



Fall 2019

Point Blue Quarterly

Conservation science for a healthy planet.

Stories from the Field

Adventures in Curiosity
and Discovery





FROM THE CEO

The Magic of Fieldwork

I want to dedicate this issue of the Point Blue Quarterly to all of our staff who live across California and are often dramatically affected by powerful forces, such as the wildfires we experienced once again this year. Despite all challenges, they always demonstrate tremendous passion and dedication, and I feel fortunate to be working alongside them every day.

Before I had even worked my first day at Point Blue, I was lucky enough to see our scientists in action in the field at a beautiful ranch owned by one of our supporters in the mountains east of Monterey. Since that day, visiting our many field sites and learning from our scientists and our partners working together has been one of my favorite things to do as CEO.

We are privileged to work in some truly spectacular settings, many of them right here in California. From our historic Palomarin Field Station in Bolinas (part of Point Reyes National Seashore) where we've been banding birds and collecting data for more than fifty years, to the bucolic mountain meadows in the Sierra, our field sites keep our staff closely connected to the natural places we're all working so hard to conserve. But it is the passion demonstrated by our conservation scientists when they are out in the field that is truly amazing. Nothing inspires me more than to see the connection between the science and the human spirit. And I see this when a soil ecologist's eyes light up as she tells me about all of the microbes in a single tablespoon of soil, or when a restoration project designer tells me about the careful selection process used in choosing a certain native plant for a given site, due to its drought tolerance under a changing climate.

The data that our scientists collect in the field—the weight of a penguin in Antarctica, the number of birds present a year after a fire burned through a forest, the number of whales observed on a research cruise—get added to decades' worth of other observations, creating incredibly rich datasets. These datasets provide the bedrock of countless future analyses, by our scientists and others. And from these analyses emerge new understandings of our natural world. Some of these are published in peer-reviewed scientific journals and some we bring to our natural resource manager partners, who use our findings to take actions that protect our lands and waters for wildlife and sustainable human use. Knowing that this data, which has the ability to create significant conservation impact, comes from passionate observers of nature makes experiencing it first-hand that much more special.

I hope you enjoy this issue and it inspires you to come join us in the field to see our work for yourself. I promise you will not be disappointed. Please visit PointBlue.org/field for information about opportunities to connect with our fieldwork first-hand.

Sincerely,

Mani Oliva
Chief Executive Officer

Above: Mani Oliva at a field site in Tasmam Koyom, northern Sierra.
Photo by Lishka Arata.

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ON THE COVER:

Central Sierra Program Leader Alissa Fogg carefully holds a Wilson's Warbler for banding at a Sierra field site. Photo by Michael Mahoney/Point Blue.

Top, left: Hermit Trush nest at a Sierra Nevada field site. Photo by Michael Mahoney/Point Blue.

Top, right: Former Nest-Finding Intern David Sherer. Photo by Point Blue.

Middle, left: California Gull chick carefully held during monitoring at Mono Lake. Photo by Ryan Price.

Middle, right: Katie Dugger, PhD, conducts Adélie Penguin monitoring. Photo © Helen Glazer 2015, helenglazer.com.

Left: Foraged stinging nettles. Photo by Leslie Seaton.



The Heart of the Wilderness

In our last issue of the Point Blue Quarterly (Summer 2019), we explored some powerful new tools that help us gather increasingly detailed information about our planet. But in most cases, modern technology is a complement to—not a replacement for—good old-fashioned fieldwork. This is especially true when our scientists need to collect fine-scale data on wildlife, their habitat, and the impacts of environmental change. Our scientists take us along as they “embed” themselves in nature, revealing the enduring value of boots-on-the-ground science and illustrating how immersion in the wild can deepen their personal connections to nature and conservation.

Think Like a Bird

by Diana Humple, Palomarin Program Lead

Sunrise in a high mountain meadow. I pull more sedges over me, feeling the cold but not yet the moisture as I lay on the wet ground wearing raingear almost the same green as the vegetation, all providing camouflage.

My heart skips a beat when from behind me I hear the telltale “drip” note—an appropriate call for a species that nests in such wet places—and I listen intently as it gets louder, closer. Through an iPod and speaker, I play back the same note, satisfied when the bird responds again in turn. I more quietly play a different call of the Swainson’s Thrush, a songbird that is simultaneously

understated and breathtaking—in its vocalizations, its appearance, its behavior—and who thereby gets under your skin. As with others we’ve targeted in recent days, each time this thrush approaches, I feel closer to understanding what pattern of songs and calls increases his curiosity and territoriality towards this fictional invader we’ve placed in his neighborhood. Our speaker is near a painted, wooden effigy of a thrush. We know it won’t convince him for long, but hope it will rouse him for long enough.

We are counting on his reaction, and the precise placement of our mist nets (fine mesh nets we use to capture birds without harming them)—in just the kind of opening in the alders through which we’ve learned

the thrush may be tempted to travel. Our goal is to capture this bird and remove a GPS tag we placed on his back last summer, when we carefully caught and released him a mere 50 meters from here. With the data we will download from that tag and a suite of others we’ve deployed in the mountains and on the coast, we hope to unravel a great mystery: where do these Swainson’s Thrushes migrate when they leave these the mountain meadows and riparian forests of their California breeding grounds and fly south? By comparing the wintering grounds of birds breeding on the coast (where they are common) and in the Sierra Nevada and southern Cascades (where they have become quite rare), we can better understand the influence of their winter habitat on their population health.

Sometimes on these brisk mornings, all our energy focused on one bird whose tag we earlier saw peeking out under its feathers, giving our hearts a stir, we succeed. When the bird flies into the net (as it does this morning after a few near misses!), we thrill that our intuition allowed us to recapture this skillful, tricky bird. And we thrill even more at the possibility of what we will learn about this amazing thrush in our hand and its thousands of miles of travel, before returning it to the wild with a lighter load. But sometimes, we fail: we are humbled, scratch our heads at the mysterious nature of these birds that elude us, and marvel at how much we still have to (and get to) learn.

Editor's note: This study was conducted out of our Palomarin Field Station in Bolinas, CA, and in the southern Cascade Mountains and northern Sierra Nevada, in a collaboration between Palomarin, our Sierra Nevada Group, and the Tahoe Institute for Natural Science. Stay tuned to find out where these birds migrated—our manuscript is currently in review!

A Day Deep within a Post-Fire Landscape

by Joel Donohue, Sierra Nevada Point Blue Count Technician, 2019 Field Season

My field partner and I drove to the Power Fire area on a warm Sunday night to set up camp for early morning bird surveys. The Power Fire burned in 2004, covering 17,200 acres within the Eldorado National Forest. Point Blue has a partnership with the US Forest Service to understand how birds use post-fire habitat under different management prescriptions, both in the short- and long-term. We camped out under the crystal clear spring sky, stars shining down on us. Upon waking at 05:00, we were greeted by a beautiful pre-dawn glow on the horizon, with the first bluebirds calling nearby. Not the worst way to start a work week.

I hiked in to my first survey site—a location that is regularly revisited to tally all birds heard or seen—with 8 minutes to spare before the 05:48 start time. I love to give myself a few minutes to prepare and immerse myself in my surroundings. Green-tailed Towhee, Fox Sparrow, Dark-eyed Junco, and warblers were singing, calling, and foraging among the shrubs that sprout in abundance post-fire.

I then made my way down a steep hill toward the raging Cole Creek, wading through green-leaf manzanita and surfing atop a field of prickly mountain whitethorn. Both shrub species depend on fire for germination, and my thoughts turned to the harshness and beauty of this post-fire habitat. The steepness, especially near the creek, was difficult to navigate, and when the shrubs let up, I was constantly slipping on beds of fallen yellow pine needles. As I neared the creek, dense clumps of deerbrush covered my head, but I continued to push through.

The day had already turned hot by 09:15. Upon reaching the creek I climbed down and soaked my shirt and hat in the pure snowmelt. I found the widest log I could, crossed over, and began my ascent up the valley toward my next survey point. I had to haul myself up the opposite bank using the whitethorn shrubs by fully clenching my hands around each stem. Deerskin gloves saved me from many pin pricks. As I got to the top, I surprised an *Accipiter* (a genus of woodland hawk, see page 15 to learn more) and its prey darting in front of me into the forest.

At the end of four hours of surveys, it was time to hike back to the truck and pick up my field partner. A fallen log blocked the fire road. I bucked it with an axe, getting a couple of blisters on my hands. Continuing down the road, I met my supervisor, Alissa Fogg, who had been run off her count by a large black bear. She hopped in and we continued down the mountain, finding my field partner deep in a valley overlooking the Mokelumne River.

What a demanding, but extremely rewarding, day this was! Incredible views, forests, strenuous hiking, and of course so many birds. My observations—obtainable only by being in the field—would become part of a large, multi-year dataset. We're tracking bird response to wildfire in the Sierra and how land managers shape these landscapes by leaving them alone or by logging, replanting trees, and removing shrubs. Our data contributes to post-fire forest management plans to prioritize biodiversity and critical habitat for a bird community reliant on fire. This day was everything I could have asked for and more. I am beyond grateful for the amazing aspects of nature I was able to witness. This is why we do conservation work.



Opposite page: The strong root of arrowleaf balsamroot, photographed at a post-fire site in the Sierra Nevada, allows it to regenerate following most fires. Photo by Michael Mahoney/Point Blue.

Above: A Swainson's Thrush, the subject of a migratory connectivity study by Point Blue and the Tahoe Institute for Natural Science. Photo by randimal.



Protecting Marine Mammals, One Piece of Scat at a Time

by Emma Railey, Farallon Islands Intern, 2019 Field Season

An audible commotion hit me when I landed on Southeast Farallon Island in July. The gulls' deafening calls stood out, but there were other noises, too—waves crashing against the rocky shore, the Farallones crew calling to one another as they operated the crane, and the roaring of sea lions. This last sound was the one I was most drawn to.

I was on the Farallon Islands as an intern, studying the diet of *Zalophus californi-*

nus, the California sea lion, by collecting their scat. This intimate process included scouting out prime sea lion hangouts, then scrambling over the rocks to retrieve the scat under the watchful eye of a few dozen sea lions scattered around me. With each *Zalophus* dropping that I scooped into my bucket, I was contributing to a story told through the analysis and publication of diligent, thoughtful research.

The samples I collected were sent back to the Point Blue marine laboratory at the Petaluma headquarters, where scientists, interns, and volunteers sorted through the

scat, looking for bones and scales from fish and beaks from octopi and squid to determine what the sea lions are eating. Changes in diet may indicate larger changes to forage fish populations or the marine environment. Monitoring sea lion diet increases our understanding of marine species and informs possible protection or management. And it all starts with on-the-ground work in the field—in this case, the glorious act of collecting poop.

The Farallones are a truly wild place, home to a plethora of animals that allow scientists numerous opportunities to study and observe them. Although my internship is complete and I'm back on the mainland, the memories I brought home from the islands linger as moments of inspiration and beauty: feeling the incredible softness of a downy pigeon guillemot; being so close to a sea lion that you can see the whiskers poking off of its big, dog-like face; seeing powerful wings flapping across a brilliant red orange sky at night; feeling the excitement involved with each seabird's encounter in a mist-net. I feel immensely grateful to have experienced these moments in the field and proud to have contributed to the research that underlies them all. It is my hope that our telling of these fieldwork stories results in the continued protection and care for the creatures that connect us humans to our natural world. 🌍

field hacks

tips and tricks for life in the field

"On larger research ships, you can string a hammock in the infrastructure. String lights make great cabin decorations and double as a night-light for watch changes. Also, the ship's crew have diverse and interesting backgrounds... share a meal and hear their stories." —Julie Howar, Coastal Program Biologist

"Waterproof everything, or have a place that is waterproof to put non-waterproofed things. Plus, always bring a camera—you never know when the perfect photo opportunity will occur." —Emma Railey, Farallon Islands Intern, 2019 Field Season

"STRAW students figured out that if they placed an inverted yogurt container over a newly planted plant, they could then pour mulch on and leave the much needed 'donut of space' around the plant so that it won't rot." —Laurette Rogers, STRAW Founder and Ambassador

"In the marsh, we forego gate keys and a truck in exchange for a salty bike to reach the edges of San Francisco Bay. Being out at the edge of the pickleweed plains at dawn, while I'm able to see the lights of Oakland or San Francisco and millions of people on their morning commutes, feels much more remote than you might imagine, and being on my bike intensifies that feeling." —Megan Elrod, Librarian/SF Bay Program Biologist



Field of Extremes

Fieldwork can lead Point Blue's scientists to strange and wonderful places. They often brave difficult, cold, dirty—and sometimes even risky—conditions. Despite the challenges, fieldwork can also be hugely rewarding, both personally and for the health of our planet. Read on to learn about the extreme environments our intrepid scientists endure, and the conservation impacts we're making thanks to their uncommon dedication.

Finding Yourself on Grid 4

by Elizabeth Porzig, PhD, Working Lands Director

I have worked in a lot of extreme environments, from deserts to mountain tops to the bottom of the world. But in truth, I have yet to meet a place more extreme than Grid 4 at Point Blue's Palomarin Field Station.

At first introduction, you might think that there isn't much extreme about this place. An approximately 30-acre patch of land at the southern end of Point Reyes National Seashore, formed by centuries of sea-level change and tectonic turmoil, the steep terrain provides an amphitheater view of the Pacific Ocean along one of the most stun-

ning stretches of the California coast. But the magic of Grid 4 is not in the grand views. Instead, it is in the rich research history tied to this land, in the beauty and complexity of the plants and animals that call it home, and in the physical challenges one must overcome in order to know it. Grid 4 inspires a life-long fascination with our planet's living systems and a commitment to become better stewards of the earth. Its careful study has been the starting place for many careers in science and conservation, including mine.

Grids are designated plots where we search for breeding birds. To be a gridder at Palomarin means to spend every day for five months learning your grid and its feathered

occupants. And by learning, I do not mean a cursory familiarity. To know a grid is to know every bush and tree, every bird in as much detail as you know your friends, and put all of the pieces of the ecosystem together. It's what every other gridder for decades before you has done, so that we may tell a part of the story of our planet in a time of unprecedented change.

The habitat at Palomarin makes this no small feat. The vegetation is a solid forest of coastal scrub and Douglas-fir. Walking is possible only in some places. Crawling is often your better option. You know you are reaching the heart of Grid 4 when you come across the 'old growth' poison oak—plants so old and

Opposite page: 2019 Farallon Islands Intern Emma Railey collects sea lion scat as part of Point Blue's work to monitor changes in the marine environment. Photo courtesy Emma Railey. Above: Former Nest-Finding Intern David Sherer within a "grid" at Palomarin. Photo by Point Blue.

enormous, they are more aptly measured as trees, with branches and leaves extending for the better part of an acre. Gridders spend their days fighting their way through the impenetrable vegetation and steep terrain in pursuit of brief glimpses of the birds that call it home. We mark each bird with a unique set of colored leg bands so that we can know them as individuals and tell their life stories. Your first weeks on Grid 4 are spent getting hopelessly lost, but by the end of the season, you know every tunnel and deer trail by heart, and the birds are your neighbors and friends.

A day on Grid 4 is an odyssey—you will undoubtedly fall more times than you can count, laugh, cry, get lost for hours, make friends with some feisty birds, lose your field equipment, and, if you're lucky, find a small piece of yourself. The lessons Grid 4 has given its students in perseverance, tenacity, and humility are gifts for life. My career path has brought me away from Palomarin, but what I learned on Grid 4, I hold in my heart. To young people looking for their place in the world and thinking about a career in conservation, I wish all of them a field season on Grid 4.

Boomerang

by Annie Schmidt, PhD, Antarctica Program Leader

The pilot's announcement is unintelligible through my headphones. I take them off and the unfiltered drone of the C-17's twin jet engines pulses around us. The announcement by the air national guard crew is still unintelligible. I glance around at my fellow Antarctic hopefuls, already strapped in for landing on the ice runway in Antarctica, to see if anyone else is catching the message. Blank stares and shrugs are the only responses. A few seconds later, he tries again with a bit more success: "I'm sorry to say we've found a problem with the plane and have to turn around."

Boomeranged. A common term in Antarctic program lexicon, meaning you took off on your flight to "the ice" but turned around without being able to land. Usually weather related, but today, mechanical. As the collective sigh and resignation settle in, the irony of the timing strikes me. Moments before I

had been reflecting on the relative ease with which we are now able to access this place, one of the most remote locations on the planet. A five hour flight from Christchurch, New Zealand, and we are (usually) there. But there are times like these that remind you: it's a harsh continent still, even with the advantages of modern technology.

When Antarctic exploration and research began in earnest over 100 years ago, the dedication and devotion to purpose must have been astronomical to overcome the significant hurdles required to reach the icy continent. Months on a ship, countless storms, dogs and ponies washed overboard, sickness, isolation. Early Antarctic explorers devoted years of their lives away from loved ones for a single expedition, enduring unimaginable hardship, all in dedication to an impressive ideal: exploration and science.

From our field site at the Cape Crozier penguin colony, we have a tradition of hiking to the "stone igloo" every year. A pilgrimage in honor of the early explorers, which never fails to impress. The stone igloo is now just a pile of rocks, tattered fabric bits, and rusted cans, the remnants of an ill-conceived plan to visit the first known Emperor Penguin colony to collect eggs for scientific study.

Emperor Penguins breed in the harshest environment on earth—the dead of the dark Antarctic winter. In 1911, three men pulled on clothes that had frozen stiff while they slept, set out to haul their sledges and trudge through the endless polar night to reach the Cape Crozier emperors. Near their final destination they built the "igloo" out of nearby stones, on what now appears to be the windiest spot for miles. A three-day blizzard ripped their canvas roof to shreds, took off with their remaining tent, and left them pinned to the ground in their sleeping bags. All for the sake of knowledge.

Expedition member Apsley Cherry-Garrard said "We travelled for Science. The [data] gathered... hour by hour in wind and drift, darkness and cold, striven for in order that the world may have a little more knowledge, that it may build on what it knows instead of on what it thinks." They managed to collect several eggs from the emperors, three of which made it back to England. Standing in the places they stood, places where few humans have set foot, we feel the significance of their presence. We feel what an ultimate, thrilling privilege it is to continue, to carry on. If the price is an occasional boomerang, count me in. I'm here for the science, and it's worth it. 🌍





Trust: A Field Guide

Nature knows the value of a good collaboration. Take pyrosomes, for instance. These exceptional sea creatures are actually made up of hundreds or even thousands of tiny individual organisms called zooids, which band together in a single gelatinous tube, sometimes reaching 60 feet in length. Just as these zooids find advantages in navigating dark ocean waters together, Point Blue scientists know that trust and cooperation matter when working in remote field locations where conditions can be challenging, and even dangerous. Teamwork—with colleagues, crewmates, and landowners—is as important as any data point or field sample in advancing climate-smart conservation science.

Land Trust

by Alicia Herrera, Rangeland Watershed Initiative Partner Biologist

Dennis and I have been talking for over an hour now, with very little of the conversation focused on the primary reason for my visit—to discuss the soil, vegetation, and bird data I collected from his ranch earlier this year as part of our Rangeland Monitoring Network. While I'm keenly aware that the end of the day is approaching, I don't interrupt. I've been working with Dennis for about a year

now, and in that time he has spent many hours accompanying me around his 360-acre oak woodland and vernal pool-dotted ranch in southern Shasta County, California. He has listened and respectfully questioned my observations on perennial grasses, Lewis's Woodpeckers, blue oak regeneration, soil compaction, medusahead cover, chinook salmon, and a changing climate, among other things. He has a lot on his mind right now, and he could use an open ear in return.

I listen with deference as Dennis lays out

his mounting chores and apprehensions: trees that were toppled during February's snow storm still need to be bucked up; the perimeter fence needs to be checked and repaired before cows are turned out this fall; limbs that came down in a recent windstorm need to be piled for burning; the barn renovations are behind schedule and over budget; invasive Himalayan blackberry needs to be controlled along the pasture; more bids are needed for the irrigation project slated to begin in a couple of months; what if neither of his sons want to continue ranching?

Opposite page: Antarctica Program Leader Annie Schmidt, PhD, records data in the field. Photo © Chris Linder. Above: Rangeland Watershed Initiative Partner Biologist Alicia Herrera at a working lands field site with NRCS District Conservationist Jenna Ganoung. Photo by Wendell Gilgert/Point Blue.



“Ok, sorry about that—you didn’t come here to listen to me moan and groan.” And with that apologetic segue, he is ready to shift back to the ‘Landowner Letter’ report sprawled before us on his kitchen table. It’s Dennis’s turn to listen and ask questions as I share the monitoring data and my recommendations to improve the ecological health and sustainability of the ranch: target grazing of the vernal pools to reduce medusa-head thatch build-up and make space for native flowers and grasses; leave some of the burn piles in place to provide cover for wintering birds; encourage recruitment of shrubs to support oak woodland birds. I was hesitant to make such recommendations twelve months ago, as I’m unsure how receptive Dennis would have been to taking advice from a biologist he just met. But because of the slow and careful building of our relationship and the trust between us, we both know that when we speak we will be heard.

There is No “I” in ACCESS

by Julie Howar, Coastal Program Biologist

When I tell friends and family I’m going on a cruise, they get jealous. I’m not going to Cozumel or the Bahamas, though, it’s an ACCESS cruise. There are no shore excursions, but if I’m lucky, I’ll get close enough to the Farallon Islands to smell them—seabird guano is potent!

ACCESS stands for Applied California Current Ecosystem Studies, a partnership between Point Blue, NOAA (National Oceanic and Atmospheric Administration), and many other organizations. My role in ACCESS is as a member of the bird and mammal data team. I record what the seabird and marine mammal observers are saying, even when they all shout excitedly at once. At night, I process the data, looking for errors and answering questions with the team. Many other types of oceanographic and biological information are also collected around the clock. The science team and ship’s crew work together to ensure it gets done; cooperation and communication are paramount at sea.

I enjoy ACCESS cruises because I can focus intently on the task at hand while still having the chance for surprise and enlightenment. Land-based distractions are superseded by a yell from the side deck: “Check out this unusual pyrosome in the net! And there’s an octopus!” On multi-day trips, I encourage the night watch to wake me if they find a seabird has been attracted by the ship’s lights and landed on deck. The opportunity to get a close look at animals that we usually see at a distance justifies appearing in the lab in Wellingtons and pajamas. Beats Casual Fridays!

Sixteen years of surveys conducted at least

three times a year have taken place on fixed tracks that now extend from Monterey to Point Arena. I am honored to play a small part in the team effort to protect the marine environment. With this wealth of data, we can support wildlife conservation by predicting where animals concentrate and why. Point Blue and its partners can also describe how ocean conditions have changed, noting the impact on the health of marine ecosystems and providing information to promote climate-smart conservation practices. And ACCESS has made some big conservation impacts, including helping to establish three National Marine Sanctuaries, as well as to reduce whale deaths from deadly collisions with cargo ships in north-central California. Data collection occurs 24-7 on an ACCESS cruise; every minute contributes to the science that helps us understand our planet.

From Fake Volcano Flows Real Conservation Impact

by Kristie Nelson, Mono Lake California Gull Project Leader

Mono Lake is unlike any other place in California. Because the lake has no outlet, it is naturally saline—two- to three-times saltier than the ocean, in fact. Otherworldly tufa towers (limestone spires formed when calcium-rich spring water meets carbonate-heavy lake water) dot the surface. They provide habitat for the millions of birds that feed and rest here each year, including the California Gull. Point Blue has studied these birds as indicators of Mono Lake’s overall health for 36 years, and our science was instrumental in winning protection for this special ecosystem in 1994.

I work on the gull colony with a small crew of assistants, and during fieldwork season we camp on Krakatoa, a unique islet of Mono Lake, which contains a large fake volcano structure. Yes, our basecamp is on a giant fake volcano situated in the middle of Mono Lake, which is surrounded by real volcanoes—Panum Crater, the Mono Craters, and others. This ridiculous-looking but very useful

Opposite page: Point Blue’s Mono Lake team conducts a California Gull nest count. Photo by Erv Nichols.

Above: Coastal Program Biologist Julie Howar aboard an ACCESS research cruise. Photo by Meredith Elliott/Point Blue.

structure stoically remains here from a 1952 movie set and somehow has survived wind, lightning, and other extremes. A carving on one of the wooden beams that reads “Ivan was gull banding 7-4-1983” is a testament to how long this beloved structure has served as Point Blue’s gull research basecamp.

Over the years, hundreds of interns and volunteers have participated in this project by not only collecting meaningful data, but also receiving life-enriching experiences. We camp together, cook communal meals, and listen to the screams of thousands of gulls as we fall asleep at night. We work hard to count nests and chicks in a sometimes chaotic environment. We encounter challenging situations, and we must work together to achieve common goals. We end up building life-long friendships, forge a deep connection to the place and community in which we work, and find inspiration in a world much larger than our own selves. And I know these experiences have transformed the lives of many—I’ve seen it in countless dazzled faces and gasps of awe at seeing the beginning of a new gull life hatching from a pipping egg.

But field life here can be harsh. The winds are wicked nasty on Mono Lake, and I am always prepared with a backup plan in the event they pick up when the gull crew and I are out on the lake. Conditions can be glassy calm one moment, only to be torn up by sudden tumultuous winds that rip this region between the high mountain peaks and low Great Basin desert. We don’t want to end up in the water, which—thanks to high concentrations of carbonates—is very alkaline and has a pH similar to household glass cleaner. Prolonged exposure can be unsafe, and hypothermia from the cold water and winds is a real risk, too.

Reflecting on my 15 years of running this project, many vivid memories come to mind. Boating back to base camp after a night of



trapping gulls and looking down upon the Milky Way reflected bright, wide and clear in the waters of Mono Lake. A cold, windy night of 15 degrees. The time a small plane crashed on one of the islands. And the time we saved a pair of kayakers. But what really stands out are the friendships and bonds that have developed from working together. All this and more are the indirect gifts of the experiences and inspiration found out in the field. 🌊

did you know?

conservation wins that began with fieldwork

1969	Our data on key shorebird feeding areas in the Limantour estero resulted in the National Park Service amending their master plan to ensure that Limantour would remain a natural area.
1982 – 1990	Point Blue data contributed to the establishment of three National Marine Sanctuaries and an International Biosphere Reserve in Central California.
1983	Point Blue began studying the California Gull colony on Mono Lake, generating data that proved crucial in the 1994 decision by the State Water Board to protect the Mono Lake ecosystem (read more on page 10).
1993	Our Farallon science was crucial to the passing of a state law to prevent the hunting of White Sharks in California.
1998	Point Blue helped develop and write the US Shorebird Conservation Plan and became the principal author of the Pacific Southwest Shorebird Conservation Plan.
2013	Our data helped reduce by half the planned salvage logging of the Yosemite Rim Fire region and prioritized where that logging should happen to best conserve the benefits of fire to birds, other wildlife and ecosystem function (read more about our fire ecology work on page 5).
2014	Point Blue contributed data considered in the listing of the Yellow-billed Cuckoo as a threatened species under the Endangered Species Act.

PARTNERSHIP

Katie Dugger, PhD

Collecting Data—and Inspiration—in the Field

Cape Royds is a rocky promontory on the westernmost edge of Ross Island, Antarctica. Famed explorer Ernest Shackleton made a base-camp here on his historic attempt to reach the South Pole. And modern day researchers come on quests of scientific discovery, seeking knowledge that will help us better understand our changing world.

Point Blue biologists and research partners have been gathering here each Antarctic summer (October-February) since the early 1970s. It's a trip that can take upwards of 14 days from the US, and living conditions in the field are rustic to say the least—cramped quarters, no running water, and winds up to 100 mph. But scientific curiosity trumps even the harshest field conditions.

Dr. Katie Dugger is in Cape Royds largely thanks to the Adélie Penguin, a little bird with large colonies in the area. Dr. Dugger is a federal research ecologist embedded within the Fisheries and Wildlife Department at Oregon State University. As co-principal investigator on Point Blue's collaborative Adélie Penguin research project, she explains how the birds can shed a lot of light on shifting global conditions. "Adélie Penguins in Antarctica are a perfect 'snow globe' for

studying climate change, as they are closely linked to habitat conditions that are predicted to change dramatically. Antarctica is largely (although not entirely) free from other human-associated influences, so we can focus on understanding changes to an intact ecosystem."

Dr. Dugger studies the population demographics of wild animals, in particular key vital rates—things like occupancy, survival, and reproductive success—relative to environmental factors such as habitat and climate variations. In addition to penguins, species investigated by Dr. Dugger and her students at Oregon State University include Northern Spotted Owls, Barred Owls, Greater Sage-grouse, cougars, and black-tailed deer.

Point Blue has partnered with Dr. Dugger on Adélie Penguin research since 2002. She's traveled with our team to Ross Island 16 times, usually supervising the fieldwork at Cape Royds during the early part of the breeding season. "This has been a fantastic collaboration because my Point Blue colleagues and I share the same focus on excellent science, including the importance of field research and the mentorship of young professionals in our field," she says.

"With Katie's expertise in demography, she helps us to understand why some of the penguin populations we study are thriving while others struggle," says Dr. Grant Ballard, Point Blue's chief science officer and co-lead on the project. As Dr. Dugger explains, getting into the field with the Adélies is critical to this work. "You can't understand population change of wild animals without following individuals over time," she says. "Year after year we spend time in the field to find them and determine whether they are breeding or not. The information we get from field data allows us to then estimate vital rates that can be used directly to inform management, or in more complex models to understand why populations change."

Beyond the value fieldwork provides as a raw data source, Dr. Dugger says it also fuels the "creative" part of her science. "New hypotheses come from observation, so getting into the field to observe nature is a critical component of the scientific process for me," she says. "The natural world is also an energizing and inspirational place for me. I feel fortunate to have experienced so much of it."

Being in the field, along with the joy Dr. Dugger finds in mentoring her students, keeps her optimistic about the future. "My students are really my legacy, and mentoring them is one of my favorite parts of the job," she says. "Sitting in the middle of the penguin colony, watching each bird go about living its life in an amazing place like Ross Island, Antarctica, is always inspirational, so continuing to find opportunities to get out into the natural world is an important way that I stay hopeful." 

by Stacey Atchley-Manzer



Opposite page: Julie Chase Baldocchi. Photo by Tina Marie Humphery. Left: Katie Dugger, PhD, monitors Adélie Penguins in Antarctica. Photo © Helen Glazer 2015, helenglazer.com.

CHAMPIONS OF CONSERVATION

Julie Chase Baldocchi

Picturing a Healthy Blue Planet

If you're a regular reader of the *Point Blue Quarterly*, chances are good that you've noticed the name Julie Chase Baldocchi attached to some of the most beautiful images we've published. She's a professionally trained photographer who ran her own commercial studio for more than 15 years. But Julie brings more than her considerable artistic talents to her role as a member of Point Blue's Board of Directors. As co-owner and vice president of Pacific Nurseries and as an active member of her family's ranching operation, Julie has deep connections to nature and a passion for transforming working landscapes through sustainable practices. She explained to us why she's inspired by Point Blue's work and shared some memorable experiences being in the field with our scientists.



Serendipitous Meetings

"I was sitting at one of my favorite places on Lake Tahoe with my feet hanging off the dock and into the cool lake water. I was engaged in a conversation with Carolyn Johnson, a woman I had just met. At the time, she was on the Board of Point Blue—an organization I had not heard of. We were sharing stories of our interests and hobbies, and I was explaining to her that I'd spent a large part of my life involved with and working on a cattle ranch. We were practicing what at the time was called Holistic Resource Management, and the results we were seeing on the land were amazing. Carolyn's eyes lit up as she began to tell me of the work that Point Blue was doing with its Sustaining Working Lands initiative. We realized that we needed to continue our conversation, and that I needed to learn more about Point Blue. The wheels started turning.

"Not long after that, my close friend Kat Taylor told me she was working with Point Blue on her ranch and creating a 'Learning Laboratory' where they could use the data Point

Blue provided to help inform cattle ranching management practices. I was inspired, and soon my family's cattle operation engaged in a similar partnership with Point Blue, which has been incredibly positive and rewarding."

Taking the Long View on Fieldwork

"I've had incredible opportunities to see firsthand the work Point Blue is doing in the field. I spent eight days on the Pacific Ocean off San Francisco aboard the NOAA 209' Bell M. Shimada on an ACCESS (Applied California Current Ecosystem Studies) research cruise. I was the crew photographer and spent my time documenting the work of the scientists. Watching how they methodically and scientifically collected data from GPS points where they have been monitoring for the past 15 years made me realize that this is not something where we get answers overnight—it takes long-range vision and perseverance to collect and analyze that data over many years. And I gained a new appreciation of how valuable it is to share and use this scientific data to understand trends like the changing ocean climate.

I have personally seen other examples of these long term studies, like those at the Palomarin Field Station and out at the Farallon Islands, where Point Blue's ecological observations have been continuing for over 50 years. These long term datasets create the foundation for scientists to help understand and inform the world about the impacts of climate and habitat change that not only help inform decision makers now, but will also many decades from now.

Better Together

Sometimes it's overwhelming when you think about the needs of the environment and the communities that depend on them, but I like to think that as an individual I can make a difference. We all can if we collectively work together. This is something Point Blue does very well. They form partnerships, engage in outreach, and share information, including their impressive long term datasets.

Think of the power we have if we all work together to help save this precious planet we call home. Now's the time! 



NEWS BITES

Bird-A-Thon in the Books

Congratulations to all of our 2019 Rich Stallcup Bird-A-Thon counters, participants, and donors! Thanks to your efforts, \$88,047 (as of press time) was raised to benefit conservation science. At least 18 teams and 63 counters participated through our website, with many more participating offline.

Geupel Elected to NABCI

Strategic Partnerships Director Geoff Geupel was elected to a position on the US North American Bird Conservation Initiative (NABCI) Executive Council, representing Partners In Flight, Waterbird Conservation for the Americas, and the US Shorebird Conservation Plan Council. This is an honor reflecting all of Point Blue's hemispheric leadership role in bird conservation, and builds on over a decade of service on NABCI's Executive Council and multiple working committees by Conservation Director Catherine Hickey.

DEI Grant Awarded

In recognition of the commitment demonstrated by Point Blue, we were recently awarded a grant from the S. D. Bechtel, Jr. Foundation to implement year one of our three-year action plan to increase diversity, equity, and inclusion (DEI) within Point Blue. Our DEI Action Plan focuses on training all our staff and our Board of Directors, evaluating our internal operating systems and policies, and looking for new opportunities to engage a diverse set of conservation leaders through our intern program. During the first year, our leadership team, 20 other staff, and our Board of Directors will receive a three-part diversity, equity, and inclusion training. 🌍

Recipes from the Field

Fieldwork can be exhilarating and rewarding, but it can also be physically demanding. Meals—whether prepared together in a communal kitchen at a remote field station, pulled from a rucksack, or even foraged—help maintain energy and build team morale.

Stinging Nettle Pesto

From the Palomarin Field Station Recipe Binder

Low on cash? Stinging nettle is free! Mosey on down to Pine Gulch and harvest yourself some dinner! To harvest nettle, just wear gloves and pinch off the top few whorls of leaves, checking for weird bugs.

- 1 brown paper grocery bag full of nettle, blanched in boiling water for ~30 seconds to remove the “sting”
- 1 head garlic, chopped
- 1 cup pine nuts
- 1 ½ cup Parmesan cheese
- ¾ cup extra virgin olive oil
- salt and pepper

Place everything but the oil in a food processor and blend until smooth, scraping the sides down occasionally. You may need to do a couple of batches, but once it's all liquefied it will fit. Gradually pour in the oil until well distributed. Use on pizza, pasta, bruschetta, whatever. Buon appetito!

“I just eat pickleweed when I'm hungry in the marsh!” —*Julian Wood, SF Bay Program Leader*

“My field recipe is that after a long morning in the field, all food tastes better! Pack a peanut butter and jelly sandwich or a bagel and cream cheese, and after a few hours of fieldwork they become gourmet meals.” —*Mark Dettling, Avian Ecologist*

Anything Wrapped in a Tortilla

From Alicia Herrera, Rangeland Watershed Initiative Partner Biologist

Serving size 2

Ingredients

- 2 cups of anything already prepared/leftover
- 2 8" tortillas

Directions

Step 1: Place tortilla on any flat surface—back of a clipboard works nicely.

Step 2: Remove Tupperware of warm leftovers from field backpack. Use your cleanest finger to scoop half of the contents onto the tortilla.

Step 3: Wrap the leftovers up in the tortilla, fold one end, and eat.

Step 4: Pretend like you're going to save the remaining leftovers and tortilla for later... but instead repeat steps 1-3 from above.

focus

Rich Stallcup (1944-2012) was a Point Blue co-founder and naturalist extraordinaire. His original *Focus* essays inspired a love of nature and conservation. The column excerpted below was originally written in summer 1982, with an update in 1996.



Accipiters, the Forest Hawk

Just as smaller and weaker animals have evolved strategies for locating and ingesting their food, predators have evolved strategies, and anatomies, for locating and ingesting small weak animals.

In birds, most raptors can be grouped generically by their shapes, especially their wings and tail. *Accipiters*, the forest hawks, have sturdy but short, wide wings and long tails that serve as rudders during hot pursuit through branches in thickets.

There are three species of *Accipiter* in North America north of Mexico. Sharp-shinned and Cooper's Hawks are both fairly common in California during migration and in winter. Both are sparse breeders, as most of their populations nest in more boreal forests. The Northern Goshawk is a rare resident of the high Cascades and Sierra Nevada; it is of accidental occurrence in lowlands in winter.

Size. In these kinds of birds, the females are larger than their males, but in the field any judgment of size must be made in a relative way. A pair of hawks seen together may be "gendered" by size difference, and the size of a single bird

may be deduced relative to other birds nearby.

Shape. Sharp-shinneds are the most compact of these hawks, having relatively short, usually squared (when closed) tails, and small heads with no apparent neck. At a distance, one has to look hard even to see a head. Cooper's are the longest-looking *Accipiters*, usually having rounded tails that are relatively longer. Their wings are proportionately a little shorter than Sharp-shinneds' and obviously shorter than Goshawks'. Goshawks are the widest *Accipiter*, with the heaviest bodies and proportionately longer wings, which are also more pointed than those of the other two species. Their tails, in both relative length and terminal shape, are intermediate between those of their smaller cousins.

Flight characteristics. Sharp-shinneds' flight is the most tight and twinkly; Cooper's are more loose and floppy in flight; and Goshawks are the hunkiest—buteo-like—but they accelerate with deeper, more powerful strokes.

Appearance. Because of the pattern on each web of each feather, and the way

the feathers overlies one another, the Goshawk has wavy dark bands, while most Sharp-shinned and Cooper's have bands that are straight across.

An immature Sharp-shinned's face is plain dull brown with little or no pale eyebrow. Cooper's' face is also brownish but with streaks of gold giving the head a warm aura, noticeable even in flight at close range. Goshawks' faces are light brown or gray—paler than the faces of the other two—and they have a bold tan or white eyebrow that flares behind the eye.

Regardless of the shape of the whole tail tip, the individual feathers have different shapes—Sharp-shinned square and Cooper's more rounded. Whether spread or closed, Sharp-shinned tails show corners at the outer tips.

Accipiters are reckless, dashing, and valiant, but because they hunt in deep cover and blend with forest shadows, they don't have the glorious reputation of Peregrines, Prairies, or Gyrfalcons... and they just don't seem to care. 🌿

Opposite page: "The Lookers" Bird-A-Thon team. Photo by Dan Lipp. Above: Cooper's Hawk. Photo by Becky Matsubara.

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Point Blue Advancing nature-based solutions to climate change, habitat loss, and other environmental threats for wildlife and people, through science, partnerships, and outreach.

Former Intern Nicole Gaudenti carefully holds an Oregon Junco while banding birds at our Palomar Field Station. Photo by Duperron Photography.