



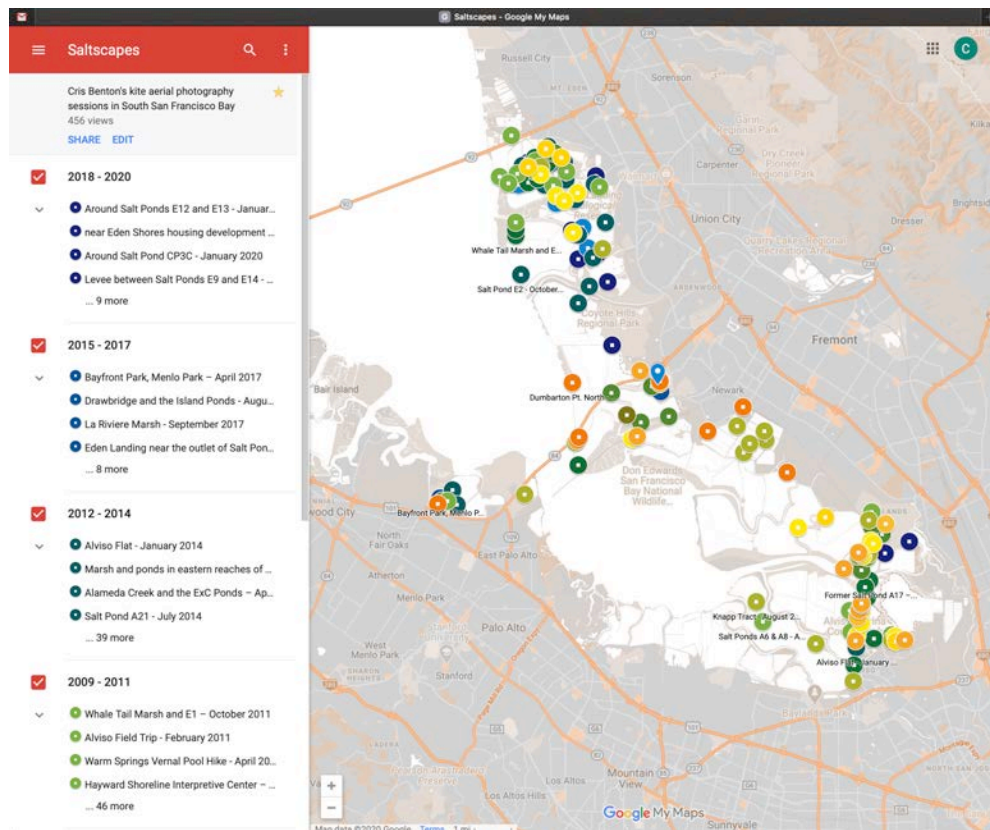
Using Google My Maps and Flickr to catalog my South Bay photographs

Cris Benton

Back in 2003, I started taking kite aerial photographs of the South Bay salt pond landscape as part of an Exploratorium project. This is an entertaining landscape, so much so that I now have almost 250 sessions logged in the South Bay with an image archive approaching 100,000 photographs. At times, folks using my photographs to convey progress in the South Bay Salt Pond Restoration Project have had difficulty understanding what images exist or finding one that meets their needs.

During our pandemic quarantine, I have been working on lending order to my KAP South Bay image catalog. About half of my sessions do not have a Flickr album to convey representative images, so I am working on creating albums for my earlier unrepresented sessions, no small project that. I am also putting together a new way to access images for sessions that do have a Flickr album. This effort currently revolves around a **Google My Maps** site to provide a cartographic key for these sessions. I think it is an entertaining and useful way to access my photos.

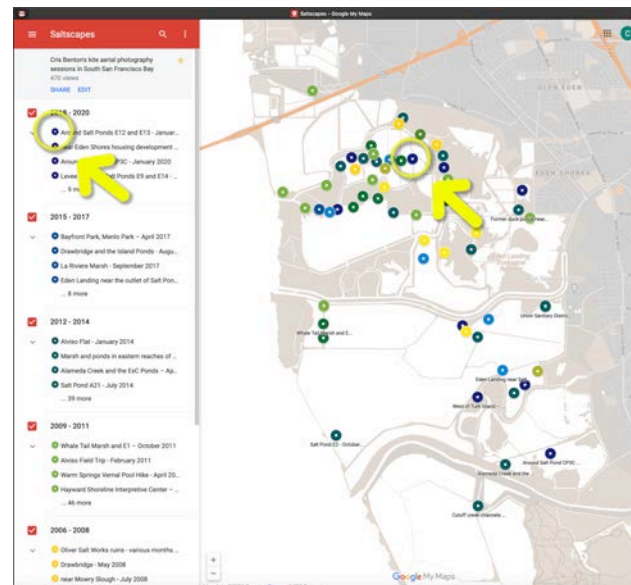
<https://www.google.com/maps/d/edit?mid=1OUvoTxwcZ4tVUOv47e-Q7Ne3VMZai0i8&usp=sharing>



In the remainder of this note, I will point out features of my Google My Maps site I have found useful. While navigating the map interface is pretty intuitive, I have come to appreciate a bit of nuance here and there. Clicking on a map icon will display a sidebar on the left containing information about that KAP session. The most important item in this sidebar is the Flickr album URL, which will take you to the session's Flickr album. The rest of the sidebar conveys a sample image, a track log with a closer view of image locations (work in progress), a session description (taken from Flickr), and a few details at the bottom including the number of photographs taken that day and keywords. Finally, the map has a search feature that you can use to find photography sessions by year, month, landmark, salt pond number, and keyword. This turns out to be a pretty handy feature.

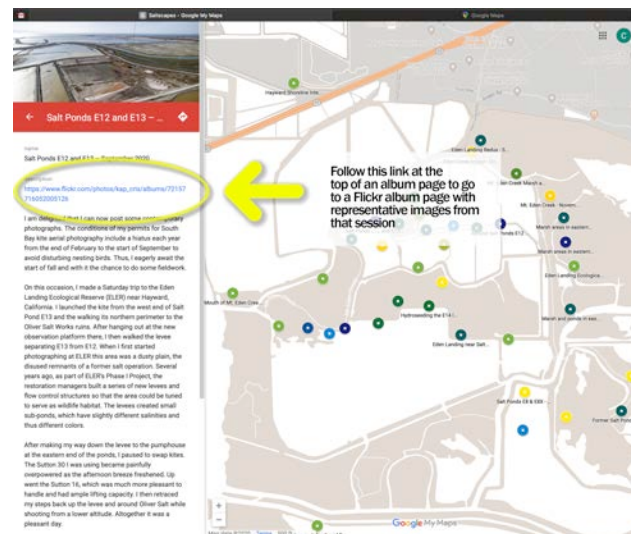
You can drill down to a particular session by selecting it in the date-ordered session list presented in the left sidebar. This will load a page specific to the session you selected, center the map on the location of that session, and apply a very subtle highlight to the session's map icon (a small white border). You can also load a session page by clicking on a map icon. In this case, the map will remain unchanged.

The map icons are color-coded to indicate the year of the KAP session. When the map is zoomed out, the icons can overlap each other and some will be obscured. Try zooming in to greater detail on the map to separate the session icons and reveal their titles.



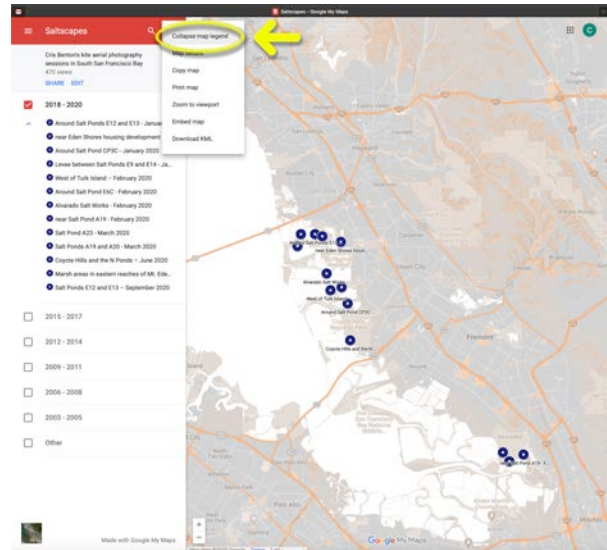
Once a session is selected, from either a map icon or the sidebar roster, the sidebar will display specifics for that session. At the top is a representative photograph for that session followed by a title noting the location and date of the session. Before the descriptive text, there is a URL for that session's Flickr album. These albums generally contain a few dozen photographs selected to convey the results of a session. The session sidebar concludes with the number of photographs taken in the session and a listing of keywords.

Descriptions and keywords in this system exist at the album level, meaning they are the same for every image in a session. In a perfect world these details would be photograph specific, but time constraints make this impractical.



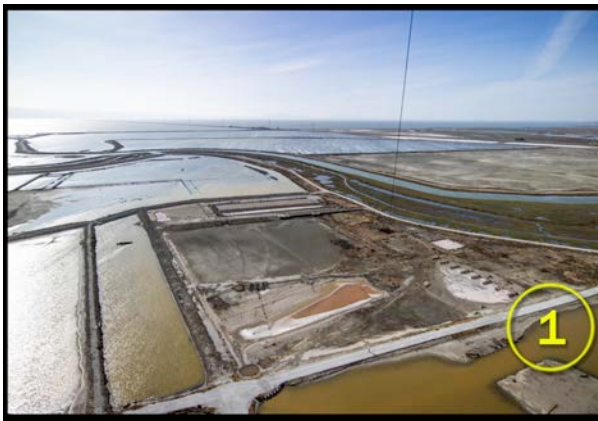
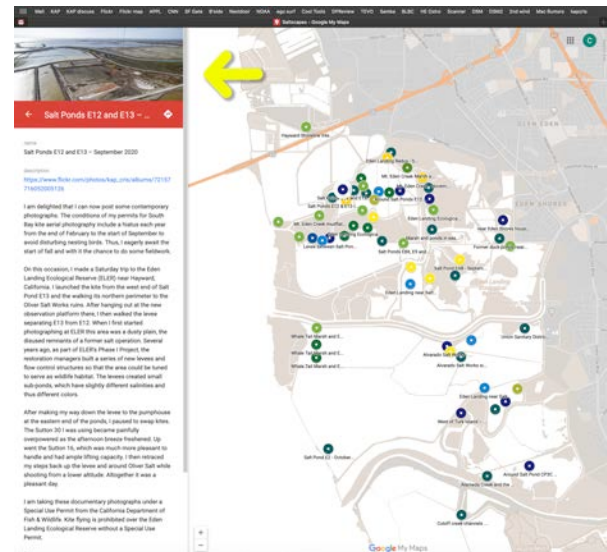
The left-side, red, header bar has a series of dots that will launch a fly-out menu. I often use the “collapse map legend” command to get the roster of KAP sessions out of the way and show more map. This is particularly handy on a smart phone or tablet device. I also use the “zoom to viewport” command to reestablish the default map view showing all sessions.

Note that in this example, the only time block enabled in the menu is “2018 – 2020.” Since there were no sessions in 2018 and 2019, the sessions thus shown were all flown in 2020.



One dilemma in placing a session icon on the map to represent a day's KAP session is the fact that a single photo session might involve several miles of walking and photographing along the levees. Thus, the placement of a single symbol fails to convey the geographic reach of the session. For instance, I recently launched the camera at the pumphouse east of Salt Pond E12 and then took photographs as I walked the entire perimeter of Salt Pond E14. No single dot would represent that photo set well.

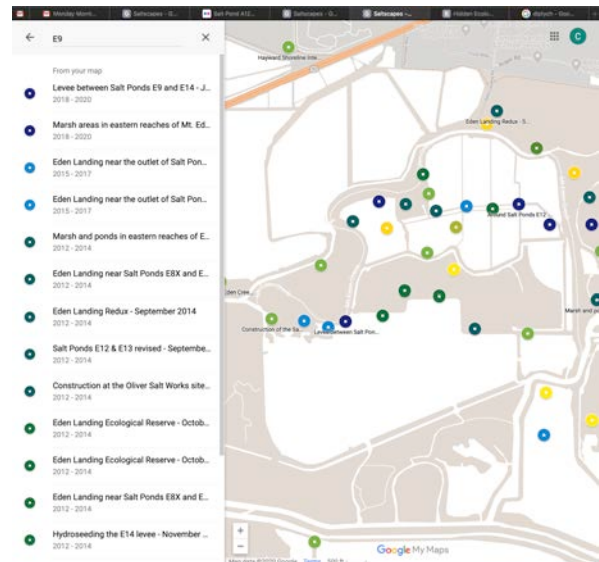
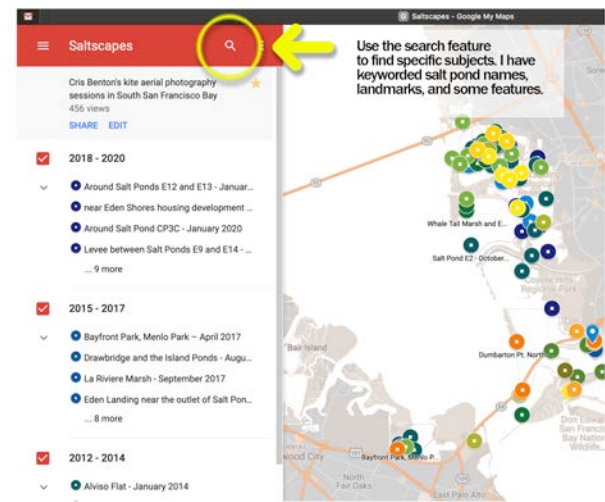
At the top of each session sidebar there is a small photograph presenting a sample view from that session. If you click on that photo, it will first show 1) a larger view of the representative photo. You can then elect to show 2) a second image that will display a trace of the session's track log with symbols showing where photographs were taken. (9/20 – I have just started adding these tracks, working from 2020 sessions backwards.)



Search – In the red sidebar header, there is a search icon. This allows you to search for specific locations, times, or keywords. As examples, try searching for A21, September, Oliver Salt, or train.

Unfortunately, the search results appear in the sidebar but not as a filtering of map icons. If you click on one of the map's album icons, the sidebar will show specifics for that session. I also wish that the search feature could be limited to title, text, or keywords. Currently, a search for “September” will return results for not only sessions conducted in September but also any session page that references previous September outings. Still, I have found the search feature a useful asset.

For instance, this search for “E9” finds 20 Flickr album pages, ordered by date of session, that have some connection with Salt Pond E9 in the Eden Landing Ecological Reserve. Note that this is almost twice the number of icons present on the map along the edge of Salt Pond E9. The additional references are largely for sessions that started at a nearby location and included some time spent at E9 as well as sessions that include a view of E9 from a distance. Clicking on any one of the results in the sidebar will zoom the map to the location of that gallery and display the album page for that session in the sidebar.



Note that all photographs taken in my South Bay project are © Cris Benton. If you would like to use an image, I would be happy to work with you. This Google My Maps project is a work in progress.

I will be adding additional sessions to the map as time goes on, both new sessions as they occur and older sessions as new Flickr album are created. If you would like to see which albums have been recently posted, you can consult [my Flickr albums](#) page. This lists albums in reverse chronological order of posting date. I welcome feedback on the project and suggestions for improvement.

Cris Benton

crisp@berkeley.edu
(510) 326-4298

Appendix: Background information on my South Bay photography

Cris Benton

By way of introduction, I am a retired Professor of Architecture from UC Berkeley. While my academic career principally focused on building science it also included stints in academic administration, study abroad programs, and teaching courses in design and documentary photography. For over twenty years, I have been taking low-level aerial photographs using cameras lofted by kites. While this might seem a bit quirky, it turns out that kites are a very practical platform for aerial photography and remote sensing at an intimate scale. As my work in kite aerial photography (KAP) matured, the technique led to topics, relationships and communities that have been richly rewarding. So much so that KAP is now my primary creative pursuit.

My kite aerial photography

My first forays into KAP sprang from a confluence of photography and radio-controlled sailplanes, two of my favorite pastimes. In 1995, after playing with mounting a camera on one of my planes, I made a shift to kites, which tend to be a stable, self-tending platform. Since switching to kites, I have progressed through three stages.



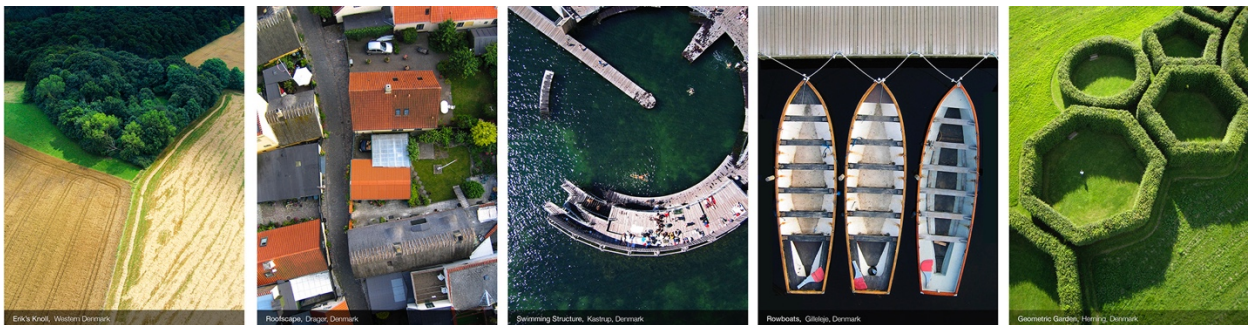
A hand-sewn, seven-foot Rokkaku kite and my Singer Featherweight

The first stage, lasting several years, involved sorting out how to fly kites, mount the camera, compose the photographs, and keep my lofted gear from crashing. I have now designed a dozen robotic camera cradles including one that became the cover story for the inaugural issue of MAKE magazine. The Cooper-Hewitt Museum exhibited this cradle and twenty of my aerial images when they included MAKE in the 2006 National Design Triennial exhibit.



KAP Cradle No. 12: a three-axis, radio-controlled rig carrying an EOS-M3 camera with a 11-22mm lens.

During my middle period, again lasting several years, I traveled broadly with my KAP gear in a continual quest for aerial images compositionally worthy of display. This was a fine period of practice and skill honing that yielded satisfying work, the placement of images in publications, coverage in the press, and a few exhibits. During a sabbatical year in 2003, I was fortunate enough to spend time as a Visiting Artist at the Atlantic Center for the Arts and as an Artist-in-Residence at the Exploratorium, both formative experiences. I later spent a year as Associate Artist at the Headland Center for the Arts, all great fun for a building scientist.



Example photographs taken in Denmark during the middle period.

I am now well settled into my third period, the use of kite aerial photography in sustained studies of specific landscapes. I came across the South Bay salt ponds while taking a series of hikes with microbiologist Dr. Wayne Lanier during my sabbatical at the Exploratorium. On these hikes, Wayne would photograph through his field microscope while I took overhead views of the sampled environment. Not knowing much about the South Bay landscape, I was struck by the wonderful variety of colors and textures associated with the salt ponds. This was fun territory to photograph. After learning more about the South Bay Salt Pond Restoration Project, I developed a proposal in 2007 to continue photographing the South Bay landscape in service of the restoration efforts. The Don Edwards National Wildlife Refuge and the California Department of Fish & Wildlife issued Special Use Permits granting requisite permissions for kite flying conditioned on seasonal restrictions to protect wildlife. This project, still underway with the enthusiastic support of governing agencies, has blossomed into a major undertaking.

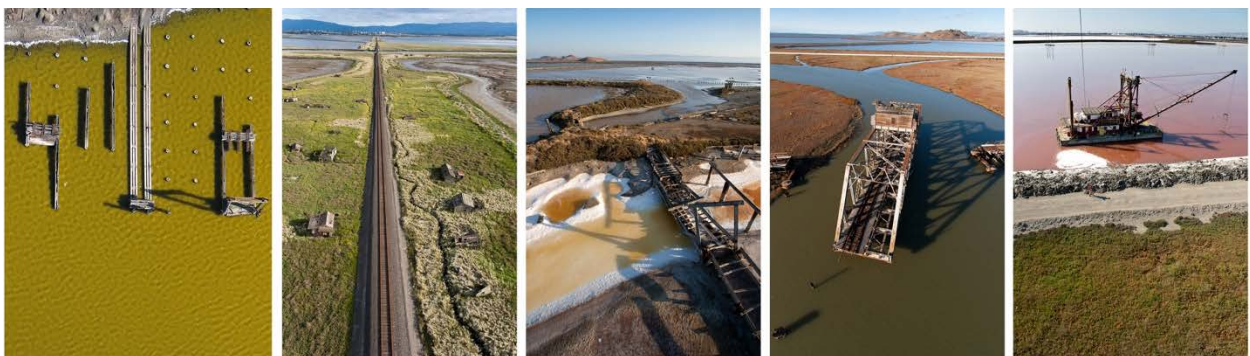


Example “color and texture” images from the South Bay.

My South Bay project to date

On approach to SFO, airline passengers glancing out the window will see the vivid patchwork of the South Bay’s salt evaporation ponds. These ponds support a five-year-long process of solar evaporation that yields 600,000 tons of salt a year. As San Francisco Bay water makes the trip from 2% to 32% salinity, it evolves through a succession of bright colors - evidence of halophilic algae, bacteria, archaea, and other organisms that thrive at specific elevated salinities. These tiny creatures paint the current day’s version of what has been a remarkably transitional landscape.

Over the last decade, the landscape’s transitions have taken a new direction with the South Bay Salt Pond Restoration Project. After a century of industrial salt production, the project is reshaping thousands of acres of former salt ponds to serve the public missions of wildlife habitat, recreation, and flood control. Portions of this rehabilitated landscape are now open to the public. There hikers can bring binoculars to bear on abundant wildlife, explore diverse halophilic microorganisms with a field microscope, seek out early engineering interventions scattered across the Bay shallows, or appreciate the intriguing juxtapositions afforded by the landscape. And juxtapositions abound – dendritic marsh channels as foils for the straight lines of infrastructure; wild openness confronting the confines of encroaching capitalism; salt ponds, vividly colored by the aforementioned halophiles, constrained by subtly hued mud and marsh; derelict, forgotten engineering works faintly echoing their former functions.



Remnants of previous South Bay occupations – boat landings, abandoned Drawbridge, early bay bridges, and the quaintly Victorian Mallard II dredge.

I started by photographing the colors and textures associated with the various salinities of salt ponds in the South Bay. Curiously, you can see little of a pond's color or bottom detail while hiking on the ground due to sky reflection from the pond's surface.

I was having a great time bagging new colors, as though trophy animals, when I realized that many of the aerial images contained vestigial remnants of the marsh channels that once served square miles of South Bay marsh. Looking more closely, I also found traces of old boat landings, 19th century salt works, and curious artifacts left by over a century of dredging and duck hunting.



Two collages from the color and texture phase of my salt pond work.

What began as a photographic romp through a visually compelling landscape slowly shifted toward documenting the landscape's history and deciphering traces of it evident in my aerial photographs. My aerial images often presented puzzling artifacts and these fueled visits to libraries, map rooms, and local experts. Then it was back to the field for more photographs. After photographing for several years, I came to appreciate that the landscape was still in transition, and rapid transition at that as the salt pond restoration project gained stride. This realization has lent a sense of urgency to the project.

My first project on retiring from the university was writing *Saltscapes* (Heyday Books), a book presenting a history of the South Bay landscape as revealed through my aerial photographs. The book provided a handy summary of work to date and conveys a good sense of my approach to the South Bay.

Over the last sixteen years, I have made about 250 trips to photograph the South Bay. The South Bay Salt Pond Restoration Project has used my images for outreach and in support of science projects that guide the restoration. For instance, my low-level aerial images of Drawbridge were used to “ground truth” the locations of invasive vegetation as predicted by the analysis of satellite data. My photographs have appeared in video segments produced by MAKE TV, PBS Newshour, the Exploratorium, and local news stations. I have mounted several exhibits of the South Bay work, including a permanent display of fifty images at the Exploratorium, large panoramas in the Oakland Museum’s exhibit Above & Below: Stories from Our Changing Bay, and a dozen diptychs for the SFO Museum.

While the South Bay’s current day juxtapositions provide an interesting glimpse into the landscape’s history, they also reveal the first traces, just emerging, of bold initiatives for its future. The restoration project, backed by a broad coalition of advocates, finds itself in a race with rising seas to reestablish marshlands while there is still time to do so. Much depends on the success of their efforts.

Links

Since you have made it this far. I will leave you with a few links for further information.

A MAKE TV (PBS) segment about my kite aerial photography.

<https://www.youtube.com/watch?v=swqFA9Mvq5M>

The Hidden Ecologies Project blog:

<http://research-benton.ced.berkeley.edu/he/>

Benton’s general Flickr photostream:

https://www.flickr.com/photos/kap_cris

Acknowledgments

The Don Edwards San Francisco Bay National Wildlife Refuge, managed by the U.S. Fish & Wildlife Service, has provided patient counsel and, importantly, a Special Use Permit to take kite aerial photographs in the refuge.

The California Department of Fish & Wildlife provided encouragement and permitted access to the Eden Landing Ecological Reserve.

The Exploratorium provided safe harbor during my 2003 Sabbatical and ongoing encouragement to pursue the aerial photography more seriously.

Dr. Wayne Lanier has been a steadfast companion and collaborator in exploring the South Bay.

Heyday Books made the development of Saltscapes: the Kite Aerial Photography of Cris Benton a lovely experience.

UC Berkeley’s Committee on Research provided modest support for project expenses.