SAN DIEGO AUDUBON



Building Strength Through Coalition

ReWild Mission Bay Surpasses 50 Coalition Members—and Growing

Protecting Biodiversity With Coalition Diversity

by Andrew Meyer, Director of Conservation

Two years ago, in June of 2019, the San Diego City Council delayed wetland restoration in the ReWild area by extending the existing land uses and leases for another 5-8 years. I was sitting in the City Council chambers, my heart rising and falling with each public comment and every City Council question and statement. Although I was surrounded by partners and supporters in ReWild t-shirts, we couldn't convince the Council members that this was the right vision for Mission Bay, that the marsh bird-habitat expansion, water-quality improvement, sea-level rise resiliency, and new opportunities for access were worth it.

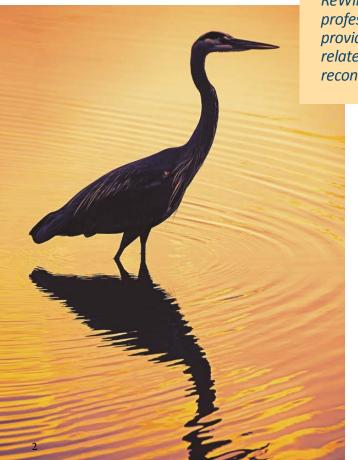
Since then, we've been building our ReWild Coalition flock, getting more powerful and louder, joining voices with over 50 local and regional organizations and businesses calling on the City to embrace the positive vision for Wildest restoration of the northeast corner of Mission Bay. In late 2020, we notched a major win when our Coalition and Feasibility Study convinced the Regional Board to fund a City proposal to create a new landuse alternative with the same goals as the Wildest plan.

Now, we are focusing on researching the carbon sequestration value of the Wildest plan, and defining a ReWild plan for restoration of access and



Coalition members march alongside SDAS. By Andrew Meyer.

management by Native American communities. Along with new, science-based information to build our case, we are amplifying our Coalition voices. The following articles and statements by ReWild Coalition members show the power that is being generated by our common cause and combined efforts.



ReWild is a unique opportunity to work with like-minded professionals who envision a wetland restoration project that provides a sustainable solution to many of our climate-change-related challenges while bringing an opportunity for human reconnection to the land and to our homeland.

The Renascence Project Values ReWild's Cultural Connection

by Brandon Linton ('lipay/Kumeyaay) and Rebekah Loveless

Renascence Project (Renascence) is a San Diego-based foundation that specializes in the Art of Reconnection. Our focus is on building places of reconnection for community members through revitalization and rehabilitation of the natural environment by providing services that aid in the dignified repatriation of displaced decedents. We envision a foundation that helps bring the reconnection of local communities to their homeland through programs of stewardship, access, education, and project development. We have worked in Cultural Resources Management for most of our careers and see a need to reintroduce the human element to cultural and biological resources and to connect all these elements back to the land to offer healing and hope. ReWild is a unique opportunity to work with like-minded professionals who envision a wetland restoration project that provides a sustainable solution to many of our climate-change-related challenges while bringing an opportunity for human reconnection to the land and to our homeland.

A Great Blue Heron wades in the glow of dusk.

The Good Science Undergirding ReWild Leads to Sustainability

by Dr. Matthew Costa, Scripps Institution of Oceanography

I step out into the Kendall-Frost Marsh Reserve in northeast Mission Bay. Without thinking, I scan the landscape, taking in the open water to the south leading up to the edge of the marsh. In some places, steep, eroding banks overlook deeper water. Elsewhere, the marsh's edge smoothly transitions into mudflats teeming with feeding birds restlessly probing the mud. I look across the successive zones of vegetation, moving from the cordgrass in the low elevations in the south through higher elevations populated by different communities of mixed cordgrass and succulent marsh plants, to the highest areas in the north, where only the most salt-tolerant marsh plants grow. Looking in this direction north, you can't help but notice the built environment crowding this patch of coastal wilderness—roads, storm drains, apartment buildings, and recreational space—and of course people—driving, cycling, littering, bird-watching, blasting music, doing high-school research projects, boating, swimming, and all the other things we do—with their complex effects on the environment around us.

"I look forward to seeing a healthy, functioning, sustainably used, and resilient coastal landscape when I return to look out at northeast Mission Bay in future years."

When you enter a natural environment, your eyes tend to sweep over the landscape and to try to take it all in. But in certain places, such as tidal wetlands, you can learn even more by looking down and just as carefully scrutinizing the mud. These environments build up deposits of sediment, layer by layer over millennia, keeping up with subsidence and sea-level rise. When we take core samples from these sediment deposits, each from a different depth, and thus a different age in the past, we have a view not just across the landscape but in another dimension back through time. We can learn about past environmental conditions, communities of organisms, and human

interactions with the environment. This temporal perspective allows us to understand how this ecosystem has persisted and grown over centuries of change.

Today, as our carbon emissions drive huge changes to our global environment, including rapidly rising sea level, a critical research question is, how have coastal wetlands adapted to past changes, and how can they help us adapt to and counteract today's changing climate? It turns out that tidal wetlands, in accumulating layers of sediment along the coast, not only have adapted to past sea-level rise but also, in so doing, have buried large amounts of carbon as organic matter, effectively removing CO2 from the atmosphere. Today, we know that these "blue carbon ecosystems" are some of the most efficient natural carbon sinks in the world, meaning that we should do everything we can to protect, restore, and enhance the functioning of these allies in the fight against climate change.

In addition, the "green infrastructure" provided by healthy coastal ecosystems provides numerous added benefits, such as supporting wildlife populations and the associated fishing and ecotourism, purifying runoff, and reducing impacts of coastal flooding. By studying the sediment record in these sites, characterizing how they have changed over time, and estimating their sediment accretion

and carbon sequestration rates, we can provide information on the value of these ecosystem services and the likely future of these systems under different trajectories. Will we continue encroaching on and polluting these vital environments, or will we manage them to achieve nature-based solutions to the challenge of sustainable development in the 21st century?

The scientific and practical value of addressing these questions makes this an exciting area in which to be working as a researcher. As a postdoctoral scholar in the Center for Climate Change Impacts and Adaptation at Scripps Institution of Oceanography, my goal is to pursue marine research directly applicable to finding solutions to climate challenges. San Diego Audubon's ReWild Mission Bay program is a valuable collaborator in these efforts. The thinking behind ReWild does not just encompass the diverse landscape of habitats, economic interests, and community groups involved in Mission Bay today, but, like the study of the sediment record, it is also focused on the dimension of time. Members of ReWild are looking back at how this environment was sustainably used by indigenous peoples in the past and forward to how our decisions today

can plant the seed of sustainable human use and thriving wildlife habitat in a changing future.

Working alongside organizations such as those in the ReWild Coalition gives me confidence that the data that my colleagues and I dig up in our study of the mud can be put into action. As these research and advocacy efforts continue, I look forward to seeing a healthy, functioning, sustainably used, and resilient coastal landscape when I return to look out at northeast Mission Bay in future years.

(Continued on page 4)



Sharing a Moment, Sharing the Dream

by Travis Kemnitz, SDAS Executive Director

During a morning of visiting our Least Tern nesting sites, while walking back from Stony Point, I ran into a birder from Orange County. As she approached, she rapidly raised her binoculars to her eyes and scanned the horizon. Her camera hung around her neck and seemed to be half the length of her body. I said hello and she asked, "Have you seen the Longspur? There have been sightings of three species and I came down from Orange County to find them." After checking the San Diego Region Birding Group posts for more details to share, I let her know I had not seen them and she went on her way. Though tempted to join her search, I headed to Mariner's Point and watched as Megan Flaherty supervised a team of Restoration Assistants conducting vegetation surveys, a city crew hauled plant debris out and trucked sand in, and a Parks and Recreation staff member busily weeded. As I helped load large bags of invasives, I noticed a sun-depleted lizard inside a bag. I removed it and placed it in a safe spot to warm in the sun and move on with its day. At that moment, I was filled with gratitude, and a deep sense of love for what I am able to do for a living. As the lizard skittered off, I felt appreciation for the adventure, healing, and happiness nature provides. These feelings have grown stronger since my journey with San Diego Audubon began last February.

In the FYE20* Annual Report (posted on our website), we document the numerous transitions and challenges we have faced—and the continued successes we've celebrated. We remain financially strong due to the smart investment decisions of past boards, the dedication of our members, and the continued support of long-time funders. As we close the current fiscal year this May, and we begin to see a light at the end of the COVID tunnel, San Diego Audubon stands poised to do some of its best work. These times require strong leadership, science-driven solutions, and vigilant care for the safe places we provide for birds, other wildlife, and their habitats. Our partners, coalition members, and more favorable government policies embolden us as we intensify our efforts to defend remaining wild places. This summer our board and staff will set strategic priorities for the next three years. With our primary goals mapped out, we'll work diligently to deliver unprecedented results for you, our region, and the birds we know and love.

*Fiscal Year running from June 1, 2019 to May 31, 2020

(Continued from page 3)

ReWild is the Fisherman's Friend, Too

by Tyler Vanosdell, Mission Bay Fly Fishing Co.

I own and operate the Mission Bay Fly Fishing Company, which offers guided fly fishing on the Bay and Surf, as well as courses on fly fishing. I named my company after Mission Bay because of its great beauty and excellent fishing. It is a perfect bay for fly fishing and has an amazing diversity of fish species to catch. Once I saw what the bay had to offer, I wanted to share it with others. For these reasons, I fully support the ReWild Project on Mission Bay. Every bay needs wetlands or marshes to be healthy. Wetlands, as the bay's arteries, are the foundation of life in the water. For my business to do well, I need Mission Bay to be as healthy as possible. The ReWild Mission Bay project is out to do just that! The bay is surrounded by humans every day. We need to protect this bay in every way we can.

"The weight of humanity is heavy on pretty places." Sandy Moret HOF, Fly Fisherman

Why SACNAS Supports ReWild Mission Bay

by Archie Baza, President of City College SACNAS

The San Diego City College SACNAS (Society for Advancement of Chicanos/ Hispanics and Native Americans in Science) Chapter has been around for a little over four years now. One of just two community college chapters in the nation, it was recognized as the 2020 Chapter of the Year by the national SACNAS organization, competing with other chapters from such universities as Yale and Harvard. The focus of our chapter is to raise awareness, bring inclusivity, diversify, and expand curiosity and creativity, while connecting students to different organizations across different communities, so that they can work on their



Students march for wetlands—and the future.

professional and interpersonal skills.

The partnership between San Diego City College SACNAS and San Diego Audubon Society has emerged to work collaboratively. Students are exposed to great opportunities that connect them with nature and wildlife. A good example is the ReWild Mission Bay project, which has not only taught students about restoration skills, but also made them aware of the politics that go into policymaking. With the issues of the climate crisis and the increase in the extinction rate caused by shifting climate zones, it is the next generation's challenge to keep wildlife safe, as the older generation passes the torch. The ReWild project is helping students to be the great leaders of change by protecting the lands that are slowly fading away and the native species that are being forced out by people who have lost their connection with nature and wildlife. This is the main reason San Diego City College SACNAS supports the ReWild project. We believe in science and the integrity of good data, and we believe that the environment is for all of us.

Our Education Program Ventures Into Virtual Learning by Hayley Heiner, Education Manager

As we move closer to the end of the school year, we continue our efforts to foster education connections with partners and students throughout the county. Initially, the transition into virtual education proved challenging, especially with programs that focus so heavily on outdoor, hands-on experiences, but through creativity and collaboration, we have been able to honor our commitments and expand our education reach in new ways. Recently, we have been thrilled to use the power of collaboration to expand our Anstine Adventures program out into Virtual Learning Labs. After Vista Unified School District afterschool staffers completed our takehome Nature Kits in the fall, they were able to really see the value of outdoor experiences and connections for their students, especially as they navigated learning at home. As students began returning to campus in small groups, our partnership with the afterschool program proved invaluable, as it allowed for our continued involvement on campus and funded development of our pilot Virtual Lab Program.

Thanks to these generous funds, we will be able to provide three weeks of programs for students in grades 3-5 across seven Vista Unified campuses. Each week will kick off with a pre-activity video introducing the week's topic and supplemented with an in-class activity. Later in the week, students will be joined by an SDAS educator to lead them through a hands-on, live Zoom lab, all followed up with a post-activity PowerPoint and a final lesson to guide them through a nature exploration on their campus.

In Week 1, students will learn "All About Birds," focusing on local species, practicing bird-identification skills, and diving more deeply into owls with an owl-pellet dissection. In Week 2, they'll be learning about native plants and pollinators, focusing on both plants and insects around their school and the greater San Diego region. They'll also be getting their hands dirty by creating native wildflower seed balls. Their final activities, in Week 3, will focus on the importance of clean water as they learn about water quality,



Anstine Adventures Nature Kits give students an enriching hands-on experience.

the water cycle, and even try their hands at designing their own natural water filters. This is the first program of its kind in the San Diego Audubon education department, so we're looking forward to feedback and collaboration from Vista Unified students and staff. This input will guide us in using these experiences as our virtual program prototype. From this collaboration, we're excited to soon implement a similar program with afterschool students in Chula Vista Unified School District and we hope, over time, other districts, depending on what the next school year holds!



San Diego Audubon Takes to the Skies with **FAA-Licensed Drone**

San Diego Audubon is now the owner and operator of a DJI Mavic Air 2 drone (larger view to right) which is fully operational. With our licensed "pilot," Office Manager Chelsea Felbeck, we have the potential for a large range of uses in a variety of locations.

At Silverwood and Anstine-Audubon,



we will employ the drone for vegetation and habitat surveys, especially for difficultto-monitor or even inaccessable areas. It will let us target non-native plants before they spread out of control, and document signs of encroachment by humans or feral species. It carries an HD camera, giving us the ability to produce quality video that can be incorporated into virtual education programs. This aerial dimension can help us create digital tours along our trails (and beyond) that will greatly enrich the viewer's experience of our sanctuaries, especially for those with limited mobility. This is a major step in reaching a larger and more diverse public while shielding fragile ecosystems from too much human activity. Watch for coming attractions!

If you would like to learn more, or contribute to this new dimension of our conservation and education work, call Chelsea at 858-273-7800.

SilverWood Scene Changing Seasons Bring Silverwood to Colorful Life by Phillip Lambert, Silverwood Resident Manager

Despite the limited rainfall this year, many riparian bird species are preparing for Silverwood's spring nesting season, which typically begins in March. By the time you read this article, much of this preparation will have already happened.

The pair of White-breasted Nuthatches and Oak Titmouse, as of this writing in mid-March, have been preparing their nest sites among the Live Oak trees. The Nuttall's Woodpeckers and Northern Flickers are excavating new nesting holes in the oaks outside of the observation area. Bewick's Wrens and Anna's Hummingbirds are also collecting material for their nests. Our Western Screech Owl pair continues to be active in the observation area during the night, but they have taken up a new, better-hidden roosting site during the day and are no longer visible to onlookers. The nonstop nightly calling from the male is an indication that they will be breeding once again, making it their twelfth year of active nesting since they took up their Silverwood residency back in 2010.

Though many species of fall migrants arrived on schedule back in October, the White-crowned, Golden-crowned, and Fox Sparrows had all moved on by December. Other fall migrants, such as Audubon's (Yellow-rumped) Warblers, Dark-eyed Juncos, Hermit Thrushes, and Ruby-crowned Kinglets, stayed through the winter months. Temperatures during the winter this season did drop to lows of 26 degrees (F.), which may have been a factor in the early departure for some species. Parts of Silverwood were blanketed by hail during a recent storm, casting the fleeting illusion of a snowy winter to our sanctuary.

Since the reopening of Silverwood back in October 2020, we have had 572 Sunday visitors come out for hiking and birding in the

Wildflowers line the trails in peak season.

observation area. We were glad to host two birding expeditions from the SDAS Bird Festival in February. Silverwood's 5.7 miles of trails offer a variety of scenic habitats, from riparian Live Oak woodlands to thickets of Ceanothus, Chamise, and Scrub Oak, giving hikers the charmed experience of walking through an elfin forest.

Heading up to the first ridge along the sometimes steep trails, and weaving through weathered outcrops of unusually shaped granitic boulders and other formations, you will discover several vista points with panoramic views of Silverdome and the rugged, trailless gorge that stretches to its oak-lined base. If you have never made the climb to Rudy's View, this is a good time of year to do so. On days with clear skies you can glimpse the coastline to the west and the mountains to the east—as distant as the peaks of Palomar or even Mt. San Jacinto, far to the north.

This May and into June (when this issue arrives in your mailboxes), many of our native flowering species will be in full bloom. They may not be quite as prolific as last year's showing, due to lower rainfall



Hail blanketed Silverwood following a winter storm. All photos by Phil Lambert.

totals, but based on the evidence of early seedlings, this May should still be quite spectacular. We are expecting good displays of the following species: Slope Semiphore (Diplacus brevipes), Fremont's Monkey Flower (Diplacus fremontii), Chia (Salvia columbariae), Danny's Skullcap (Scutellaria tuberose), Rough Popcorn flower (Plagiobothrys collinus var. fulvescens), Delicate/Campo Clarkia (Clarkia delicate), Nuttall's Snapdragon (Antirrhinum nuttallianum ssp. Nuttallianum), Chinese Houses (Collinsia heterophylla var. heterophylla), Parry's Larkspur (Delphinium parryi ssp. Parryi), Scarlet Larkspur (Delphinium cardinal), Canchalagua (Zeltnera venusta), and many others of the 374 flora species found at Silverwood Wildlife Sanctuary.

Silverwood Calendar for May and June 2021

Silverwood Wildlife Sanctuary is free and open to the public from 9 a.m. to 4 p.m. on Sundays only. (We will be closed July-September.) Registration is required to limit attendance to maintain social distancing. Please note that COVID-19 rules are in place during your visit and should be followed at all times.

To sign up for a visit, please log on to:

www.sandiegoaudubon.org/what-we-do/silverwood

For further information, contact Phillip Lambert, Silverwood Resident Manager, by phone or email:

(619) 443-2998 • philscottlambert@yahoo.com We're at 13003 Wildcat Canyon Road, Lakeside, CA 92040



Anstine Ambles Herbariums—Compressed Floral Treasures of Knowledge by Arminda Stump, Anstine Committee member

As I write, spring has just begun. Mountain Lilacs pepper hillsides in their luminescent blues, Anna's Hummingbirds joust like knights in the air, and all around, plant life grows from the much-needed rains. What makes this time of the year so precious is how brief it is. During those colder months, flipping through a herbarium (a collection of pressed flora with the intent of recording scientific data)



can help bring back some of the magic of spring.

Pressing flowers as an art form originated in China and Japan. Samurai would take up the practice, called oshibana, as a method to hone patience and harmony. Pressing flowers properly takes time and a delicate hand. In the West, during the Victorian era, flower pressing was a well-loved art form but also a method of recording and understanding the natural world. One of the oldest accounts of a herbarium dates back to 1532 in Italy.

Before photography was widely available, this was the best method to learn not just the structure of a plant but also its geographical range. Through herbariums, extinct flora have been recorded. Some of these pressed flowers are the only examples of their species. In our digital age, herbariums are recorded and shared worldwide. But let's not forget the hard work and love of citizen scientists and hobbyists. It is often because of the hard work of these dedicated people that new and rare flora is recorded.

So how does it work? What are some of the methods, and how does one collect flowers ethically? Like the samurai working diligently, it takes patience. For my own tools I use a flower press consisting of three paper layers: a delicate one against the flower, an absorbent layer after, and heavier cardstock for structure. This is mirrored on the other side of the plant. Next is a hard cover with belt-andbuckle-like bindings to keep everything tight. I've also just squashed a flower flat between two pieces of newspaper with a heavy book on top (this method takes a long time to dry). Whichever method or medium you use, the most important part is to change out that absorbent layer from time to time, so the flower can continue to dry. Some plants will change color from the pressing, either dulling or even brightening. Some plants may need to be dried out before pressing for best results, but a wilted or decaying flower won't preserve properly. Freezing plants is a method used to rid specimens of parasites that could damage a collection.

That brings us to the legality of collecting flora. Collecting from a private garden is best. If out in nature, be sure to check whether collection in the area is prohibited. Poaching is a serious issue, about which we should all be cautious. When in doubt, "Leave No Trace" works best, and photography can be a beautiful method to capture springtime bliss. At the Anstine-Audubon Nature Preserve, collection is prohibited, but photography is welcome. We even encourage our guests to share their images on our Facebook page, which can be found at https://www.facebook. com/anstineaudubonnaturepreserve. So, the next time you are out in nature, take a moment to stop and admire the flowers, or better yet, if they are in your garden, pick them and preserve them for future admiration.

Anstine is open to the public on Saturdays, 9 a.m.-12 p.m. (Closed July-September). Preregistration is required. Visit our website for more details at: www.sandiegoaudubon.org/what-we-do/anstine.html

David Sibley's Mesmerizing Book, "What It's Like to Be a Bird"

Phil Pryde, Ph.D., past president, SDAS

What It's Like To Be a Bird, a 2020 book written and illustrated by David Sibley (Knopf), will go far toward answering any questions you might have about the lives of birds. Birding field guides tell you the what and where of birding—what a bird looks like and where it can be found. This richly illustrated volume goes much farther, explaining the why and how of the actions, thoughts, and lifestyles of birds.

Even if you know a fair amount about birds, this highly readable book will quickly convince you there's still a lot to learn. Examples: Did you know that some birds spend the entire winter in the air and can sleep while flying? Or can sleep with one eye open? Or that the average Wandering Albatross might fly 114,000 miles in a single year? Our bodies can't detect the Earth's magnetic field, but a bird's can, and birds use that sense to help navigate while migrating.

The format of the book is to introduce all the main families of North American birds, as well as many interesting smaller families. Then Sibley selects one or two typical species in each family. In a few succinct paragraphs, he tells you many facts and secrets about how the species in that family feed, breed, and in general conduct their lives.

Sibley also corrects several misconceptions, such as the common

assumption that hummingbirds have brilliantly pigmented feathers. Their iridescence results from the diffraction of light caused by feather structure, not pigment. Also, birds' legs don't "bend the wrong way"; what you may think are knees are actually ankles. And if you want to lose weight, do not try to "eat like a bird"; in order to eat like some birds, based on relative weights, you'd need to eat up to 25 pizzas a day!

I found there's little to criticize in this book. One misconception Sibley doesn't refute is that hummingbirds subsist entirely on nectar. He neglects to mention that hummingbirds need to eat some small bugs (which are important for protein). Also, I would have liked more discussion of how the various species are (or are not) adjusting to major environmental alterations, such as urbanization and the climate crisis. Such omissions are few, though, and they don't lessen the enjoyment.

This is one of those great reads where you don't need to start on page one; you can open up to any family of birds that interest you and enjoy discovering the wonder of their daily lives.

If you're a beginning birder, this book will be a magical window that opens the way to a whole new world. For an experienced birder, it will almost certainly enlarge that world. I enthusiastically recommend it.











There are reasons why we call all of our loyal supporters *Friends*.

Friends share common values and interests. They stand by you when you need them most. They're there for you in challenging times. Friends are essential! Your Friendship means a great deal not only to San Diego Audubon but also to the future of our region's birds, other wildlife, and their habitats. Friends come in many different shapes and sizes. From the least (tern) to the great (egret), all levels of support matter!

Join or Renew as a Member. Make monthly or yearly contributions, meet other bird enthusiasts, and enjoy member benefits, too.

Make a Donation. Make a tax-deductible gift to support our initiatives, our many programs, and both of our sanctuaries.

Leave a Legacy. Make plans today for a gift tomorrow and become part of our esteemed Golden Eagle Legacy Club.

Volunteer. Contribute your time and talents. *Visit* **SanDiegoAudubon.org/JoinOurFlock**



We encourage you—especially if you are already a National Audubon member—to become a Friend of San Diego Audubon to support our local conservation and education programs.

Photos by

Karen Straus

Sketches SAN DIEGO AUDUBON

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The office is now open to visitors. Please wear your mask and follow social distancing guidelines.
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sdaudubon@sandiegoaudubon.org. (Emails will likely be more effective than calling.)

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...Fostering the protection and appreciation of birds, other wildlife, and their habitats...