# Discourse

## from the end of the line

August 2015

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On the Cover:
A panoramic view of Punta Piedras in San Ignacio Lagoon, Baja California, Mexico taken by oceanologist Oscar Frey, using a kite aerial photography (KAP) system.Using a 1,000-foot line, this is the highest he has ever lifted a camera. More on page 34.

August 2015

# From the Editors



Drachen Foundation
is a non-profit 501(c)(3)
corporation devoted to the
increase and diffusion of
knowledge about kites
worldwide.

WWW.DRACHEN.ORG

*Discourse* is published on the Drachen Foundation website several times a year and can be downloaded free at www.drachen.org (under Browse > Articles).

On the road and shut out of the Internet, I'm going to wing it a little on this introduction and talk about the one contributor who I really know. That would be my son, Christopher, who is an amazing middle school teacher in Durango, Colorado. Chris was previously nominated as his school district's science teacher of the year, and this year he was the deserving winner of the honor. He always looks for innovative ways to connect to students and, as he explains in this issue of *Discourse*, has finally found a way to introduce kites into his curriculum.

Since the Adelanto Middle School stresses interdisciplinary work, Chris found that kites would work naturally into the format. (We at the Foundation have been saying this for over 20 years!) With very little guidance from me, he developed an orderly and thoughtful approach that could teach fundamentals and develop creativity. I liked that he had students work in two-person teams – it's an approach that works well in any workshop format – and that, after mastering some basics of kite design and engineering, his students went "off the leash" and built final projects with their own body of knowledge.

Seeing the results from Chris' students surprised and impressed me. I had no idea that the best flying kites would be doperos: great as full-sized KAP lifters, but also (I know now) fantastic scaled down and made in paper. Creative three-stick variants and common Eddys all had their day and gave students every probability to succeed. I hope you enjoy Chris' essay as much as I did.

Also take a look at the fine work of Chris Yuengling-Niles as she documents some of the amazing work of an American kiting legend, Tom Van Sant. We get to catch up with *Discourse* contributors Whitney Richardson and Oscar Frey, I take you on an excursion into the back room of kite collections, and who could not be charmed by the world of Ron and Marla Miller?

Enjoy.

Scott Skinner
Board President
Drachen Foundation

# Correspondence

Another excellent read!

Catherine Gabrel
USA

Always awesome!

Bob White
Canada

Well, needless to say, I didn't get done anything I had planned to do today [the day the new issue of *Discourse* came out].

Gary Hinze
USA

As always very good to read! Especially the pages on Cris Benton's kite aerial photography (KAP).

KAPshop.com
USA

And it's fascinating, as usual. Thank you, Drachen.

Alexa King
USA

Thank you for featuring my work in *Discourse*. I am proud indeed.

Cris Benton
USA

A beautiful tribute to Yoshizumi-san! Thanks for *Discourse*.

Kata Gal
USA

Excellent!

Cindy Thrall
USA

# Contributors

Oscar Frey
*Puerto Vallarta, Mexico*

Born in Mexico City, oceanologist Frey has used kite aerial photography (KAP) since 2004 to document humpback whales, gray whales, whale sharks, and fragile coastal and offshore marine environments in Mexico.


Keith May

Ali Fujino
*Seattle, Washington*

From work at the Smithsonian to her present status as Director of Advancement for the Alaska Wilderness League, Fujino continues her 20 years with the Drachen Foundation by serving on Drachen's Board of Directors.


Fujino Family

Whitney Richardson
*Chicago, Illinois*

An artist, teacher, writer, designer, and civic engagement organizer, Richardson directs Whatever Lab, an environmental arts project that focuses on creative reuse, play therapy, and engaging with the environment, community, and the self.


Courtesy Whitney Richardson

Christopher Skinner
*Durango, Colorado*

With a Master's of Education from the University of California in Santa Barbara, Skinner has been an 8th grade science teacher for 12 years, and also teaches classes in American History, Health, and Digital Media Yearbook.


Sheridan Skinner

Scott Skinner
*Monument, Colorado*

A former Air Force instructor pilot, Drachen's board president has flown and designed kites for three decades. Today, Skinner is known as a world class, visionary kite artist.


Courtesy Scott Skinner

# Contributors

Chris Yuengling-Niles
*Los Angeles, California*

With 35 years as a successful graphic artist at a global advertising agency, Yuengling-Niles now works as a printmaker, assisting students at Scripps College Press in the creation of art books and serves as an art docent at the Getty Center.


Chris Yuengling-Niles

# Kites in a Middle School Science Classroom

Christopher Skinner

Christopher Skinner

The author's middle school students build kites in an engineering-design class called Project Future.

I grew up on a kite field. Several days, weeks, and even months of my childhood were spent with Eddys, *edos*, box kites, *rokkakus*, stunt kites, Chinese dragons, and *sode-dakos* (to name a few). Kites have taken me to locations across the United States and beyond; I've flown a kite above the Great Wall of China, among the hustle and bustle of London, and on a cow pasture in Thailand. These kite excursions with my father have given me a world of cultural knowledge, a lifetime of fun experiences and memories, and colorful acquaintances such as Dave Gomberg, Peter Lynn, and Modegi-san. Every year from kindergarten through high school, one of my teachers would discover that my father was a kiteflier, and he would be invited to spend a few hours or more teaching my classes about kites: kite flying, kites as sport, kites as art, kites in history, kites in physics, and the geometry of kites. Sometimes he'd even return to my former teachers' classrooms, several years after I'd left, to open the world of kites to new eyes. By now, he probably has spent more time teaching about kites in elementary schools than I did attending.

Perhaps I should back up and explain that my father is Scott Skinner of the Drachen Foundation. I have known him to be a kiteflier, a kitemaker, a kite educator, a kite philanthropist, and a kite historian, but I am sure that in the world of kites he may be many more things. After he retired from the Air Force, I suppose kites kept him connected to the world of aeronautics. I know that my love of science began at the end of a kite string. My

father and his kites taught me from a very young age about Bernoulli's principle, Newton's laws, and even the sun's role in atmospheric heat causing winds. Not surprisingly, when I left for college, he gave me a beautiful red sode-dako-shaped kite, in my father's American patchwork quilting style, that resembles a bright red bird. I flew it during the first week of classes at University of California in Santa Barbara (UCSB) each of my four years as an undergraduate. It may still be a bit salt-encrusted after its last flight landed it in the Pacific Ocean.

This year kites have returned to my life. I am now 37 years old, with a Master's of Education from UCSB, and for the past 12 years I have been an 8th grade science teacher, currently at Escalante Middle School in Durango, Colorado. Over my 12 years as an educator, kites have found a few niches in my curriculum. While teaching students about physics, lift, drag, and even gravity, kites would make cameo appearances in the form of examples, images, and short demonstrations. Kites had roles during interdisciplinary studies when my colleagues and I taught about symmetry, kinetic art, Asian history, or measurements.

This year kites have taken a starring role. In addition to my regular science classes, I teach one period per day of an elective called Project Future. Project Future is an engineering design and challenge class where students apply scientific principles to complete various challenges: soda bottle rockets, mouse trap powered cars, balsa wood sail boats, hydraulic arms and fighting robots, rubber band powered moon-rovers, popsicle stick towers designed to withstand high winds, crash-test vehicles that protect their egg passenger, and many more fun and challenging projects.

One year ago, when I was informed that I would be teaching Project Future, my first call was to my father. I knew that kites would now have a starring role in my new curriculum. After several conversations, my planning and preparation yielded over a month's worth of (affordable) kite related lessons and challenges. The unit starts small; a quick folded-and-scissor-cut kite made from a bamboo barbecue skewer, a sheet of (brightly colored) printer paper, and some scotch tape. The second project uses a reel of string, a pile of plastic drinking straws, and some tissue paper to build a four-celled tetrahedral. While making these first two kites, I spend time teaching my students about how the roles of symmetry, dihedral stability, rigidity, and flexibility work together to produce lift using Bernoulli's principle. I also show them how drag and air resistance can be captured and utilized to balance the lift, increase stability, and straighten flight orientation.

But kites are more than a physics lesson. They are also a study in engineering and construction as well as being creative, artistic, and beautiful. Using sheets of tissue paper, a roll of string, Elmer's Glue-All, and spars from a disassembled bamboo window shade I found on eBay for $10 (a single shade has provided enough spars to last me for several more years), my students are taught some basic construction and reinforcement techniques to build larger paper kites. They are challenged to design and build any one of six different kite shapes (Eddy, edo, rokkaku, hex, sode-dako, or delta). Prior to construction, each pair of students is required to submit blueprints that include the measurements of all their spars, as well as the length, width, and proportions of their paper sail. Artistic plans are also submitted that demonstrate some pattern or design and any additional construction necessary to complete their kite. As students complete the construction

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Photographs by Christopher Skinner

Students' kites take to the skies over Escalante Middle School in Durango, Colorado.

Photographs by Christopher Skinner

8th grade students working with kites learn about physics, engineering, construction, and art.

of these first freely-designed kites, they are taught how to flex horizontal spars which creates a dihedral effect (previously achieved by the triangular, three-dimensional shape of their first two kites) that eliminates the kite's ability to roll about the vertical axis. Once the bridle is attached to the vertical spine, students are taught how to adjust the flight angle and add drag, both of which increase the flight stability of the kite. My class of nearly 30 students, flying their creations in the light early morning breeze of southern Colorado, immediately transforms this school's football field into the kite fields of my youth (complete with Mary Poppins' "Let's Go Fly a Kite" blasted over my iPod speakers, a permanent part of those early memories).

But what have my students really learned? Do they really understand the concepts they've been taught? Can they apply these lessons to new circumstances? These are questions that plague every teacher. Now given new construction requirements (building with multiple vertical spines, or only diagonal spines, or with non-dihedral flexed spars) and design possibilities (removal of panels and other sail cut-outs, roller-modifications to rokkakus, and new shapes such as *genkis* and doperos) student pairs are challenged to design and fly a unique new kite, but they must solve the construction, symmetry, dihedral, bridling, and other physics challenges that these new shapes offer. The first time my students tackled designing and constructing this fourth kite, I was expecting a mixture of successes and failures. What I didn't expect was that the groups whose kites struggled to fly did not want help "fixing" their designs, and while they may have sought some advice, they were determined to get their kites to fly without my intervention.

During my second semester, with a second round of students designing and learning about kites, I decided to take their kite-building experience a step further. While preparing my entire Project Future curriculum, looking for fun engineering challenges suitable for students, I stumbled across a website called Instructables.com. It is a crowd-sourced website where people can find, read, and post instructions about all varieties of how-to or DIY subjects (near the holidays I used plans found here to teach my students how to make duct tape wallets). After creating an Instructables.com account using my school-issued email address, I gave each group of students the password. In just this past week, they have completed a multi-week project in which they were asked to build and document the construction of a new kite and then create a DIY set of instructions and publish them to the site (complete with materials, pictures, captions, and step-by-step guidelines for constructing their kites). I read these student-created kite building instructions and I am many things: proud of what they have published, disappointed that we didn't have enough time to fix all the middle-school grammar, thoughtful about ways to increase the science-content in their instructions, and excited about the myriad of possibilities that both kites and this website will provide for my next year's Project Future students. I am also exploring new opportunities that studying kites can provide for all students to learn about flight, physics, and the principles of science.

Several of my students' Instructables can be reached online:

www.instructables.com/id/Roller-Kite-By-Kylie-and-Avery/

www.instructables.com/id/Dopero-Kite-by-Luke-and-Amadalla/

www.instructables.com/id/Barn-Door-Kite-by-Tim-and-Wil/ ◆

# Two Is Much Better Than One

Ali Fujino

Courtesy Ron Miller

Kite enthusiasts Ron and Marla Miller are passionate about kites and the worldwide kiting community.

In over 25 years of kiting, I have had many opportunities to write about kite personalities as part of my job for the Drachen Foundation. With each opportunity, I have been both charmed and bemused, as I have learned so much more about individuals I thought I already knew.

Such was the case in May, when I drove 45 minutes south from Seattle to visit with Ron and Marla Miller at their home in Tacoma.

I have known Marla and Ron Miller for decades. Through these decades, we have bumped into each other at a number of kite events, and after each encounter I have always thought, "My goodness, that was great, we should spend more time together."

But our busy lives have always kept us at least 45 minutes apart. I have always known them to be the best of volunteers, never hesitating to assist others, and in the process also taking on some of the most unglamorous of jobs.

Having a reason to interview them, I found their past histories as interesting and charming as their present lives. Both were raised in the logging town of Tacoma, Washington and attended the same public schools where they first took notice of each other. Upon graduating from high school, life took them in different directions, each of them marrying young, and starting families. Marriages came and went (as sometimes they do) and left Ron and Marla

single. But a common friend brought them back together and rekindled their relationship, where they became a family, one yours, one mine, and a third together.

Ron's professional work has been in the construction field. He has made a good livelihood in construction management, working for just one developer, an indication that he is very good at what he does. Marla, wanting to be at home with the kids, figured out her professional path without hesitation. Her stellar people skills led her to the retail industry. She added her love of gardens and flowers. Her garage blossomed into a thriving florist business that she ran out of her own home for over 20 years. This flexible professional lifestyle made it possible for them to raise their children and find an opening for that special personal diversion, kiting.

Growing up in the generation without electronics, they were raised to make their own recreation. And like many children during this time, they made simple paper and wood kites. These simple kite encounters could have been the gateway to their fascination in kiting. Ron remembers as a teen riding off on his bike with his buddies, stripping wood for spars, using newspaper for sails, and flying kites. After marrying Ron, Marla recalls using kite flying as an activity for their small children when they lived in Oregon. And while this is just what many parents do with their young, there always seemed to be more than the ordinary number of encounters with kites.

Enter the big time kiting commitment.

In April of 1991, Marla was introduced to flying by Sonny Kirsch and the Westport Windriders. Sonny came into her shop, and he invited her to meet at the ocean. The meeting was Marla's first lesson with a stunt kite. It was the classic experience of being pulled down the beach by a stack of Hawaiian SpinOff's stunt kites. Marla's eyes were the size of pie pans, and she was hooked. They both knew, "This is it." The excitement of stunt kiting was just beginning and needed direction, and Marla dove right in. (I want to point out that this is the strength of this couple, doing things together as one, yet also independently.) Marla's straightforward organizational style, balanced by Ron's gentle, focused guidance, made her a better organizer. He often said, "Marla, get back to the point, you have moved off course," and Marla responded just like a boat that had veered to port or starboard, and the rudder is moved to bring her back on course. This is a rare and completely symbiotic relationship!

Through the years, Ron found the time to make kites. He experienced making kites of every style, shape, and flyability. Ron has a wonderful collection of workshop kites that he made himself under the tutelage of famous domestic and international kitemakers. While Ron sewed, Marla continued to make her focus the organizational operations. She dove right in and made sense and dollars out of even the smallest of kite auctions, earning thousands of dollars for the American Kitefliers Association (AKA), World Kite Museum, and the Fort Worden Kitemakers Conference. She was one of the first raffle chairs to develop a "no one is a loser" kite auction. After years of watching only those who had deep pockets making large bids to win the best of kites, she enacted a system to even the auction playing field where even the lowest of bidders could be winners. Instead of bidding, she added, in conjunction with kite auctions, a low-cost raffle. You could purchase tickets for 25 cents per ticket (four for a dollar) and drop your tickets into the bag next to the item to be raffled. If your ticket was picked, you could walk away

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Courtesy Ron Miller

Ron and Marla Miller have brought the world of kiting not only to the U.S., but to their own living room in Tacoma, Washington, which displays a diverse kite collection.

Ali Fujino

Each kite artifact in the Millers' collection is precious, each with a story and a special place in their home.


Courtesy Ron Miller

The Millers' collection includes kite poster artwork, original drawings, paintings, and prints.

with a $1,000 kite for the price of a 25 cent raffle ticket. It turned out that even with tickets at low cost, the auction/raffle actually made more money, as more people participated and bought more tickets to improve their chances of winning. Brilliant! In this and other activities, she was the perennial volunteer. Even today, she represents the AKA at international venues in both France and England. She is on the board of the AKA, and assisting the 2015 Enid, Oklahoma AKA Convention chairperson, so don't miss it! She is also assisting the governing body of the AKA, bringing in good strong board members and charting a course of development to bring the membership numbers up.

Ron continues to study various contemporary approaches to kitemaking and is working on a large piece inspired by Scott Skinner.

Together they have brought the world of kiting not only to the United States, but to their own living room. There are over 250 flyable kites in their contemporary kite collection alone, many are gifts from the international visitors they have housed. They have never turned away a kitemaker and have hosted visitors from around the globe. They shuttle them from the airport, to the flying field, to their home for the night, before returning them to the airport to go home. Their home is the perfect example of good design for a large collection and is one of the best displayed. Ron's years of construction experience show in the many displays for their eclectic collection of kite-related artifacts. Every corner of their home exhibits a kite or kite-like object, which documents their participation and passion for kites. There are kite items that are noteworthy "just because it caught my eye on that particular day, so I bought it to put in the collection." There are objects of kiting humor, not true functional kites, but those which reflected a kiting joke or pun. There is the famed Nick Parks character of Wallace and Grommit flying a kite, along with Snoopy and many others. There are ceramics formed into kite-like objects. There are collections of kite poster artwork, original drawings, paintings, and prints. I was fascinated by the care given to each item, each finding a place. Each artifact is precious, each one had a story and a special place in their hearts, minds, and home. To visit the Millers' home in Tacoma is a great honor and unique experience.

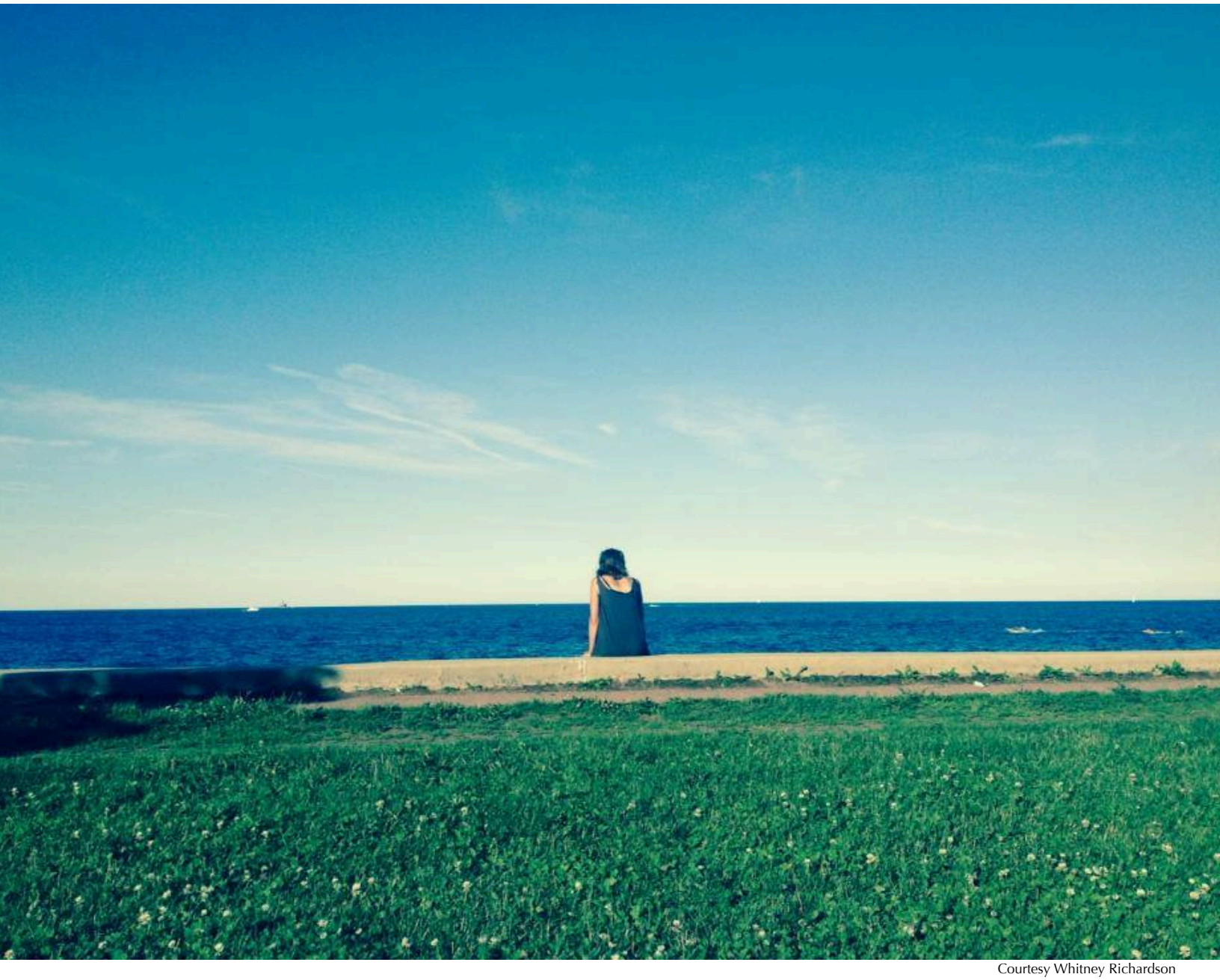
I realize there are many, many kite enthusiasts in the world much like Ron and Marla Miller, but what makes them stand out is their passionate connection to people. It was Ron and Marla who became close to the miniature kite artist Charlie Sotich of Chicago, and that closeness lasted until Charlie's final days. Marla saw the genius in Charlie and filed his days with the kiting he loved. Charlie had no children and outlived his brothers and sisters. Ron and Marla became his family, making sure that he had a purposeful life until he passed away. That is the gift of Ron and Marla, the gift of a purposeful life through kites. Even now that Charlie is gone, he lives on as Ron and Marla help with the Thank You Charlie Program.

To be a part of Ron, Marla, and Charlie's work, donate to the Thank You Charlie Program on the AKA website:

http://kite.org/education/thank-you-charlie-program/ ◆

# Open Sky, Open Mind

Whitney Richardson



Courtesy Whitney Richardson

Sit-spot for reflection and observation-making
along Montrose Beach, Chicago.

## Part I: Making a Go of It

My experience with kites began on Coney Island with two female friends of mine, Lee and Julia. We made a beach date – our bags packed with some of the vices of youth (beer, cigarettes) and a handful of kites from the dollar store. I watched as Julia and Lee tried to assemble the kites and then fly them. They came without instructions for assembly. We felt a little inadequate not knowing how to put together such common objects without referring to directions. We tried to figure it out ourselves.

After four failed and broken kites, I put together the last one based on observations I'd made from what happened to the others, and it worked. It stayed up! It stayed up until a young boy and his mom marched along with their own kite, getting tangled up in mine. I laughed as I tried to unravel the lines. The parent and child gave up and moved on, letting their cheaply made kite die a lonely death. A small particle of air inside of me began to stir. The experience made an impression on Lee, too.

Lee began to make kites and included me in the process. I am often full of ideas but too hyper to carry them out, bubbling with more ideas and falling prey to the pinball mind. Lee's proactive spirit assuaged me into sitting down to actually make them. So there we were, sitting down and making kites together. We would walk to the park to fly them, usually Bedford or McGolrick Park in north Brooklyn, New York.

We got into it. Sometimes we would meet people. We tried to give this newfound interest a name, rhyming words until something sounded right. First we went with "Kites for Rights." We sold kitemaking kits on Bedford Avenue to raise money for what I remember to be an English organization that builds schools in Africa to confront "slaughter of child witches," in other words, modern day witch-burning. Soon, though, we began to realize the power of kites for kites' sake.

We were becoming inspired by the actual making of objects. We were meeting people we wouldn't normally interact with. We were connecting with nature in a very elemental way, on nature's clock, instead of our own. After a few workshops, we decided to change the name to "Kite Collective," falling into a collaborative rhythm with friends and new kitemakers, reveling in the cooperation of making.

In Summer 2012, we ran the Kite Machine on Rockaway Beach, distributing 700 kites by donation along the boardwalk. It gave me hope, direction, and a process I could rely on, a form of active meditation I can bring throughout my life. I was at the beginning of a breakdown and left New York the way so many people leave New York. The breakup of fellow members and subsequent move of Lee back to Canada created a new dynamic for the project.

## Part II: Looking Up, Moving Forward

I came back to Chicago to find some peace and stability, re-focusing on what I can contribute to life instead of all the ills that can come along with it. Each day I began to operate a little less on fear, more on courage. It has been three years in Chicago, and the "Collective" today is now a member of one, me. Though in its form it has touched thousands of people.

After a beautiful last hurrah as a collective in a short-lived experience in the Kimball Arts Center, I am back to conceiving and developing the project as a single body in my own apartment. What remains is a firm

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Courtesy Whitney Richardson

"As a part of Museum of Contemporary Art's 'Family Day' we created a pulley system for participants to offer their hopes and dreams to the great beyond." - Whitney Richardson


Courtesy Whitney Richardson

"From an installation for the 'Conceal & Carry' exhibition, advocating for creative resilience and nonviolence." - Whitney Richardson

Courtesy Whitney Richardson

"Kites make friends." - Whitney Richardson

Courtesy Whitney Richardson

"RIP Paper Canoe, short-lived home for the Kite Collective
at the Kimball Arts Center." - Whitney Richardson


Courtesy Whitney Richardson

"As a part of the 'Open Parachute, Open Mind' Project
with Whatever Lab." - Whitney Richardson

belief in generating creative opportunities to connect with people, the air, the trees, the soil beneath our feet, and our own rhythms and styles and hands and inner selves.

I am struggling with the name change from Kite Collective to Whatever Lab, out of loyalty of purpose and a deep affection for the beautiful friends I have grown with, Lee and Maureen in particular, as a part of the Kite Collective. I am more understanding of my own limitations and my own interests and visions to develop further. I am thrilled to continue developing as a kitemaker in my natural habitat, letting my pinball mind take me on adventures in learning while I rely on my intuition to tell me when to rest and where to grow.

This past year I have worked at a public school in Chicago, primarily with kindergarten and first grade autistic youth, developing my awareness of sensory perception and environmental factors. I have watched my nonverbal student enjoy the laws of gravity as he plays with light objects, thrusting plastic bags in the air, watching paper fall, building paper airplanes and folded butterflies. These simple acts never cease to provide a strong sense of wonderment and appreciation for the earth as it is.

There is a whole summer ahead of me to develop Whatever Lab, fueled by inspiration and a drive to face fears and try anyway. There is a lot of development to drive a wide net for collaboration outside of the collective scheme. There is no one to help me make outreach calls this year. I have to do my least favorite tasks on my own. Chicago, as a city, appears to be growing in its earth consciousness, with newly developed bike lanes downtown and the re-opening of parks that were shut down from urban blight. I see creative agents of change everywhere I go, in activists and artists with seriously innovative perspectives and motivations. I walk through these streets and find creative sparks reflecting back at me.

That day at the beach led to a full personal revolution, reigniting the creative and curious voice I had dismissed out of fear. It opened me up to a world of like-minded individuals, to an octopus of pursuits I might not otherwise have acted on, as an arts writer, birth doula, designer with a focus on sustainability, gardener, teacher, teaching artist and, to some extent, an organizer.

It helped me connect with people I might otherwise miss, like the artist Amitis Motevalli who flew 23 kites at the Rapid Pulse Performance Art Festival in Chicago in early June to commemorate 23 people killed by law enforcement within one year in the state of Illinois. (Their faces and names were stenciled on the kites and flown across the street from police buildings.) It helped create a strong sense of camaraderie with artists behind Industry of the Ordinary, with an emphasis on challenging pejorative notions of the ordinary and, in doing so, moving beyond the quotidian, setting my sights toward stretching my comfort zone on where and how I address certain realities of society, industrialization, urbanization, environmental degradation, diversity, net creative loss, special needs populations, and loss of multi-generational connections.

This summer, I seek a new sit-spot for kite flying, building on a sense of place and purpose in this very big/very small world I am a part of. I find myself drifting toward a bigger sky, as usual, keeping my gaze upwards and feet on the ground. ◆

Whitney continues her journey to find ways to incorporate her love of kites in her art and life and community. - Alison Fujino, editor

# Tom Van Sant: Close Encounter of the Third Kind

Chris Yuengling-Niles

Chris Yuengling-Niles

Artist Tom Van Sant displays the launcher for his "Jacob's Ladder," a structure with hundreds of segments that can reach a quarter mile into the sky.

## Introduction by Ali Fujino

In 2005 Scott Skinner and I had the good fortune to be a part of a *washi* paper tour of Japan, organized by the handmade paper goddess Hiromi Katayama. We traveled from Osaka to Kochi visiting traditional handmade paper makers and meeting the families involved.

Among the people that we met on that trip was American paper artist Christine Yuengling-Niles. One of the most creative individuals in the universe, she is an artist with incredible credentials who lives in Los Angeles. After ten days of traveling together on the Japanese paper roads, it was clear to us that we should not only savor our new knowledge of handmade Japanese paper, but also NEVER lose sight of Christine.

Since that tour, Chris has been one of the Drachen family. We have invited her to participate in various projects all over the world, collaborating with her creative eye, her personal humor and wit, her ability to dive right in and work on a project (not just pushing it along, but contributing MORE to it), and her ability to work with very little definition.

Of all of us who know Tom Van Sant, there was no better person to work with him in the archival documentation of his kite work. Chris shares her experience in this charmingly journalistic account of her interactions with Tom.

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Chris Yuengling-Niles

A cache of Tom's drawings showing designs for kites and decorations.

Chris Yuengling-Niles

One of several birds that grace Tom's workshop and studio.

## TOM VAN SANT:
## CLOSE ENCOUNTER OF THE THIRD KIND

The day before the first Otis Kite Festival in Los Angeles, the invited kite artists meet at Tom Van Sant's studio and home. Tom pulls out sketches he had done for kite designs, as well as his "Jacob's Ladder" launcher. "Jacob's Ladder" is a structure with hundreds of segments that when launched can reach a quarter mile into the sky. This all prompts enthusiastic discussions of kites, kitemakers, and innovations that Tom utilized, such as fiberglass tubes and nylon fabric, new materials that enabled many participants in the festival to make the kites they were to fly the following day.

On festival day, Tom's "Centipede" kite is brought to the beach. Everyone pitches in and applauds as the 35-year-old kite lifts. Strong winds bending banners in the sand are too much for the fragile sails, and despite rapid triage and spot mending it is packed up and returned to Tom's studio. Other kites fly high, and thousands of children add their own creations to the mix of aerial art.

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When next I visit Tom, he is quietly mending the delicate kites in his studio. I have come on behalf of the Drachen Foundation to assemble slides and acquire digital images of the many sketches that document his airborne structures built in the mid-'70s. As we go through the portfolio of images and binders of slides, Tom reminisces.

While looking at slides that have been tucked away for many years, Tom notices a number of familiar faces. A slide of a figure being lifted off the ground prompts a smile and the comment that she was "ready for anything."

With pride, he shows me a letter from the British Kite Flying Association that published the book *Kites: A Practical Handbook* written by Ron Moulton and illustrated by Pat Lloyd. In part the note reads, "The book includes pics and data on your inspiring designs we saw during the memorable visit to Europe. That was really the beginning for all of us in the appreciation of ripstop nylon and glass fibre spars and the ICA Exhibition was the most educational display we have ever seen. Thanks and keep flying. Ron."

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In 1989, Tom decided to form the first real picture of the earth as it appeared from space. He purchased a computer the size of a refrigerator for $200,000. Using his contacts at NASA, U.S. Geological Survey, National Geographic, and others, he gained access to satellite images. Following months of software development, they created a digital photographic composition program that would stitch together hundreds of mosaics free of clouds to create a totally unobscured image of planet earth. On April 15, 1990, the image was complete. For a time the room that I now sit in with Tom was filled with desks and a cadre of young workers manning phones to disseminate the image at no cost. It has been said to be the most reproduced image in the world.

For the next decade, Tom continued work on the Geosphere Project. He conformed the map to a 6′ 6″ globe. Ultimately the Geosphere was equipped with an interior projection system that could study weather and migration patterns. A network of seven "Earth Situation Room" installations were placed around the world.

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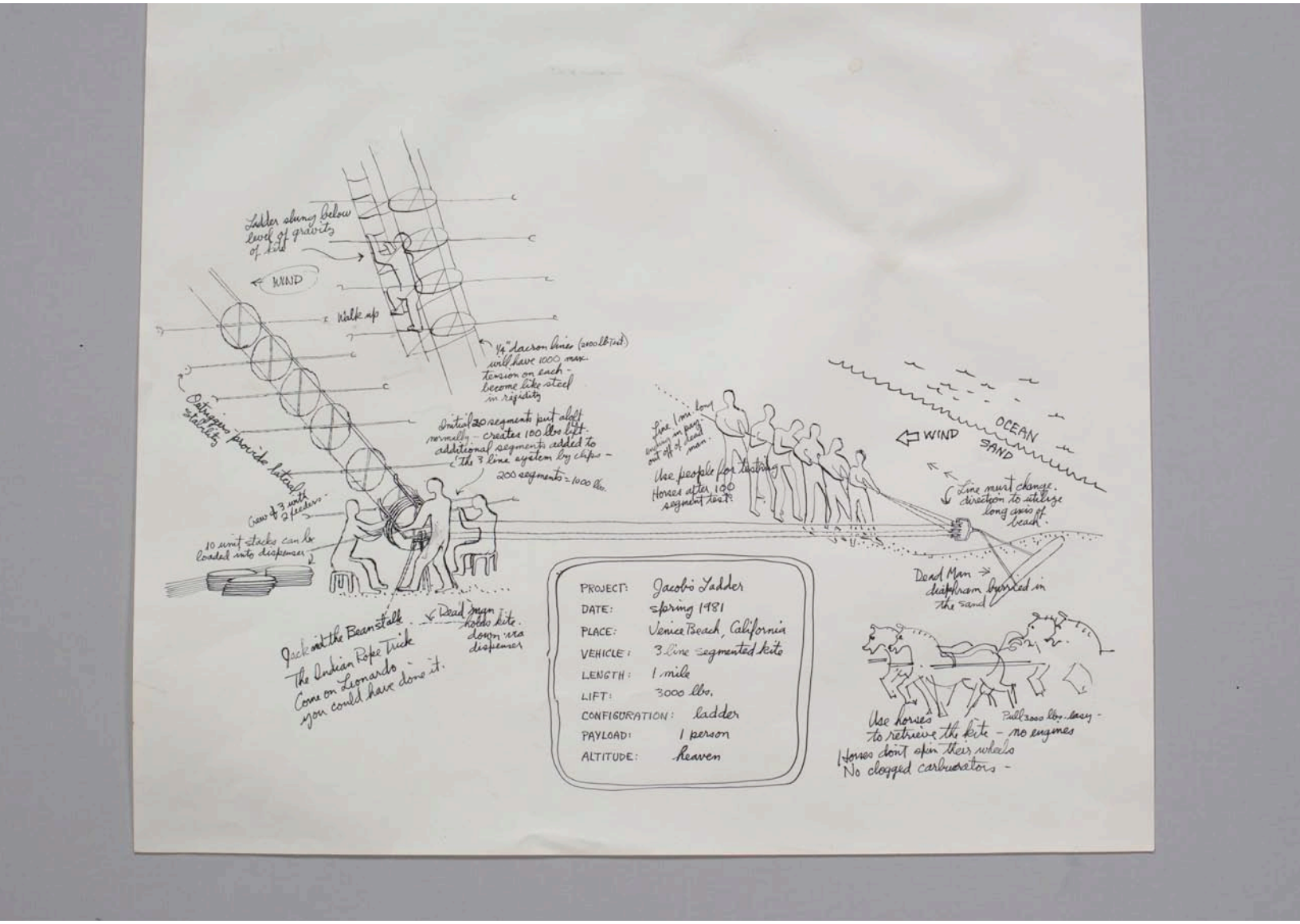


Stephen Niles

A whimsical, mysterious sketch of Tom's "Jacob's Ladder" in action.

Chris Yuengling-Niles

Tom's studio/home for over three decades. Kites, drawing benches, and the "Geosphere" take pride of place.

After graduating from high school, a young Tom decided to travel. He took a job on a freight ship, assisting in caring for the cargo: pregnant cows. The cows spent their days on deck in sheds to shield them from the summer sun. The days were long and hot. During a storm at sea, in the midst of heaving decks and lashing rain, Tom assisted in the birth of a calf.

As a young man, he continued to travel as a correspondent to various locations. In Jordan, a trip through the desert at night produced a charming line drawing of a belly dancer.

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Once a week, Tom now hosts a life drawing workshop in his studio. It is a loose collection of interested participants. Among the regulars is a cheerful senior former ballerina and an earthy woman interested in all things natural. My first night we use one of the sculptures found in the studio as a model. An owl poised, alert with deep eyes. Tom joins us and as he walks about encourages us to be expressive rather than worrying about making a realistic rendering of the model. His own drawing is full of energy and color.

On the table Tom has piled a stack of drawings of a cartoon dragon. He had drawn these during his son's childhood – whimsical messages saying hello and letting him know what was happening that day. He is thinking of making them into a book.

I ask him about the owl sculptures scattered about the studio. He says he has raised several owls. He acquired a pair of young owls and put them in a space prepared for them. At first they kept as far away as possible from him, but as they became familiar to him they slowly moved closer on the perch stretched across their room. In time, Tom was able to cup their heads and gently scratch behind their ears as they leaned into his hand. Ultimately he freed them from the house into the woods outside his home.

Lady is his companion, a dog of pleasant disposition who wanders in and out hoping for a friendly pat or scratch behind the ears or across the belly. At last, sitting there is a semi-feral cat, white with orange spots, who in the midst of moving chaos is snoozing on a chair and politely submitting to strangers' attentions.

Tom was fascinated by the cargo culture. He has in his workshop an idol/icon made by South Pacific natives. During WWII, Japanese cargo ships would fly overhead and drop supplies for soldiers. Natives who had never seen airplanes before mistook them for beneficial spirits. They created images to invoke their return along with their perceived largesse.

◆◆◆

At the next Otis Kite Festival, the centipede is brought back to the beach and flown to cheers. (See a video clip on the Drachen Foundation YouTube channel at: http://youtu.be/6RiTIEgLDIc.)

Tom Van Sant is a living national treasure, integrating the sciences, arts, and humanities within our ever-changing world.

More can be learned about Tom and his projects at his website:

www.tomvansant.com ◆

# Kite Aerial Photography: A Pivotal Turning Point in My Scientific Research

Oscar Frey

Oscar Frey

Boca del Camaron, the mouth of an estuary at San Blas, Nayarit, on the Pacific coast of Mexico.

In 2003, I was introduced to kite aerial photography (KAP) by Ali Fujino and the Drachen Foundation. It was a pivotal turning point in my life and my career, as it widened my perception and understanding of planet earth to a much broader and more objective perspective from above.

By this time, I had been studying whales for a decade. As an oceanologist, I realized I could use KAP to document whale behavior and interaction around my boat from an external perspective that was clearly not subjective.

From this external and objective view, I had the opportunity to document the human/whale relationship and how whales react to the maneuvering of boats during whale-watching activities – either tourist or during

research and data collection. Putting this into experimentation, I was able to grasp a higher understanding of human impact on the environment and have thus become far more respectful in the work that I do on a daily basis.

Using KAP to document Humpback whales (*Megaptera novaeangliae*) and Gray whales (*Eschrichtius robustus*) in their breeding grounds of Mexico, I discovered a new way to study how they react and integrate boating activities into their environment. I tested KAP to document Gray whales in San Ignacio Lagoon and Humpback whales in Banderas Bay, Mexico. These are two very different environments with contrasting conditions. However, the research fieldwork on both areas has proven that KAP is a successful non-intrusive technique to document marine megafauna with a geographical and scale reference.

Since 2006, developing applications of KAP has been an ongoing learning process that has led me to creatively document diverse coastal marine environments and endangered species in the Mexican Pacific and the Mexican Caribbean.

I have continued to work on transitioning from the use of analog technologies of the past to keep up with the new standards and advantages of modern digital technologies as they evolve. With my colleagues, we have also applied kite aerial videography (KAV) to our work and successfully documented Gray whales interacting with humans. This work has been documented and shared by Discovery Channel around the world. You can find a small clip of this experiment online at: www.deepblueconservancy.org/Programs/programs.html.

Coastal and offshore environments usually have seasonal wind patterns that are strong and consistent enough so that we can use a kite to elevate our cameras and document human effects on beaches, islands, mangroves, whales, birds, and other natural resources. The aesthetics and the diversity of colors, landscapes, and wildlife that are present in the coastal and offshore marine environments are very attractive for KAP applications.

On the other hand, the fact that it is the wind force which elevates our cameras, makes KAP an environmentally-friendly way to document and study natural resources without creating physical or acoustical disturbances that can impact your subject of study. This is precisely what makes KAP the ultimate resource for collecting valuable data for scientific research from an aerial perspective at a low cost and with a high efficiency.

To use KAP from a moving 28- to 30-foot outboard motorboat can be a titanic endeavor. However, the methodology to use this technique can be simplified and customized to meet the specific conditions of each location and the nature of the subject being documented.

Since 2004, KAP has proven to be useful to document marine megafauna such as Humpback whales in Banderas Bay, Gray whales in San Ignacio Lagoon and whale sharks (*Rhincodon typus*) in the Yucatan Canal, Mexico.

Further experimentation verified that KAP is also useful to document a variety of fragile coastal and offshore marine environments such as mangroves, estuaries, coastal lagoons, sand barrier islands, unstable beaches, and offshore islands.

After 12 years of experimenting with kite aerial photography, I deeply understand its nonintrusive nature and the outstanding

versatility that it offers to document natural resources and the human activities that affect them. This understanding is what drives me to continue developing KAP applications as it relates to scientific research, so that future generations can use it to document, study, and preserve marine environments.

As a scientist and member of our non-profit organization Deep Blue Conservancy, I am looking forward to applying in the near future KAP and KAV techniques to document Humpback whales in their feeding grounds of Monterey Bay, California and have a better understanding of how they integrate human activities into their environment.

Following you will find a selection of images captured along my KAPing journey in Mexico. Enjoy the views!

www.OceanFriendly.com
www.DeepBlueConservancy.org


## Acknowledgements

My special gratitude to the Drachen Foundation for believing in me and for providing me with the equipment and training needed to apply KAP to the documentation of whales in Mexico. I am especially grateful to Ali Fujino for opening her home and a whole new world to me, for her dedication, friendship, and unconditional support during my learning and experimentation process with KAP.

Thanks to Brooks Leffler for his help in the design of the first big rig used in this project and for providing me with special inspiration. A very special thanks to Peter Bults for his dedication in designing state-of-the-art technology to rig, elevate, and control my high resolution SLR digital cameras in rough ocean conditions.

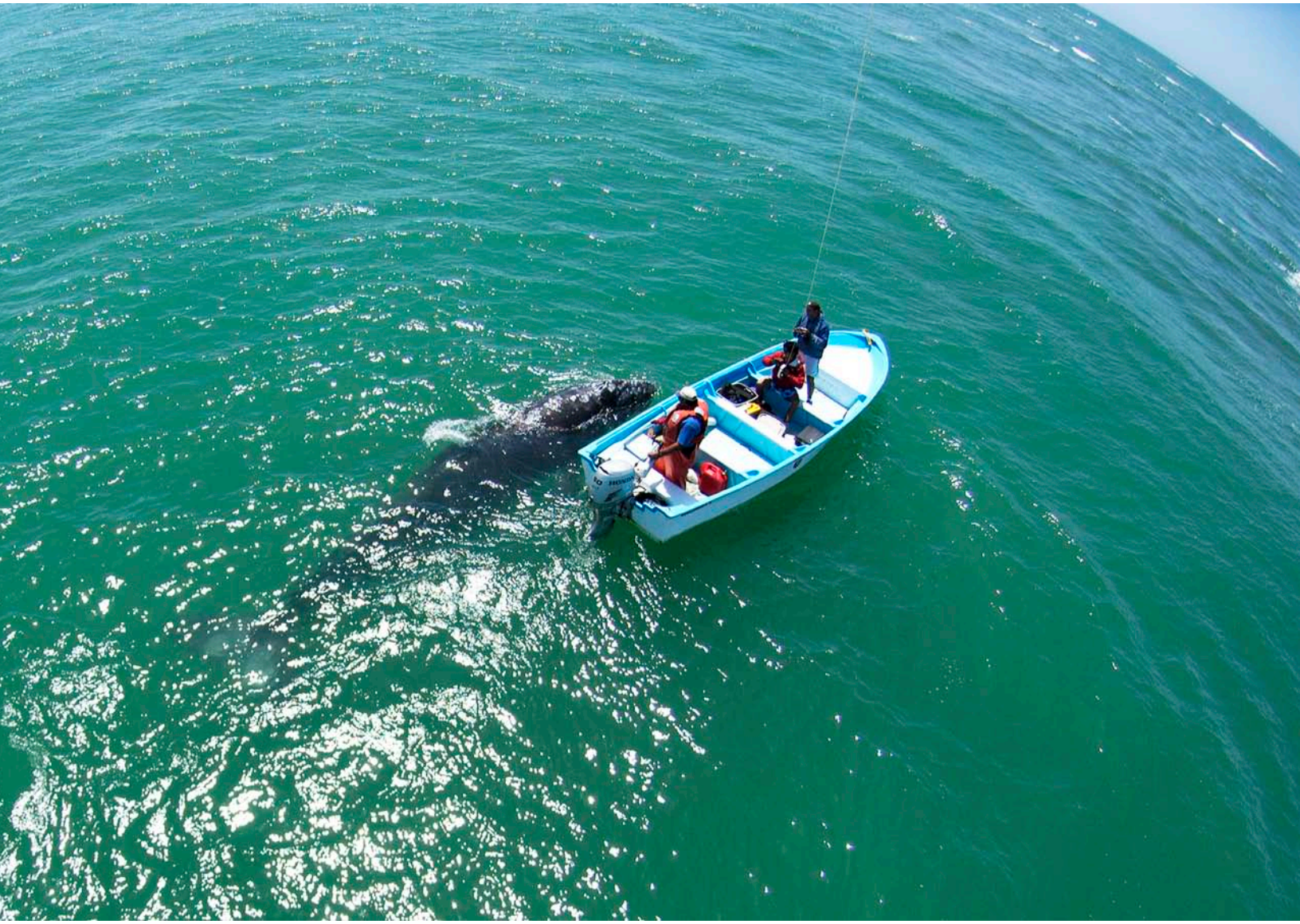
A special acknowledgement to Mike Jones for designing and donating the rokkaku kites specifically built for the environmental and work conditions where I have used KAP in Mexico. My rigs have never been more stable. Thank you, Mike.

A special thanks to Giovanni Macedo, Manuel Gardea, Captain Lucio Leon, Captain Tony Macedo, Captain Maximo Perez, and Captain Juan Avila for providing the boat operations in Banderas Bay, San Ignacio Lagoon, and the Caribbean. I am grateful for sharing their passion for the ocean and their unconditional support, dedication, and patience during long hours of navigation.

I am very grateful to Fredo Velazquez for inspiring me constantly, for sharing his passion for photography, and for sharing unconditional love.

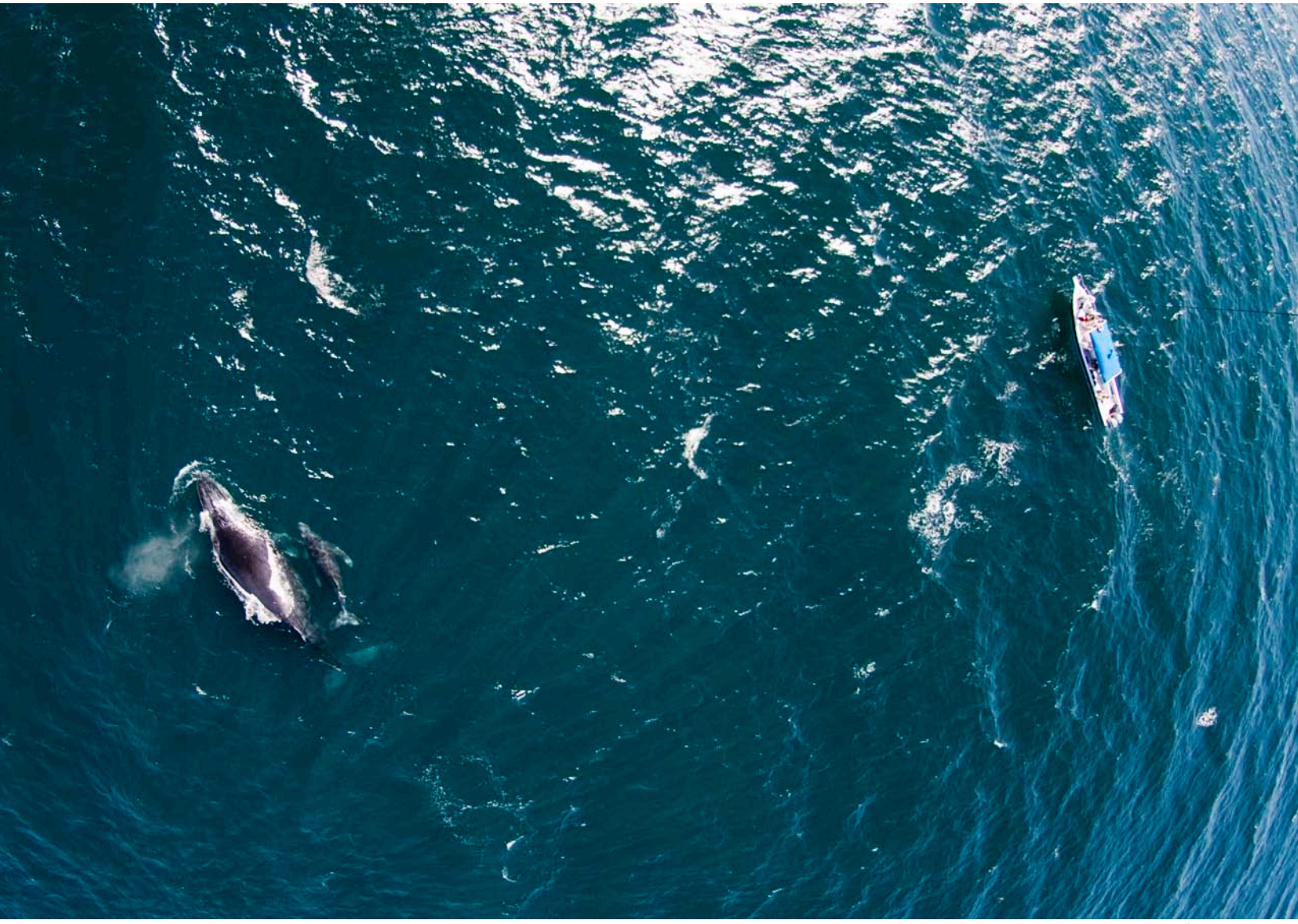
Very special thanks to Jorge Guzman and Keith May for their close friendship, constant assistance, and unique dedication to explore and study marine environments along my KAPing journey in Mexico.

I want to thank the Environment and Natural Resources Agency of Mexico for providing the authorizations to undertake scientific research activities and the use of KAP to document Humpback whales, Gray whales and whale sharks in Mexico since 2005. ◆



Oscar Frey

A friendly and curious Gray whale calf approaches our boat
in San Ignacio Lagoon, Baja California, Mexico.



Oscar Frey

KAPing Humpback whales in Banderas Bay, Mexico. From this external perspective, we can use the size of the boat, its geographical position, and the geographical position of the center of the photograph to provide a scale from which we can measure the size of the whales and their proximity to our research boat.

Oscar Frey

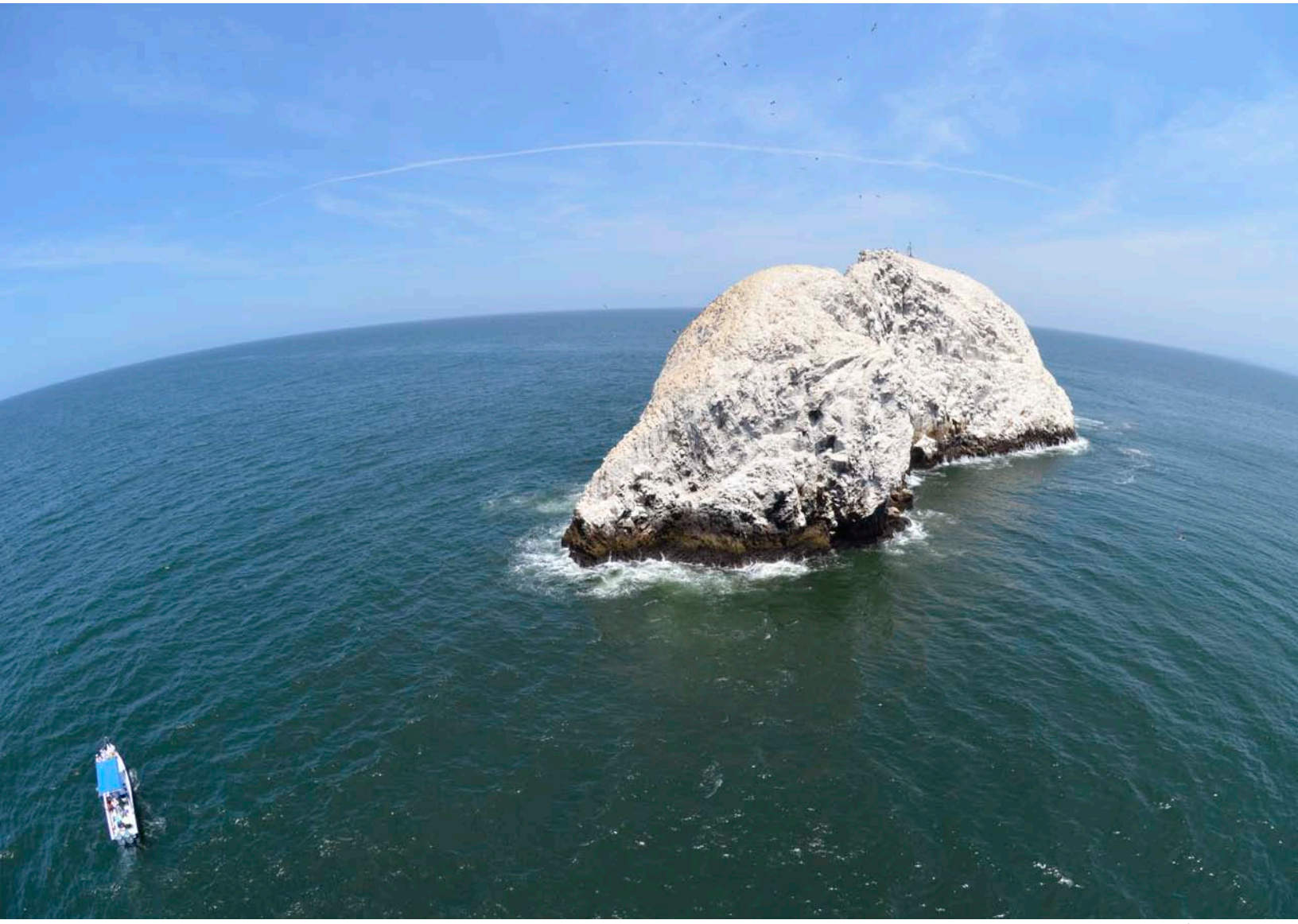
This image was captured when a Humpback whale calf got briefly entangled on a towing line of this sailboat. Luckily he was successfully released as the crew of the boat reacted rapidity to cut the rope loose. You can appreciate the size of the mother Humpback whale ready to do whatever necessary to assist her baby.

Oscar Frey

This is an estuarine environment located on the North Beach of San Ignacio Lagoon. This small estuary has a diversity of mangroves and other flora, and it is a very fragile and important habitat that enhances the health of the lagoon. On this image you can appreciate the desert environment that surrounds this site and on the horizon a 150 foot tall stabilized dune, a volcanic mesa, and the mountain range of Sierra de Santa Clara.

Oscar Frey

This is a drop shot taken over a flock of brown pelicans and neotropical cormorants at the coastal lagoon of Cabo Catoche, Holbox Island, Quintana Roo, Mexico. The drop shot is a unique way to project the camera downwind to reach and document your subject from afar.



Oscar Frey

Documenting a rocky outcrop offshore the Santiago-Lerma River mouth in Nayarit, Mexico. The tectonic origin of this outcrop is related to the opening of the Sea of Cortez. The whitening is guano from birds that feed in the area.

Oscar Frey

Isla Ana, a sandy island inside San Ignacio Lagoon, Baja California, Mexico.

# Kite Safety Is Never Out of Date!

Scott Skinner


Skinner Collection

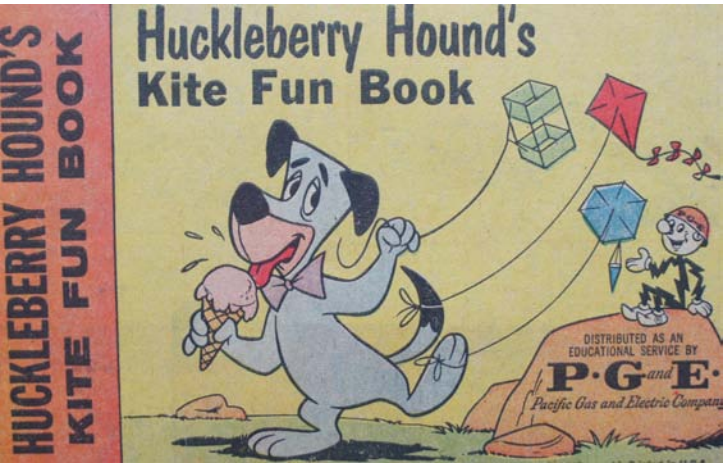
In taking stock of some of the obscure collectibles in my back room, I ran across this unexpected image: a model-worthy woman retrieving a kite from power lines (top image at left)!

It led me to think about my friend, Jose Sainz, who for the last decade or so has worked for San Diego Gas and Electric (Sempra Energy) to put all of these wires underground. One of many reasons for doing so is to keep company personnel from having to do the very thing my German friend is shown doing in the bottom image at left.

A quick look at the Sempra Energy website will show you their commitment to public safety. (I picked Sempra to stay with my friend Jose's company, but looking at your own utilities company will probably lead you to a similar page.)

They say: "At Sempra Energy, our top priority is safety. Nothing is more important to us than keeping our employees and customers safe. Protecting the public from dangerous contact with our systems and assets is an ongoing challenge. Our businesses educate their customers to avoid contact with electric and natural gas equipment, including poles, transformers, pipes, and wires." We've all seen these safety messages on billboards, in newspapers, and even in our utility bills themselves.

But our web-driven and mass media lives have lost some charming relics that came from these


Skinner Collection

same companies over a half-century ago. Two examples come from Pacific Gas and Electric (PG&E) in 1960 and 1961. *Porky Pig's Kite Fun Book* and *Huckleberry Hound's Kite Fun Book* were distributed by PG&E to promote safe kite flying, and each creatively detailed the dangers of flying near power lines as well as flying during thunderstorms. Both booklets have their namesakes leading the process of making a two-stick diamond kite with helpful commentary by PG&E's Reddy Kilowatt. In addition, each details construction of a "plane surface kite" (barn door kite), box kite, and star kite.

As I've pursued an artistic interest in three-stick kites, Huck and Porky's plane surface kite is of particular interest to me. It shows construction and bridling techniques of the day (early 1960s), when wood and paper were still the materials of choice. In both booklets, techniques for tails are given, from bow-tie tails to cones to disco balls (okay, not really disco balls, but 3D cardboard discs that might be really effective). Both also give would-be kitefliers the idea of "messages" or simple line-climbers for additional fun.

Now it's time to see if we are all the kitefliers we think we are. Here's a quiz from *Huckleberry Hound's Fun Book*.

(It's True/False, so you've got a pretty good chance at passing!)

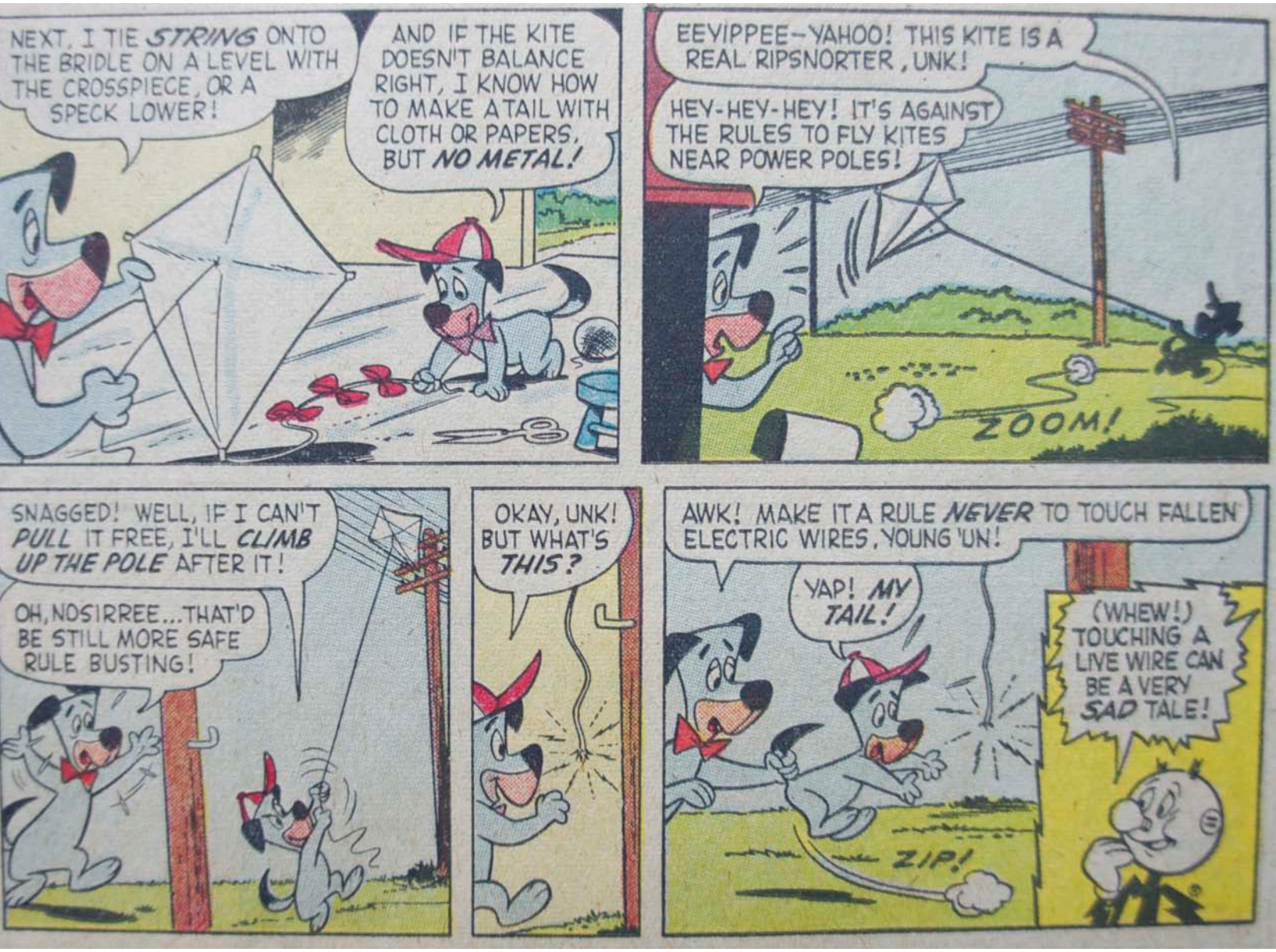
True or False:

1. When running with your kite, don't cross streets.

2. As long as you're standing in a puddle, it's safe to fly your kite in the rain.

3. It's safe to use just a little metal in your kite for strength.

*continued on page 50*

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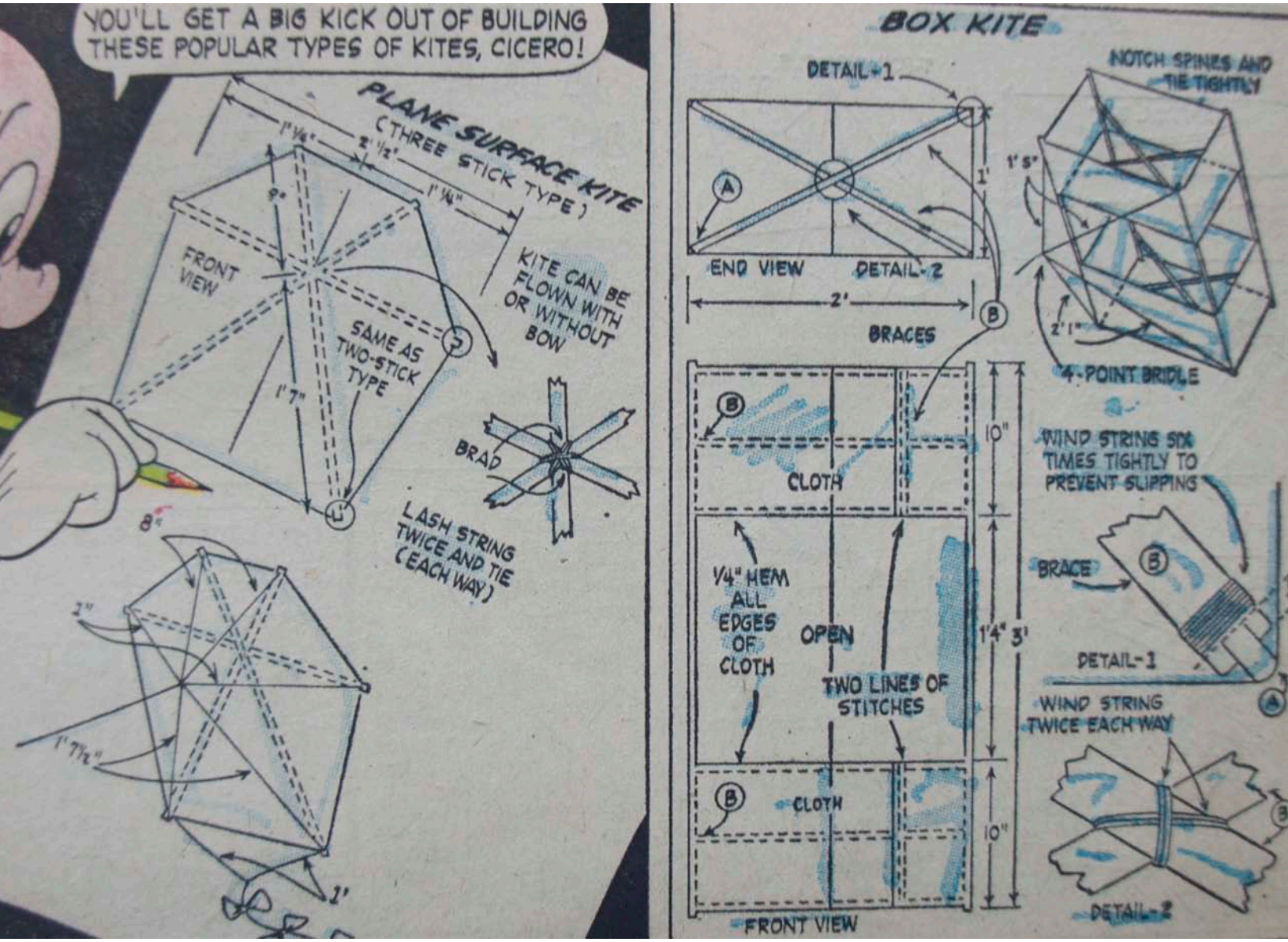


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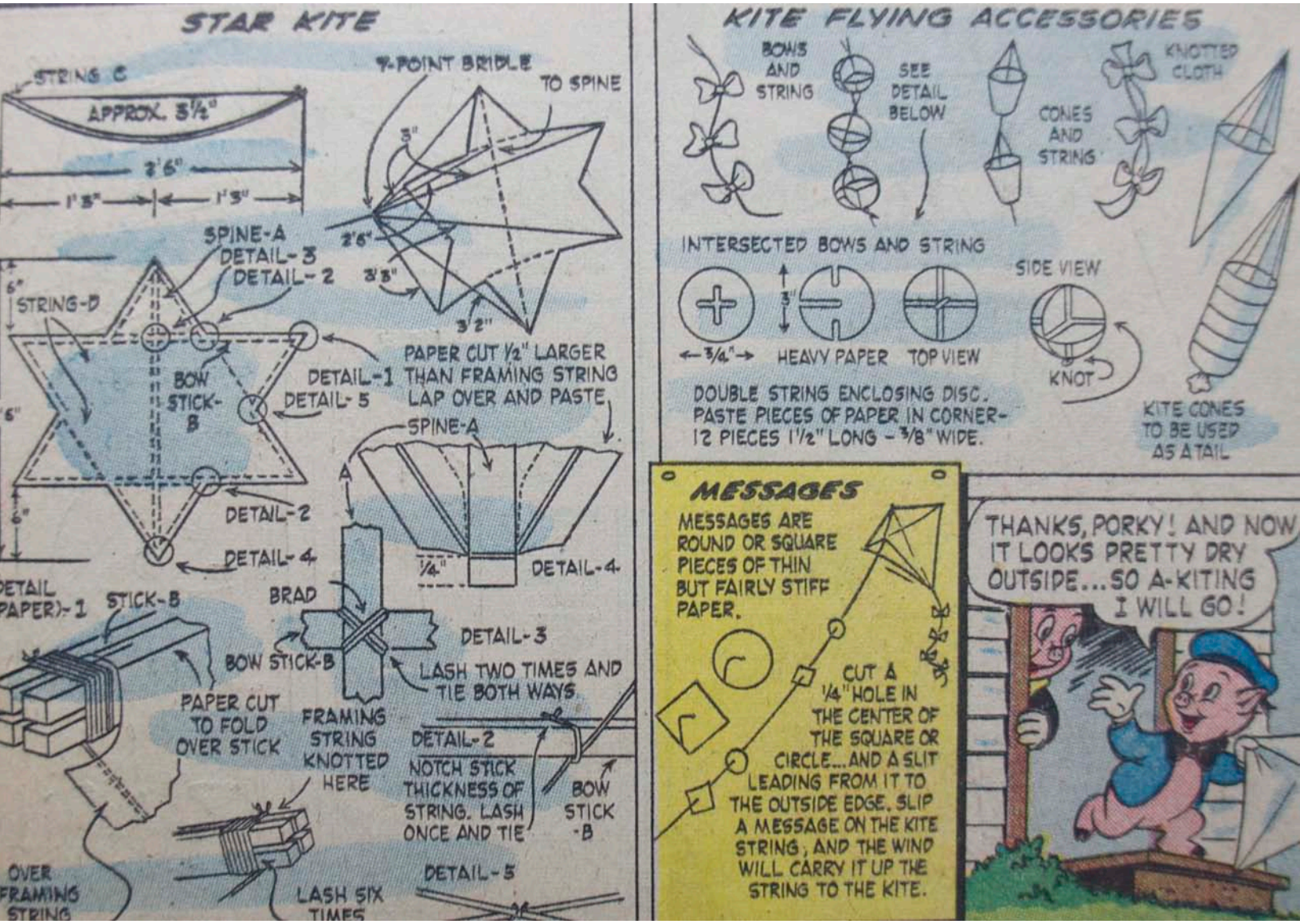


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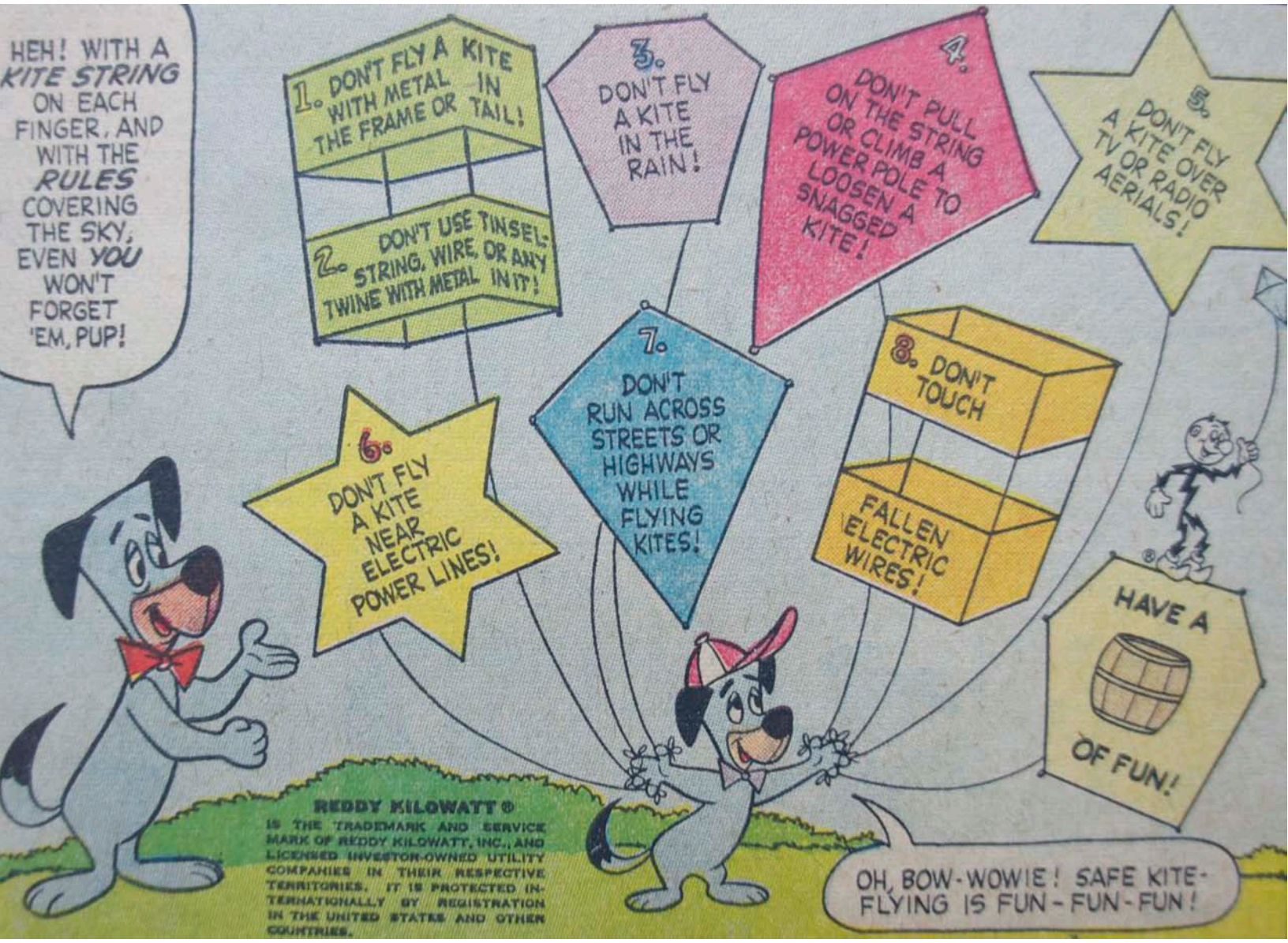


Skinner Collection

4. It's dangerous to fly your kite near electric power lines and TV or radio aerials.

5. If you find a fallen electric wire, tie a knot in it so the electricity can't escape.

Hope you got 'em all right! You'd rate a "Tops" on Huck's Kite Pilot Safety Meter!

These little relics are from a much simpler time, but they serve to show the creative way that power companies promoted safety in a time before video games, the Internet, and social media. While I'm not sure these would ever be considered valuable artifacts from the past, it's sure they served a valuable purpose and today can be a source for humor, semi-serious kite study, and a reminder that safety is never out of date. ◆


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