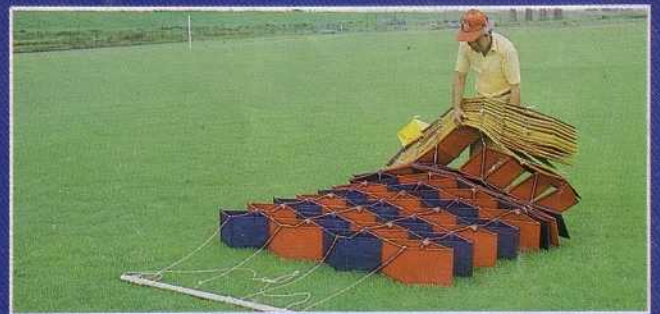
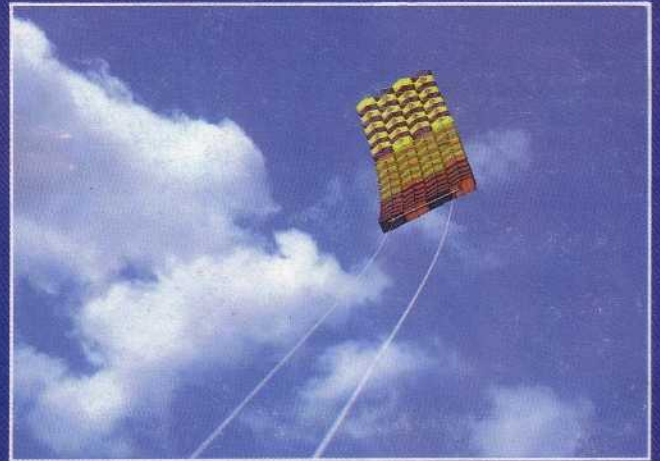
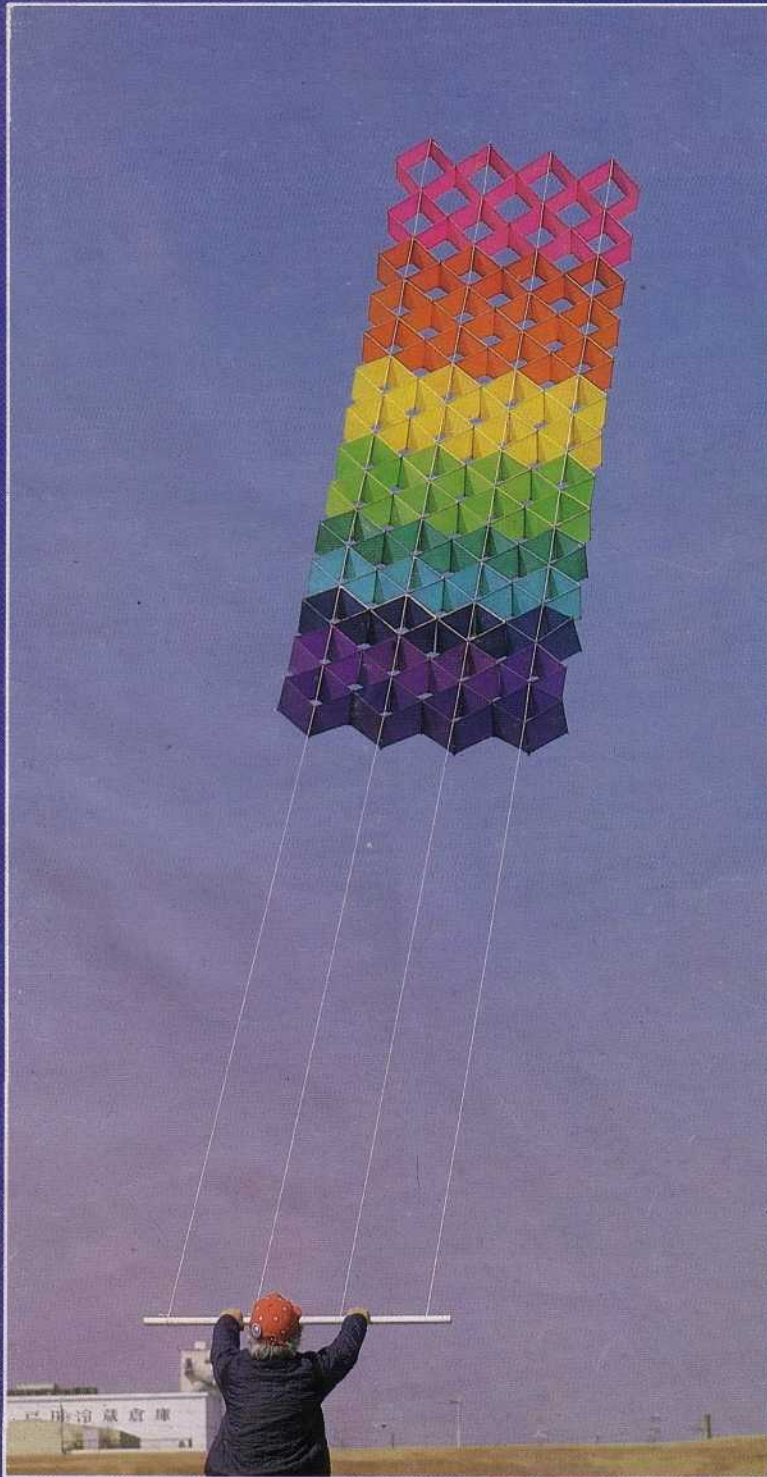


KiteLines™

\$ 2.50
SUMMER-FALL 1984
Vol. 5 No. 2

quarterly journal of the worldwide kite community



**Stairways to Heaven
built by Eiji Ohashi**

**Small Wonders:
The International Exposition
of Small Kites**

**A Counter-Rotating Innovation
by Thomas B. Caldwell**

**New Directory
of Kite Clubs**

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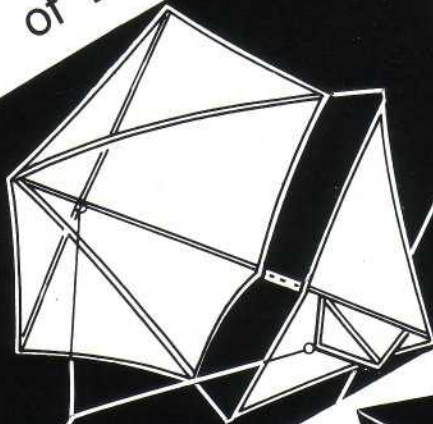
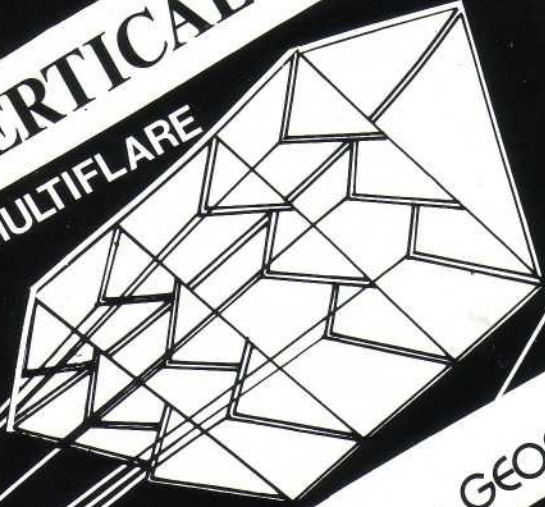
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The Expandable Box Kites of Eiji Ohashi are among the most arresting and innovative of modern designs. Each kite is made of many cells joined together with string hinges to allow the kite to open out like an accordion for flight and then fold flat for transport and storage. Discover how Ohashi makes his "Rainbow" and "Empire State Building" on pages 27-29 of this issue. Photographs courtesy Eiji Ohashi.

KiteLines

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succeeding *Kite Tales*

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Kite associations and clubs are located around the U.S. and the world. *Kite Lines* works for and with all of them and maintains an updated file on them. Write for information about your nearest group.

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Letter from the Publisher

It isn't often we can tell you news like this. On May 1, 1984, the International Editorial Design Forum selected *Kite Lines* for one of 100 awards given to magazines for excellence in editorial design. An exhibit of the winning entries was held at the Viridian Gallery in New York City from June 26 to July 14, 1984. Among the winners were such noted publications as *Architectural Digest*, *Audubon*, *Esquire*, *Fortune*, *Geo* and *Time*.

The award was received for our publication of Oscar Bailey's panoramic photograph of the 1982 convention of kitefliers in Detroit, MI. The judges spoke of their fascination at seeing so much color and invention within one photographic frame.

We are delighted to share our pride in this with you, our kiteflying friends, who are always a part of anything we do. In many ways, this is an award for *kiting*.

To paraphrase George Orwell in *Animal Farm*: "All magazines are different, but some magazines are more different than others." *Kite Lines* is certainly not cast

from any mold. And there are no experts to "consult" for advice on it.

One way we are different is our size/quality ratio. From the first, we have published to a standard of excellence that goes well past what a journal of our circulation is expected to support. Small specialized medical journals are an exception because they can be priced to suit their role in improving expensive services. *Kite Lines* isn't meant to be an income-enhancer. Most of the value of our magazine is rather diffuse, residing not in clear-cut specifics but in cumulative effects—many articles, many drawings, photographs and researches—many little tasks and efforts to do things right, over and over again, building over time. And all this—this thing we call the magazine—hangs from the smallest-pound-test financial line you can imagine. Thus we value each issue not only for its own existence but for its linkage in the chain, its added increments to the body of kite knowledge, its new impressions on our minds and hearts, its confirmation of the longterm vitality of the magazine—and of

kiting itself, which the journal mirrors and nourishes.

We're different, yes. Not only for our quality, we're different because we have an unusually close, personal relationship with our readers. You ask us questions and we try to find answers. You want to find a kite or a person and we point you in the right direction. You tell us how you feel about kites and we understand.

In addition, you pay us a small sum to do our work and we try to produce the best value we can for your money. It isn't easy with today's escalating costs. For example, postal rates are about to jump again, by about 20%. Paper is getting scarce—and higher priced. The costs of many services we buy have gone up. Yet our subscription rates have been the same for *five years*. Obviously, we cannot continue this way and expect to be here for another five years (or longer, as we plan to be). So, no surprise, we are raising our rates with the next issue of *Kite Lines*.

And here's another thing that makes us different. We are willing to let you come "inside" the magazine, to understand its operations, problems and delights as much as possible. An example is this price rise we're telling you about right now, in advance. Reading this, you have the opportunity to renew now at the old rates. We are not screaming this news or using it as a way to hype subscriptions because, frankly, we are not terribly eager to obtain subscriptions at the old rates. But to you who are friends of the magazine we feel we owe some consideration. You could call this a holiday offer, if you like, and use this as a good-buy gift for a friend or yourself—in the interests of simple thrift. Or you could renew to show us you care about this magazine. That would please us very much.

For we are different. We are sensitive to every piece of mail that comes in the door, to every phoned-in charge-card order, too, because to us these are friends talking to us, just as much as friends we meet on the kite field.

To find out when your subscription runs out, see the top line of your mailing label, which tells volume and issue number. We will appreciate when you renew that you are renewing a commitment to kiting and to its leading voice.

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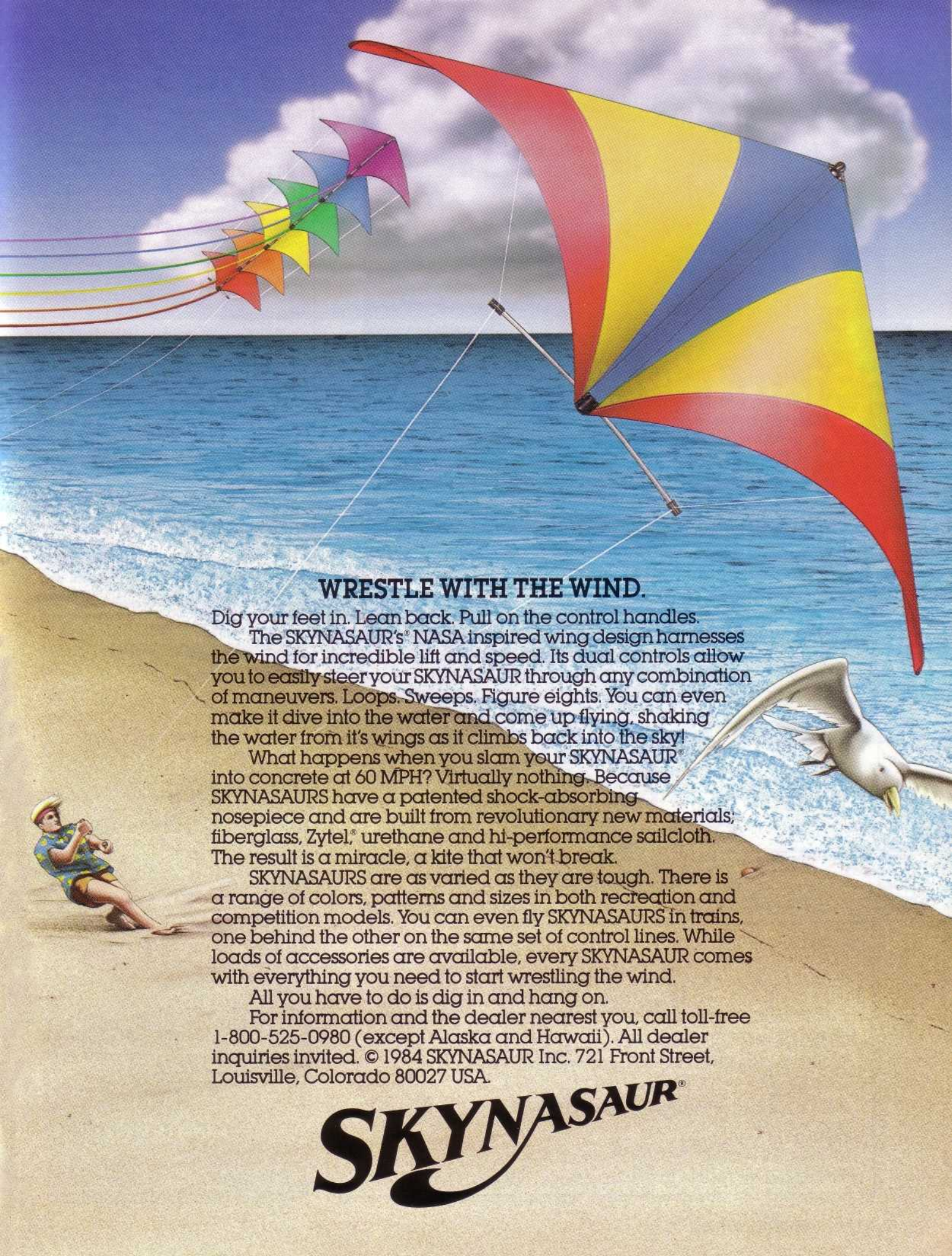
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Letters

SHATTERING EXPERIENCE

I'd like to relate an experience I had last weekend which left me absolutely shattered. Somebody could very well have been killed.

I was testing a proven design, but one on which I hadn't set the point of attachment for the front bridle leg, because it was the first time out. The kite was a clipped-wing delta-pilot, only four feet long with roughly the same span. After a few trial flights up to 150 feet or so, I thought I had the bridle set pretty well. The kite was flying stably at a high angle in a good wind for testing—strong, gusty and turbulent. Clouds were racing overhead at perhaps 80 mph.

Now, in this valley, the wind velocity often decreases at higher altitudes, so I felt confident to let the reel go and try a bit higher. I began to think I'd have a job getting this one down—it was taking out line too fast. Although I had gloves on, I couldn't hold the line. I let go again and the reel roared in my left hand, burning my fingertips. Either the bridle had slipped or the kite was caught in a tremendous gust. I don't know which, but I suspect both. The kite went into a highspeed power dive, pulling the line constantly, the reel roaring. The kite never righted itself, and the reel, spinning like a gyro, was yanked off my left hand, all 3½ pounds of it. It bounced along as if shot from a catapult and smashed into the stone wall over the lane below. It hung there for an instant, still spinning, and before I could reach it, it went over the wall and smashed into the front of the stone house on the opposite side of the lane. Then, with the line over the TV antenna, the reel started swinging in huge arcs, smashing into the lower part, then the upper part, of the house (narrowly missing the windows) then the gutters (which I thought would surely come down) then the old slates of the roof. It was flying up and smashing down noisily, wildly, all over the roof, and the next instant it was somehow orbiting the TV antenna, going around and around. I thought it was surely going to tear the aerial loose when the line finally severed and the reel flew up into the air, soared over toward the next house and crashed into the garden 50 feet below the rooftop. Thankfully nobody was hurt and damage was luckily nil.

The reel is a write-off, of course, but I am keeping it as a reminder. *Continued...*

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Letters

... Continued

In hindsight, I realize that there was no way I could have cut the line during the incident. It took two hands to hold the reel when it wasn't spinning. Perhaps when it was spinning I might have been able to chop it with a large knife. But I also realize that a different reel, one with a strap that tightens on the arm and has a handle to grip would have been better in such conditions. I have two such reels, but on that particular occasion I wasn't using one.

I didn't want to think about flying anything except tiny kites for days after that. In fact, I haven't flown any kites at all since that day. But I have tests to do and new designs to sort out and I have promises to keep. So, I suppose I'll be more cautious from now on and try to maintain a constant respect for the awesome power in the wind, which can change so quickly at times, and remember it can be deadly as well as gentle.

Dan Leigh
Gwent, Wales

WORLD'S WORST

You know, I wish you wouldn't keep on referring to "world's worst kite books."

I'm not objecting to unfavorable reviews, you understand; I just feel I could do worse if I tried. Want me to have a go?

"Grasp bamboo firmly with one hand, pocket knife with other. Split bamboo from thicker end. Wash hand. Apply band-aid. Go to hardware store, ask for product to remove blood from carpet...."

If anyone's looking for a sociology thesis, maybe publish-it-yourself kite authors would be worth considering.

John Spendlove
Preston, England

LAMSON AEROCURVE

I am very interested in the Aerocurve kite as developed by the American Charles J. Lamson. Reference page 45, *The Penguin Book of Kites* by David Pelham. There is an excellent photograph, but no dimensions. Is it possible your readers would have any details at all of this kite? My wife and I would like to reconstruct one, but we would want to be sure of dimensions to build an accurate model.

In the photographs, the main longerons look as though they have curvature, so I imagine these would have to be laminated. We realize, of course, that we have set ourselves a mammoth task. But we are at present working on our third Cody, so we

have no illusions as to the work involved.

John Hollingshead
315 Point Clear Road
St. Osyth
Essex CO16 8JU
England

Readers are invited to reply directly to Mr. Hollingshead, but please keep Kite Lines informed of any progress. You are also encouraged to write letters for this column and reply to them through our forwarding services. Any letter to Kite Lines may be considered for publication (subject to editing), so please state "not for publication" if you want no doubt to be left about it. Write: Kite Lines, 7106 Campfield Road, Baltimore, MD 21207.

CLARIFICATION

In the article "Your Line—It Flies, Too" in the Spring 1984 *Kite Lines*, the author and editors tried to present a complex technical subject for our mostly nontechnical readers and we may have created confusion in some of our word choices and illustration captions. For example, Illustration 3 should have been captioned "cross-wind aspect" as distinct from "effective line cross-section," since it is shown relative to the direction of the wind. ◇

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What's New: Kites, Books, Sundries

Kites

By Mel Govig, assisted by A. Pete Ianuzzi and Leonard Conover

ENGLISH QUARTET

From Wycombe Kites of England we received four kites which prove that good things still come in small packages.

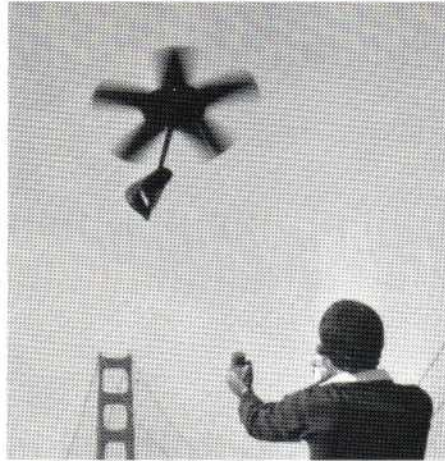
We flew two Wycombe deltas in winds that varied from 4 or 5 to 20 mph. For small deltas, they behaved remarkably well. The Wycombe Scalloped Delta has an inward curve at the trailing edge and a slightly shortened spreader, so that it takes on a very smooth, birdlike aspect in flight. The pronounced dihedral, high aspect ratio and high angle of flight make it very responsive to shifts in wind direction.

The Fringed Delta is just that. It flies very stably, dragged down to a lower angle in winds above 10 mph.

The Wasp is a well made, nicely balanced Malay that proves what we all come back to periodically: a well-made bowed diamond kite with a little bit of tail is a kite that is hard to beat for classic simplicity. After all, it looks like a kite, doesn't it?

The last in the Wycombe bag of tricks was a pleasant surprise. The Super Tube is a ram-air stiffened sled kite, the vertical support accomplished by slightly conical tubes at each side. The Super Tube seemed less troubled by crosswinds and gusts than the other small ram sleds we have tried. In a stroke of justifiable bravado, the Super Tube makes no provision for attaching tail or drogue. We admire that.

There are two things which can crumple the Super Tube into a floppy wad of cloth on the line. The first is running it into another kite or kite line. The second occurs



Press release photo from Möbius makes it look like the package says: "You have complete control." Our testers didn't.

in sudden drops of wind pressure. Like most sleds that don't have the Hornbeam relief at the leading edge, the kite can fold closed and deflate its tubes. No amount of jerking and tugging of the line will reinflate the Super Tube.

IMMOBILE MÖBIUS

If we understand its packaging, Möbius is a trademark for an improbable stunt kite made by Coyote Engineering of San Rafael, CA. If August Möbius were alive today, he might enjoy the use of his name on the acrobatic autogyro. He (Möbius) pioneered "topology" in geometry, the study of twisted forms, and gave his name to the Möbius strip, the so-called continuous plane ring. Like the Möbius strip, the

Möbius kite offers a mental challenge.

After an hour trying in very good winds (10-15 mph), we offer these cautions:

- The maker, Coyote Engineering, does not call it a kite. (Neither would we.)
- Beware of any kite that comes equipped with its own oil can and cotton swabs.
- The Möbius is extremely heavy for its size, made of thick vinyl and other plastics.
- Don't expect Möbius to soar. The highest angle we achieved in 15 mph winds was less than 35° on 50 feet of line.

• We could not fly the Möbius on the line provided. Arm movements required to control the kite had to be exaggerated grossly due to the extreme elasticity of the flying lines. Any orders transmitted to the kite via the rubber-band-like lines took a very long time to reach the kite. Then the kite would react, then overreact, then the flier would react, then overreact, then the line would react, then overreact—but to no avail. By that time, the Möbius had flipped over and was methodically winding the flying lines around the rotor's shaft.

Remarking on it as a stunter, one of our test crew said, "I've got it! The stunt is to make it fly!" We found we could make it fly on Kevlar lines.

Was it fun? Yes, for well seasoned kite-fliers who accept the challenge. Would we do it again? Probably. Would we recommend it? Only with strong reservations.

BETTER-THAN-BASIC BOX

There is a young man with a little red van who has been traveling the East Coast for

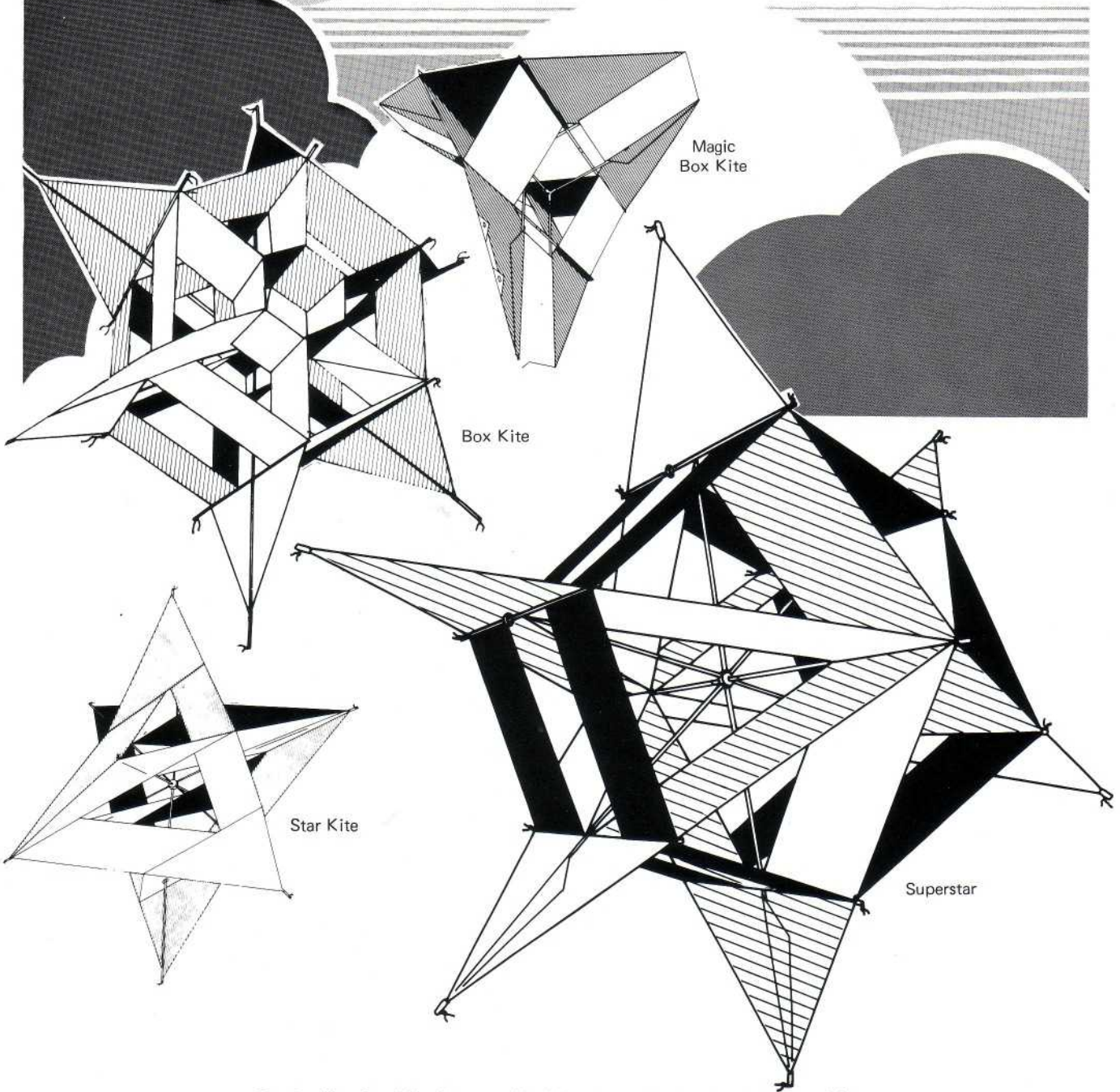
DATA CHART

Name of Kite	Retail Price(\$)	Dimensions (inches)	Weight (ounces)	Major Components	Portability	Assembly Time	Durability	Wind Range	Flight Angle	Ease of Launch	Skill Level
Möbius	24.95	24 x 27	5.2	vinyl, ABS plastic	F	5.0 min	F	12-25	35°	P	S
Tethered Aviation Mini Mite Box Kite	15.95	12 x 30	8.0	ripstop, spruce, birch dowels	E	3.0 min	G	6-30	65°	VG	N-I-S
Tethered Aviation Super Box Kite	69.95	27 x 72	25.0	ripstop, spruce, birch dowels	F	3.0 min	G	6-30	65°	VG	N-I-S
Wycombe Scalloped Delta	15.95	32 x 66	4.5	ripstop, birch dowels	E	1.0 min	G	4-20	80°	E	N-I-S
Wycombe Fringed Delta	10.95	24 x 48	2.0	ripstop, birch dowels	E	1.0 min	G	4-20	75°	E	N-I-S
Wycombe Super Tube	10.95	20 x 20	1.0	ripstop	E	N/A	E	5-20	65°	VG	N-I-S
Wycombe Wasp	9.95	30 x 32	1.8	ripstop, fiberglass	E	1.0 min	E	4-25	75°	VG	N-I-S

NOTES: Retail prices are "advertised" or "suggested." Wind Range (in mph) covers minimum and maximum wind speeds deemed suitable by our evaluators. Skill Levels are: N-Novice, I-Intermediate, S-Skilled. Other ratings are: P-Poor, F-Fair, G-Good, VG-Very Good, E-Excellent.

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What's New

...Continued

the past year asking anyone who would listen, "Try this!" A lot of people who have tried it have bought it: an excellent basic box kite at a reasonable price.

The young man is Dan Flintjer and he calls his company Tethered Aviation. From his home near Buffalo, NY he produces his box kites in four sizes: 8, 6, and 4 feet tall and the Mini Mite Kite, 30 inches tall. We tested the 6-foot model and the Mini Mite and we assume the other sizes are made to comparable standards: drum-tight panels of 3/4-ounce ripstop nylon, sanded spruce longerons, birch dowel spreaders inserted into ingeniously crafted little

holding blocks. The workmanship might best be described as "old world," indicating that one or two people actually make the kites. And the bonus is: they fly as well as they are made. The design itself is nothing new, but there is something to be said for doing an old design well.

For straightforward square box kites, these have no peer, probably because they are made by the young man with the little red van. We hope that he continues to make kites, that he does well—but not so well that he will stop making kites.

UPDATE: THE FLEXIFOIL

Since we first reviewed this maneuverable kite in 1978, it has been through a series

of disastrous marketing problems in the U.S. and Canada. Aficionados who *had* to have a Flexifoil often were driven to make their own—no easy task.

The good news is that the Flexifoil is back and better than ever. Manufactured in Europe with care, this ram-air stunt kite is being imported into the U.S. in sufficient quantities to satisfy the most ardent Flexi-flier.

When Curtis Marshall was introduced to the Flexifoil he predicted it would spawn a whole family of kites. No one should be surprised to learn that the original 6-foot model has been joined by a hefty 10-footer and a monster with an incredible wingspan of 16 feet. Now *that* is what Curt would call a "worthy adversary."

Books

By Valerie Govig and Felix Rosenthal

SPRECHEN SIE DRACHEN?

Drachen bauen by Werner Backes (Ravensburg, West Germany: Otto Maier Verlag, 1984), 128 pages, softbound, no price indicated.

Until this one, the only kite books in German I was aware of were translated from other languages, foremost among them Pelham's *Penguin Book of Kites*. Kite flying simply has not been a widely practiced sport in Germany. There have been some beginnings lately (new shops opening) but in the book there appears only one name (*Der Drachenspezialist*) where Germans can find the proper kites and materials—mostly imports from the USA. By and large, kites are still thought of as quaint 19th century toy holdovers, somewhat on the order of hoops or scooters. Unlike England and France, where the army experimented with "war kites" for observation purposes, Germany never did. Instead, they opted for *der Drachenballon*, which, once in the air, flew a little like a kite.

Despite all of the above, the book is well organized and contains a wealth of information. It acquaints the reader with the basics, shows general structural detail, lists knots, tools, materials and special tricks. Precise and lucid graphics supple-

FELIX ROSENTHAL is a long-time kite-flier, having instigated kite races across the San Francisco Bay in the 1960s. Felix Rosenthal is an architect, once retired, now practicing again in California. Felix Rosenthal is an author, having written The Paper Airforce Training Manual in 1979. And Felix Rosenthal knows books. For twelve years he lived in Switzerland and conducted his family's antiquarian book business, specializing in texts relating to flight.

ment easily understandable explanations which are further illustrated with many photographs, including 16 pages in color.

Special mention must go to the construction of the book itself: the quires are sewn and the cover glued over a cloth strip, thus insuring durability and allowing the book to lie flat at any page that is opened.

Directions for construction are divided into subheadings by type: sleds, flat kites, dragon kites, demountable flat kites, dihedral kites and, finally, "kites for people in a hurry." There are 34 different models, each one presented with great clarity. A last chapter deals with terrain, games, multiples, messengers, trigger mechanisms and, rather vaguely, aerial photography, and also describes the author's crowning achievement, a 20-disk centipede kite. Structural details for the latter include radii and spacing, as well as clever use of cane and short pieces of drinking straw for closing circles and making joints at right angles.

There are also some things about the book which we did not like. Although there is a table of contents, there is no index and, far worse, there is no bibliography! The author made all the kites shown, but gives no sources from which he got the designs. He does identify the types (Rogallo, Peter Lynn, Conyne) but omits credit due to other books. The only other publication mentioned is the *amerikanische Drachen-zeitschrift Kite Lines*.

On page 16, a wonderful little contrivance is shown with which to fix multiple bridle points. *Die Dosenklemme* is a small plastic sleeve with a screw in its top: the strings are inserted and the screw is tightened on top of them. The item is a stan-

dard European electrical connector but has not, to my knowledge, crossed over to the United States.

To sum up: a nice book for German beginners, but not a volume I would consider a must in a kiteflier's library. F.R.

GREGER FOR EVERYONE

Kites for Everyone, by Margaret Greger, diagrams by Madel Greger (Richland, WA: self-published, 1984), 136 pages, indexed, softbound, \$10.

It's not easy counting the kites in this book, but there are at least 39, of which 14 are new, representing Margaret Greger's 15 years of experience with classroom kites. As such, the book summarizes a type of kitemaking that for sheer quantity may be without equal.

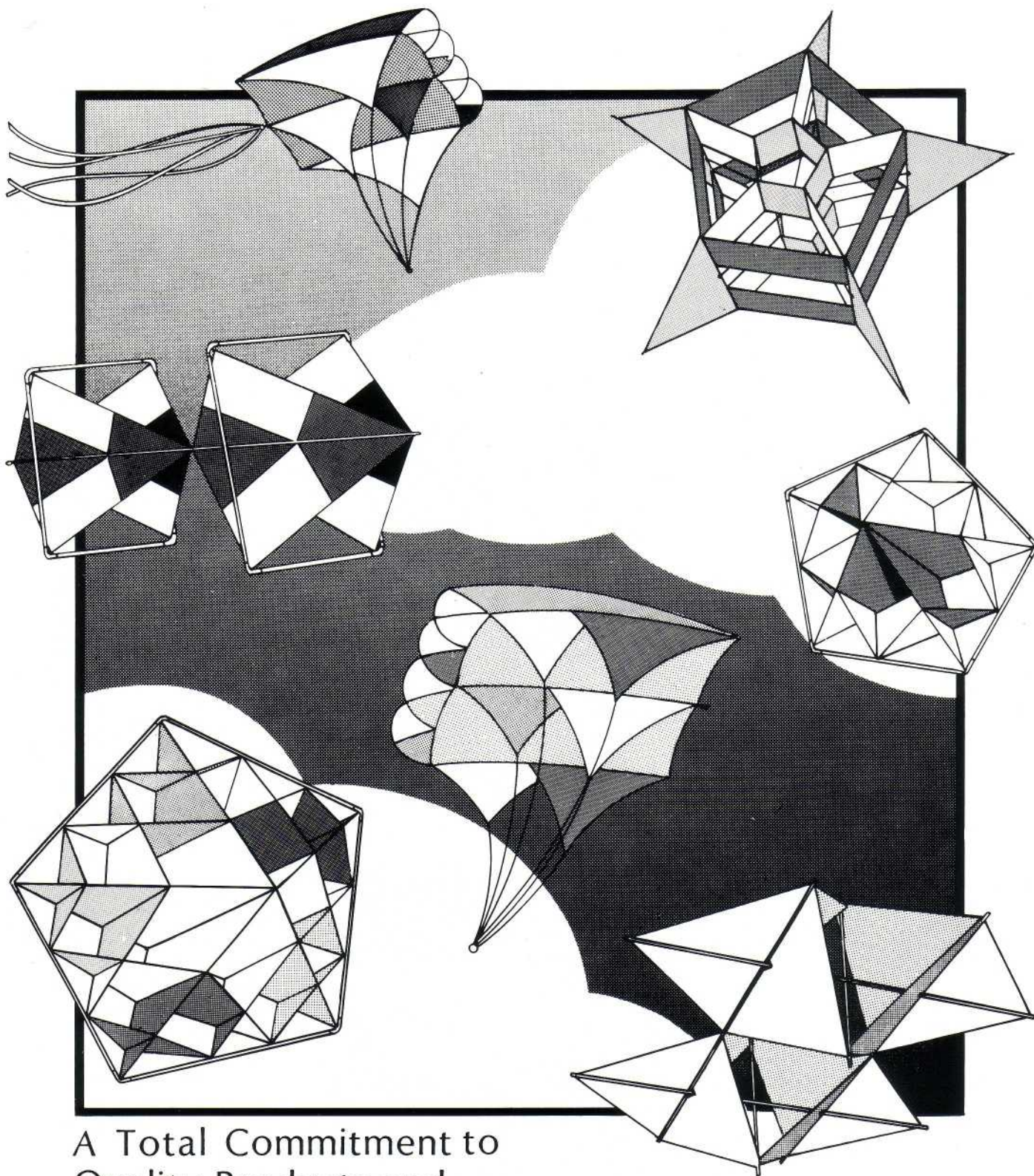
A big part of the author's impact has been felt through her books, which have gone much farther than could her personal teaching alone. Three little books at \$5, \$2 and \$4 preceded this latest one and have been among the best-sellers in the Kite Lines Bookstore. Now those three books have been gathered under one cover—and a prettier, color cover at that.

But okay, so what's new in this book? Well, there's Bill Lee's Trashbag Delta and Box Kite, with an interesting wrap-around bridle; the Conover Eddy in plastic and fabric; Leland Toy's Eddy Bird; the Harpers Ferry Delta; Tony Cyphert's Delta; Stephen Robinson's Facet Kites and John Loy's Swallowtail Sled—to mention some chief examples.

Also the book has new tips on construction and accessories in the sections on tails and drogues, cutaway appliques, windsocks and a windspinner.

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What's New

...Continued

one is already known to *Kite Lines* readers. What Greger does is make these kites—even some rather complex ones—simple or close-to-simple for her main audience, fourth-grade teachers.

My personal choices for favorite parts were the first 10 pages of general introduction and the last page, "Classroom Preparations in Brief"—words to live by. I love her Clothesline Kite Museum (every town should have one) and I appreciated many bits of helpful information here and there, such as the explicit description of

how to use dressmaker's tracing paper in kitemaking. I admired the rigorous review and updating she made of her previous books; for example, she gives new standard lengths for crepe paper and the use of fiberglass rod as an alternative to reed.

A major strength of the book is the new and superior illustrations by the author's daughter Madel. With a few exceptions, the drawings are clearly done and cleanly printed. There's a glossary and a bibliography (too brief, but better than none) plus a resources list and (hurrah!) an index.

There are weaknesses, of course, as in almost any book. Bridling isn't adequately

handled and the text leaves one wondering if bridles ever have more than one line.

"Braided fishline" is referred to but different traits of nylon and polyester are not explored, nor are monofilament's particular pluses and minuses described.

Greger's frequent reliance on butcher paper for kitemaking is practical for schools but leaves the rest of us wondering what alternatives would be suggested.

For treatment of bridle points on sleds, Greger shows several but makes no comparisons to point out that one type is preferable for large groups of children—important for her audience.

The Stapled Hornbeam Sled instructions are outright confusing.

Crystal clear wording is not always in evidence. Greger's *Kite Directory* should have been called *Kite Ratings Index*—or, more usefully, the information should have been placed next to each design to highlight the three concerns: wind level, ease of building and ease of flying.

There's a kite she has called the Vietnamese Bag Kite (must one first obtain a bag from Vietnam?)

Typos were few, except that Hargrave's name was misspelled three times out of four. Which raises the question of why a former Linotype operator chose to use a typewriter to set the book's lettering. Old Linotype machines must be hard to find.

That there are no photographs except on the covers is a loss—not just of eye-appeal, but of information and verisimilitude. With only plan drawings to look at, a reader needs a real act of faith and imagination to believe in these kites. And even *one* picture of a smiling child making or flying a kite would have put much more appeal—the evidence of results—into the hands of a prospective book buyer.

Questions about typesetting and photographs are ones a book designer would ask, so perhaps we are talking about the general design of this book. With a small book nobody thinks much about design, but a "big" book asks to be taken seriously. The flatness or lack of design in this book is a flaw and makes the \$10 price tag seem high. Not that it's unusual for almost any book these days, but only that Pelham's well-produced *Penguin Book of Kites* at \$8.95 is now the greatest bargain available in kite books. Pelham has no competition here.

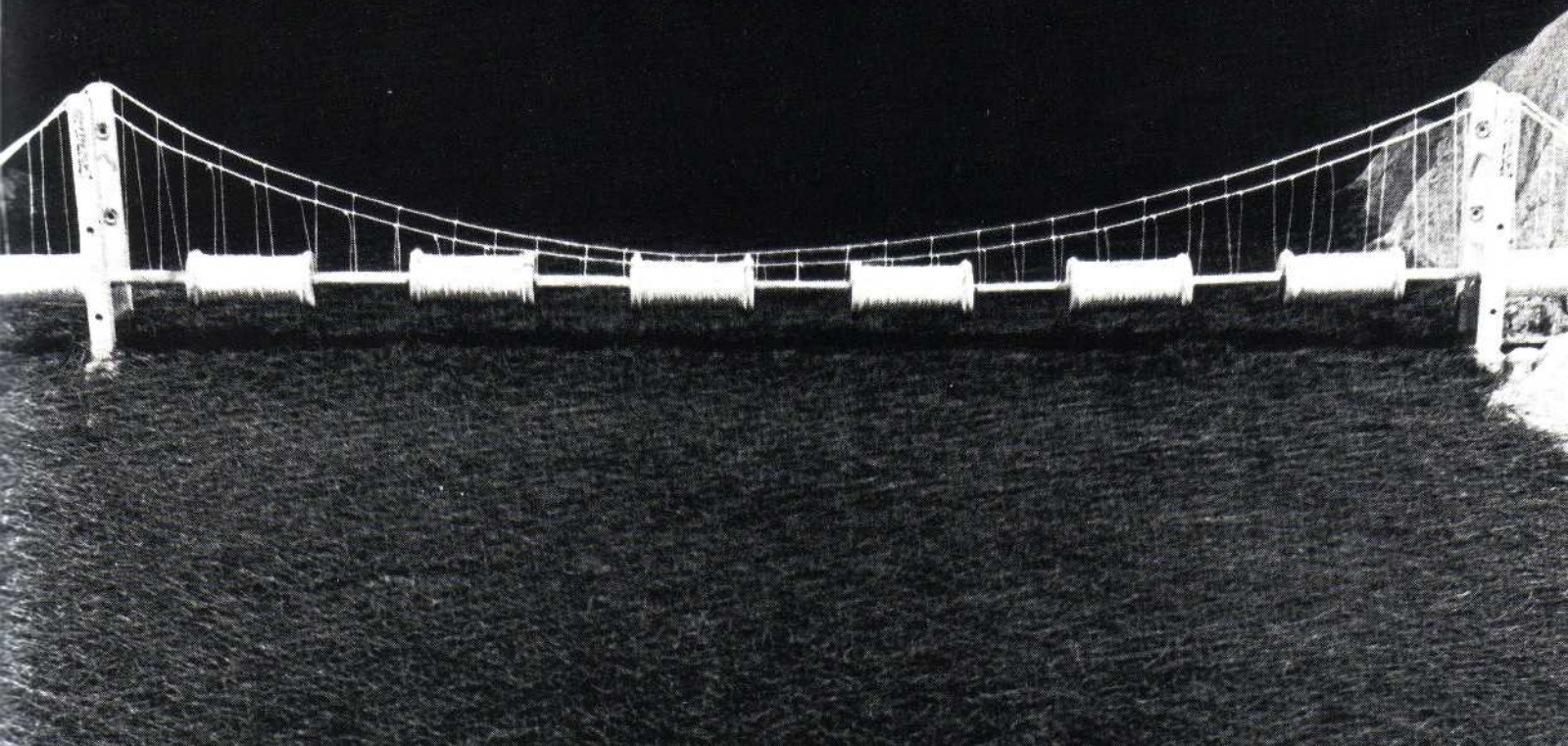
On the other hand, if one has to accept flaws, then appearance is certainly less important than information. Erroneous writing has been a plague in kite books recently. Margaret Greger does not have it in her nature to write anything she does not *know* from direct personal experience. This is a solid book. *Continued...*



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What's New

...Continued

Greger says: "My real goal in all this is not more kites or even better kites but competent kids, people who know that the work of their hands will fly."

Not the kiter's usual view. We could all learn from Margaret Greger. V.G.

FROM TOY ON TV

Flight Patterns, by Leland Toy (San Francisco: self-published, 1984), 33 pages, softbound, \$5.

Since 1978, Leland Toy has been putting out *Kite Flyer: The San Francisco Bay Area Kite News*, a bimonthly almost as ingratiating as Lee Toy himself. In 1982-83 he made an 18-month motorcycle tour of the United States, stopping at the homes of kite friends along the way. He managed to carry his kites and his mailing list with him so that he could keep putting out his newsletter direct from the road.

While in Lexington, VA, he and Perry Fitzhugh, a local kiter, were asked to host a television series on kitemaking. This booklet is an outgrowth of that series.

The eight kites in *Flight Patterns* are presented in order of construction difficulty from an easy sled to a taxing fighter. In between there's a delta by Bill Lee; a

near-classic Eddy; a Red Braswell rotor; a Swallowtail delta variant by Perry Fitzhugh; a Rocket (Conyne kite variant) by Grant Madill; and a rhomboid box, based on Brooks Leffler's version of the Robert S. Price design. The drawings are clear and well detailed. Knowing that all the kites were made and flown in front of a television camera inspires reader confidence.

But why attach tails to sleds that don't need them? (If for decorative effect or high winds, why not say just that?)

Why protract the myth that attributes the delta kite's origins to the Rogallo Flexikite? (Les Phillips of the Gayla kite company has been good enough not to grumble about this myth.)

Other minor glitches in the book are the location of page numbers in a non-standard jumble and the lack of professional page trimming. These are more than offset by the stylish one-color cover by Carlos Marchiori and the attractively laid-out drawings. The book is remarkably free of serious errors, even of typos.

Of the current crop of kite books, this one ranks as the most boiled-down-to-basics of the lot. It should help fill that slot that was held before by the introductory books of Wyatt Brummitt and Margaret Greger. V.G.

EDDY KITE

INSTRUCTIONS COMPARED

It is interesting to compare the Greger and Toy instructions for the classic three-foot Eddy kite. Let's take a look.

Greger calls for 3/16" x 1/4" sticks. Toy uses 1/4"-dia. dowel.

For skin, Greger specifies "tough, lightweight paper." Toy names Tyvek® "or lightweight wrapping paper or plastic trash bag."

For line, Greger suggests 30-lb-test for building and 30- to 50-lb-test for flying. Toy prescribes only 20-lb-test line for the whole job.

Greger now wants us to glue and lash our sticks at the intersection: real old-school Eddy building. Toy has another idea. He tells us to do the whole kite cover—cut it out and glue down the corners and the bridle reinforcements—then slip the cover under the framing string that we've drawn around four nails pounded into plywood.

Back to Greger. Now we find out that these sticks we've glued and lashed were supposed to be notched. There is no detail about how to notch or how deep. Toy tells us to notch the dowels 3/16" deep using a hacksaw blade. He further advises that the notches be in alignment with one another.

On Greger's kite we now tie the framing string around from point to point before we place the frame down on the cover. After we put it down we glue the flaps over the string all around.

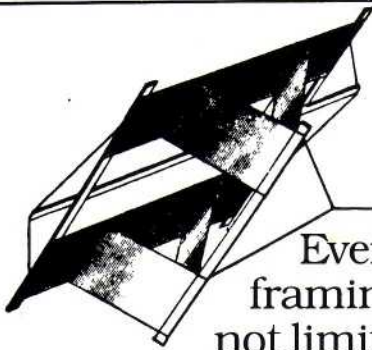
Toy next sketches a spar connector we will make from vinyl tubing. We will bend the connector after we've made a cut halfway through. Two of these pieces of tubing combined make a four-way intersection. Finally Toy tells us to insert the notched ends of the frame into the framing string.

Greger gives no bridle measurements but says that the bridle should be "1½ times the vertical length of the kite." She tells us to attach the bridle at the cross sticks and at the *bottom* of the kite.

Over to Toy for the bridle. He describes and locates it: upper leg at the cross stick, lower leg at a point 7/8" from the end of the kite.

Both Greger and Toy use a clever button bow-string adjuster. Greger's drawing of it is printed five pages earlier, in her introduction to the Eddy; Toy's drawing is with his kite plan and has more description and detail.

Is there any "best" Eddy? What does "classic" mean in relation to Eddys? May the debate continue. V.G.



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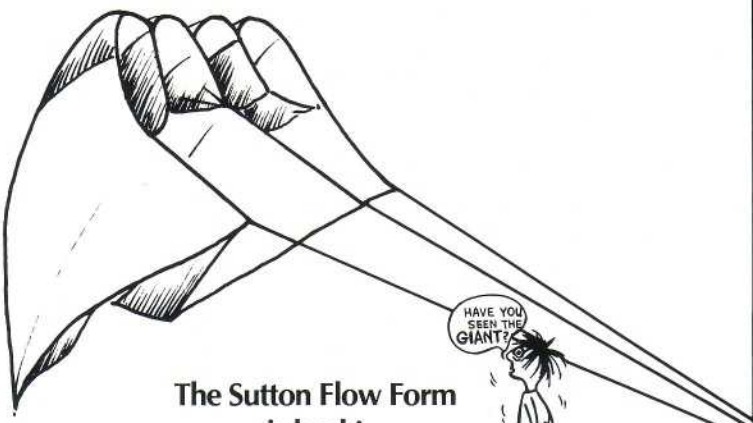
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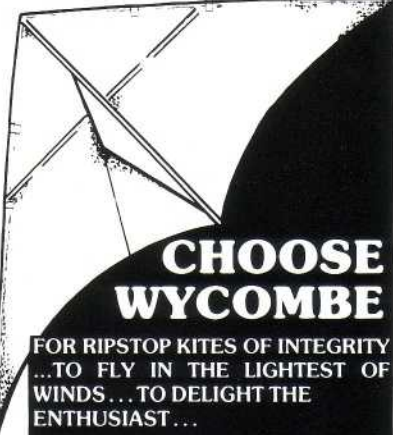
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We've noted some trends in kite book publishing to take titles out of print and to hike up prices suddenly. We will try to help stem the tide, but we suggest that if you are a serious collector of kite literature, you will be wise not to delay. Snap up the books you want NOW!



IMPORTS!

From Japan.....*Ship Kites* by Morio Yajima, in Japanese with detailed drawings and 8 pp. of color photos. Softback, 66 pp., \$8.95

Magic Kites—Cubic Kites by Takaji Kuroda, in Japanese with details for the famous convertible boxes and 8 pp. of color photos. Softback, 72 pp., \$8.95

Bird Kites by Shuhei Goto, in Japanese with 36 color photos of lifelike bird kites plus full-size seagull plan. Softback, 72 pp., \$8.95

Kite Trains Making by Eiji Ohashi, in Japanese; many innovations, detailed drawings, full-size plans for two kites and 8 pp. in color. Softback, 56 pp., \$8.95

Bessatsu Bijutsu Techo, Winter '82 special kite issue of art journal, in

Japanese with over 300 color photos and a new cover in a protective clear wrap. Softback, 216 pp., \$9.95

Create a Kite by Takeshi Nishibayashi, in Japanese, 8 pp. in color. Inventive! Softback, 64 pp., \$8.95

The Happy Kiteflier by Takeshi Nishibayashi, in Japanese, 16 pp. in color. Softback, 159 pp., \$4.95



From Australia.....*Make Mine Fly* by Helen Bushell; includes full-size plan for Trefoil. Softback, 40 pp. . . . \$3.50

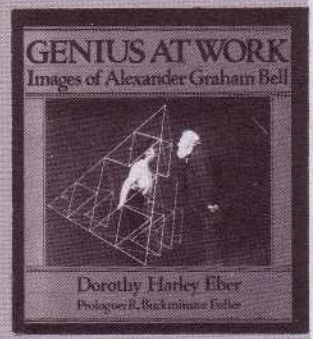
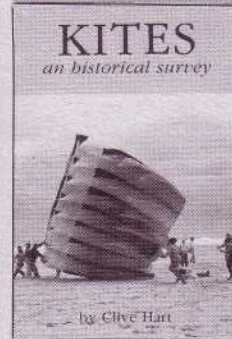
From Bermuda.....*Bermuda Kites* by Frank Watlington; 5 kites and variations; good drawings. Softback, 24pp. . . . \$2.95

From Taiwan.....*Chinese Kites* by Kin Kan and Susan Hsieh; in Chinese and English; 12 pp. in color. Softback, 84 pp. . . . \$11.95

From Hungary.....*Sarkanyepites* by Bodoczky Istvan; in Hungarian; fine drawings; and 24 pp. in color. Hardbound, 207 pp. . . . \$16.95

From The Netherlands.....*Vliegers Zelf Maken* by Harm van Veen; in Dutch; good details; original kites. Softback, 111 pp. . . . \$11.95

From Great Britain.....*Kite Cookery* by Don Dunford; easy kites and theories. A bargain! Softback, 47 pp. . . . \$2.25

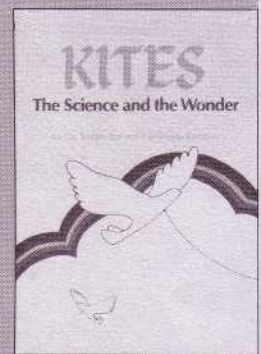


NOTABLE BOOKS

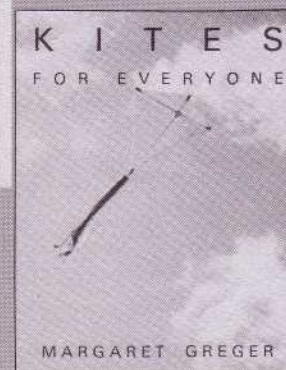
Kites: An Historical Survey by Clive Hart. The recently revised and expanded edition of the definitive history of kites; an invaluable reference work with many illustrations and an extensive bibliography. Softback, 210 pp., \$13.95

Genius at Work: Images of Alexander Graham Bell by Dorothy H. Eber. The rich recollections of Bell and his trials with the tetrahedral kite. A readable narrative combined with 132 classic photographs. Hardbound, 192 pp., \$16.95

Kites: The Science and the Wonder by Dr. Toshio Ito and Hirotsugu Komura. Despite the frail English translation, this book offers more kite aerodynamics than any other in print; many diagrams. Softback, 160 pp., \$11.95



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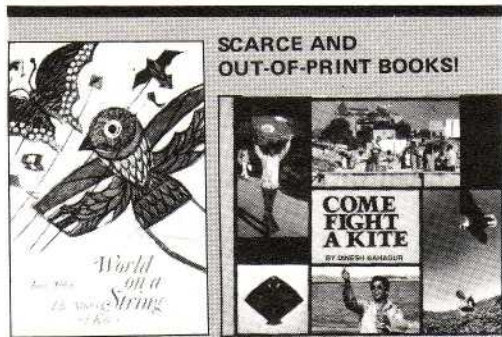


Vented Cellular Kites by Eiji Ohashi; in Japanese, with clear drawings and plans plus 16 color photos for such inventive designs as a clock, sunflower, triangular variations. Softback, 60 pp., \$8.95

Kites for Everyone by Margaret Greger. A well-packed, reliable collection of easy kites for classrooms or beginners. Includes the Flow Form, Corner and Facet kites. Written for the non-kitemaker who wants to become a kitemaker. Softback, 136 pp., \$10

Flight Patterns by Leland Toy; an unassuming, dependable little book with 8 good plans, tips on fundamentals. Softback, 33 pp., \$5

The Kite Lines Bookstore . . . Continued

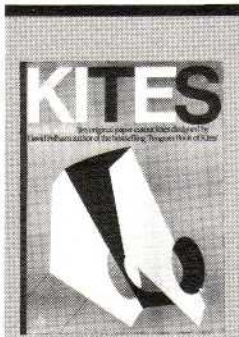


SCARCE AND OUT-OF-PRINT BOOKS!

LIMITED SUPPLY: *World on a String* by Jane Yolen; publisher's last stock of this attractive, carefully written kite history book; many illustrations; 144 pp. hardbound, \$9.95

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SPECIAL SERVICE: We now have certain out-of-print kite books in *very limited quantities*. We cannot advertise them, but if you want a particular title, ask us. Maybe we can help.



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Kites for Kids by Burton and Rita Marks; cute; 127 pp. hardbound, \$6.95
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GREAT CLASSICS!

The Art of the Japanese Kite by Tal Streeter; profiles of Japan's kite artists in color; 181 pp. softback, \$14.95

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BOOKS WRITTEN BY KITEERS

Kites Aussie Style by Wayne Hosking; lots of designs and teaching advice; plastic kites; 120 pp. softback, \$6.95

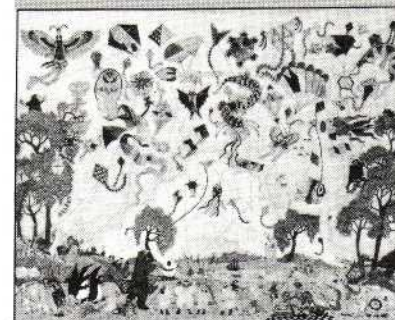
Make Your Own Kite by John Jordan; novel materials; amusing reading; 90 pp. softback, \$6.95

Super Kites II by Neil Thorburn; many drawings; novel techniques; anecdotes; 112 pp. softback, \$7.95

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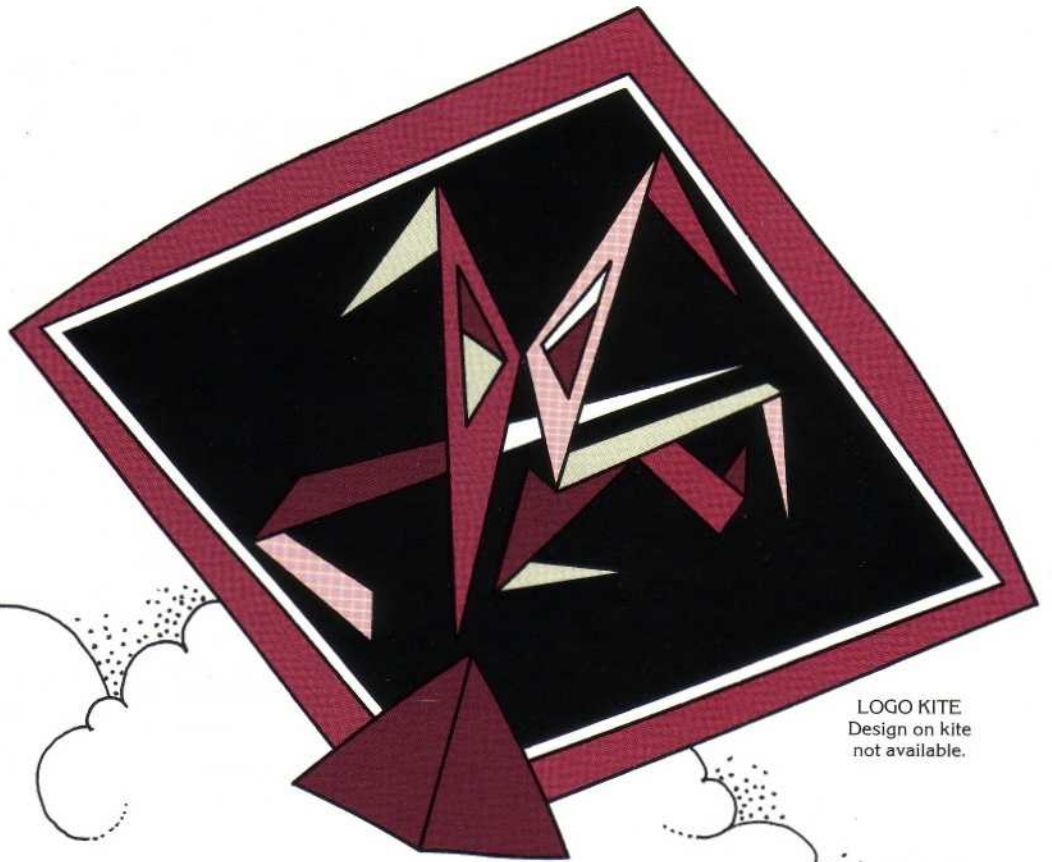


Flying Origami by Eiji Nakamura; in English; clear drawings for 28 fliers plus a photo of each; birds and planes; good inspiration for kitemakers; 64 pp. softback, \$7.95



Kite Postcards from the Japanese Kite Museum; elegant antique woodcut prints in rich colors;

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The Counter-Rotating Multiple-Cell

The CRQSMCBX, created by the mind and hands of Thomas B. Caldwell, appears from the many photographs we have received to be a most impressive device.

Some rather sophisticated construction techniques were used, especially in the creation of the hubs, which maintain the required strength while permitting free rotation of the four units. The larger two units are counter-rotating as to each other and obtain their torque from the use of parallelogram panels between radial vanes; these parallelograms, in effect, twist each radial vane to resemble a propeller blade. The smaller two units, also counter-rotating as to each other, achieve their torque from radial vanes of paper affixed to the circumferential sails in a spiral pattern.

Radial tension adjustments are accomplished by the use of Velcro® strips affixed to each radial spar and to the mating small triangular tip vanes.

A two-leg bridle is attached to the leading tip of the axle and to the tip of the ventral fin or skeg, which is, in turn, mounted on the main axle between the two large foremost rotating units.

The four units rotate at speeds of 10 to 25 seconds per revolution in winds of



Tom Caldwell flies his Counter-Rotating marvel at water's edge near his home in California.

7 to 15 mph, creating a changing montage of colored nylon.

Curtis Marshall
Innovations Editor

Some comments from the designer:

It is a rare kite that requires the owner to bring a grease gun or oil can to the flying field, but this one does. The germ of the concept came from John W. Jordan's "Space Station II" as described in his book, *Make Your Own Kite*, but my finished product is quite different from his.

The kite was built piecemeal. I construc-

By Thomas B. Caldwell

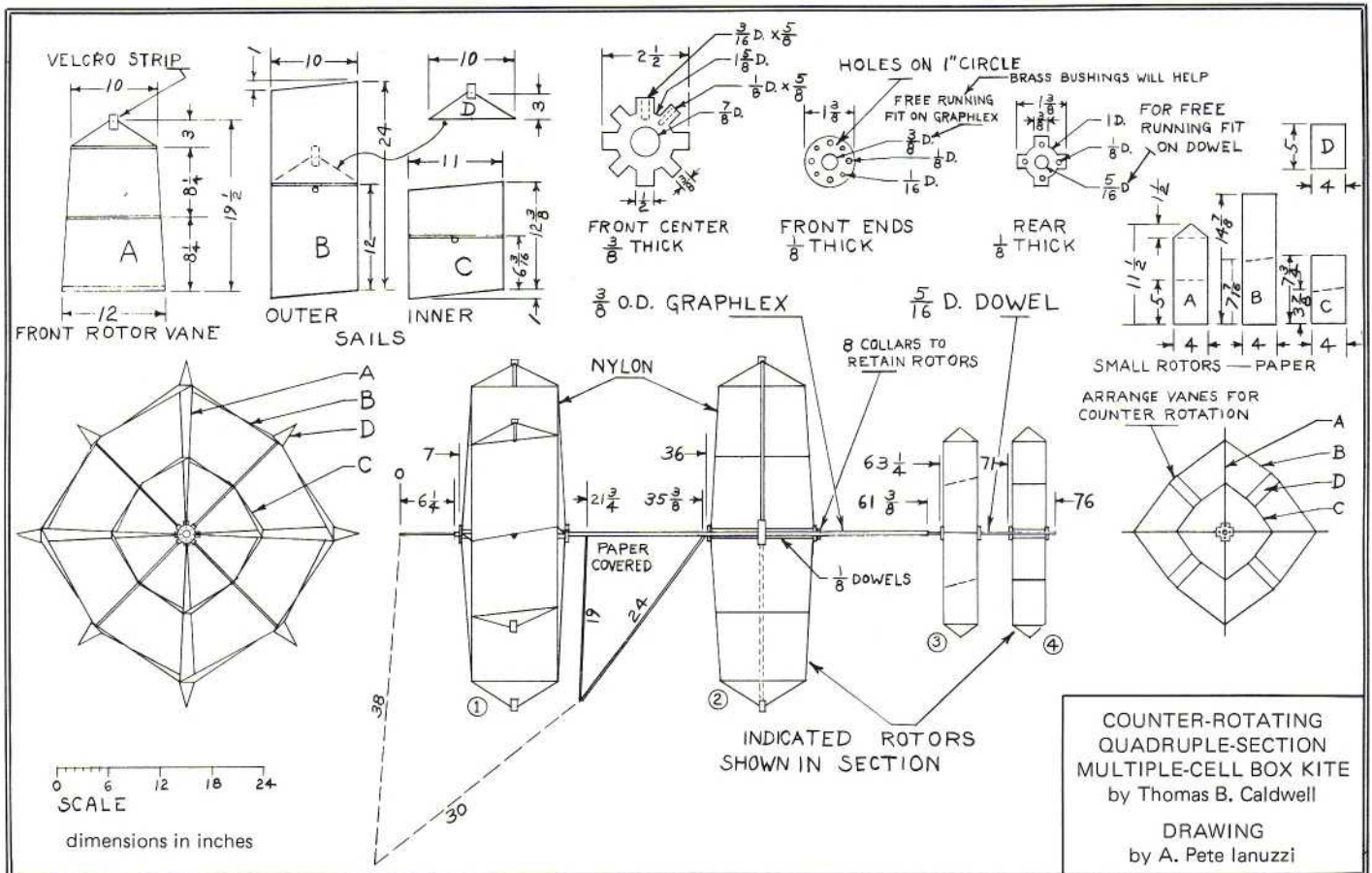
Quadruple-Section Box Kite

ted the two smaller rotors in spring 1982 and mounted them on a ¼-inch dowel rod axle about 20 inches apart. After repeated redesigning of the rotor framework, the fifth trip to the flying field resulted in a successful small kite. I then built the two larger nylon rotors, thinking that all I had to do was enlarge the original design. This was an error! With all four sections the kite flew unsteadily and only in 10-mph winds, and it collapsed when the wind went to 10½ mph. Back to the drawing board and more redesigning of the rotor framework. Rotors 3 and 4 do not have central hubs. Rotor 3 has a double bamboo spar system and Rotor 4 has a perimeter framework similar to that used in Facet kites.

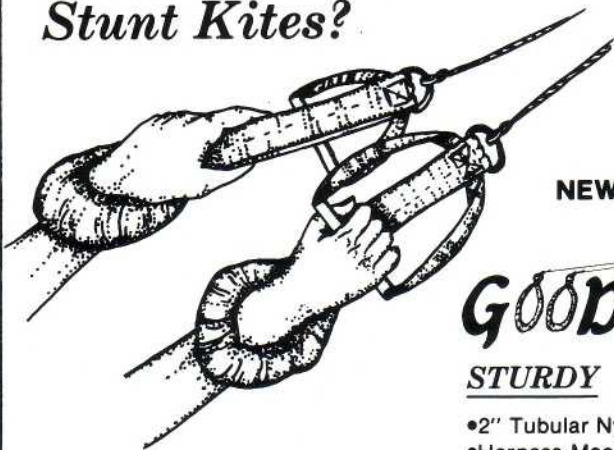
The kite is difficult to build, transport and assemble, but the result has been more than worth the effort.

Thomas B. Caldwell, Judge Ret.
San Mateo, CA

Ed. Note: Although Pete Ianuzzi has drawn rather detailed plans of the Caldwell kite, we do not consider the construction details to be important. A knowledgeable kite builder will utilize the concept rather than imitate the execution. ♦



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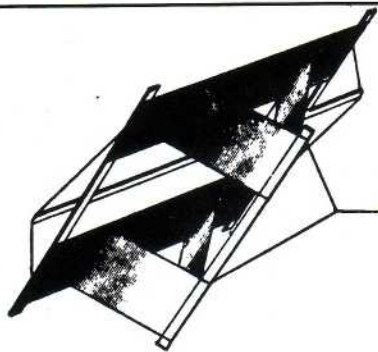
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Stairways to Heaven



built by Eiji Ohashi

Opposite page, about 100 hawk kites soar together; Ohashi bought the kites at a toy shop and made them into a train.
 This page, behind the opening initial, an Ohashi Expansible Box Kite by Oscar Bailey forms a piece of art even on the ground in a photograph by Dawn Norris.
 Below, Ohashi trains of international flags showing their colors and paired birds in poetic motion.
 All photographs except the Norris courtesy Eiji Ohashi.



DO YOU LIKE kite trains? You want to see some of the best? You need to see the trains of Eiji Ohashi.

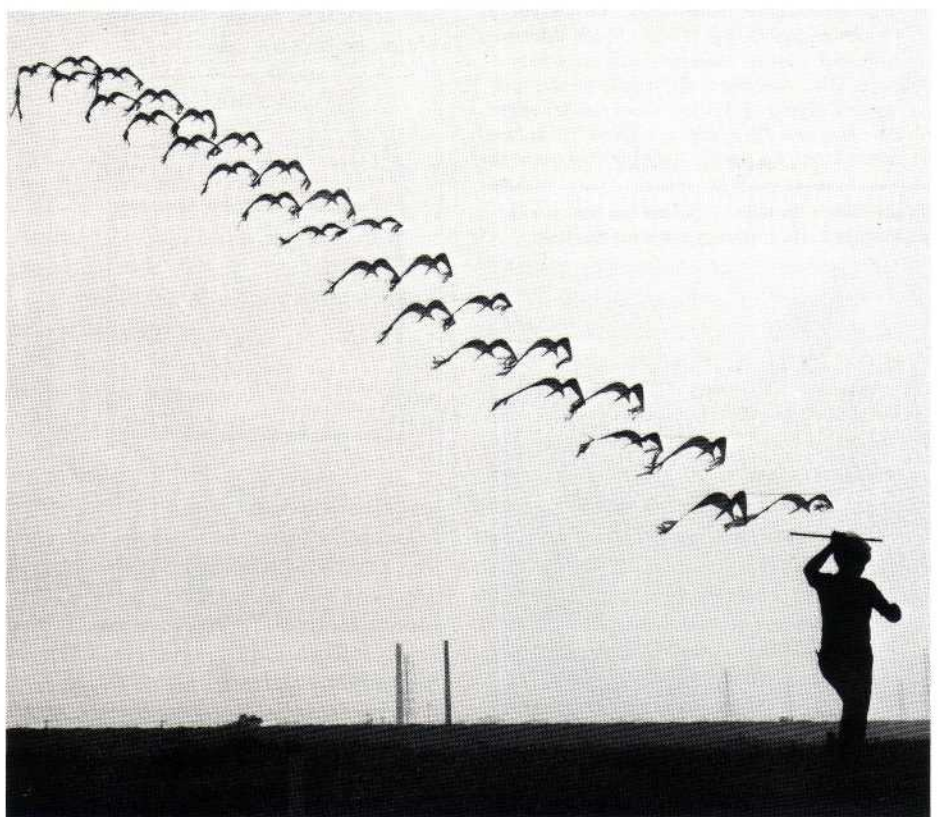
In 1981, David M. Checkley brought the first news to America of Ohashi's kites, which Dave had seen on his tour at a Japan Kite Association festival at Mt. Asagiri. Dave talked about seeing "a train of vegetables, nine varieties from pumpkin to radish, and a train of quintuplets."

Dave also circulated some copies of Ohashi's book on kite trains (subtitled in English *Kite Trains Making*).

Kiters responded with raves. When *Kite Lines* obtained the title for the Bookstore (see page 21), it became an immediate hit and continues to be one of our most popular offerings—despite its Japanese text. The photographs and the drawings, which use metric dimensions, provide adequate help and inspiration to kitemakers of the occidental world.

The book shows 28 types of kite trains, graded from one to five stars by degree of construction difficulty. Starting with triangles and two-stick kites, then going to lozenges, pentagons, trapezoids, airplanes, houses, octagons, hexagons, octopuses, sled-type kites (with stiffened leading edge), cobra-styled "advertising" kites, a "triangle tricolor troika," stars, birds (single-line and paired—using two lines), flags of all nations, linked-in-train boxes—there seems to be nothing in kites that Ohashi has not tried to entrain.

Such ingenuity is partly a result of long experience with kites—and with writing about them. Eiji Ohashi was born in 1931 in Tokyo and began flying kites as a child. He graduated from Tokyo University, School of Agriculture, and thereafter was employed by a textbook publisher as editor of study manuals for junior and senior high schools. He was taught kite-making as an adult by Professor Tsutomu Hiroi. He has made innumerable kites and won many awards at kite festivals in Japan, but he doesn't sell his crafts. He says, "I make kites, write books, teach children or



How Ohashi makes

create new kites full-time." Of course, he flies kites, too, but says, "I have no place to fly kites near my house, so I must drive about an hour to a dry riverbed area." Ohashi has written four books on kites, two of them collaborations. He is also the editor of the Japan Kite Association magazine. His latest book shows 17 types of box kites, using their geometry in fanciful ways—a clock, a flower, an American flag. He uses perforations and cutaway techniques with finesse.

But perhaps the most fascinating of Ohashi's kites is his 1981 development, the most difficult to build (five stars) in his book on trains. It is the Expansible Box Kite (see this issue's cover). Sometimes called the Flying Carpet kite, sometimes the Ladder or Jacob's Ladder, it can be opened out like an accordion for flight and then folded flat again for packing into a small car. By the *Kite Lines* definition of the word *train*, the Expansible Box Kite does not fit the category because it is really a single kite. But its classification in the book hardly matters. The important thing for kites is that the world can see and enjoy this kite.

For a long time, *Kite Lines* has wanted to print something about Ohashi's Expansible Box Kite in English, to allow it a wider appreciation. Ohashi sent us a partial translation and additional translation was provided by James Kagawa. V.G.

REFERENCES

- "Kite Trains: The End Is Not in Sight," a 10-page symposium, *Kite Lines*, Vol. 1 No. 2 (Summer 1977), pp. 17-26. Much information and how-to material, still fully useful.
- Woglom, G.T., *Parakites: A Treatise on the Making and Flying of Tailless Kites for Scientific Purposes and for Recreation* (New York: Putnam), 1896, pp. 45-47. Reliable observations.

Ohashi flies a "smaller" Expansible Box while his Empire State Building waits on the field.



The principle of this kite is that each separate cell is connected to the next by a hinge. The hinge is fashioned with string as shown in Illustration B.

When launched on multiple flying lines, the kite expands, catches the wind and rises, becoming a three-dimensional shape. When stowing the kite, one need only push it at one end and the kite will shrink in height (from 3m to 10cm, for example), making it convenient to carry.

Before starting, read through the complete number of steps to be followed, keeping in mind the general construction principles—then begin.

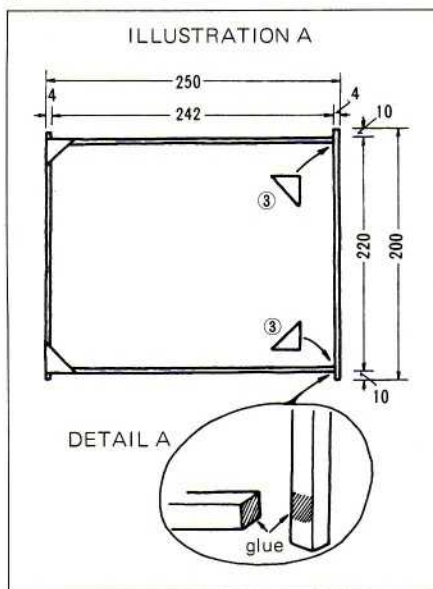
MATERIALS TO MAKE ONE BOX

(Compute the quantities of materials to make the number of boxes you need.)

- 4mm x 4mm x 22cm Japanese cypress or other wood* for vertical sticks . . . 8 pieces
- 4mm x 4mm x 24.2cm same wood for horizontal, or lateral sticks. . . . 8 pieces
- Right-angled triangles of thick paper or postcard for reinforcement 16 pieces
- 20cm x 25cm *shoji* paper† . . . 4 sheets

CONSTRUCTION

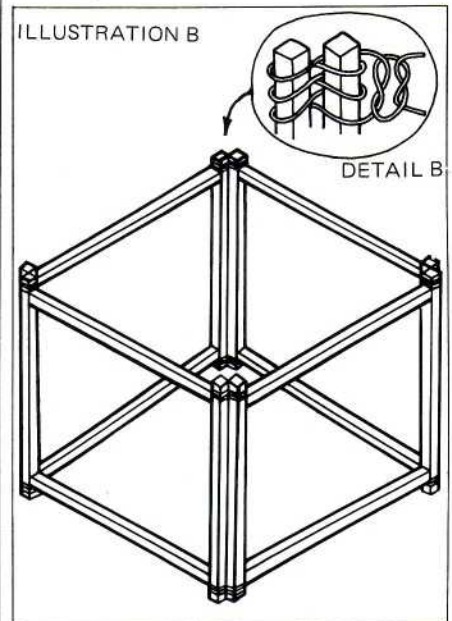
1. Make frames by gluing together the vertical and horizontal sticks. Each corner must be reinforced with a paper triangle glued to the sticks as shown in Illustration A. Make four frames to complete one box, or cell.



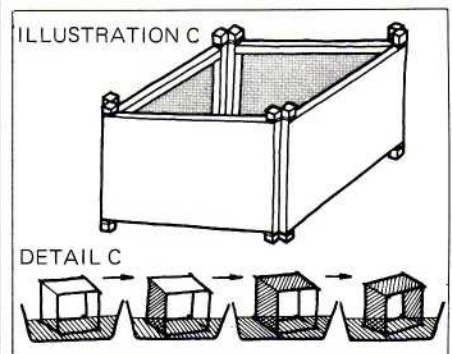
*Oscar Bailey of Florida has used bamboo to make his Expansible Box Kite. Probably spruce or other light, strong wood cut to the proper size would work as well. Ohashi believes in using "readily available materials."

†Silkspan® was used by Oscar Bailey and dyed in the same manner as described in step 4.

2. Join the frames by tying the vertical sticks with string, using a figure-eight hinge at each corner (8 per box), as shown in Illustration B. (Oscar Bailey warns: "This takes hours and hours and hours.")



3. Cover the frames on the four sides of each box with paper (Illustration C). It is important to apply the covering with precision; otherwise a distorted box will result.



4. If desired, draw pictures or designs on the paper sides. *Shoji* paper such as Ohashi uses may be dyed after it is applied to the frame. If one color is used for all sides, dissolve the dye material in the solvent and apply by dipping the box in the color bath in four steps, for each box side, as shown in Illustration Detail C.

METRIC CONVERSIONS

metric unit	approx. U.S. equivalent
millimeter (mm)	0.04 inch
centimeter (cm)	0.39 inch
meter (m)	39.37 inches

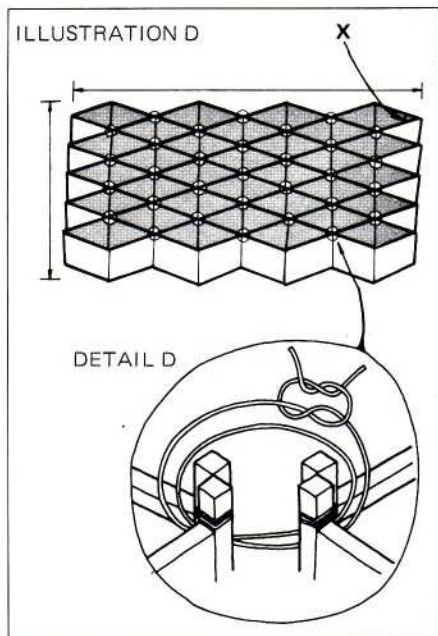
the Expansible Box Kite

5. Tie the boxes together using the knot shown in Illustration Detail D. (Oscar Bailey used braided nylon line, about 40-lb-test, for his tying.) Tie together at least two columns and five rows to fly as an Expansible Kite. Tips:

When angle X (Illustration D) is made large, the stability of the kite improves but flying performance drops. When the angle is small, climbing performance improves but stability is reduced.

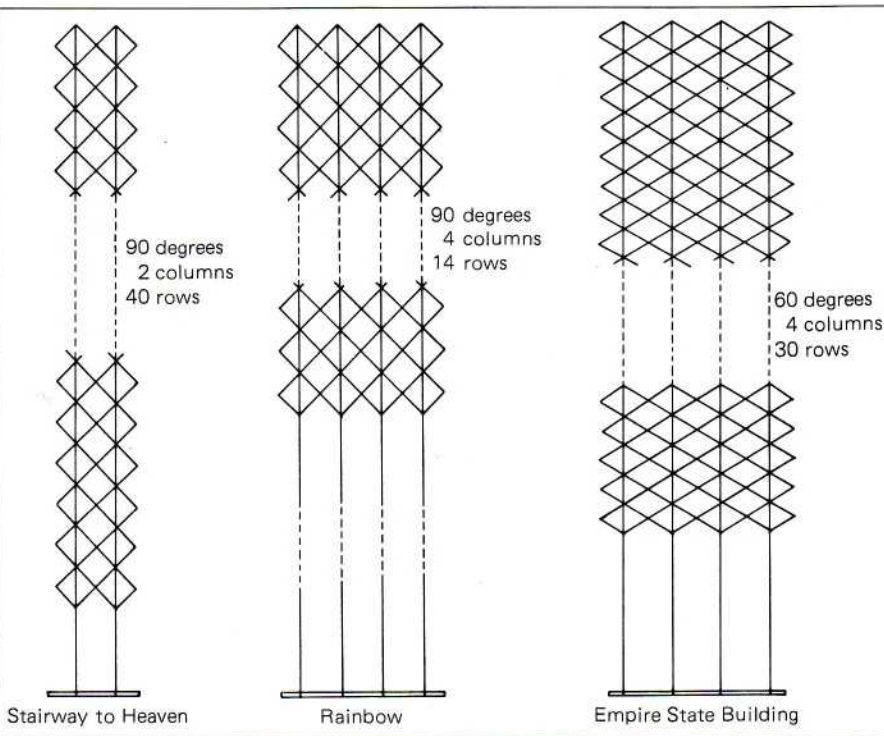
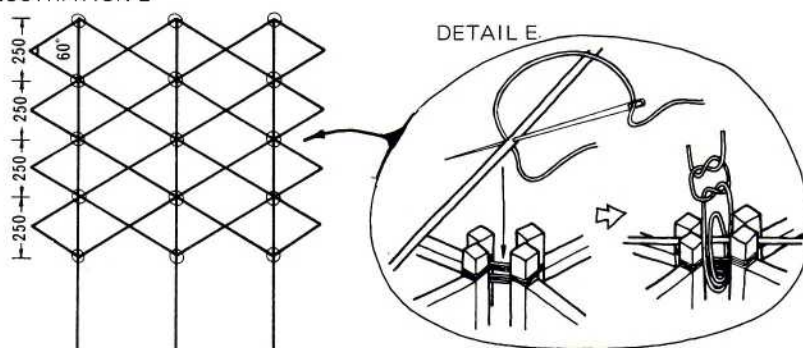
Rows are placed like the rungs of a ladder and counted from top to bottom.

Columns are placed like newspaper columns and counted from side to side. For example, in Illustration D we have four columns and five rows.



6. Fasten the limiter lines to the kite (Illustration E). These lines are not ordinary bridles. They are attached to each column and run across the box cells, controlling the amount each box can expand in flight. These lines must be measured and attached carefully and consistently from point to point to assure good flying performance. Use nylon line, a length for each column, according to the size of the kite. String a length of line across all the horizontal hinges in each column. Join the limiter line to the kite with small pieces of fastening line at each hinge, using a needle to pass through the hinge string and around the limiter line, as shown in Illustration Detail E. This method secures the position of the limiter lines. These lines extend at the end of the kite to become the flying lines, which are

ILLUSTRATION E



attached to a control bar the width of the kite.

A guide for selection of line thickness is as follows:

- Fewer than 10 rows. 1mm
- 10 to 20 rows. 2mm
- 21 or more rows. 3mm

FLYING

In the case of a kite train or the Expansible Box, as the number of kites (cells) is increased, even in weak wind, the pull on the line becomes gradually stronger. For this reason, kites for trains should be made of sticks with a smaller cross-section, making it possible for them to fly in relatively weak winds.

Editors' Notes: The phenomenon that Ohashi is describing we might call *train effect*. All kite train fliers know it. When the winds are low and it is a struggle to

fly most kites, a train often will survive as if by magic. What is happening is that the winds will vary at different levels and a train will catch any winds at strong levels to carry the kites at the weaker levels. (See page 42 for some cautionary tales from an experienced "engineer.")

Also a train has more area in proportion to the amount of line it must carry, which makes a train efficient for high altitude flying. In turn, the higher altitude of a train reinforces its apparent flying talent, because upper winds are stronger and steadier.

Dave Checkley describes the way the Expansible Box looks in flight: "During launch it oscillates due to ground effect, but once aloft it swoops up at a steep angle, looking like a real flying carpet. Fabulous!"

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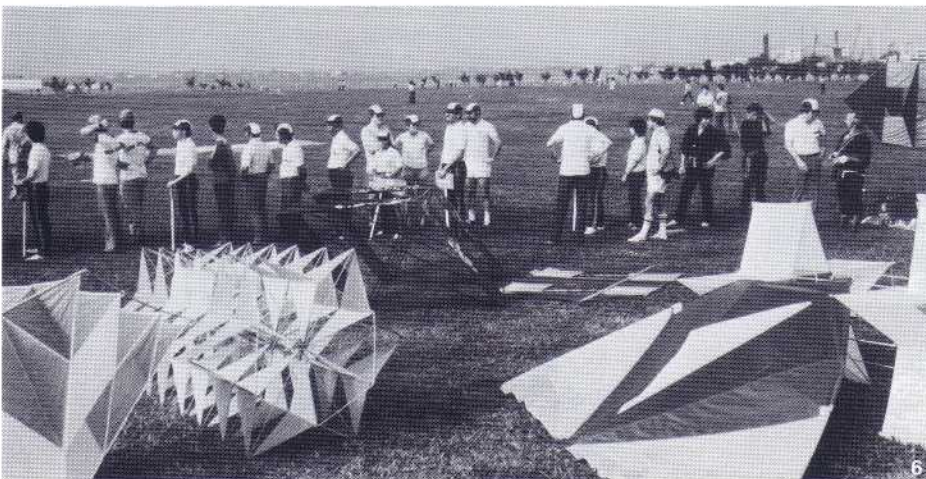
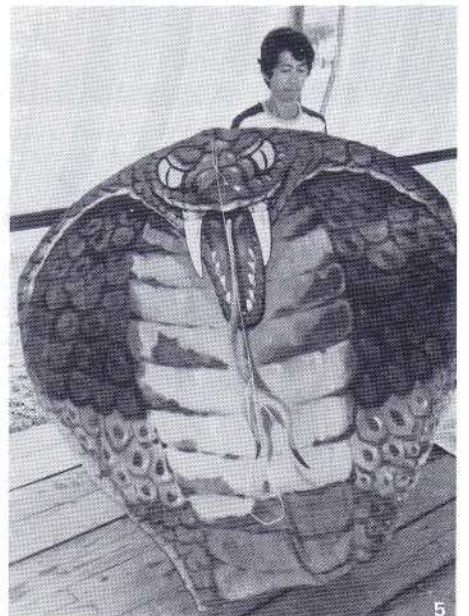
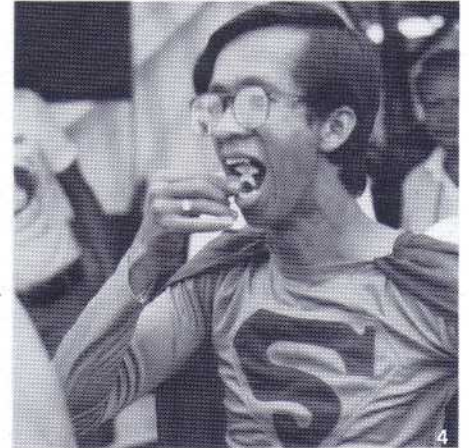
Another Singapore Festival!

...AND ONLY 3 YEARS OLD... BY JON E. BURKHARDT



Immense and exotic, the Singapore International Kite Festivals have gained renown for their size, seriousness, hospitality and true international flavor. A \$100,000 (US) budget includes substantial cash awards. January 26-27 is 1985's date.

1. The colorful wau bulan ("moon kites") are judged in a separate class. Points are added for what appears to be instability, but is really a horizontal figure-eight pattern.
2. The schooner-rigged Flying Dutchman never had quite enough wind to perform as it could.
3. The mixture of cultures is part of Singapore's sensory overload, which also includes intense heat and humidity (in January!) and stomachs struggling to identify unfamiliar cuisine.
4. "Superman" (Thailand's Prinha Sukchid) with what he called "the world's smallest kite."
5. Now this is what you call a cobra kite!
6. The line-up for an Olympic-style march of 60 fliers from 11 countries.
7. One of the marvelous Thai creations.
8. A passerby inspects a kite by Peter Lynn of New Zealand, who with Clyde Woods won Best Foreign Team award for flying despite low winds.



Whose Face Is on the Kite?

...AND 1500 YEARS OLD... BY SHAKIB GUNN

When the Shirone Kite Association came to Singapore for the Singapore International Kite Festival in January 1984, they flew two beautiful *o-dako*. Little did they know the kites would go on living long after they left.

One of the kites was to tell a story that began 1500 years ago! It was a story that started with a Buddhist monk in India. It took us to China, where he is revered to this day by followers of the Shaolin martial arts school, then via Korea to Japan, where, in Shirone, the same monk's face was painted on a seven-meter kite for the Singapore Kite Festival. An Indian image on a Japanese kite?

"*O-dako, lalu, lalu*" ("move aside" in Malay) was the cry at 10 o'clock the night after the festival as Jon and Gloria Burkhardt (USA), Nop Velthuizen and Michele de Vries (Netherlands), Kasmin bin Haji Abd. Jabar and Mukhtar bin Yusof (Malaysia), Tan Kim Hui and his wife, Shirley, and Shakib Gunn (Singapore) carried the first *o-dako* from the Seaview Hotel to my apartment block.

For those who do not regularly fly 5 x 3 meter oriental kites and then take them to their apartments on the seventh story, let me tell you it is all done with kite lines! One line runs from the window to an anchor on the ground at an angle of 45 degrees through the rolled-up kite. The other line, attached to the kite, is used for sliding it up or down. Then all that is required is enthusiasm, lots of noise, and liquid to slake dry throats. Above all, enthusiasm!

The second kite, about 7 x 5 meters, the one that tells this fascinating story, was carried some days later directly to its final resting place, Parkway Parade, Singapore's biggest shopping complex. More shouts of "*o-dako, lalu, lalu*" attracted even Singapore TV, who included it in the evening news, together with Peter Travis (Australia), always the last to leave a festival in Singapore.

The story began in India sometime be-

tween A.D. 420 and 520, when the Indian Buddhist sage Bodhidharma, or Ta Mo, as he is known in Chinese, started on a three-year journey that was to take him to China.

In China, Ta Mo is believed to have lived in the Shaolin temple on the mountain, Sung Shan, in Hunan province.



Tan Kim Hui, Shakib Gunn and Eric Ang, all Singapore Kite Association members, took three days to repair and hang two *o-dako* at Parkway Parade shopping center. The group backed up the Japanese *washi* covering with paper imported from China and used glue made from sago flour. The surface was retouched with poster paint. Pieces of bamboo frame broken in transit were reinforced with compressed fiber battens bought from a yacht chandler in London. "A perfect synthesis of East and West!" declared Shakib.

From here, his influence created the Ch'an school of Chinese Buddhism, the most important of Chinese schools.

Ta Mo, who was the 28th monk in line to receive the secret doctrine transmitted by Buddha Sakyamuni, introduced very simple ideas to the Shaolin temple. The new doctrine was quite op-

posed to the Buddhist ritual that had been practiced before he arrived. Such was Ta Mo's search for enlightenment, he once sat in meditation facing a wall—for nine years.

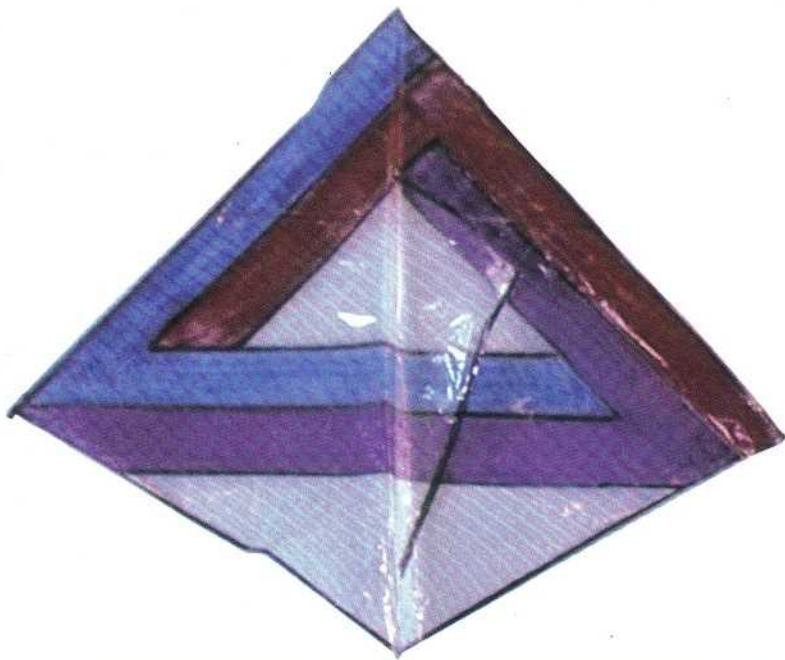
The Chinese monks around him were mortals of less stamina. They even fell asleep during meditation! So, to provide adequate exercise, Ta Mo developed a series of special movements, aerobic exercises, if you like. It is these movements that today form the basis of the famous Shaolin *wu-shu* martial art. (In the West, you may refer to *wu-shu*, incorrectly, as *kung-fu*.)

Ta Mo died in China, but his influence spread, presumably via Korea, to Japan. Buddhism arrived in Japan around A.D. 550 and so did the Japanese perception of Ta Mo's countenance.

In the pictures I have seen of Ta Mo in Chinese books, he appears as a rather benign, bald-headed monk, usually standing on a few pieces of straw. In the Japanese rendition we all know, he appears with down-turned mouth and eyes as bright as hot coals. In both interpretations, his dark skin reflects his Indian origin. Until I had researched it, I had always wondered why we should find a dark-skinned face on a Japanese kite.

In Singapore, it was our happy privilege to write out the story in English and Chinese and to display it around the kite. Thousands gaze up at Ta Mo every day and begin to understand a little more about their culture. More importantly, I feel, they are reminded about the unity of mankind—how, in the final analysis, despite what politicians and others would have us believe, we have more things in common with each other than we realize. Kiting is surely about unity, about finding out how similar we all are despite our different colors, creeds and philosophies.

To the beautiful kitefliers of Shirone, to Jinzaburo Hokura and your team, may you, one day, learn how we in Singapore feel about you and all mankind. ◇



**INTERNATIONAL
EXPOSITION OF SMALL KITES
Harpers Ferry, West Virginia, USA
August 18, 1984**

Top left: shown full size, the overall winner in the Exposition, "Optical Confusion," a modified delta by Charles A. Sotich of the USA.

Top right: Charlie holds a miniature winder over four of his five small kites.

Inset: his fifth entry—a balsa mini-rotor.

Opposite page, left: "Damsel fly," weighing an incredible eight milligrams, is the realistic creation of Kazumasa Kihara of Japan and the lightest kite successfully flown. **Opposite page, right:** the monogrammed "Fluke 153 V" by John Spendlove of England. Both kites on page 35 are shown full size. Note the American 25-cent coin (about 25mm in diameter, less than one inch), included for comparison purposes.

Article by Valerie Govig
Photographs by Theodore L. Manekin

At 1:30 p.m. there was tension in the air. All of the 53 tiny kites entered in the International Exposition of Small Kites were ready on a table and all the materials and spectators were gathered.

But Chief Judge William R. Bigge was preoccupied, fingering his calculator. He had just finished directing the laying of tapes at a measured distance of 28 feet down a long room at the Hilltop House in Harpers Ferry, West Virginia, the site of the Exposition. Bigge had made several walks over the course with a digital stopwatch in hand. The air conditioner had been turned off—despite temperatures in the 90s—to halt perturbing drafts. But we assistants and spectators were obliged to

fidget for several minutes more while Bigge and his calculator held a silent dialogue.

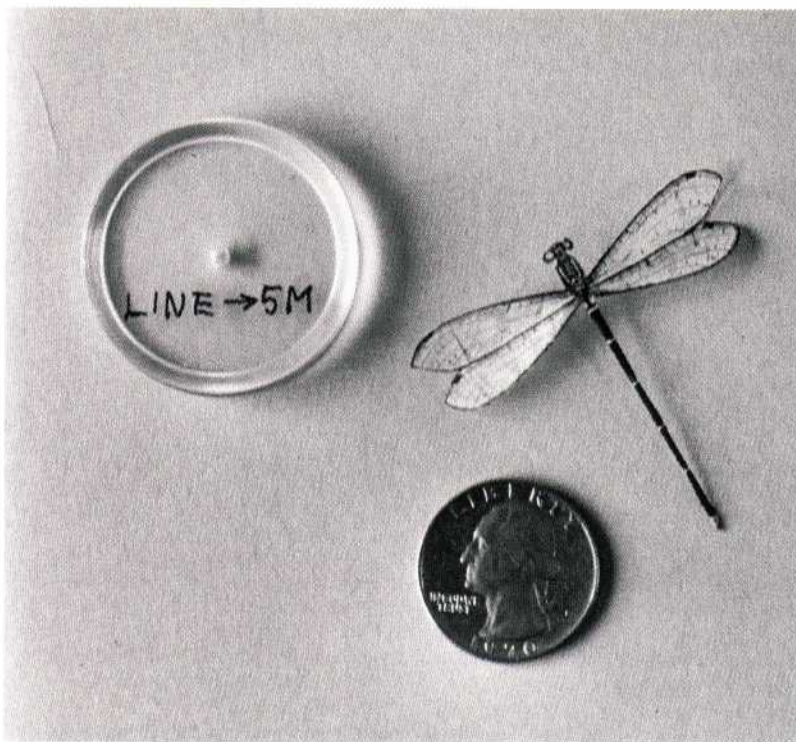
Bigge was translating the 28-foot walk into miles per hour. Finally he produced a tape from the calculator that satisfied him that he had obtained a consistent standard by which to score the kites, basing it on the range of air speed at which each kite could stably maintain the minimum angle of 22½ degrees above the horizontal. Bigge came out of his corner and started talking to people and handling kites. The flying was about to start!

From that moment on, the air was filled with lightness—and delightedness. Murmurs and smiles of appreciation rippled along the room as the collection of kites, one at a time, was walked for flying from a two-foot tether attached to a two-foot stick.

Walking was the method Bigge chose on this occasion, although Felix Cartagena and Pete Ianuzzi had each made mechanical circling arms that could pull the kites through an orbit at a constant speed. Bigge preferred walking as a fairer method of comparison because some kites fly better in a circle than others.

Usually three walks per kite were required. The first walk was to qualify the kite, to establish its ability to fly stably at the required angle and to find its optimum speed. If qualified, the kite was then walked and timed for a windspeed score. This walk varied from a snail's stroll that took as much as 32 seconds to an athletic near-run that took about 5 seconds.

The third walk was taken to determine the kite's angle, which Bigge again converted from degrees to scores. Assistant



Judge William A. Rutiser attached the kites to the stick and kept the entries in order. Simply handling these small kites required the utmost care.

Serving as judge of Beauty was G. William Tyrrell, Jr., a flier of big kites, who quickly reversed his mental gears and gave scores consistent both with themselves and with the audience reaction, in effect serving as the voice of the spectators. Tyrrell perceived Beauty in this instance as an effect of several—sometimes contradictory—characteristics. He recognized both decorative treatments and pure shapes, classic designs and innovative ones, stable flight and liveliness.

The order of flight was based on the order in which the kites were received in the office of the sponsor, *Kite Lines*. The judging forms were marked with numbers, not with names, in order to preserve as much as possible the anonymity of the kites and the impartiality of the judging. Last to fly were the kites that were brought to the Exposition in person by three of the contestants.

This flight order was essentially random and resulted in a show with no particular pace or plot—in other words, an unpredictable happening.

For example, the first entry was disqualified as unflyable—diagnosis, overweight. But the second entry, in contrast, was the “Fluke 153 V” by John Spendlove of Preston, Lancashire, England. The sled-based design took its name—and some of its traits—from Helen Bushell’s perforated sled.* As the Fluke flowed gently on a slow pull through the air, holding upright but bobbing slightly from side to side,

there were many “O-o-o-h’s” from the gallery. *This* was an interesting event!

Now the box from Holland was opened. Harm van Veen, of The Hague and E.M.R. (Ron) Schroder of Delft had sent in their kites (eight and seven each, respectively) all in one beautifully built masonite box with inner transparent plastic boxes and foam separating supports.

First to fly were Schroder’s “fighters,” a group of tissue kites in a variety of shapes, sizes and colors. None flew as would a true fighter, maneuverably, but stability was the standard here, and five of the seven qualified. The largest of the group (7.4mm x 6.6mm) had the best score, but was not as popular with the spectators as a blue-spotted “fighter” that spun through its flight. It narrowly qualified, but it made spinning look good—and scored well for Beauty.

Van Veen’s virtuoso effort of eight kites produced not only good scores but warm audience response. The highest scoring of the group was one of two rainbow-striped cigarette-paper kites, which, as Bigge said, “shows the positive aspects of small size, namely, that you can use paper alone.” The Van Veen kites as a group varied in tail-fin treatment, vents, size and color. Three were rainbow-striped but one all-white four-wing composite kite was the more interesting for its contrast to the others.

Next was a red tissue-paper Conynetype kite by Roland Coppens of Brussels, Belgium. Its use of side fringes was a clever

*“Fluted Kite,” by Helen Bushell, *Four Standard Australian Kites* (Victoria, Australia: Australian Kite Association, 1979), pp. 12-13.

AWARDS

OVERALL WINNER: \$100 US

Charles A. Sotich
Chicago, Illinois, USA

“Optical Confusion,” a modified delta of Mylar skin and boron filament spars, flown in the widest wind range with the most consistent stability and highest angle

CRAFTSMANSHIP: \$20 Hargrave Australian
plus special grant of 6000 Japanese yen

Kazumasa Kihara

Kawasaki, Kanagawa, Japan

“Damselfly,” weighing eight milligrams, the lightest kite successfully flown; realistically rendered in bamboo and homemade paper

INGENUITY WITH COMMON MATERIALS

\$20 Hargrave Australian

Harm van Veen

The Hague, The Netherlands

Pentagonal kite with split tailfin

in multicolored cigarette paper,

one of eight entries from van Veen

ELEGANT DESIGN TO THE SPECIFICATIONS OF THE EXPOSITION

\$20 Hargrave Australian

John Spendlove

Preston, Lancashire, England

“Fluke 153 V,” a high-aspect-ratio sled with rounded trapezoidal vents in the fins, made of tissue paper with a bamboo cross-spar

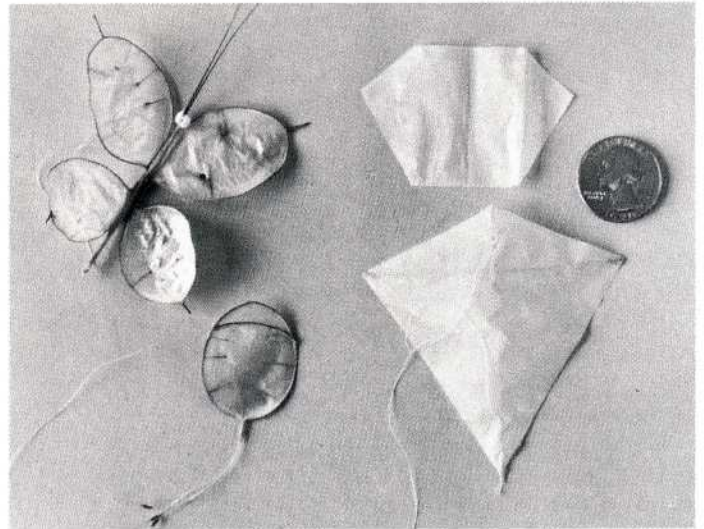
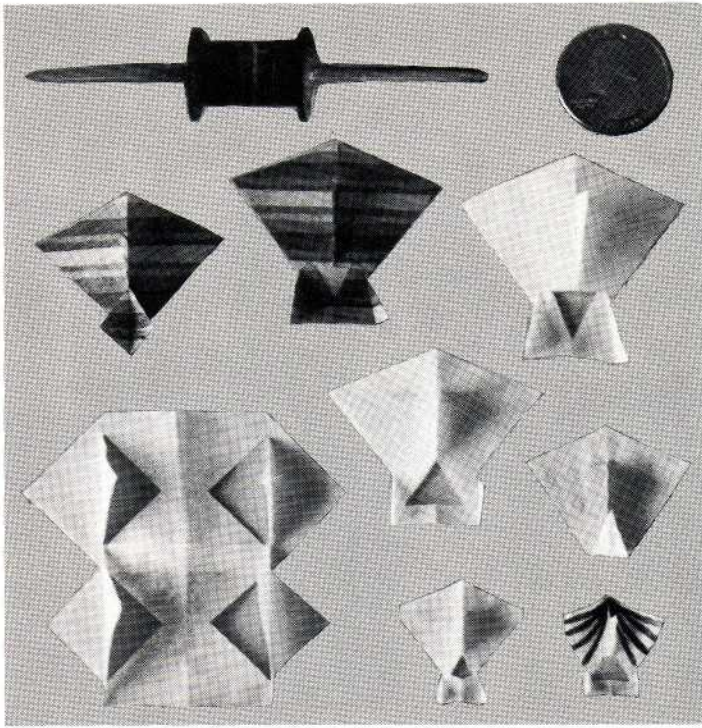
USE OF NATURAL MATERIALS

Special Recognition

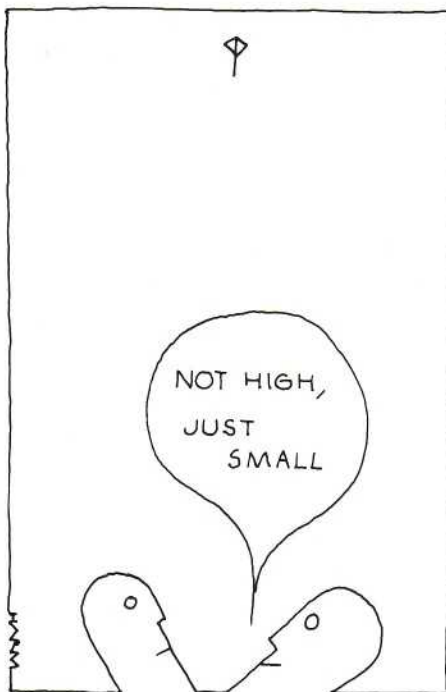
John E. Clarke

London, England

Oval kite made of a single honesty seed pod with dandelion down at the ends of short-tail threads for stability



Bottom left: A sample of the wit of kitemaker Harm van Veen. Center left: Chief Judge William Bigge, pacing himself with a stopwatch, puts a small kite (one of Ron Schroder's "fighters") through its paces. Above left: The overwhelming collection of eight small kites entered by Harm van Veen; each kite was accompanied by its own line and tiny reel, only one of which is pictured here; his smallest kite weighed in at a mere six milligrams but unfortunately did not qualify. Above: John Clarke's group of honesty seed pod and polythene kites.



solution to the three-inch size restriction.

Raymond V. Brandes of Edison, NJ, entered two very different kites, a Mylar[®] Hornbeam sled and a one-piece graph-paper box. The sled was a particularly good performer.

Now it was time for the flight of the Saconney. Everyone had already peeked at this exquisitely detailed miniature of the Cody-like kite. It had been shipped with tail material in case of need. Need there was, for the kite was heavy. Even after Angela Dittmar twice fitted it with tassels of the tail material at each wingtip, within the three-inch specifications of the Exposition, it would not maintain the necessary angle and was disqualified. It was such an extraordinary effort, however, that it was dubbed the Exposition's Greatest Disappointment.

Michel Dusariez's kite was next, also a miniature of an historic kite, in this case the "Monocroix Ickx," originally flown by Belgium's late Lucien Ickx at the Concours International de Spa in 1912. After its disappointing first flight, the judges, acting within their charge to make adjustments to improve any kite as received, applied dihedral to the kite to give it a more-than-qualified performance. "The kite is too heavy for its size to fly without dihedral," Bigge declared. Dusariez also owed part of his success to the 20 minutes spent by Michael Carroll to untangle the kite's long line, which had become nearly impenetrable in shipping.

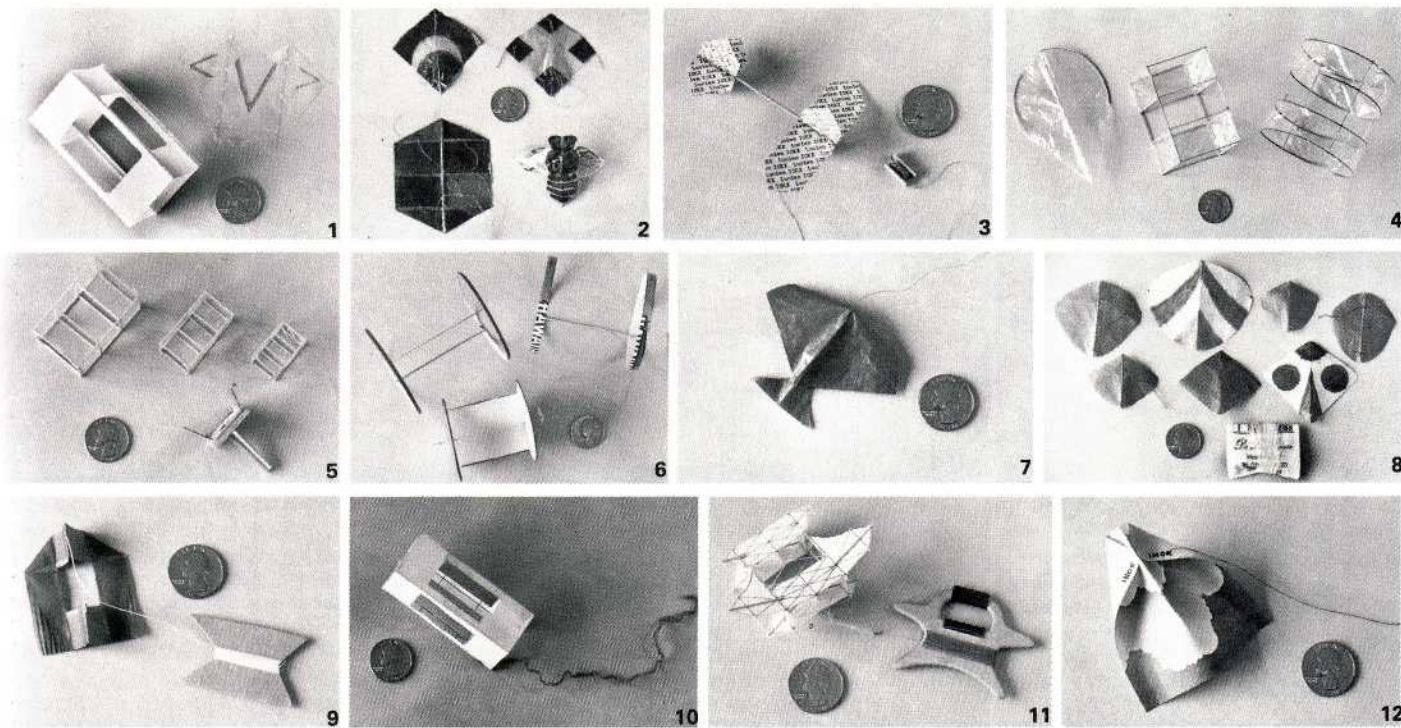
The possibilities of tissue became even more apparent with the flight of the "Modern Bird" by Dennis Kucmerowski of St. Cloud, FL. It was very carefully

shaped, with a rolled nose, and made a respectable flight.

Three box kites by Billy O. McDow of Portland, OR, were next up. Each had been separately housed in a neat round box with inner protective partitions. On the outside of the 2-inch and 1½-inch boxes was printed "Open Carefully." But for the 1-inch box, the wording was "Open Very Carefully." Bill Rutiser did as instructed. These kites earned scores in almost exact relation to their size, with the largest kite scoring best and the one-incher barely missing qualifying. McDow had set a special challenge for himself and the audience appreciated it.

Now we were to see if John E. Clarke's kites could fly. Clarke had written to us from London beforehand to inquire if he should enter his honesty-seed-pod kites. He seemed to doubt they would meet the qualifications. Both *Kite Lines* and Bigge replied that it could only broaden the education of us all to have such entries, regardless of their performance by I.E.S.K. standards. So Clarke sent two kites made of honesty seed pods as well as two of polythene. The single-pod oval kite made a very good showing, but the four-pod butterfly kite was not flyable, presumably because of warp caused by the humid West Virginia air. Clarke's polythene Malay scored respectably; his polythene sled suffered structural failure (loosened glue). All in all, however, anyone who saw Clarke's kites was impressed by their added dimension of delight.

Besides the Saconney, there was another interesting disqualification, an attractively decorated folded Tyvek[®] kite



by Ihor Slabicky of Newport, RI. To everyone's regret, the kite failed to attain the necessary angle.

Another Londoner, Roy Akong, entered four kites which earned top scores: a hornet with sleeve-pocket wings, two "fighters" and a rokkaku—showing great variety. Performance was also very good and his hornet elicited spates of buzzing from the smiling audience.

Wayne Tupper of Union Bay, British Columbia, Canada, sent in a white paper box with a long (illegal) tail of red yarn. Compassionately, the judges removed the tail. The kite did fly, barely. At 730 mg, it was the heaviest qualified kite.

As if for dramatic contrast, the next entry was the precious damselfly kite by Kazumasa Kihara of Kawasaki, Kanagawa, Japan. Weighing only 8 mg, it was realistically rendered of *washi*—paper, hand-made by the kitemaker—and thin bamboo, including nearly invisible slivers outlining the wings. A hush fell over the crowd as this beautiful creature flew delicately over the course.

At last it was time for the contestants who were attending in person. W.D. (Red) Braswell of Manassas, VA, entered two circular box kites made of narrow slices of soft-drink foam insulating jacket as well as a styrofoam rotor. The rotor did not qualify, but the circular boxes were a success and demonstrated that humble materials and simple crafting techniques can compete.

A. Pete Ianuzzi of Catonsville, MD, entered two kites of Mylar and bamboo, one a pear-top diamond and the other a rhomboid box. Ianuzzi was pleased to do

well in spite of his having had little advance experience with small kites.

"The last shall be first" was never more true than for Charles A. Sotich of Chicago, IL. That morning at the Retreat, he had given a workshop to show his small-kitemaking techniques, using Mylar and boron filament. The proficient Sotich had entered five kites. As they flew in turn, these kites finally showed the audience, primed to appreciate it, just what a superior small-kite flight was like. Stability and high angle combined in a wide range of speeds, especially at the fascinating slow end of the scale: Bigge barely moved along the course. Sotich's delta-type kites did best, although his high-aspect-ratio Eddy-type kite did well, too. Scoring lower but respectably was his mini-rotor. It was the last qualified kite to fly and drew a round of applause as it whirled smoothly through the room like an indoor hummingbird.

The flying was over exactly at dinner-time. But the judging for craftsmanship, weighing of the kites and tallying of the final scores were yet to be done. Bigge and Rutiser spent most of that evening completing these tasks. The next morning the judging committee met and freshly surveyed the results. It was decided that awards did not need to be based solely on scores, in the typical linear manner, but that specific awards should be made to the entries that were most outstanding. In other words, although the scores were arrived at strictly, the awards were not based on preconceptions. They were, more accurately, a direct response to an educational experience. *Continued. . .*

Above: A small-kite sampler, showing entries from

- (1) Ray Brandes,
- (2) Roy Akong,
- (3) Michel Dusariez,
- (4) A. Pete Ianuzzi,
- (5) Billy O. McDow,
- (6) W.D. [Red] Braswell,
- (7) Dennis Kucmerowski,
- (8) E.M.R. [Ron] Schroder,
- (9) Roland Coppens,
- (10) Wayne Tupper,
- (11) Robert Devautour and
- (12) Ihor Slabicky.

These and other artifacts of the IESK are being mounted in a display case for traveling to exhibits in science museums and other appropriate institutions. (Inquiries about use of the display may be directed to [Kite Lines](#).)

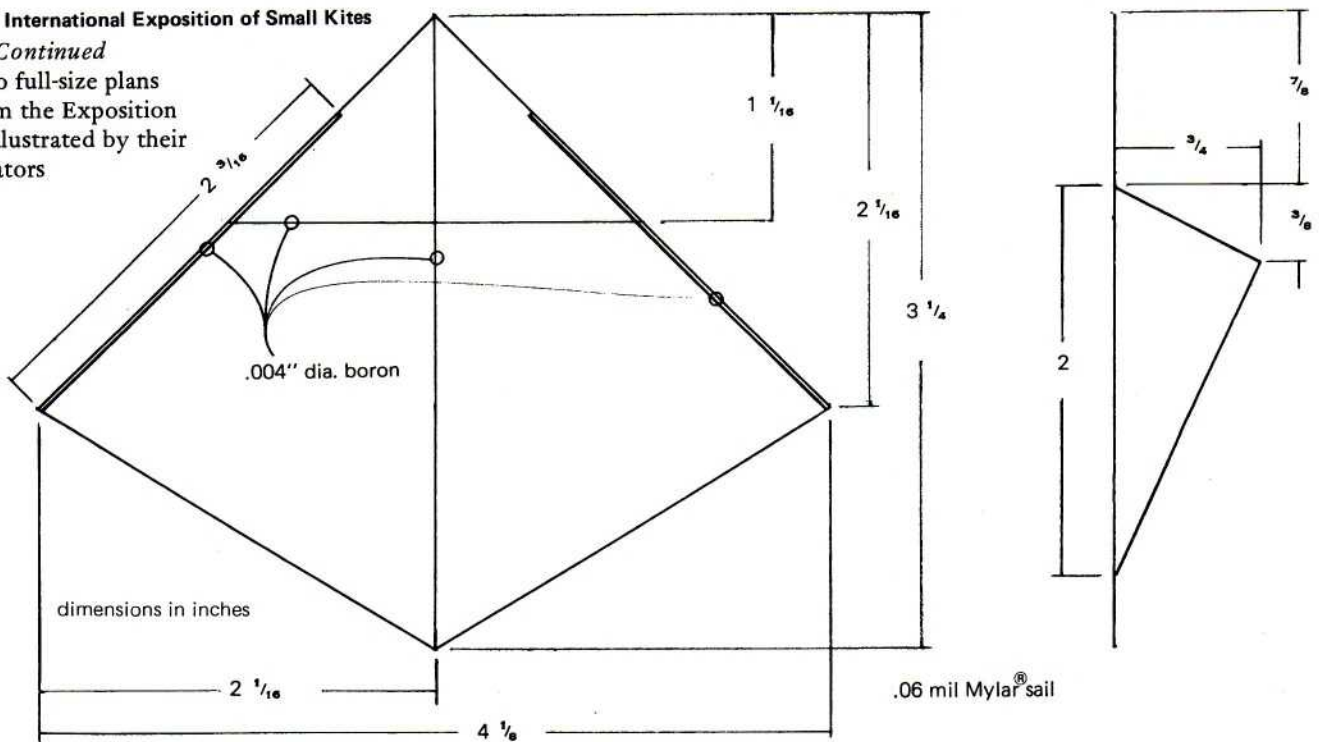
Below: A collection of containers illustrating a variety of solutions to the problem of shipping very small, precious kites.



The International Exposition of Small Kites

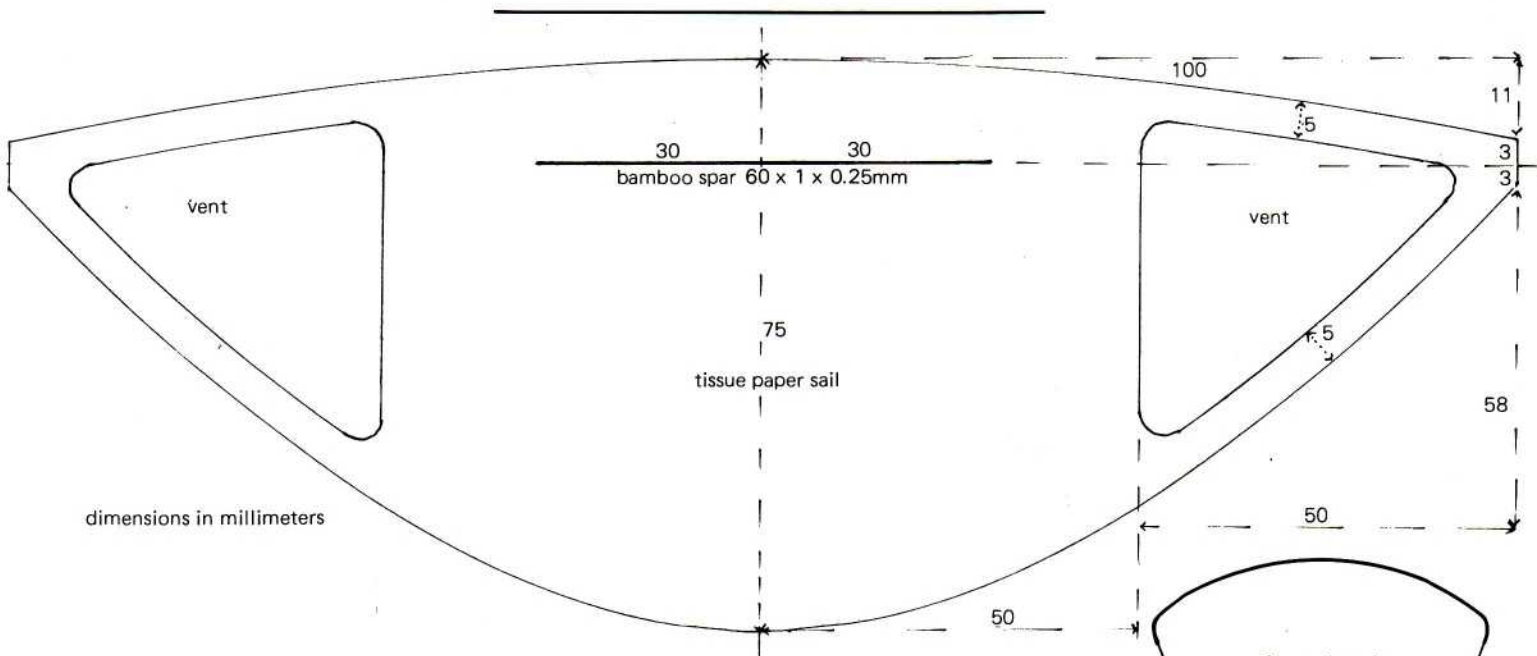
...Continued

Two full-size plans from the Exposition as illustrated by their creators



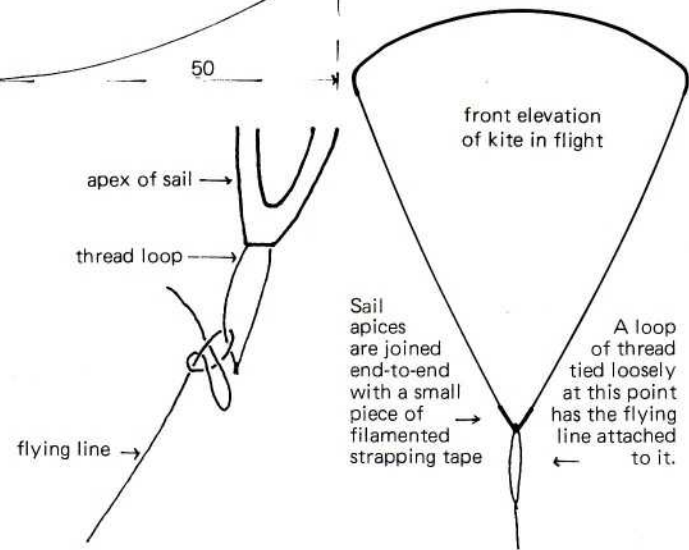
"OPTICAL CONFUSION" modified delta
 by Charles A. Sotich
 Chicago, Illinois, USA

Glue an oversize piece of Mylar on top of a full-size plan with drops of thinned rubber cement placed outside the plan's borders. Coat a length of the boron with rubber cement and place it on the Mylar. Cut out the kite with a very sharp knife/razor. Glue the keel to the sail with rubber cement and attach the flying line to the keel with a 1/16" x 1/8" piece of tape. Minimum wind speed: about 0.6 mph.



"FLUKE 153 V" side-vented sled
 by John Spendlove
 Preston, Lancashire, England

Spendlove comments: Drawn on tissue paper, using French curves and straightedge. Cut out with swivel-bladed craft knife and scalpel. Bamboo split with pocket knife, trimmed and balanced with scalpel and sandpaper, affixed with viscous glue. It is essential that the spar be flexible enough to bow in the pressure of the wind. Thread is single strand from three-strand nylon whipping thread. The name "Fluke 153 V" is a pun on that of Helen Bushell's "Flute 153" design. I used her 153° formula for the positioning of the apices. The word "Fluke" refers to my surprise at the success of the design. The "V" refers to the side vents. In suitable conditions (3-5 mph) the kite reaches an angle of 60° or more above the horizontal.



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FIRST QUARTER 1982 (Vol. 4, No. 2):

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WINTER-SPRING 1983 (Vol. 4, No. 3):

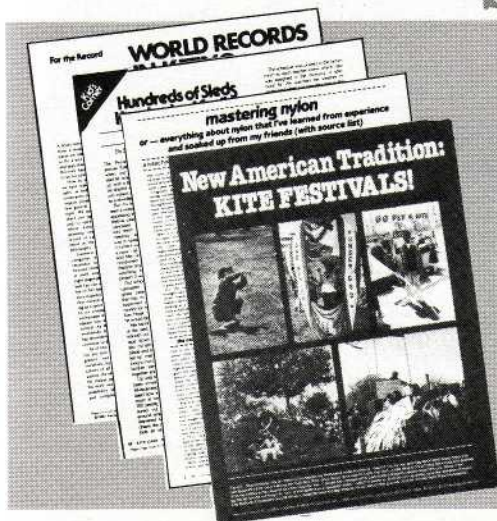
Detroit Convention panoramic photo; AKA, Blackheath, Coup de Vent, Maebashi festivals; rokkaku challenge; Harpers Ferry delta; Kites of Trinidad; new reels; Adrian Conn profile; Peter Lynn box.

SUMMER-FALL 1983 (Vol. 4, No. 4):

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SPRING 1984 (Vol. 5, No. 1):

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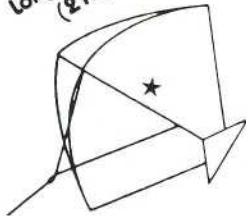
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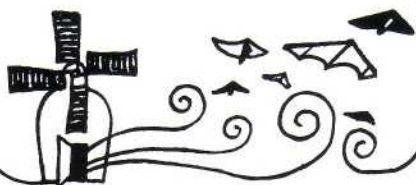
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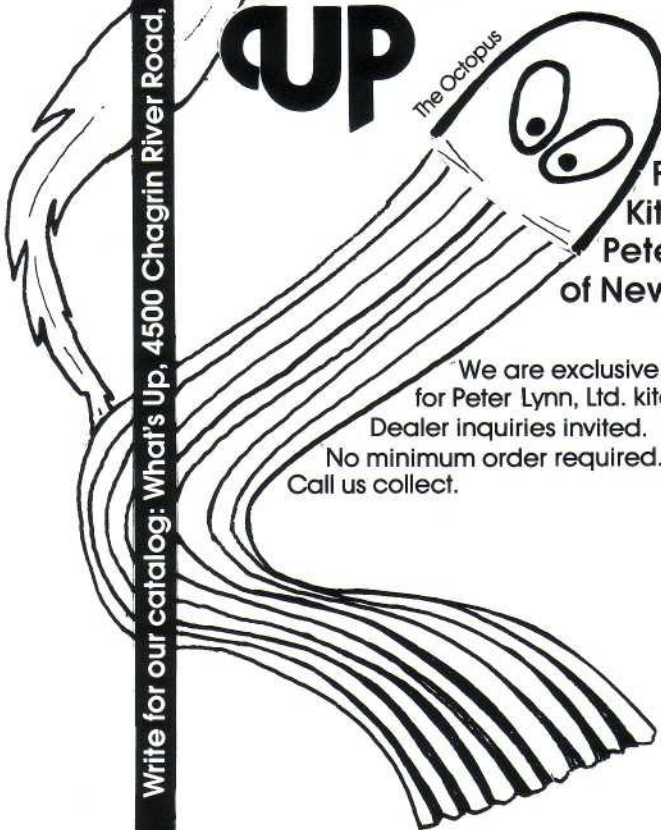
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The Tri-D (Peter Lynn Box)

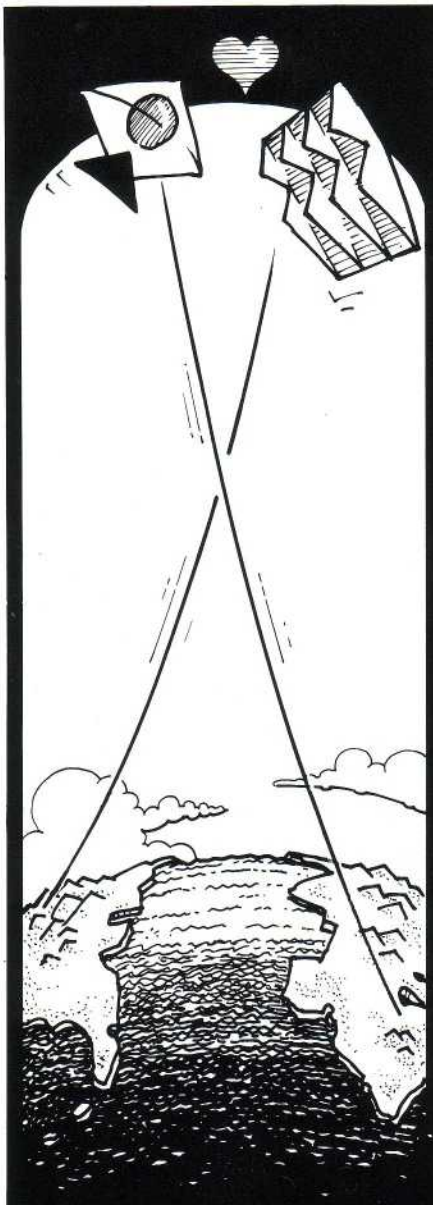
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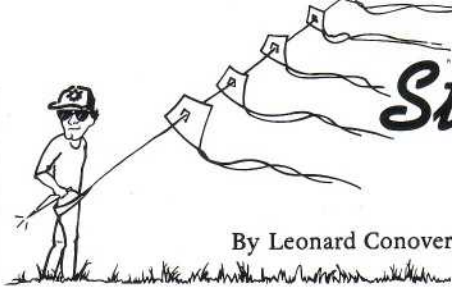
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By Leonard Conover

Flying a train is just like flying any other kite. I do it because it's fun! Flying a train is *not* like flying any other kite. It's more like giving freedom to a living thing that has been temporarily located in a box. You show it the sunlight, give it some air and it leaps out of your hand.

I don't really fly my kite train—it flies itself. Once I get it out of the box. . .into the air. . .with a good clear field, I can anchor it, eat lunch, take a nap, whatever. When conditions are right, the train is self-launching, self-landing and sometimes, I think, self-propagating. (I quote Bill Rutiser, who opined: "People who fly kite trains must have loco motives.")

Launching is easy: just get the first kite in the air and it will pull up the second kite. Then those two will lift the third, then those three. . .

Some words of advice (warning) from someone who's been there: Don't fly a kite train in (1) high winds or (2) a crowded sky. Both you and your train will live longer.

Getting caught with your train up in high winds is a lot like getting caught with your pants down. You may eventually save the train (and your pride) but not without an excess of heart-pounding adrenalin.

Flying a train in a sky full of other kites is asking for more trouble than anyone deserves. Some fliers become irrational when only two or three single kites tangle in the air. They pull and tug and run in opposite directions, aggravating the situation. Just imagine the headache you will have when a 12-foot delta or a 6-foot box (or BOTH) decides to cozy up to your train, say between kites number 82 and 83, while you're off sitting on a tailgate drinking a lemonade.

To avoid the problems of high winds and crowded skies, I don't even take my train out of the car 50% of the time. (Hey, I didn't go to school just to eat lunch!)

I always carry a good sharp knife in my pocket when flying my train. It comes in handy for minor surgery, quick repairs, slicing cheese and—most important of all—cutting the line of anyone who is foolish enough to let his kite tangle with mine!

As I've implied, by far the most difficult (and harrowing) part of flying a train

LEONARD CONOVER is well known as the maker and flier of a 100-Eddy kite train.

Stay away from my train!

is KEEPING OTHER KITES AWAY from it. (Don't those other kitefliers know that I cannot maneuver with 500 feet of train as easily as they can move around with a single six-foot delta? Please, do me a favor—STAY AWAY FROM MY TRAIN!)

Retrieving a train—that is, bringing it down, one at a time, in an orderly, unhurried fashion and placing each kite gently back in the box—is much more difficult than either launching or flying it.

On deeper reflection, I would say that, even more difficult than retrieving, launching, flying—even more difficult than *making* a train—is answering the same old questions over and over. Is there a kite train flier alive or dead who has not suffered through this routine:

Q. How many kites ya got there?

A. 100.

Q. Howdya get 'em all up?

A. One at a time.

Q. Where'd ya buy 'em?

A. I made 'em.

Q. Whatja make 'em out of?

A. Trash bags, wood dowels, masking tape. . .

Q. How long did it take you?

A. About eight hours.

Q. How much did it cost?

A. About ten dollars.

Q. How hard does it pull?

A. Not hard. Here, feel the line.

Q. What kinda string is this?

A. Braided nylon.

Q. How strong is it?

A. 200-pound-test.

Q. 200-pound?

A. Yes, it's good insurance. Also, it's easier to grip with your fingers.

Q. What kinda gloves are they?

A. Sailing gloves.

Q. Has this ever picked you up off the ground?

A. No.

Q. Ever been caught in a tree?

A. Yep.

Q. How d'you get it out?

A. Fly it out.

Q. Is this some kinda world record?

A. No. The record is 4,128 kites on one line.

Q. 4,128?

A. Yes. A team of Japanese kitefliers...

Q. Hey, how many kites. . .?

A. 100.

Q. Howdya get 'em all up?

A. One at a time.

Q. Where'd ya buy 'em?

Ad infinitum.

KITE CLUBS:

THE NEW NUMBERS

We can't help but wonder if the same fickle winds which gently buoy our kites one day and brusquely slam them to the ground the next day are the same winds which give rise to kite clubs around the world.

What is it that makes a club suddenly shoot up like a fast climbing box kite? Does anyone know what supports a club like a delta on a windless day? Why do some clubs suddenly disappear like a trash bag sled the day after a workshop? How do some clubs magically return to life like a stunter out of the surf? What invisible adhesive holds some clubs together for years like a ripstop parafoil while others crumble like a tissue paper diamond in a thunderstorm?

Do you know? We at *Kite Lines* don't. What we do know is that the world of kite clubs is an ever-changing one. No sooner is a list of clubs on paper than it is out of date. We have been working on the present directory since the day after the first one appeared in

AUSTRALIA

AUSTRALIAN KITE ASSOCIATION

Founded: March 6, 1977
 Founder: Tony Johnston
 Contact: Helen Bushell, 10 Elm Grove, East Kew 3102
 Members: 100

Benefits: Monthly one-page newsletter, occasional information sheets and kite plans, all distributed free on regular flying days: the first Sunday of each month at Royal Park, Melbourne. AKA conducts the Moomba Kite Fly the first Sunday in March.

AUSTRALIAN KITEFLYERS SOCIETY

Founded: 1977
 Founders: John Silk and Edward (Ted) Stevenson
 Contact: AKS, P.O. Box 11, Holme Building, Sydney University, Sydney, New South Wales
 Annual dues: \$5.00
 Members: 30

Benefits: Membership card and annual membership directory. Regular kite flies the second Sunday of each month at Tania Park; annual Festival of the Winds in September. *Flying High*, an eight-page newsletter is issued twice a year.

KITE FLYERS ASSOCIATION OF SOUTH AUSTRALIA

Founded: June 23, 1977
 Founder: Bob Hains
 Contact: Ron Carson, 28 Kentish

an international smorgasbord

Kite Lines in July, 1981. Little, if any, of the data gathered here should be construed as permanent.

How many active kite clubs are there in the world? We don't know that either, but our best guess is at least 64. We listed 51 clubs in our first directory. That makes a healthy 27% growth in three years.

HOW THEY RUN

Kite clubs are as diverse as their members. Some clubs seem to be the creations of a strong-minded personality; others are democratically run. A few de facto clubs are no more than kite shop mailing lists, yet a retailer may provide very well for club functions. At the other end of the spectrum is

the independent publication. Two such are *Vlieger** and *Kite Lines*, which provide communication but shun any "club" pretenses. It is well to make no assumptions when you join a club and enter into its mutual endorsement system.

HOW WE LISTED THEM

For this directory we have tried to reach all kite clubs known to us and we have printed most of the information we obtained. Where information is missing from our listings (dues, newsletter, membership card), it's because

**Vlieger*, a 16-page bimonthly bulletin, is obtainable for f13.50 a year at Weteringkade 5A, 2515 AK, Den Haag, The Netherlands.

A selection of colorful club patches from around the world of kiting.



Road, Elizabeth Downs, South Australia 5113
 Annual dues: \$5.00
 Members: 16
 Ed. Note: Last heard from May 1983

TASMANIAN KITE FLYERS ASSOCIATION

Founded: 1975
 Founders: Don Jones and C.H.B. (Kent) Stevenson
 Contact: Kent Stevenson, 8 Summerleas Road, Fern Tree, Hobart, Tasmania 7101
 Annual Dues: \$3.00
 Members: 6
 Benefits: Regular kite flies the first Sunday of each month at Queens Domain, Cenotaph End. Annual Father's Day event the first Sunday in September.

BELGIUM

LE NOUVEAU CERVOLISTE BELGE
 Founded: May 31, 1982
 Founders: Jacques Durieu and Michel Dusariez
 Contact: Jacques Durieu, 45 rue de la Houssiere, B-5873 Hevillers
 Annual dues: 450 FB
 Members: 125
 Benefits: Membership card and annual membership directory.

Le Nouveau Cervoliste Belge, bi-monthly newsletter of 30-50 pages is one of the best. Regular kite flies the last Sunday of each month at Louvain-la-Neuve plus four "flying weekends spent in the country and at the seaside" each year.

BRAZIL

ASSOCIACAO PAULISTA dos EMPINDORES de PAPAGAIOS
 Contact: Roberto Armano, Rua Abilio Soares 140-32, 04005 Sao Paulo SP

CANADA

BRITISH COLUMBIA KITEFLIERS ASSOCIATION
 Founded: March 1980
 Founders: "33 people"
 Contact: BCKA, Box 36563 Station E, Vancouver, B.C. V6M 4G9
 Annual dues: \$5.00
 Members: 95
 Benefits: Membership card and bi-monthly newsletter, *Windsox* of 8-12 small pages. Many workshops, exhibits and kite flies every year.

FEDERATION QUEBECOISE DU CERF-VOLANT
 Founded: August 5, 1982

the club either doesn't have them or didn't answer our questions.

We have printed dues in the currency of the club's country. Some clubs have family or junior rates, but we have listed only one-year adult dues. Note that overseas and airmail services should be added to dues where appropriate.

We have printed numbers of members according to what the clubs told us, which in some cases were approximations.

Benefits vary widely from one club to the next. For example, officers—especially *elected* officers—were the exception. Discounts at local kite shops are a benefit of nearly every kite club. Newsletters are an important benefit, one that not only glues a group together but may attract "members" from outside the region. Most kiting bulletins are a mine of unexpected pleasure. We recommend you try them.

If you live near a club and have not been aware of it, we are happy *Kite Lines* can make this your introduction. Seek out your fellow fliers! Then thank us by telling us and others all about it.

Founder: Denis Trudel
 Contact: Lucien Gibeault, 416 Jacques Cartier #2, Valleyfield, Quebec J6T 4T2 or Denis Trudel, Casier Postal 555, Limoilou, Quebec G1L 4W4

TORONTO KITEFLIERS

Founded: April 1979
 Founder: Garry Woodcock
 Contact: Garry Woodcock, 1055 Shawnmarr Road #68, Mississauga, Ontario L5H 3V2
 Annual dues: \$3.00
 Members: 132
 Benefits: Membership card and quarterly newsletter of eight small pages. Many workshops, demonstrations and kite flies throughout the year.

COLOMBIA

JARAMILLO'S KITE FLYERS
 Founded: August 1979
 Founders: Fidel and Ana Maria Jaramillo
 Contact: Fidel Jaramillo V., P.O. Box 90617, Bogota
 Members: 45
 Benefits: Informal kite flies, workshops, exhibits and demonstrations. The Festival de la Cometa is held annually in late July or early August.

DENMARK

KOBENHAVNS DRAGECENTER
 Founded: April 1982
 Founder: Herman Wolsgaard-Iversen
 Contact: Herman Wolsgaard-Iversen, Amagergade 1D, 1423 Kobenhavn K

Benefits: Informal kite flies twice a month in the Copenhagen area; workshops and exhibitions. Annual festival in May.

FRANCE

CERF-VOLANT CLUB DE FRANCE

Founded: April 3, 1977
Founder: Jean Louis Bouisset
Contact: CVCF, boîte postale 186, 75623 Paris cedex 13
Annual dues: 150 francs
Members: 270
Benefits: *Le Lucane*, quarterly newsletter of 30-40 pages. Many informal kite flies and several large festivals (Caen, Dieppe). Sponsors international contest for aerial photography in even-numbered years.

GERMANY

DRACHEN CLUB DEUTSCHLAND

Founded: July 28, 1984
Founders: Chris Sandy and Michael Steltzer
Contact: Chris Sandy and Michael Steltzer, Eisenacher Strasse 81, 1000 Berlin 62, FRG

GREAT BRITAIN

BLACKHEATH KITE ASSOCIATION

Founded: February 1977
Founders: Chris Field and David White

Contact: Steve Gooding, 62 St. Albans Road, Dartford, Kent DA1 1TE

BRIGHTON KITE FLYERS

Founded: 1979
Founders: Greg Locke, Allan Martin and David White
Contact: Greg Locke, 49 Greenways Crescent, Shoreham by Sea, Sussex BN4 6HR

BRITISH KITE FLYING ASSOCIATION

Founded: October 12, 1975
Founder: Ron Moulton
Contact: Ron Moulton, PO Box 35, Wolsley House, Wolsley Road, Hemel Hempstead, Hertfordshire HP2 4SS

CORNWALL KITEFLIERS

Founded: February 1979
Founders: "many people"
Contact: Carolyn Rule, Tremain, Meaver Road, Mullion, Helston, Cornwall

CROYDON KITE GROUP

Founded: June 1980
Founders: Mike Fay, Adrian Wild and Julie Williams
Contact: Mike Fay, 69 Ringwood Avenue, Croydon, Surrey

ESSEX KITE GROUP

Founded: October 1976
Founders: Michael Gardiner, Clive Rawlinson and Bruwer vanGraan
Contact: Clive Rawlinson, The Croft, Parsonage Lane, Howe Street, Great Waltham, Chelmsford, Essex CM3 1BS

GREAT OUSE KITE FLIERS

Founded: March 1981
Founders: Ted Fleming, Colin Jackson and Pete Messenger
Contact: Sheila Hartwell, 7 Saxon Close, Godmanchester, Huntingdon, Cambridgeshire PE18 8JL

THE KITE SOCIETY

Founded: April 1983
Founders: Jon and Gill Bloom
Contact: The Kite Society, 31 Grange Road, Ilford, Essex IG1 1EU
Annual dues: £4.00
Members: over 500
Benefits: Membership card and 24-page quarterly, *Kitefliers Occasional Newsletter*. Most recent issue contains newsletters of the Midlands Kite Fliers and the Brighton Kite Flyers (two pages each).

MARCH AND DISTRICT KITE CLUB

Contact: Les Grumbley, 94 Creek Road, March, Cambridgeshire PE15 8RD

MIDLANDS KITE FLIERS

Founded: April 1, 1979
Founders: Mike Hale, Nick Hale, Bill Souten and Jim Whitehouse
Contact: Bill Souten, 76 Oxhill Road, Handsworth, Birmingham B21 9RH

NORTHERN KITE GROUP

Founded: November 5, 1978
Founders: Martin Powell and Mike Ware
Contact: Ian Walton, Edgely, 50 Park Lane, Congleton, Cheshire CW12 3DD. *Kite*, newsletter of 10-12 pages

SHEFFIELD KITING CLUB

Founded: April 1977
Founders: Frank Green, John Green, Richard Norris, Robert Norris and Stephen Robinson
Contact: John Green, 18 Downham Road, Sheffield S56QB

SHROPSHIRE KITE GROUP

Founded: 1977
Contact: Julian Wright, Bleak House, 46, The Rock, Dawley, Telford, Shropshire

SKYLINE KITE GROUP

Contact: Jon O'Brien, 52 Sandhurst Lane, Darby Green, Caberley, Surrey GU17 0DH or John Tucker, 68 Earlswood, Hanworth, Bracknell, Berkshire

WESSEX KITE GROUP

Founded: 1981
Founder: Patrick O'Driscoll
Contact: David Webster, 16 Brackley Way, Hammonds Green, Totton, Hantfordshire

HUNGARY

MAGYAR PAPIRSARKANY SZOVETSEG

Founded: September 10, 1983
Contact: Bodoczky Istvan, 2092 Budakeszi, Kiss Lojos U. 30

ITALY

ASSOCIAZIONE ITALIANA AQUILONISTI

Founded: July 12, 1982
Founders: Mauro Marsilli, Oliviero Olivieri, Lorenzo Savioli and Claudia Terzani
Contact: Oliviero Olivieri, via Dandolo 19/a, I-00153 Roma
Annual dues: 20,000 lire
Members: 100
Benefits: *Cervi Volanti*, newsletter of 36-40 pages issued 2-3 times a year. Many small, informal kite flies and some larger (in April, May and September).

CLUB CERVIA VOLANTE

Founded: June 1984
Founders: "14 members"
Contact: Roberto Guidori, via Copernico 4, 48015 Cervia
Members: 80
Benefits: Exhibits, workshops, demonstrations, social gatherings and a week-long June kite festival at Grazia Deledda Free Beach.

JAPAN

JAPAN KITE ASSOCIATION

Founded: October 23, 1969
Founder: Shingo Modegi (deceased) and 15 friends
Contact: Masaaki Modegi, c/o Taimaiken, 1-12-10 Nihonbashi, Chuo-ku, Tokyo 103
Overseas subscription: 3000 yen
Members: 1000
Benefits: Small format magazine of 60-80 pages issued twice a year. Conducts annual meeting and 2-3 kite festivals; supports events sponsored by other organizations. The JKA has chapters in 30 or more cities.
Ed. Note: In addition we have locations and names of 34 other kite clubs in Japan and we have reason to believe there are even more.

KOREA

KOREAN KITEFLIERS ASSOCIATION

Contact: Roe Sung Kyu or Roe Yoo Sang, 182 Younghidong, Seodaemun-ku, Seoul

MALTA

KITEFLIERS ASSOCIATION MALTA

Founded: 1977
Founders: Alfred and Josephine Darmania Gay
Contact: Alfred Darmania Gay, Trinity Flats, 3/107a Rudolphe Street, Sliema
Annual dues: £M1.00
Members: 20
Benefits: Membership card and eight-page newsletter published quarterly. Informal kite events throughout the year and an annual meeting and national kite festival in May.

NETHERLANDS

NEDERLANDS VLIIEGER GEZELSCHAP

Founded: Summer 1978

Contact: NVG, Meendaal 39, 6228 GE Maastricht
Benefits: 10-page newsletter issued twice a year contains a lengthy "vlieger kalender."

NEW ZEALAND

NEW ZEALAND KITEFLIERS ASSOCIATION

Founded: July 17, 1984
Contact: Bob Maysmor, 9 Kenef Road, Paremata, Wellington
Annual dues: \$5.00
Members: 30
Benefits: Annual January meeting and kite festival planned. *What's Up*, quarterly 12-page newsletter was first printed September 1984.

WAIKATO KITE CLUB

Founded: 1972
Founders: Clarence P. Croft and Logan Fow
Contact: Logan Fow, 45 Mears Road, Hamilton
Annual dues: \$5.00
Members: 20
Benefits: Monthly kite flies in the summer; yearly kite day; annual general membership meeting.

WELLINGTON KITE ASSOCIATION

Founded: January 1973
Founders: Tony Fitchett and Jim Oliver
Contact: Jim Oliver, 14 Cherry Blossom Grove, Maungaraki, Lower Hutt
Annual dues: \$6.00
Members: 50
Benefits: 12 informal kite flies and six social gatherings a year.

SINGAPORE

SINGAPORE KITE ASSOCIATION

Founded: July (?) 1982
Founders: Shakib Gunn, Tan Kim Hui and Tan Siak Yam
Contact: Shakib Gunn, 149 Rochor Road #05-01/02, Fu Lu Shou Complex, Singapore 0718
Benefits: Small-format newsletter (not seen by us lately). Organizes the Singapore International Kite Festival annually in January.

SPAIN

CLUB de COMETAS de GETAFE

Founded: September 1982
Founder: Jose Exposito Aranda
Contact: Jose Exposito Aranda, c/Batres No. 9 4oD, Getafe, Madrid
Members: 20
Benefits: Membership card, informal kite flies, exhibits, workshops, demonstrations. Newsletter, *Apuntes de Cometas*, is planned 2-3 times a year. The first issue appeared in June 1984.

TAIWAN

TAIPEI KITEFLIERS ASSOCIATION

Founded: November 30, 1980
Founder: Kin Kan Hsieh
Contact: Kin Kan Hsieh, P.O. Box 35-37, Taipei, Taiwan, R.O.C.

UNITED STATES

AMERICAN KITEFLIERS ASSOCIATION

Founded: October 24, 1964; reorganized September 21, 1978

Founder: Robert M. Ingraham; reorganized by Valerie Govig

Contact: AKA, 113 West Franklin Street, Baltimore, MD 21201

Annual dues: \$15.00

Members: 1300

Benefits: Membership card and bimonthly newsletter (*AKA News*) of 24 pages. Conducts annual meeting and festival in early October at varying locations.

CALIFORNIA

BAY AREA KITE ENTHUSIASTS

Founded: December 10, 1983

Founder: Leland M. Toy

Contact: Leland M. Toy, 1044 Sanchez Street, San Francisco, CA 94114

Annual dues: \$8.00

Members: 16 (at the founding)

Benefits: Membership card and bimonthly eight-page newsletter, *Kite Flyer*. Regular kite flies at the Marina Green.

SAN DIEGO KITE CLUB

Founded: 1974

Founders: Benny Baldomero, Bill Everett, Vic Heredia, Ted Norton

Contact: Vic Heredia, 3260 F Street, San Diego, CA 92102

Benefits: "Plenty of weekend kite-flying at Seaport Village and south of the Hilton."

GEORGIA

PEACH STATE KITE CLUB

Founded: February 1981 (former name—Gone With The Wind Kite Club—changed October 1983)

Founders: Billy Davis and Ron Witt

Contact: Ron Witt, 2349 Burch Circle N.E., Atlanta, GA 30319

Annual dues: \$7.50

Members: 12

Benefits: Occasional two-page newsletter, *Kite Chronicle*. Regular meetings the third Sunday of each month except December. Workshops and informal kite events throughout the year.

HAWAII

HAWAIIAN KITEFLIERS ASSOCIATION

Founded: 1968; reorganized 1982

Founder: Wayne Baldwin; reorganized by Alfred Chang and Robert Loera

Contact: Robert Loera, 2863 Kalakaua Ave., Honolulu, HI 96815

Members: over 100

Benefits: Numerous kite flies, meetings, workshops, demonstrations and social gatherings.

TRADEWIND KITEFLYING O'HANA

Founded: May 1983

Founder: John Ornelles

Contact: John Ornelles, 730 Makaleka Ave. #406, Honolulu, HI 96816

Annual dues: \$4.00

Benefits: Occasional newsletter; get-togethers the second Sunday of each month at Sandy Beach.

ILLINOIS

CHICAGOLAND SKY LINERS

Founded: March 6, 1982

Founders: Al and Tom Hargus, Anita and LeRoy Hoover, Tom Lach, Charles and Pat Sotich, and Mike Steele

Contact: Pat Sotich, 3851 West 62nd Place, Chicago, IL 60629

Annual dues: \$5.00

Members: 80

Benefits: Membership card and bimonthly newsletter, *Sky Lines*, averages six pages. Numerous workshops, demonstrations, kite flies, business meetings and social gatherings throughout the year.

MARYLAND

MARYLAND KITE SOCIETY

Founded: January 25, 1969

Founder: Valerie Govig

Contact: Jon E. Burkhardt, 7016 Buxton Terrace, Bethesda, MD 20817

Annual dues: \$8.00

Members: 150

Benefits: Membership card, annual membership directory and 4-page bimonthly newsletter, *The Windy Notice*. Numerous workshops, exhibits and informal kite flies throughout the year. Kite Retreats held in February and August; general meetings held in September and January. Conducts the Maryland Kite Festival annually in April.

MASSACHUSETTS

KITES OVER NEW ENGLAND

Founded: Spring 1980

Founder: George Stantis

Contact: Theodore Kuklinski, 24 Henshaw Terrace, West Newton, MA 02165

Annual dues: \$5.00

Members: 93

Benefits: Membership card and six-page newsletter, *Flypaper*, issued four times a year.

MICHIGAN

RAINBOW KITEFLIERS SOCIETY

Founded: September 26, 1982

Founder: Carleton Crockett

Contact: Art Tallman, 1102 Flushing Road, Flint, MI 48430

Annual dues: \$5.00

Members: 50

Benefits: Membership card and bimonthly newsletter of 3-6 pages (*Windy Tales*). Informal kite flies on the 2nd and 4th Sunday of each month.

5/20 KITE GROUP

Founded: May 20, 1978

Founder: Hank Szerlag

Contact: Hank and Nancy Szerlag, 1961 Hunt Club Drive, Grosse Pointe Woods, MI 48236.

Ed. Note: Quiet lately; newsletter not seen by us. Detroit Kite Kaleidoscope continues each June.

NEW HAMPSHIRE

KEENE KITE FLIERS

Founded: April 1978

Founders: Chester McMartin and Robert Sherwin

Contact: Chester McMartin, 24 Gemini Drive, Keene, NH 03431

Members: 12

Benefits: Workshops, demonstrations and displays; regular kite flies most Sundays at the Park Avenue field.

NEW JERSEY

GREATER DELAWARE VALLEY KITE SOCIETY

Founded: January 17, 1981

Founder: Leonard M. Conover

Contact: G*D*V*K*S, P.O. Box 426, Newfield, NJ 08344

Annual dues: \$6.00

Members: 338

Benefits: Membership card, annual membership directory and *Tight Lines*, 8-page bimonthly newsletter containing an extensive calendar of East Coast events. Numerous workshops, demonstrations, exhibits and kite flies in Pennsylvania, New Jersey and Delaware.

NEW YORK

BROOKLYN KITE CLUB

Founded: July 26, 1981

Founders: John Bell, Lawrence Cuttitta and Frederick Sellett

Contact: Carmine Santa Maria, 275 94th Street, Brooklyn, NY 11209

Annual dues: \$15.00

Members: 27

Benefits: Membership card, workshops, demonstrations.

LONG ISLAND KITEFLIERS ASSOCIATION

Founded: 1973

Founders: James T. Linnen and Edward Mills

Contact: James T. Linnen, P.O. Box 362, Holtsville, NY 11742

Members: 54

Benefits: Informal kite events at Jones Beach.

LONG MEADOW CHAPTER

Founded: 1970

Founders: Wyatt Brummitt (deceased) and Ed Grauel

Members: 45

Benefits: Informal kite flies the third Saturday of each month, May through October, at Monroe Community College.

TAPPAN ZEE KITE FLIERS

Founded: 1983

Contact: TZKF, P.O. Box 55, Sparkill, NY 10976

OHIO

CENTRAL OHIO KITEFLIERS ASSOCIATION

Founded: July 12, 1980

Founders: Gary Herbst, Robert Kloss, Miller Makey and Tim Preston

Contact: Fred Bell, 315 S. Kellner Road, Columbus, OH 43209

Members: 69

Annual dues: \$6.00

Benefits: *Airmail*, small-format eight-page newsletter. Informal kite flies on even-numbered Saturdays at Sharon Woods Metro Park.

OHIO SOCIETY FOR THE ELEVATION OF KITES

Founded: Spring 1977

Contact: Constance Pederson, 1336 South Belvoir Boulevard, South Euclid, OH 44121

Members: 75

Benefits: Exhibits and demonstrations at local fairs and community days; seminars and programs at local schools.

OREGON

ASSOCIATED OREGON KITERS

Founded: 1981

Founder: Dale Gunter

Contact: Sharon Gunter, 6305 SW Cherryhill Drive, Beaverton, OR 97005

Annual dues: \$5.00

Members: 50

Benefits: Bimonthly *AOK Newsletter* of 3-4 pages. Regular kite events the second Sunday of each month at Willamette Park; fourth Sunday is "visiting day."

TENNESSEE

THE WINDANCE SOCIETY

Founded: May 1981

Founder: Jerry W. Harris

Contact: Jerry W. Harris, P.O. Box 120504, Nashville, TN 37212

Annual dues: \$6.00

Members: 40

Benefits: Workshops, demonstrations and non-competitive kite flies. Their *Flyer* is rare.

WASHINGTON

WASHINGTON KITEFLIERS ASSOCIATION

Founded: Summer 1971

Founder: David M. Checkley

Contact: Pacific Science Center, 200 2nd Avenue North, Seattle, WA 98109

Annual dues: \$5.00

Members: 258

Benefits: Membership card, annual membership directory and a bimonthly small-size newsletter. Informal kite flies most Sundays at Gasworks Park.

WISCONSIN

KITE SOCIETY OF WISCONSIN

Founded: 1978

Founders: James and Verdell DeYarman

Contact: Jeff Kataoka, 2266 North Prospect #501, Milwaukee, WI 53202

Annual dues: \$5.00

Members: 75

Benefits: *Tangled Lines*, occasional newsletter of 1-2 pages. Lectures, workshops, exhibits, demonstrations, regular kite flies throughout the year. The Frank Mots Kite Festival is held annually in September. ◇

140 Hyperkites Break the Record

Lanky, likable Rick Bell had been ready for a year to fly a world record for stunt kites in train. It wasn't easy.

Glenn Dalglish flew 60 last year. Then Rick flew 120 at the Washington State International Kite Festival in Long Beach on August 26, 1984. Then Rick came to Ocean City, MD for the Kite and Seafood Festival on September 22-23 for a fresh attempt with 140 kites. The weather was kite-perfect: temperatures in the 80s, steady 10-mph winds, unremitting sunshine in a deep sapphire sky. On Saturday, however, the winds were on-shore and Rick decided to wait for the next day. On cue, Sunday's winds were steady and parallel to the beach, just what "Millie" wanted.

Milliecent Millipede was the name given the Hyperkites train. She was about 200 feet long, composed of 5000 parts and measuring 93-100 square feet of wing area. Every wing was a standard Starfighter Hyperkite except for the first one, which was reinforced to withstand extra stress.

There were five or six false starts, each running the same sequence of excitement at launch, hope for success as minutes passed—then the pain of disappointment as Millie dove into the sand. As defined at Ocean City and agreed as a minimum standard, a world record in dual-line stunt kiting required a five-minute flight under control that included at least one complete loop to the right and to the left. Once, one of the Kevlar lines snapped at the handle. The right loop was giving Rick trouble. Finally, on the sixth try, at 12:27 p.m., the train swooped up and the right loop was completed immediately—then the left!

Now Rick needed only to hold on for five minutes. No problem. Millie was now in the mood to behave. Most of the time she stood tall and stick-like in the sky. Her seven colors in groups of 20 moved with almost military stiffness.

The judges were minding their watches. Five minutes! Cheers went up. For an extra three minutes, Rick played with Millie a bit. He turned her around in arcs and swung her left and right. At 12:36 p.m. she landed—to cheers, toasts, hugs and clicking cameras. The 140 record was quickly mounted on the marquee of the festival's co-sponsor The Kite Loft. It was an achievement—but more than that, it was a peculiarly beautiful nine minutes with Millie.

728 Pounds Is a New Record

But there was more to come in Ocean City.

G. William Tyrrell returned to the scene of his first glory with one of his bigger parafoils (23½ x 36 feet) to break his 1978 world record of 420 pounds for greatest weight lifted by kite. Following careful preparations, including anchoring the kite to a five-ton beach tractor, the kite was launched. And the tractor started to move! Nimbly, Bill Ochse of The Kite Loft bounded into the cab and set the tractor's brakes. The kite stabilized at a good angle of flight, admirable considering that the line was dragged backward by a 42 x 70-foot American flag and a seven-foot WindSpinner attached as drogue. Despite these, the kite's measurements, taken between 1:30 and 2:00 p.m. on September 23, 1984 yielded 728 pounds of vertical lift, a record.

A. Pete Ianuzzi played the key role in measuring maximum vertical lift, which is different than straight line pull. Described for *Kite Lines* by Ianuzzi, the measuring method was as follows:

Measuring Kite Lift

The force developed by the kite was measured by a dynamometer, a device that can measure pull in any direction. Hung vertically, it can be used as a scale for weighing things.

The unit used was invented and patented by Ianuzzi in 1963 for an ichthyologist friend who needed a portable instrument for an expedition to study porpoises. The

complete dynamometer as shown in the drawing is 10 inches long, three inches wide and weighs two pounds including the dial gauge. It will accurately measure forces to 2000 pounds. The principle of operation is based on eight balanced cantilever beams all working together. The force is measured by the change in the gap between the two central legs.

The angle of the flying line, which under the applied force was considered to be straight, was measured by a universal protractor, with a weighted pointer that could be easily read to the nearest degree.

The dynamometer was read by A. Pete Ianuzzi and the angle was read by Bevan H. Brown. Whenever the kite held steady for about a minute, a reading was made of pull and angle. Five readings were taken at what seemed to be maximum conditions (Table 1). The wind speed,

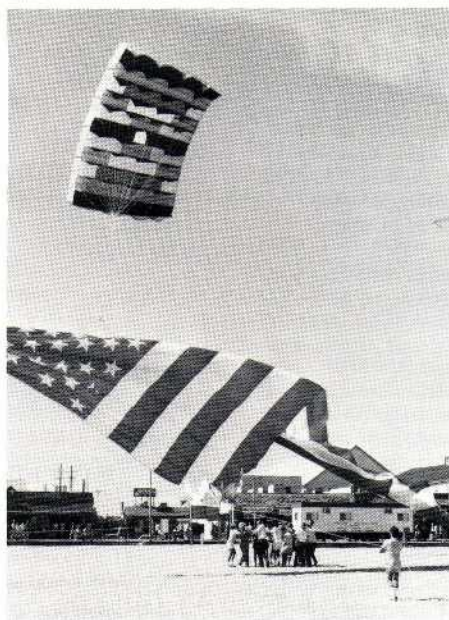
Reading Number	Dynamometer Deflection	Line Angle	Line Pull	Vertical Lift
1	0.0190	70°	678.6	637.6
2	0.0195	60°	696.4	603.1
3	0.0200	58°	714.3	605.7
4	0.0225	65°	803.5	728.2
5	0.0210	67°	750.0	690.4

Dynamometer Deflection measured in inches.
Line Pull and Vertical Lift measured in pounds.

CALCULATION FORMULA

$$0.000028 = \frac{D}{L} \quad L \times \text{SINE } A = V$$

0.000028 = Dynamometer Constant
D = Dynamometer Deflection
L = Line Pull
A = Line Angle, Above Horizontal
V = Vertical Lift



Left, the heavyweight champion of kites at the moment of bring-down, Ocean City, MD. Below, Pete Ianuzzi takes readings for vertical lift.



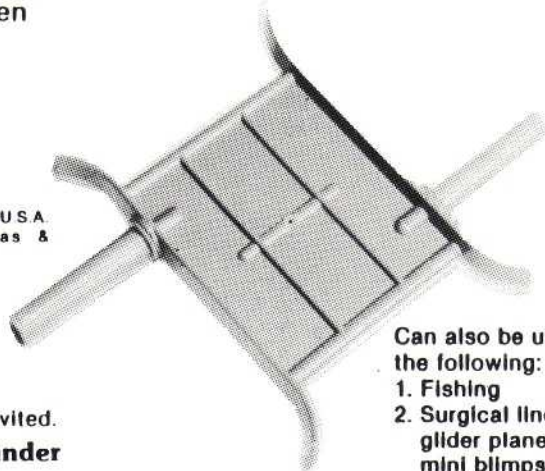
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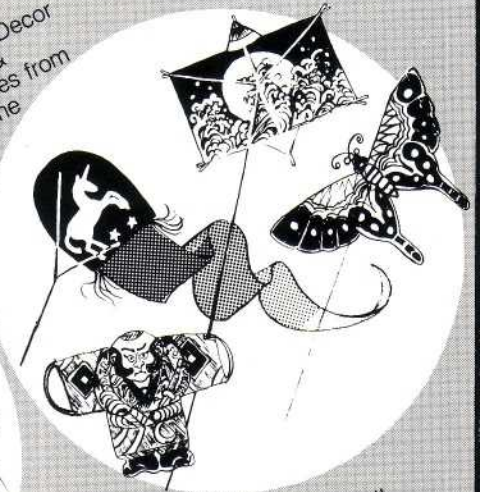
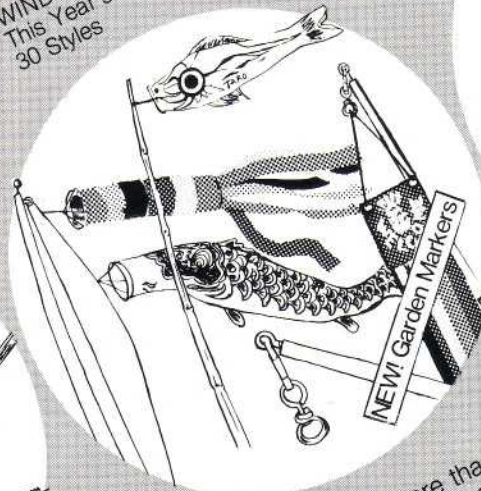
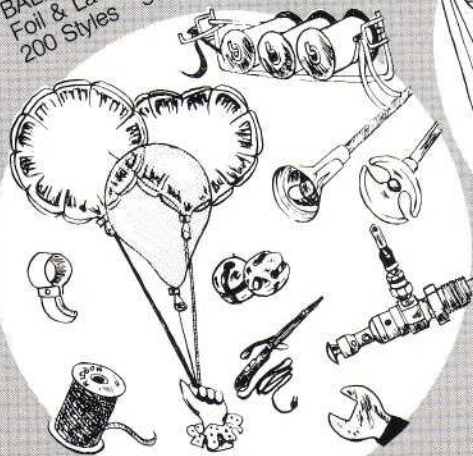


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Empty Spaces in the Sky...

Arnold Brenten

Arnie Brenten, well-known East Coast kite-flier, died suddenly at his home in Clifton, NJ on September 25, 1984. He was 58.

In lieu of a formal service, dozens of his friends from several states gathered at his favorite field, filled the sky with deltas and exchanged anecdotes about Arnie. His favorite kite, a windworn Ingraham delta, was flown above the others. On its line was a banner bearing his name.

At sunset, as the kites were being brought down, the line on his kite broke, the banner fluttering to earth. His kite was not found.

He is survived by his wife, Elaine, a son, Richard, a daughter, Karen, a granddaughter, Melissa and hundreds of friends.

—John Dorrothy

Richard L. Ames

On September 23, 1984 Richard L. Ames died of a heart attack in Los Angeles at the age of 77.

From about 1975 to the present, Dick developed and marketed his Flying Tiger[™] line of spools as an alternative to the popular bamboo-core spools from India. His handcrafted products included the Tiger Tail[™] with an off-center wheel that pulled the spool around by wrist action; the Hungry Tiger[™], a large-diameter small winder; and the Spreel[™], a cross between a spool and a reel. Tiger Tether[™], a specially-made low-stretch line with distinctive flecks of black, was sold with the spools.

Dick was a booster for kite safety and a regular at the local kite festivals. He had many kite friends, including Takaji Kuroda of Tokyo, who gave him several kites, including convertible cubic kites.

Dick is survived by his wife Betty who plans to carry on with Flying Tiger. —V.G.

George P. Turner

Kite Lines learned recently that George P. Turner of Goodlettsville, TN died on July 23, 1983.

George had been an active enthusiast, flying kites regularly in Centennial Park in Nashville. He promoted and served as judge for local kite festivals, owned over 70 kites and was in wide demand to give talks and show kites in schools. He wrote several articles about local events for *Kite Lines* and its predecessor *Kite Tales*. —V.G.

Note: A tribute to Wyatt Brummitt will appear in the next issue of *Kite Lines*. ◇

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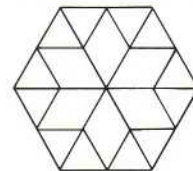
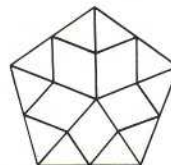
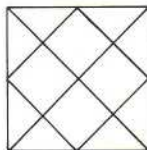
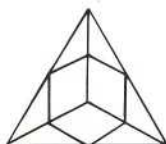
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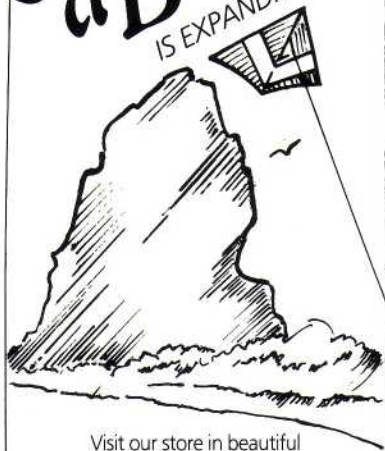
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Shopping Around

By Lou Kane

This new column will attempt to bring you a little of the flavor and some of the interesting items we've seen at kite shops in our travels. Since no one could see all the stores in a few months, the editorial *we* in these lines is meant to include *you*, our readers. You're invited to keep us abreast of the *unusual* things you find in kite shops.

There's a current big trend toward windsocks, spinners, whirligigs and other movable treats in the air. For example, as we traveled the coast of Oregon we found everyone selling a wooden garden "sculpture" called a helix—a sort of suspended revolving spiral staircase. **Once Upon a Breeze** in Cannon Beach, OR had them as large as six feet and as small as a few inches. These wind spirals hold a barber-pole-like fascination. No wonder that, sure enough, later in the season, we saw them at **The Kite Loft** in Ocean City, MD for about \$15 to \$35. We'd bet that by next spring they'll be circulating everywhere.

The WindSpinner we know and love is still moving fast at \$4.95, but its success has bred—what else—spinoffs. Steve Lamb at **Catch the Wind** on the Oregon beaches includes some magnificent ones in his daily display. He makes big spinners as large as 12 feet across using 10 colors for \$150. "Spin is In," says Steve, who also makes a conical spinning drogue he calls a Spin Sock that is very pretty and sells for \$12.95 in his shops.

At **Colors of the Wind**, a Santa Monica, CA flag, banner and kite shop run by Anders Holmquist, we were taken by a beautiful wood and steel sculptured hanging goose that gently flapped its wings when caught by a breeze or the inquisitive tug of a passerby. This bird carried a price of \$43. Later we found a seagull manufactured in smooth white plastic, nearly as elegant as the goose. It was gently bouncing its \$12.95 tag over the heads of Dorothea and Zoltan Szabo in their friendly college-town shop, **World on a String**, Northampton, MA.

I love the beach shops with their attention to affordability and durability in kites and the dramatic displays they use to lure buyers to their doors. If I wanted to test a kite for any hidden design flaws, I would give one to Bill Ochse of **The Kite Loft**, John Stubbings at **Kite Kingdom**, NC or Steve Lamb at **Catch the Wind**. These shops put more time on a kite in a

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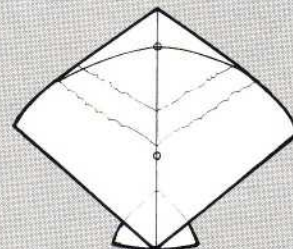
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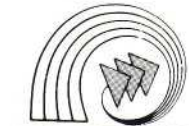
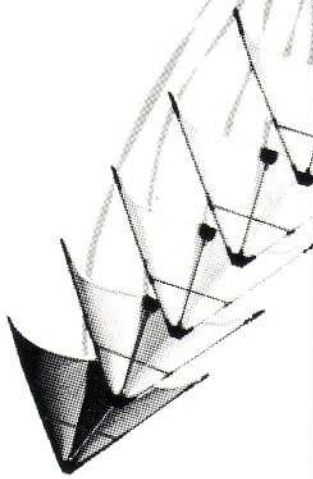


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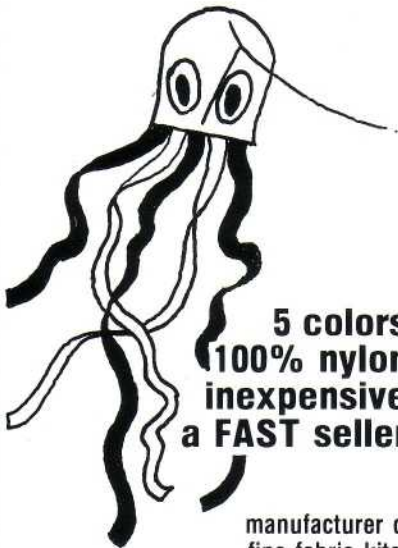
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week than most of us do in years.

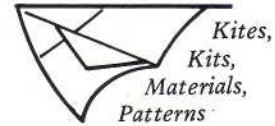
The city and inland shops have to rely on service and repeat customers to build their business. Some of these shops are treasure troves of rare paper kites from around the world, and—to their special credit—materials for kitemakers. In a recent visit to Seattle, I was pleased to see that Ken and Suzanne Conrad of **Great Winds** are importing more kites than ever from China, Japan, Korea, India, Taiwan and Sri Lanka. Whether from overambitious ordering or foresight, these wonderful kites are still available—the beautiful Sri Lanka kites, little Chinese figure kites and contentious Korean fighters. A special charmer is their Chinese mini-centipede, like a string of buttons across most of Ken's shop. They're \$150 and Ken says he *has* seen them fly.

Materials continue to be both the first interest and the hardest quest for those of us who make a few kites for ourselves. We highly commend the shops that both stock and ship materials for kite builders. The prices typically are reasonable for the small user. Some of the stores doing this are: **Great Winds**, Seattle, WA; **The Kite Site** in Georgetown, DC; **Kites Aweigh** in Annapolis, MD; **The Unique Place** in Royal Oak, MI; **Wind Play** in Portland, OR; and **World on a String** in Northampton, MA. (We're sure we've left out a few—let us know who.) These suppliers carry special repair and replacement parts and materials for the stunters and other kites. Fran Gramkowski of the **High Fly Kite Co.** in Haddonfield, NJ (a mail order business) has made replacement parts his Holy Grail. **Great Winds** handles some very-small-diameter (1mm) fiberglass rod at 35¢ a yard that does intricate bending in true bamboo style. It is used by our creative Japanese friend Takeshi Nishibayashi.

Kites are still a bit rare in the kite market and in chatting with Grant Raddon of **Wind Play** we couldn't seem to come up with a good explanation for this. Grant is one of the few who takes kits seriously and has some in development now—we'll report specifics as soon as we hear. The **Unique Place** has kits by Wayne Hosking for plastic stunters and boxes at \$3.50 and \$4.50 respectively. They also carry sled kite packages for bulk buyers, 70¢ per kite in plastic and 35¢ in paper. The Stratton airplane kite kit series is still flying. Are there other kits?

As you can see, in Shopping Around we intend to share with you some of the "extras" of the market, odd items that might not merit a full review. We write from the view of the kiter rather than the merchant. Items are chosen in a random manner—strictly for their interest to you.◇

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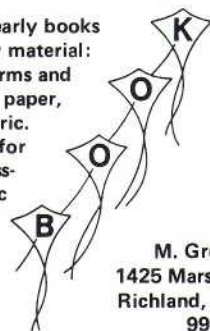
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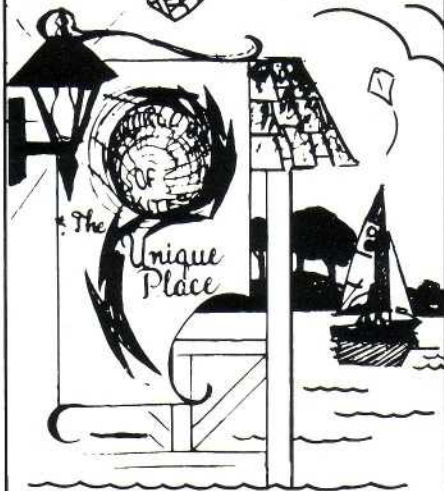
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A TALE SPUN BY A WINDSPINNER

Once upon a time there was a beautiful young maiden named Sarah. Sarah was as lonely as she was lovely, as her overprotective father kept her locked away in the castle until a suitable suitor came calling. Sarah amused herself by staring out her window at the world beyond the castle walls and admiring her varicolored jewels glistening in the sunlight at her window.

Sarah would not remain lonely long if Hiram, the Kite Flyer, had his way. Hiram had spied the lonesome lovely lass looking out her window as he was retrieving his kite from a tree at the edge of the castle walls. Thereafter daily he sought entrance to the castle but was turned away as he was but a lowly peasant.

Each day as he was sent away from the castle gate he would endeavor to catch the eye of the lovely Sarah by flying his kite within view of her window—but his efforts were in vain.

Then one day an astute businessman came along, saw Hiram, found out about his fruitless efforts and said, "Have I got a deal for you." He went on, "You'll never catch the eye of the lonesome lovely with just a kite—everyone knows her eyes are trained on her multicolored jewels sparkling in the sunlight. You, my boy, need a WindSpinner.

"For just \$4.95 retail you can capture the color of her jewels and have them dance in the sunlight on your kite line."

Hiram replied, "Sounds good, but \$4.95 is all I have left in this world."

The astute businessman said, "Trust me!"—which Hiram did. (From here on the story gets mushy—rated PG.)

The WindSpinner, like a jewel spinning in the sunlight, indeed caught the eye of the lovely lass Sarah. She begged her father to have the kite flyer brought in to see her.

As Hiram was brought into the presence of Sarah and her father, Sarah said, "Hi." Hiram said, "See, we're made for each other—she knows my nickname."

Sarah's father, puzzled yet delighted at his daughter's happiness, blessed their marriage and laid on Hiram a dowry of a new rip-stop Jalbert Parafoil.

As Hiram rode off into the sunset with the lovely but no longer lonely Sarah at his side and the WindSpinner sparkling in the sunlight on the kite he held aloft (with a "just married" sign on it), he was heard to exclaim, "Best \$4.95 I ever spent!"

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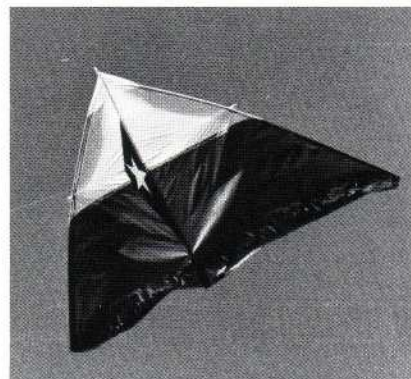
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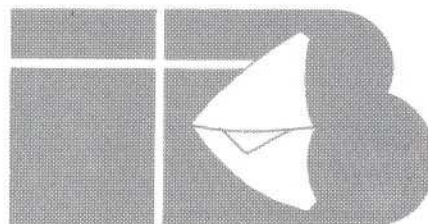
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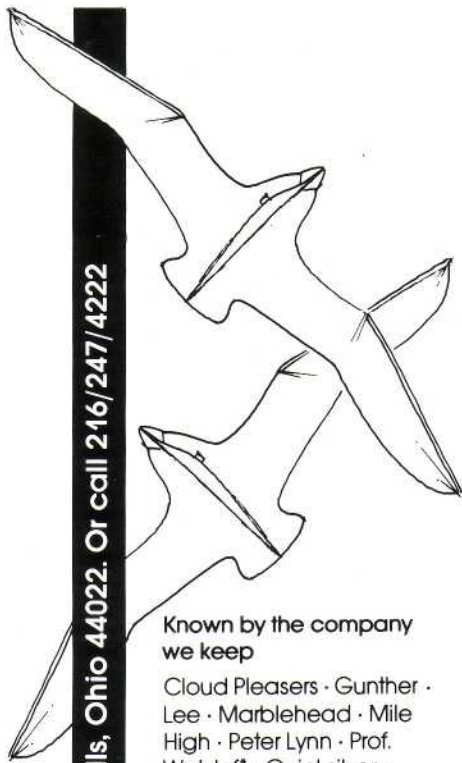


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This Issue's Best of Show

Best of Show

What Is Best of Show?

George Greger of Richland, Washington, is an innovative kitemaker and the husband of kiteflier-teacher-author Margaret Greger. Here he tells the story of his feather kite:

The early native inhabitants of America made remarkable use of feathers for decoration of themselves and their ceremonial devices. Does it not seem reasonable that, having developed impressive use of tail feathers of the golden eagle and the great horned owl for their headdress, they would also have made use of the strong but light wing feathers for an object that soars on the prairie winds?

How would the idea have come about? I can visualize a native American in full feathered headdress, riding his pony into the prairie wind. He certainly could have sensed the lift provided by the rows of feathers trailing from his elaborate attire.

Having found the study of the tools, crafts and dress of America's early man a fascinating subject, I set out to replicate this "float on the wind" creation. And I was determined to use only those construction items available to early people—primarily wing feathers and plant materials.

When my need for large wing feathers became known to my kite friends, one of them offered me the feathers of a goose destined to become the main course of her Thanksgiving meal. I took these feathers and secured them to a central spar to form a surface that would deflect the wind. This initial test of lifting capability and configuration was less than successful: the goose feathers were too heavy. It seemed logical

that the feathers from adult flying birds would be better suited to this special need. The weight of such feathers is much less for their surface area. (Note: It is currently illegal to even possess an eagle feather.)

Later, when I visited a friend whose hobby was raising peacocks, the right materials became evident. Mrs. Nicholas made a point of gathering and storing naturally molted feathers from her colorful flock. Her friends prized the multi-colored tail feathers, but I was more interested in her collection of mature flight feathers. Carefully selecting right and left wing feathers of equal size and length, I accumulated a matched set.

I made the center spar from the tapered stem of a cattail plant. When completely dry, this stem was lightweight and strong. Holes burned into the sides of the stem gave a means to fasten the quill portion of each feather, alternately left and right. I burned these holes at an angle to give tilt upwards and backwards for dihedral.

One straight tail feather was attached in the central spar's end as a keel to give directional stability. A bridle was the last preflight item.

And the feather kite flies! Rather well, I may say. From time to time, the individual feathers get out of adjustment and need recalibration for effective lift. I call this "preening" my kite. The kite also needs to be stored carefully so that the feathers do not become bent.

I'm proud of the kite—a kite that any early American would be pleased to own.

The *Best Of Show* series features a reader's kite picture on a whole page in *full color* in each issue. Yours could be the next one! What kind of kite photograph qualifies for this honor?

- First, the kite must fly well. Supporting information must be included describing the kite's typical flight and giving its dimensions, materials and history.
- Second, the kite must be beautiful. Agreed, beauty is in the sky of the beholder. This is an openly subjective criterion.
- Third, the kite must show some quality of originality in form, craftsmanship, color, decoration or use of attached elements.
- Fourth, the photograph must be of high artistic and technical quality—sharp, well-framed, rich in color. The photograph should be either a close-up of the kite in the sky, the kite filling at least one-third of the film area, or a background-inclusive shot, showing people, scenery, etc., around the kite. In any case, the kite

should be shown well, and not necessarily flying, as long as your supporting information establishes the kite's flyability.

We suggest you take many pictures of your favorite kite, but send us no more than *five* photographs of any *one* kite at a time. For printing, we prefer 35mm (or larger) transparencies, or color prints if they are 8x10" or larger. Include a self-addressed envelope with stamps or international reply coupons—otherwise we cannot guarantee return of your material.

Pictures submitted must be previously unpublished. After publication in *Kite Lines*, future rights revert to the photographer and kitemaker, both of whom will be credited in *Best Of Show*. You may take pictures of a kite not your own, but you should obtain the kitemaker's cooperation for the submission.

So, what are you waiting for? Give us your best shot! You have nothing to lose but your obscurity. ◇



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