeles to Bakersfield for the first time. The route became a popular day trip and soon fuel stations, roadhouses, and likely speakeasies could be found every few miles along the way. Now, the only evidence of this is some quiet ruins of historic buildings and one set of illusive tire tracks from a Model T Ford. Consequently, the Old Ridge Route Road is listed in the National Registry of Historic Places. This is the route we take to many of our job sites.

In 2020, at the beginning of the pandemic, CIR was hired to meet the requirements of all the oversight organizations and quickly work up there. Despite a challenging scope of work to take on in the time we were asked, our safety, operations, finance, and executive teams together figured out a workable plan and importantly the field crew were ready to take it on.

The nature of the work is categorized in the same list as First Responders which is why we were able to continue work as a crew. Some of the work such as the non native grasses removal is important for fire resiliency.

Soon we were driving the OOR and looking for turnoffs down some very gnarly dirt access roads to the numerous job sites. With extreme caution the CIR work trucks handled the terrain. Since carpooling was not possible in 2020 and 2021 due to safety rules, trucks were needed for each crew member necessitating rent-
als. Logistical planning was hard work in and out of the field. There are sixty-three, ‘anomalies’ along the path of the pipelines. This is the blanket term for pipeline repair locations. Some are quite small and others stretch over a mile in length. It is constantly amazing that they were able to build a pipeline in the steep mountainsides and across the huge canyons, and an engineering marvel to witness. Similarly the electrical pylons that bring solar and wind power from Tehachapi into Los Angeles.

This 2022 season, CIR were often working alongside linesmen, repairing cables who came into work hanging from helicopters. Our crews waved respect and wished each other well. CIR’s work is to eliminate the invasive weeds and allow the natives to repopulate in the repair locations.

We spend as much time safely accessing the locations as we do working on them. Even in the light of great human endeavor and achievement, the wild landscape of the Angeles National Forest often makes the pylons and heavy iron pipelines look small. The work involves a high level of precision, an intimate knowledge of native plants at every stage of growth, and the physical stamina to walk extremely steep mountains in the high desert sun and mountain cold. In other words, this job was practically designed for us!