

Instinct Extinct

The Great Pacific Flyway

an exhibition by
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artist's inquiry
by Valerie Constantino



Annual Bird Migration, Chico, CA
screen shot: Glenda Drew

Bird migration is the one truly unifying natural phenomenon in the world, stitching the continents together in a way that even the great weather systems, which roar out from the poles but fizzle at the equator, fail to do. It is an enormously complex subject, perhaps the most compelling drama in all of natural history.¹

– Scott Weidensaul

The trans-global migration of birds and other species by way of intuited aerial pathways has long stirred the imaginations of artists, writers, scientists and certainly anyone who pays skyward attention. It was ornithologist Frederick Lincoln who, while analyzing data from an avian banding program in the 1930's, first applied the term *flyway* to each of the four principle North American routes traveled by so many migrating groups.

The sights and sounds of great flocks of birds with seven-foot wingspans and even the notion of a single songbird traveling thousands of miles according to seasonal rhythms are indeed as thrilling as they are humbling. Perhaps too, this primordial phenomenon reminds us of our own migratory nature, that very human quest for habitable environs. The metaphors are almost as infinite as the distances traveled.

As an artist and resident of this astonishing planet, I have wondered of late if sublime contemplation in the presence of its grandeur has finally been overshadowed by our own species' interventions? Although within my own human heart such reverie has not gone mute, nature's poetic panoply is directly linked to the facts of our global political landscape. Everywhere, human occupants establish subjective boundaries and enact economically motivated strategies in relation to the land and its resources. Often, parameters such as these have a deleterious effect upon the earth's terrain, its oceans and atmosphere, and its myriad resident life forms including our avian relatives. Very likely, there remains not one square pristine inch amid the resolute new nature of today, not even in the remotest of place.

California, situated along the longitudinal migratory route generally referred to as the *Pacific Flyway*, offers a prime example of just this sort of history. At one time, the state was home to abundant wetland habitats and fluvial systems: the Sacramento River Delta, San Francisco and Monterey Bays, the Klamath River Basin, the San Joaquin Valley. By the 1930's though, most of the state's inland salt marshes and other aqueous sanctuaries had been drained into fields and pastures with little consideration for resident and visiting wildlife.² Since then various government agencies including the *Bureau of Biological Survey* (the present-day *United States Fish and Wildlife Service*) for which Lincoln collated his findings, attempt to maintain fragments of natural habitat within re-engineered landscapes known as *National Wildlife Refuges*.

These efforts, though moderately successful, are often hindered by conflicts surrounding land and water use. The flow of water for agriculture, wetland management, and basic human needs is manipulated via publicly managed canals, dams and irrigation systems, with competition for its diversion ongoing. Too, since the days of land occupation by European settlers, before the concept of its ownership was even viable, contention over territorial rights has been an issue. At the roots of these conflicts lies the conundrum surrounding the basis for survival: food production, fresh air and clean water, open space for all resident and migratory wildlife. Although each requirement is predicated upon the other, our current cultural model reiterates the competitiveness between factions.

There are many specifics to this story as there are well-documented studies and reports on the subject of habitat loss and recovery efforts, a number of which are referenced throughout this writing. But besides the subject of the *Great Pacific Flyway* itself and its coincidental overlay with California, this writing aims to articulate the evolution of an

artistic exploration. In consideration of the more than three hundred species of birds that travel these aerial corridors, their familiar sanctuaries, the poetical intimations and the hard data too, Ann Savageau, Glenda Drew and I arrived at the exhibition's core matters and conceived of its heading: *Instinct Extinct*.



Salton Sea, south shore, CA
photo: Valerie Constantino

Although the science remains inconclusive with regard to each species' precise navigational mechanisms, we recognize that instinct plays a major part. Like most of us, birds are hardwired for survival as they travel to places where warmer seasonal climates allow for greater food production. Besides the decades-long impact of agriculture, urbanization, alien species, pollution, exploitation and disease, climate change too is threatening these patterns of production and therefore, the lives of cyclical visitors.

Dependent upon a synchronized network of vital conditions, migratory birds are particularly vulnerable to the ecological alterations such as ocean acidification, sea level rise and vegetation shortages brought about by climate change. With greater frequency, ornithologists and bird-watchers too, are noticing that when flocks arrive at their resting sites, there is simply less to go around. Like disenfranchised laborers, these multitudes are forced to move into unknown territories, uncertain of what may be in

store. In a recent interview, Elizabeth Kolbert, author of **The Sixth Extinction: An Unnatural History**, stated: *Pretty much everything now is on the move or should be on the move.*³ The innate search for refuge and nourishment contributes to the potential failure of a vast array of displaced species, as conditions met in unfamiliar terrain are often less hospitable if not completely overtaken by human development.

The *United States Fish and Wildlife Service* maintains regional risk assessment lists to include mammals, birds, fish, invertebrates and plants, designating species according to their *Extinct*, *Endangered* or *Threatened* status. Presently in the California / Nevada territory there are thirty-three species of birds noted as such.⁴

In his advanced study **Bird Migration and Global Change**, George Cox notes that 1.3 percent of bird species have become extinct in recent history worldwide. Perhaps, given such a seemingly low percentage, we needn't be particularly concerned with extinction *per se*. But these are questions of balance and timing, of how and when such

conditions may impact other species including our own. Again, according to Cox's statistical analysis, 8 percent of migratory and fresh water birds and nearly 44 percent of migratory sea birds are at risk.⁵ At once, the numbers begin to seem a bit more worrying. Gaining an understanding regarding the derivations of current threats, and their potential for expansion or reversal is key.

Despite ongoing attempts to dilute and overturn this most critical piece of legislation, The *Endangered Species Act of 1973* continues to protect those most vulnerable. Signed into law by President Nixon, it was designed to protect *critically imperiled species from extinction as a consequence of economic growth and development untempered by adequate concern and conservation*. Its goals are to *prevent the extinction of imperiled plant and animal life, and secondly, to recover and maintain those populations by removing or lessening threats to their survival*.⁶

In concert with such national efforts, California maintains its own oversights and research, offering hope for future populations of the migratory birds of the *Pacific Flyway*. Legislation such as *Audubon's no-net-loss* provision insures that solutions to the crisis facing the Sacramento / San Joaquin River delta will protect migratory bird habitat. *The Natural Resources Conservation Service*, a unit of the *U.S. Department of Agriculture* has enlisted the participation of Central Valley rice farmers in an effort to increase the agricultural lands' value to migratory birds.⁷ Internet applications used by birders to post up-to-the-minute sightings are also used by farmers to track the bird's routes relative to their fields. This data helps determine where to flood the fields in season, which then provides the birds with pop-up wetlands. Such bird-friendly agricultural practices generate greater numbers of insects, worms and small rodents, contributing to the increased populations of ibis, egrets, herons, *Swainson's* hawks, stilts and curlews in the region.

These and other conservation efforts by collaborating organizations including *Audubon California*, *The Nature Conservancy* and *Point Blue Conservation Science* for example, help to mitigate the increasing threats of urban / suburbanization and overarching environmental changes. In contrast, acceptable proposals to reverse the imminent demise of the Salton Sea, a most critical refuge for birds of the *Pacific Flyway*, continue to elude the broad concerns of



Flooded Rice Field, Olivehurst CA
photo: Valerie Constantino

environmentalists, farmers and engineers. *The combination of rising salinity, low oxygen concentrations, infestation by parasites, hydrogen sulfide-generated fish kills, and a declining prey base will likely eliminate most fish in the Sea by 2018.*⁸ The complexities of this region's mounting crises reinforce the necessity for steadfast and sober commitments, beyond current expectations.

*I hope you love birds, too. It is economical. It saves going to heaven.*⁹

– Emily Dickinson

Instinct Extinct evolved in response to our appreciation for the hundreds of species of birds that return to California each year and to the ever more pressing need for lasting custodial practices. Throughout the developmental stages we met regularly, sharing and scrutinizing documents such as maps, statistical diagrams, ornithological surveys, historical studies, and phenological (the study of natural cycles and climate) data. We exchanged personal experiences and encounters, sending messages with photographs, audio clips and sketches. Like a chattering of starlings, our cross-communications evolved dynamically. As a threesome, in pairs, with family and friends and in solitude, we explored and recounted our observations of the flyway's hotspots: Grey Lodge, Humboldt Bay, Los Banos, Point Reyes, the Salton Sea, San Francisco Bay and Yolo Bypass. As our creative strategies crossed disciplinary borders, our individual ways of working embraced shared themes including avian anatomy, biodiversity, flight and navigation. A union of reverie and inquiry, *Instinct Extinct* affirms the notion of informed creative expression as communal resource, reflecting our ardent interest in migratory birds and the preservation of open space.

*We cannot navigate and place ourselves only with maps that make the landscape dream-proof, impervious to the imagination. ... once wonder has been chased from our thinking about the land, then we are lost.*¹⁰

– Robert MacFarlane

The ubiquitous road map, those redolent *Rand-McNally* predecessors to our current day satellite-dependent *Global Positioning Systems*, evolved with the science of cartography, a reductive portrait of the earth via the grid. Grid maps, due to our technological honing over time, offer ever-more accurate representations of relative scale, expanding our ability to navigate land, ocean, sky, space and time. Less systematized visualizations of place sometimes called *story maps* were used well before grid maps became commonplace. Similar to those created still by indigenous groups, such maps though not specific to distance or boundary, express intimate relationships between traveler and place, conveying contextual, even mythological aspects of land.

Our collaborative approach to mapping engendered a marriage of geometry and narrative. Offering a *bird's-eye-view* of California's terrain, our representation of the state's borders is to scale. Eight major city markers are accurately

positioned while a *You Are Here* marker is charted at each exhibition site to indicate a viewer's location within the map at large.



Collaborative map with silk suspension and portraits of threatened and endangered birds
photos: Barb Molloy and Valerie Constantino

Story maps are nuanced and substantive, and the materials and methods of choice are part of the story our map tells. Layered textiles recount stories not only of place, but also of time. A first layer of cotton muslin illustrates the history of California's wetlands, so critical to the survival of migratory birds. An overlay of sheer silk organza depicts the meager present-day remnants of these environments while revealing a contrasting view of the former terrain.

Cloth is fluid and textural, like the surface of the earth and its bodies of water. It is pliable and porous, and readily accepts various markings: the drawn or painted line as well the stitched. Drawing deciphers what the eye perceives through gestures of the hand. As pigmented media leaves its mark upon a receptive surface, our relationship to that which is observed, the terrain in this case, deepens. The measured act of sewing connects us to the physicality of birds and their movements, lifting us out of our everyday relationship to time, as does the phenomenon of flight. Here, embroidered meanders suggest the varying flyway routes of sea birds, shore birds, land birds and waterfowl, while acrylic cabochons containing hand-drawn portraits of vulnerable species are placed in proximity to their migratory range.

Beyond spatial orientation and material narratives, our map installation considers the relationships between those who are earth-bound and those who take to sky unaided by fossil fuel. It is wholly possible through the course of our hyper-industrialized everyday lives to miss our airborne cousins, as they cross over and beyond our borders. As a definitive, visual cue, a two-sided expanse of diaphanous silk floats above the terrain, imagining soaring birds as bright, shiny needles. With threads of varying qualities and atmospheric hues, they stitch the sky, the sea, the earth and all forms of life together into a vast global network.



One of the finest things in the world is feathers. Sometimes they is so pretty you can't believe they just grew that way out of a bird... But you got to be careful with feathers. Each one got its own special ways and its own kind of power. Each one belongs to that bird it came from and you can't forget that.¹¹

– as told to Warren L. d'Azevedo

Indigenous cultures across time and place incorporate found materials and objects from life as it is lived: the hide of an animal hunted for sustenance is used for protective covering, its bones, fashioned into tools. But these elements, the skins, skeletal remains, teeth, talons and feathers of various animals and birds, are respected for their energetic properties too. Perhaps more like saints' relics than talismans, feathers are portals to another realm, guardians of the bearer of origin's potency. To be in possession of an eagle feather is to merge with the essence of that noble bird.

In the context of our modern, urban society, laws are in effect to regulate our interaction with the land and its resources, including wildlife. *The Migratory Bird Treaty Act* of 1918 was the first international effort in response to what had become the real potential for the extinction of these species due largely to market-hunting and other forms of

opportunistic harvesting. Originally agreed upon by the U.S., Great Britain and Canada, and later with Mexico, Japan and Russia, it establishes prohibitions to:

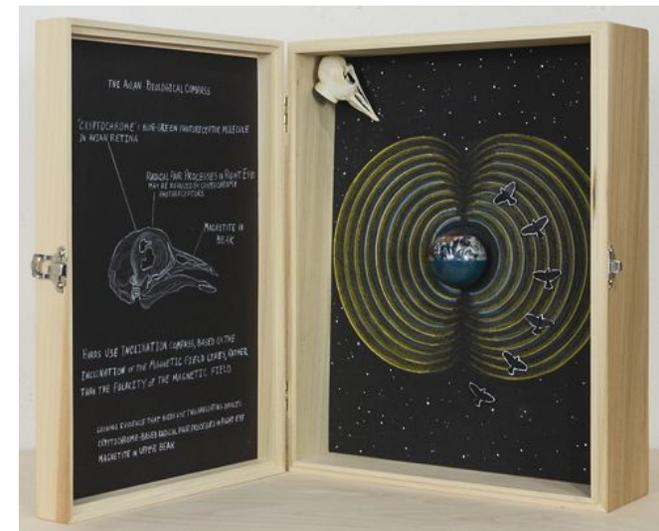
...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . or any part, nest, or egg of any such bird. (16 U.S.C. 703)¹²

There are exemptions to this act in deference to tribal customs and ceremonies. Otherwise though, the law is clear: a hiker cannot so much as retrieve a lone feather from the ground if it had once been a part of any one of the hundreds of protected migratory birds. As it is today with hunting, only the feathers from specified game birds may be collected.

In addition to instances of actual allowable feathers throughout, the exhibition includes a participatory installation for visitors to make a feather print on Japanese rice paper. Once dried, prints are secured to a wall system for display. The tradition of fine art printmaking implies the cloning of an original while suggesting the implausibility of such precision. In creating a direct print of a found object from nature, a feather, a leaf or a fish skin for example, the suggestion to replicate is superseded by the somewhat more ghostly than literal results. Their collective presentation reinforces our collaboration with community and the natural world while distinguishing the unique properties of each feather, those most wondrous mediums of flight.

Beyond our human quest for information, we seem instinctually moved to collect nature's remnants, perhaps in consideration of an ancient, corporeal tie to that which we gather. With regard to the recovered parts of once live birds, we wonder: of what phase of our evolutionary course might these avian fragments tell?

Exploratory research included visits to natural history museums and wildlife refuges throughout the state to study among other particulars, an array of ornithological finds. Leaving examples of taxidermy to the research centers, we noted the less categorized parts: singular, rare feathers of course, as well as other anatomical cast-offs, entire wings and skeletons, individual bones, talons and skulls with distinctive beaks and various eggs and nests for example.



Ann Savageau
Navigation Box



Collaborative Artifact Assemblage Installation, detail with *Turkey Feather Foot Spool*, *da Vinci's Wings* (box) and *Red Wing Blackbird Box*
photo: Barb Molloy

These notations inspired an arrangement of artifact and box assemblages.

Each small-scale work is composed of recovered or reproduced biological finds, and other self-made elements including photographs, audio tracks, drawings, paintings or other two and three-dimensional fragments. Each composition is a world, a more personal, miniaturized consideration of migration, conservation or navigation, an anatomical study, an ode to a distinct species. The shift in experiential scale from the overall exhibition space to the intimacy of each compartment refocuses our perceptions from the overall to the specific, allowing for a more private reflection upon the phenomena of migratory birds.

*When we try to pick out anything by itself, we find it
hitched to everything else in the Universe.*¹³

– John Muir

As disparate as humankind often seems, our myriad customs and characteristics provide a foundational warp and weft to our separate and shifting differences. The variously allied people of the *Pacific Flyway* suggest a kind of précis for this cultural and individual diversity. They are represented here in a series of video portraits, highlighting those aspects of bird migration that link and distinguish them. Although this written description assumes a loose linearity, the presentation itself is without narrative structure, as the cycles of migration suggest.

Long before the arrival of European settlers, Native Peoples lived in accord with the cycles of nature, including the recurring passages of migratory birds. All aspects of their lives, periodic hunts, ceremonial practices and even nomadic habitable routes were woven together according to season. Though their populations have been decimated, many tribal

descendants live today in and around the ancient territories, honoring the ways of their ancestors in observance of earthly cycles.

Obviously, the social map along with the topography has been radically altered since the colonizer's westward exodus across the North American continent. Hunters of those early days took advantage of seasonal swells in bird populations, while farmers too exploited the extensive growing season. As conservationists continue to press for the protection of the endangered and threatened, advancements in scientific research on trans-global migration and altering food and water supplies, confirm the necessity for cooperation despite conflicting requisites. As noted, developing partnerships between these groups along with policy makers encourage more efficient and agreeable approaches towards wildlife and habitat preservation.

Citizen scientists, bird enthusiasts, poets and artists too, those of us who are unaffiliated professionally with the flyway, yet are possessed of an intrinsic connection to all things avian, are an essential part of this growing cooperative network. By contributing images and stories, posting sightings and photographs, and participating in community activities such as festivals, bird counts and bandings, attention to the future of migratory birds is brought more personally into focus.

Towards this future, dedicated teachers, often operating on absurdly limited budgets, are pivotal in relation to the plight of migratory birds and the overall wellbeing of open space. In tune with our palpable ties to land, sky

and water, environmental educators call attention to the great birds of flight, the first chirps from the nest, and the inter-dependencies between micro and macrocosmic life forms. They lead our children out of doors, into the heart of nature; fostering delight in such marvels as are particular to this substantive world.



Candace Sigmund, Education Coordinator
Grassland Environmental Education Center, Los Banos, CA
screen shot: Glenda Drew

*There was a child went forth
And the first object he look'd upon
That object he became.*¹⁴

– Walt Whitman

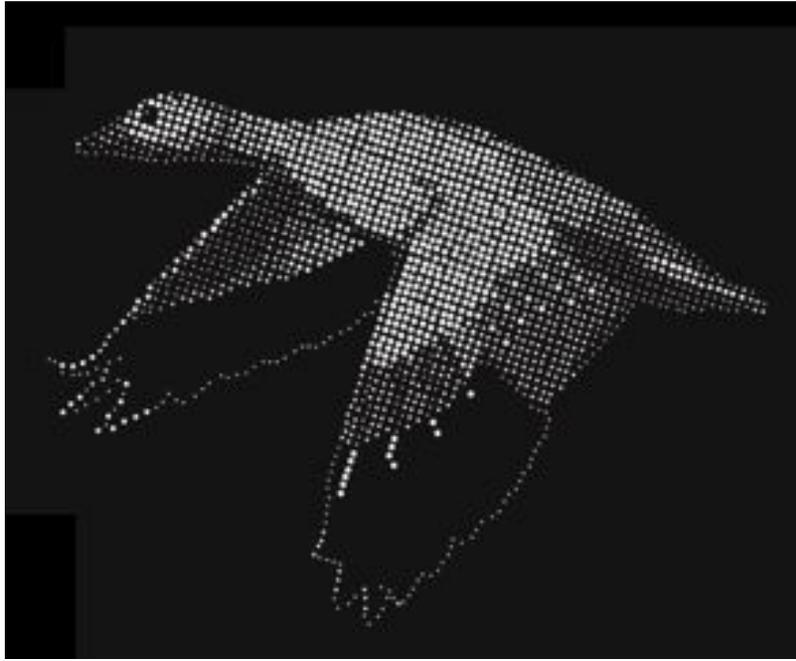
The contemporary installation site, as it expands with technological capacities and theoretical discourse, surrounds us with artist-gathered and invented elements, including our own incidental presences. Early forms of photography and film translate points and waves of light into visual data; their modern digital extensions simply stated, reduce that information to electronic bits. As optic nerves engage with specialized areas of our brains, these signals are converted into relatable forms. We do not just see pictures; we actively participate in their meaning, and in so doing, the distinction between that which we represent and ourselves diminishes. Our photographic and video gleanings, besides their inclusion in the artifact assemblages, occur throughout the ambient space of the installation, prompting subjective interpretative participation.

Early in the twentieth century wildlife photographers William T. Finley and Herman T. Bohlman traveled from Portland, Oregon throughout the wetlands of the Klamath Basin to the Lower Klamath Lake and Tule Lake in northern California. Their collected photographs and texts were published in *National Geographic* and *Audubon* journals, among other similarly inclined circulations. By representing the abundance of nature and the beauty of birds in their natural environs, these images helped to counter that era's slaughter of plume bearing birds, particularly herons and egrets. Wildlife photography evolved into an effecting force in the conservation movement in the United States, generating appreciation for all birds, eliciting great concern for the plight of migratory birds, and moderating the influence of market and recreational hunters.¹⁵

Ongoing conflicts across the globe, pitting threats of extinction against the desire for market driven 'commodities' such as ivory, exotic hides, and shark fins, in addition to rare feathers and caged birds for example, underscore the challenge to de-commodify animals and their parts in the face of increasing economic disparity worldwide. Concurrently, *Audubon*, *The Nature Conservancy*, *The U.S. Fish and Wildlife Service* and *Birdlife International* among many other ecologically minded organizations, all maintain interactive image-rich websites for all to visit, with similar aims in mind: If the citizenry cannot get to the countryside, bring the countryside to the citizenry.

With analogous intent, the occasion of animated imagery transforms the installation space offering a limen between individuals, space and time. Through an amalgamation of historical and contemporary apparatus our empathic participation is ignited, even as we affect that which we encounter.

Inspired by our shared desire for lift off, the exhibition's *Stroboscope* contains serialized photographs of individuals in handmade wings acting out their dreams of flight. As visitors trigger a motion sensor, an internal disc rotates and the



Glenda Drew
Halftone snow goose prototype for *Goboscope*

strobe light flashes. The resulting animation of sequential images conveys the illusion of motion.

The *Goboscope*, a second rotational device, also activated by visitors' proximity, projects a progression of shadowy, halftone birds in flight into the upper regions of the surrounding architectural space. Like a prayer wheel or a drop spindle, the cyclical form of each specialized system in tandem with its repeating imagery, echoes the seasonal migratory continuum, and highlights once more the flyway as unifying global tapestry.

*On soft spring midnights, the air is alive with the flight notes of unseen warblers and vireos, thrushes and orioles, sparrows and tanagers, filtering down through the moonlight like the voices of stars.*¹⁶

– Scott Weidensaul

There is the material of our being, the stuff of which we ourselves are made, and there are unseen elements too, those nano-particulars that most of us do not see unaided by technological apparatus. Sound and light for example, which contemporary science describes in terms of points, waves, strings, and other poetically charged traces are palpable things, all buzzing within and around us.

Our intuitive responses to sound, to music certainly, to tones of voice, and to the chorus of birds, insects and other non-human creatures of the world, corroborate our elemental affiliation with the world beyond human-made environments. Though frequently over-powered by sounds of urban life, it is as yet the drone of nature that connects us most profoundly to the subtle pulse of the universe.

The exhibition includes compositions of sounds gathered on location along the *Pacific Flyway* and from specialized ornithological audio collections. There will be moments when one may be alone within the architectural

setting and may then hear more intently, perhaps noting a particular birdcall, the ubiquitous honking of Snow Geese, the trill of an endangered song sparrow. There will likely be moments of much human activity, chatter and the scuffle of footsteps that may blend or compete with the intermittent sounds of nature offered here. However the exhibition's audio fragments may be experienced, they remind us that we like birds, transmit and interpret sound. We are of this audible world.

In **Seeking Refuge: Birds and Landscapes of the Pacific Flyway**, Robert Wilson writes: *The Pacific Flyway – tattered and frayed as it is – can still endure, but it will require more generosity than we have offered in the past. Having claimed the habitat of migratory birds to build our farms and cities, it is time to give some of that space back.*¹⁷

As it turns out, the *flyway* concept is a somewhat limited description of how birds actually traverse the globe. Based upon advanced computerized tracking methods, we now know that many species do not travel with such precision. Certain species and individual birds may travel a north-to-south pathway in one direction and then veer towards an east-to-west or diagonal pathway on their return flight.¹⁸ More than we imagined, bird migration is a thoroughly integrated, shifting global network. For migratory species, the earth is one habitat.

Combined with this contracted ecosystem, we hear with greater frequency of no-return carbon levels and real-case extinction scenarios. If *hope is the thing with feathers*, as Emily Dickenson's iconic elegy imagines, then escalating signals such as these, emphasize the precariousness of our prospects.¹⁹ And yet, we live each day capable still of appreciating wild things and perhaps too, strengthening and pursuing alternative outcomes. Social activist Naomi Klein suggests: *We have to keep the possibility of failure in our minds. But we don't have to accept failure.*²⁰ Against uncertainty, continuing studies of global bird migration and the effects of climate change, along with increased protections of all sanctuaries and nutrient-rich networks worldwide are more critical than ever. Many of these practices are in effect in California and throughout the world. All of these efforts in tandem with legislative actions must be reinforced and expanded across the United States and by the international community.

Weeks before moving to California, I dreamed of visiting my friend Amy in San Francisco. In the dream, she showed me around her apartment and then into a sunlit bedroom. There in a canopied bed, draped with red and yellow flower printed chintz, slept a Great Blue Heron. I was tired from my journey and so I joined the majestic bird under the blankets for a nap. When I woke from my dream, I was happy. Welcome to California.

This sense of wellbeing was due I am sure, to the openhearted connection with the heron. There was nothing unfamiliar about him, no reason to consider why a bird was in a bed or a room in an apartment. The absence of boundary conveyed in this dreamscape lies at the core of empathy. Birds, the creatures of the earth, need what we need: warmth, sustenance, companionship; they feel what we feel: pain, deprivation, loss.



Montage / Collage Series
Valerie Constantino, Ann Savageau, Glenda Drew

*Move on, bird, move on, teach me
To move on.*²¹

– Fernando Pessoa

Like poetry and art, like land, sea and sky, potentialities are fluid, relational events. Like birds and their feathers, the virtue of hope cannot be bartered or appraised. Hope is a survival instinct in common with migration, as we navigate doubt and despair and the actual, tangible obstacles to our needs and desires. Together with progressive adaptations to local and global environmental policies, our hope for the future of migratory birds, for all of us really, depends upon magnanimous, participatory flights, and perhaps too, a willingness to let slip the veil of distinction between self and other.

Notes

- ¹ Weidensaul, Scott, **Living on the Wind: Across the Hemisphere with Migratory Birds**, pg. x
- ² Wilson, Robert M., **Seeking Refuge: Birds and Landscapes of the Pacific Flyway**, pg. 34
- ³ Kolbert, Elizabeth, in Kunzig, Robert, *The Sixth Extinction: A Conversation With Elizabeth Kolbert*, **National Geographic Daily News**, 6/29/14
- ⁴ **U.S. Fish and Wildlife Service / Pacific Southwest Region**, <http://www.fws.gov/cno/conservation/migratorybirds.html>
- ⁵ Cox, George W., **Bird Migration and Global Change**, pg. 260
- ⁶ **The Endangered Species Act of 1973**, <http://www.fws.gov/laws/lawsdigest/esact.html>
- ⁷ <http://conservation.audubon.org/transforming-central-valley>
- ⁸ <http://www.seaandsageaudubon.org/Conservation/SaltonSeaCampaign.htm>
- ⁹ Todd, Mabel Loomis, ed., **Letters of Emily Dickinson: 1885-94**, pg. 365
- ¹⁰ MacFarlane, Robert, **The Wild Places**, 2007, pg. 145
- ¹¹ As told to the Warren L. D'Azevedo, **Straight with the Medicine: Narratives of Washoe Followers of the Tipi Way**, pg. 27
- ¹² **Migratory Bird Treaty Act of 1918**; <http://www.fws.gov/laws/lawsdigest/migtrea.html>
- ¹³ Muir, John, **My First Summer in the Sierra**, pg. 110
- ¹⁴ Walt Whitman from Hyde, Lewis, *The Gift: Imagination and the Erotic Life of Property*, pg. 172
- ¹⁵ Wilson, Robert M., pg. 13
- ¹⁶ Weidensaul, Scott, pg. x
- ¹⁷ Wilson, Robert M., pg. 172
- ¹⁸ Elphick, Jonathan, Ed., **Atlas of Bird Migration: Tracing the Great Journeys of the World's Birds**, pg. 52
- ¹⁹ Dickinson, Emily, Ed., Johnson, Thomas, H., **The Complete Poems of Emily Dickinson**, Little, Brown and Company, Boston, Toronto, London, 1960, pg. 116
- ²⁰ Klein, Naomi, Smith, Daniel, *It's the End of the World as We Know It . . . and He Feels Fine*, **The New York Times Magazine**, 4/17/2014
- ²¹ Pessoa, Fernando, *The Keeper of the Flocks*, from **Birds, Beasts, and Seas: Nature Poems from New Directions**, pg. 60

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Birdlife International, www.birdlife.org/

A global conservation organization, partnered with *Audubon* in the United States. Initiated a program in countries without protective legislation, to change the culture of bird hunting to one of bird watching.

The Endangered Species Act of 1973, www.fws.gov/laws/lawsdigest/esact.html

This federal act is administered by two agencies, the United States Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA).

Migratory Bird Conservation Partnership, www.camigratorybirds.org/

A conservation partnership between *Audubon*, *The Nature Conservancy* and *PRBO Conservation Science*.

Migratory Bird Treaty Act of 1918, www.fws.gov/laws/lawsdigest/migtrea.html

The Nature Conservancy, www.nature.org

Partners in Flight, www.partnersinflight.org/

Focuses on land birds; includes continually updated conservation plans and species watch list for the Western Hemisphere.

PRBO Conservation Science, www.pointblue.org/

Focused on conservation of birds, other wildlife and ecosystems through science, partnerships and outreach. Part of the Migratory Bird Conservation Partnership with Audubon and The Nature Conservancy

Sea and Sage Audubon, www.seaandsageaudubon.org/Conservation/SaltonSeaCampaign.htm

Addresses the issues concerning the Salton Sea and vicinity.

U.S. Fish and Wildlife Service / Pacific Southwest Region, www.fws.gov/cno/conservation/migratorybirds.html

Includes the Video: *The Great Migration*

Waterbird Conservation for the Americas, www.waterbirdconservation.org/

Focuses on issues concerning migratory and all waterbirds throughout the Americas.

Western Hemisphere Shorebird Reserve Network, www.whsrn.org/

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