

KiteLines

\$2.50
WINTER-
SPRING
1981

quarterly journal of the worldwide kite community



Delightful DIEPPE! as seen by Jacques Fissier

What is DELTA? Definitions and Derivations

Kite Clubs: An International Smorgasbord

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The Kite Site

About Our Materials

We believe that good long-range interest in kiterflying is helped by more people making their own kites. We answer the need for a convenient single source of kitemaking materials. We carry the largest and best quality stock and we continually research and update our selection. We invite your suggestions about what we should carry. *About our prices:* A few of these materials you may be able to obtain more cheaply from various places. However, it will probably take a good bit of research, ordering (and paying shipping) from many different sources; talking to people who don't understand kitemakers' needs; and trying to convince wholesalers to sell in small quantities. We offer a good alternative. Making your kites is still the cheapest way to go. Have fun!

Rip-stop Nylon

Probably the lightest and most durable fabric made, rip-stop weighs anywhere from .50 to 2.3 oz. per square yard. Our rip-stop is first quality from Howe and Bainbridge, the noted sailcloth makers. It comes in two weights, 1.5 oz. and .75 oz. (Stabilokote III). The 1.5 oz. has minimal porosity; the .75 oz. is urethane-coated and has zero porosity. Both have less stretch than garment types of rip-stop. Sewing fastens it. All 41" wide: .75 oz. in red, orange, yellow, green, royal blue, light blue, purple, black or white. **\$5.50/yd.**
1.5 oz. in red, orange, yellow, green, royal blue, light blue, purple, black or white. **\$4.50/yd.**

Tyvek®

Tyvek is the trade name for a DuPont product. Technically, it's a spun-bonded olefin. Nontechnically, it seems like a stiff, somewhat slippery paper (Type 10) or a kind of extra-strong paper napkin (Type 14). Type 10 is very strong and, in its heavier grades, almost impossible to tear unless "started" with a cut. Type 14 is softer, not as strong (though still very strong for its weight) and much more drapable (i.e., wind-conforming). Tyvek can be sewn, glued or taped. Both kinds are white and can be colored, painted and printed.
Type 10 (1073D), 51" wide **\$1.75/yd.**
Type 14 (1422R), 56" wide **\$1.00/yd.**

Mylar®

Mylar is the trade name for DuPont's polyester film. It's transparent, extremely lightweight, and has a very high tensile strength. If it punctures, the tear will "run" unless taped. It cannot be sewn and is tricky to heat-seal or glue, though contact cement does OK. Tape (Mylar, cellophane or fiberglass) is the best means of fastening it. We carry 1/2-mil thickness (what most dragon kites are made of) in a fluctuating stock of colors, including red, dark purple, fuchsia, yellow, green, blue or beautiful rainbow stripe; 48" wide. **\$1.75/yd.**

Tissue Paper

Ours is made by Crystal Tissue Co., the largest specialty tissue company in the U.S. and a quality leader. We carry No. 1 Standard colored Fourdrinier MF tissue. It is nonbleeding and quite strong (for tissue paper). Each sheet is 20 x 30" and we stock red, pink, orange, yellow, gold, lime, emerald, turquoise, dark blue and purple. **\$.15/sheet, \$1.25/10 sheets**

Silkspan®

An old favorite for model airplanes, heavier than tissue paper but stronger. We carry three thicknesses, all white:
Size OO (thin), 19 1/2 x 24 1/2", **\$.30/sheet**
Size GM (medium), 24 x 36", **\$.45/sheet**
Size SGM (thick), 26 1/2 x 33 1/2", **\$.55/sheet**

Hardwood Dowels

The "old familiar" of kitemaking. You can get them in any hardware store—but can you get them in 4-foot lengths? All ours are 4 feet long; diameters are:
1/8" **\$.14** 1/4" **\$.24**
3/16" **\$.19** 5/16" **\$.30**

Aluminum Tubing

Either Reynolds or Kaiser Aluminum in a grade of 6061 T6. For the nontechnical, that's a good compromise between strength and price. We carry 4' and 6' lengths. Dimensions given are outside diameters by length; wall thickness is .035".
1/4" x 4' **\$2.40** 3/8" x 4' **\$2.70**
1/4" x 6' **\$3.60** 3/8" x 6' **\$4.00**
5/16" x 4' **\$2.60** 1/2" x 4' **\$3.40**
5/16" x 6' **\$3.90** 1/2" x 6' **\$5.10**

Fiberglass Rod

This is high-quality fiberglass made by Glasforms, one of the largest suppliers of kite fiberglass in the country. It is heavier than aluminum, more durable and more flexible. Sizes:
3/32" x 4' **\$.80** 3/16" x 4' **\$1.45**
3/32" x 6' **\$1.20** 1/4" x 4' **\$1.00**
1/8" x 4' **\$.80** 1/4" x 6' **\$1.50**
1/8" x 6' **\$1.20** .300" x 4' **\$1.60**
3/16" x 4' **\$.95** .300" x 6' **\$2.45**

Glasforms now makes an "Extraflex" formula fiberglass that is somewhat less stiff, if that's what you need (Regular formula will be shipped unless Extraflex is specified.)
1/8" x 4' **\$.80**
1/8" x 6' **\$1.20**

Going for a breakdown? We now have polished aluminum ferrules for the 3/16" and .300 sizes. (Hope to have 1/4" by Fall 1981.)
3/16" ID aluminum ferrule. **\$.55**
.300" ID aluminum ferrule. **\$.55**

Tubular Graphlex

These struts aren't cheap, but if you want a light, sturdy, collapsible frame, especially for larger kites, use tubular graphlex. Of filament-wound fiberglass with graphite reinforcements running lengthwise, they're springy and light. The ferrules are short fiberglass fittings that slip snugly inside the tube. A ferrule can be secured with a drop of cyanoacrylate glue (the 10-second stuff). A ferrule glued halfway into one end of a tube will slip into any other open tube. The tubes can be cut with a hacksaw, sanded or filed smooth, and drilled. All tubes are 5/16" OD x 32 1/4".
Graphlex tubes, each. **\$1.50**
Fiberglass ferrules, each. **\$.30**

Nylon Webbing

Need a pocket that won't tear through? Use this stuff.
3/4" x 1' **\$.35** 1" x 1' **\$.55**

Polycarbonate Tubing

Rigid fittings for struts. Polycarbonate will bend when heated and regain its rigidity when cool. It can be sawed, drilled and sanded. Main problem is that the smallest size it comes in is 1/4" OD. However, by wrapping the end of a 3/16" strut with tape you can achieve a pretty good fit. **\$.80/ft.**

"Surgical" Tubing

Clear plastic tubing is handy for connecting various round struts. There are many types and grades of this tubing and although many are called "surgical" tubing, actual surgical grade is super expensive. What we have is plain old tubing, but good quality.
3/16" ID x 3/16" OD. **\$.30/ft.**
1/4" ID x 3/16" OD. **\$.40/ft.**
3/16" ID x 3/16" OD. **\$.60/ft.**

Bamboo

Outside bark. Light, flexible and strong. Interesting to work with. Good for fighter kites, etc. Comes in strips (i.e., already split) of 4' length:
1/16" **\$.12** 1/4" **\$.16**
1/8" **\$.14** 1/2" **\$.20**
We now have precut fighter kite sticks (sets of spine and tapered bow) that were cut and trimmed in India. **\$.35/set**

Rattan

Looks like dowel but is actually a round reed. Very light, very flexible. Good for dragon kite heads.
1/4" x 4 1/2', each. **\$.95**

Spruce

A straight-grain, lightweight strong wood, spruce is heavier than balsa but much sturdier. Used for aircraft (people-carrying type) for years, it's a favorite for a variety of kites.
3' long, 1/16" x 1/4" **\$.45**
The following are all 4' long:
3/32" x 3/32" **\$.50** 1/8" x 3/8" **\$.80**
3/32" x 3/16" **\$.55** 3/16" x 1/2" **\$1.10**
1/8" x 1/8" **\$.50** 1/4" x 1/4" **\$1.00**
1/8" x 1/4" **\$.65** 3/8" x 3/8" **\$1.45**

T Fittings

Tubular T-shaped fittings that accept 1/4" struts. Can be heated and bent. Good for box kites, stunters, etc. Each **\$.50**

Slotted Tips

Plastic tips with slots in the end that fit 1/4" struts. Good for winged boxes and other intricate cellular designs. Each, \$.15

Mylar Tape

Great stuff—unbelievable tear strength. You can cut it but you can't rip it. We figured that not too many people would need to buy the standard 55-yd. rolls, so we also had special put-ups made for us. It's more expensive per yard, but you don't have to wonder what to do with all that extra tape.
3-yd. roll **\$1.50**
55-yd. roll. **\$11.00**

Rip-stop Nylon Tape

A 1.5-oz. rip-stop with an adhesive backing (covered by waxed paper). Great for fast repairs, reinforcing connecting points and designs or lettering. Red, orange, yellow, green, royal blue, light blue, black, white, all 2" wide. **\$.25/ft., \$4.25/25-ft. roll**

Vinyl Ribbon

For tails. Red, orange, yellow, green, blue or white, approx.
1" wide. **\$1.75/100-yd. roll**

Books

#101 *Kites*, Brummitt, 1971, 120 pp. Excellent introduction, 16 plans. **\$1.95**
#103 *Kite Craft*, Newman, 1974, 214 pp. Substantial background, photos, 20 kite plans. **\$4.95**
#104 *Kites*, Pelham, 1976, 227 pp. Comprehensive; 85 kite plans (given with scale instead of dimensions), lots of photos. **\$4.95**
#105 *Blown Sky-High*, Greger, 1977, 81 pp. For teaching, 14 simple kites. **\$4.95**
#106 *More Simple Kites*, Greger, 1979, 21 pp. **\$1.50**
#107 *The Art of the Japanese Kite*, Streeter, 1974, 181 pp. A classic. **\$9.95**

To: THE KITE SITE
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202-965-4230

NOTE: Fabrics are now sold only in full yard increments. Half yards of different colors are OK only if they add up to full yards for each type and weight of material.

Quantity	Item & Size	Color Choices:		Price Per Item	Extended Price
		First	Second		

Deliver to: _____ Subtotal _____

Street Address: _____ Shipping **\$3.00**

City, State, Zip: _____ Total enclosed _____

Credit card number (VISA, Master Charge, Amex): _____

Expiration Date: _____ Signature: _____

Make check or money order payable to The Kite Site. Personal checks must clear the bank before shipping. Money orders, cashier's checks and charges insure fastest shipping. Alaska and Hawaii please add \$2.00 extra for shipping. Sorry, no overseas orders.

Note: In case we are temporarily out of an item, should we (check one)
 back order return payment substitute (describe below)

Note: In case we are temporarily out of your color selection, should we (check one)
 back order return payment substitute (describe below)

Damage claims must be made within 7 days of receipt of merchandise. Prices subject to change without notice.

Fly the exciting, dazzling... GRANDMASTER™ KITE

the ultimate
state-of-the-art in
single-line maneuverable
and fighting kites.



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One-of-a-kind works of art. Each Grandmaster Kite is individually hand-crafted and hand-painted by a master kitemaker and flight-tested by a master kiteflier. The color combinations of each design vary, and new designs are constantly being added to the collection. To maintain quality control, our present production is limited to 3000 kites per year.

But the real joy of a Grandmaster Kite is in the flying. When you get it up and are its master, you will exult in its power — its gentleness — its instant response to your will and artistry — its glorious colors and design enhanced by its beauty of motion. Indian Champion kitefliers have already pronounced the Grandmaster to be the most responsive kite ever made, superior to the fine-tuned fighter kites made in India. But because each kite is made of Mylar™, with a bow of fiberglass rod and bamboo spine. Grandmaster Kites are as nearly indestructible as technology permits.

The Grandmaster is produced in two models: the Competition and the Fast. For the experienced flier, the Competition or the Fast will cover all wind conditions. For the novice flier we suggest beginning with the Fast, then stepping up to the Competition when his or her skills are developed. The two models are the same in size (24x29") and appearance. Only the speed of response varies.

The price: \$21.00, plus \$3.50 per kite for shipping via UPS, insured (Air Freight east of the Miss.). Draw crowds — create excitement — order your Grandmaster Kite today!

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Dealer inquires invited.

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Quantity	Fast or Competition	Symmetrical or asymmetrical design preference	*Regular price each \$21.00	**Custom order price each \$31.00	Total price
<input type="checkbox"/> Grandmaster recommended line, 3-ply waxed linen, 1000 feet \$8.00 + 75¢ shipping. <input type="checkbox"/> Grandmaster recommended reel, \$2.75 + 75¢ shipping.					
Total					

Enclosed is my check or money order made payable to Grandmaster Kites.

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

*Regular orders will receive one of the illustrated designs or a new design.
**To custom order a specific design or specific colors, include \$10.00 each in addition to the regular charge and expect a delay in shipping time.



Grandmaster Kites are sold with an unconditional guarantee. If your Grandmaster does not come up to all of your expectations, just return the kite to us within 30 days for a total refund of your \$21.00.

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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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Contributions and correspondence are always invited. Enthusiasts who contemplate sending substantial material should request our guidelines for writers and photographers. Return of unsolicited material cannot be guaranteed unless accompanied by ample stamps and envelope, self-addressed. Accuracy of contents of *Kite Lines* is the responsibility of individual contributors. Diverse views presented in *Kite Lines* are not necessarily those of the editor, staff or advisory panelists.

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You ask for a definition and we offer one. You ask for derivations and we track them down (identifying major and minor contributions). And you ask how to make a delta and we offer drawings for five of them—demonstrating the dazzling diversity of the delta. By Mel and Valerie Govig with special contributions from Ed Grauel, the U.S. Patent Office, Al Hartig (the Nantucket Kiteman), Carol Master, Helen Bushell, Martin Powell, Bob Quinlivan, John Van Gilder, et al.

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By Mel Govig. An iconoclastic assertion that the delta is less than perfect is tempered by appreciation for its character and suggestions for troubleshooting. With a digression on the subject of *efficiency*.

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Story and Photographs by Douglas Cann. Kites are the key to communication for this kiter on his visit to Thailand.

Delightful DIEPPE! As seen by Jacques Fissier in Normandy / 34

Since 1978 there has not been an event to equal the prestige and excitement of this festival hosted by the town of Dieppe. The English, Dutch, Belgians and Germans were there—and, of course, the French, including Jacques Fissier with camera and enthusiasm.

Kite Clubs: An International Smorgasbord / 41

Today we are witnessing a phenomenal growth in kite clubs and associations—an 86% growth since 1978, to be exact. *Kite Lines* has surveyed them and the findings appear in a four-page directory.

Battle Strategy: Kite vs Model Airplane / 50

By Walt Whippo. A funny thing happened when a kiter found himself on model airplane turf. Here is how he triumphed.

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Reviews of the Ferrari Ram, the Mile High Flare and Javelin Delta and the Comet's Tail Delta. Reels are updated this issue to cover Carey's Kite Winder, the Peter Lynn Hoop, the improved KiteWinder, the Mile High Winder and the Kite Hauler. Margaret Greger reviews the book *Better Kite Flying for Boys and Girls*. And Mel Govig recounts his life with the Falcon kite in a frankly unobjective review.

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The Cambaflare by Tony Gilbey incorporates elements of several kites and achieves a novel design—one that flies upside-down, too! As a bonus, Tony tells how to make his "Foraged Kite."

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Again in Seattle's Kingdome, a new record is set for Duration Indoors—this time hitting 39 hours and 53 minutes, achieved by Carl Brewer, Tom Sisson and Bob McCort of the Washington Kitefliers Association. Report by Dave Checkley gives all the logistical details.

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Cover

In the charming ambience of the old French village of Dieppe in Normandy, a great gathering of kites occurs in September, 1980. The international sharing of witty and beautiful kites is perhaps well represented by Chantal Barret, Parisian kitemaker. Here she offers her delightful centipede to the sun. Photograph by Jacques Fissier.

MYLAR[®] BOX KITE SYSTEM[™]

These high performance, high tech kites can be flown 2 ways. First—as is. Second—fastened together in a cluster to create innovative new designs.

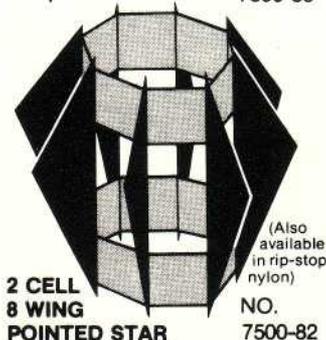
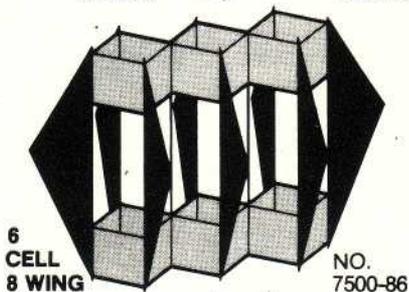
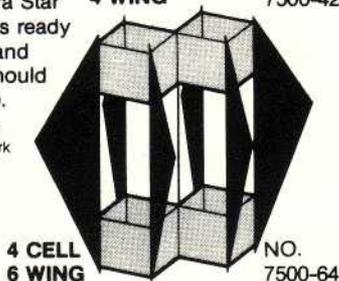
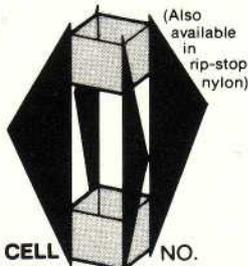
Because of their versatility the demand for these kites has been unprecedented. As a result we've increased production. In addition we've designed a sturdy, colorful, storage tube package; improved our construction techniques; and created better instructions.

To support your sales efforts we will provide art for your advertising promotions.

Advertising allowances also available.

This segment of the market is witnessing a phenomenal growth. Spectra Star Kites is ready for it and you should be too.

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or 1-800-423-3680.



Letter from the Editor

Ouch! On January 1, 1981, the U.S. Postal Service raised international mail rates 55 percent. We here at *Kite Lines* didn't even hear about it until mid-January, just after printing an issue. We could not announce new rates until another issue was out. And of course our subscription order forms ("Little Puffs," we call them) are printed in large quantities far in advance of distribution. There was not a thing we could do to protect ourselves from the losses during the interim. Our new foreign rates are now printed, with regret. We're saddest that we've had to add a differential for Canada because of postal increases in that country.

Domestic first-class mail rates were raised soon after the international hikes and are now in painful effect for us all, including *Kite Lines*, where the mail is a vital element in our work. Second-class rates (under which *Kite Lines* is mailed) have gone up as well, but not by as devastating a percentage. For the time being, we are holding the line on our regular U.S. subscription rates.

Ouch again! We changed list maintenance services with the previous issue and the company failed to follow our instructions to an absurd degree. We suffered missed deliveries, lost copies and incredible difficulties and delays over the problems. We are now, of course, using a new list maintenance company, which we have selected with great care! We apologize to those of our subscribers who suffered. If you missed a copy of the Fall 1980 issue to which you were entitled and if we did not catch the error, please let us know and we will rectify.

In large part because of the problems mentioned, we have identified this issue by two seasons—Winter-Spring. There will be no loss of issues to any subscribers, of course; all terms are being extended by one edition automatically. We are determined to keep positive and to get a leg up on our schedule over the next issues.

Life in the *Kite Lines* office can be tense at times. At a peak of nontranquillity in January, we had just taken delivery on some beautiful new filing cabinets and the innards of the old files were still mostly in boxes in the process of reorganization while at the same time we had received fresh magazines from our printer which required immediate packing into

about 90 shipments for kite shops and other bulk recipients. Tremors of chaos were alive in the air, but they were counteracted by the sense of festivity that always accompanies publication of each new *Kite Lines*.

At this moment a pickup truck appeared outside our door. Out stepped a stranger with a broadly smiling face. He asked me if I knew him. I guessed—Mike Weletyk. I was right. The Kiteronaut of Maple Heights [OH] was here, in town on delivery work, and we chatted a bit among the boxes. Mike is the flier of 50-and-more kites from one line, all of them standard two-stickers, which he flies from a giant reel. As told in a story in *Kite Lines* (Summer 1977), he had brought pleasure to his family and many gatherings of people in his area with his unique train of kites, his "singing angels." He had even been invited to Chicago and other distant places to put on demonstrations.

But all of that joy and wonder, all of that great personal identification with an unusual achievement, is stopped now. The government in the form of the Federal Aviation Administration has said no. "Too hazardous," they say. It smites the soul of Mike Weletyk.

He tries to describe it in his Ukrainian-accented English and the pain seeps out, pain for his children and his audiences more than for himself. There is no smile on his face for a while. But it returns. Mike waves as he leaves in his truck.

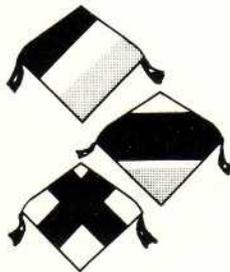
I am left thinking. Are kites *always* a hazard to aircraft? Cannot *any* space be found or warnings be made to assure a little clear air space? Where does the sacrifice of pleasure for safety reach an unacceptable limit? What patterns of control can we expect *consistently* from the FAA in its various offices around the country? But mostly I am thinking, how can I help Mike Weletyk to fly again?

My mind frets around this question for the rest of the day without an answer. I turn to other work; the question recedes from the edge of urgency. But I write down my thoughts that afternoon in order to share them with you today.

Gentle breezes,

Valerie

JAPANESE KITES collector's item



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It's history goes back 400 years. Known world wide, Mr. Morimoto is the only maker of these fine works of art. Many traditional designs are available. Designs made by paste-up. Size: 28" high.

Price: \$24.00 US + \$3.50 shipping.

SHIRONE KITE PICTURES

Hand drawn by Mr. Imai of Shirone Giant Kite Association, (see last issue of *Kitelines*). 1 2 Designs 24"X18". Other sizes available.

Colored, \$45.00 US + \$1.50 shipping.
Sumie (black ink), \$35.00 US + \$1.50 shipping.

Makes excellent wall decoration.



Quantities are limited! If you wish to select a particular design, send \$2.00 for color pictures of available designs.

More traditional Japanese kites will be available soon. . . some are presently on the way.

Allow 4-6 weeks for shipping.

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(God of the Winds)

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soaring
scimitar

Wind mill kites

innovations in kite design

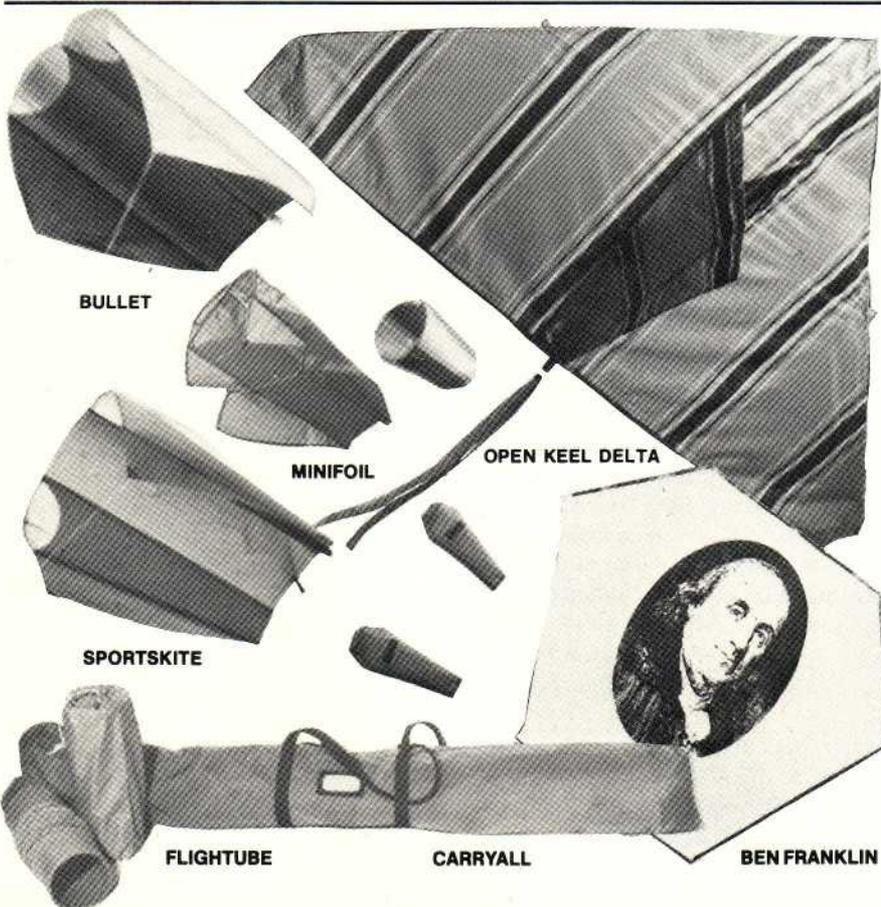
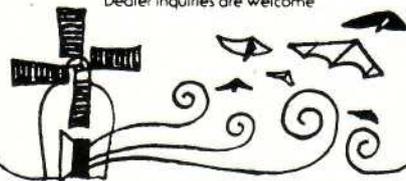
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Dealer inquiries are welcome



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Letters

CORRECTING SLED HISTORY

Last night I was rereading a recent copy of *Kite Lines* and thought that I would take this late opportunity to comment.

I was sorry to learn of the passing of kiting's Mr. Allison. In the *Kite Lines* obituary, it was suggested that I had found one of his kites and had changed it somewhat to my ends. While Mr. Allison had a profound influence on the Scott-Sled, it was not quite in the manner stated.

Quite a while ago, about 1961-62, give or take a year or so, I saw an ad in (I believe) *Model Airplane News* magazine in which there was a sketch of the new sort of kite then being offered for sale at a Dayton address. (We lived in Columbus, Ohio at the time.) I sent an order right away, but the post office was unable to deliver to the ad's address and so my letter and check were returned.

That left me with a small line sketch in a small magazine ad—and a lot of curiosity. Now I'm sure that you will quickly agree that a kite of the Allison-Scott-Sled variety is difficult to portray in a meaningful way in a simple sketch, but it was all that I had to go on. Some time later I emerged with a kite, based on the magazine sketch, that pulled like a horse but really didn't fly. With a 30-foot tail (it was a five-foot-high kite) needed to keep it right side up, the kite would only climb to a 20-degree-or-so angle. Still, that was something. So back to the basement workshop. After about half-a-dozen tries, the present "Scott-Sled" configuration evolved and I had a kite that pretty well met my needs and there the whole matter would probably have stopped, except for the enthusiasm of my Dad.

Dad had a lively and extensive correspondence going with the other founders of AKA, and built sleds by the bushel and sent them as gifts to his friends all over the world. By this means, and *Kite Tales*, did the "Scott-Sled" become known.

So, while I was certainly inspired by that sketch, I have never seen an example or a picture of Mr. Allison's kite, at least until after his patent had run out. (In this I'm assuming that the other commercial kites—such as the "Wind Wizard"—owe rather more directly to Mr. Allison's efforts.)

I am sorry, though, that I did not realize that he lived in Dayton when we moved here from Cleveland late in 1967. I, and the kiting world, owe much to him

and I would have liked meeting him.

It is interesting that he described his kites as polymorphic (which I did not heretofore know) for it is not unlike the thinking that went into the name "Scott-Sled"! In case you did not know just what I had in mind with "Scott-Sled," here it is (the "Scott" being too obvious to comment on, of course): the kite was flexible, and it flew, thus making it a flexible flier, and every child (at least where it snows a lot) knows that a "Flexible Flyer" is a kind of sled. It never occurred to me, as some have suggested, that the airborne kite's shape reminded me of a sled.

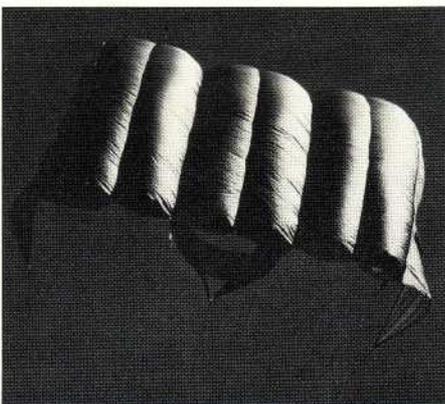
Polymorphic, or Flexible Flyer—yes, we were, unknowingly, in accord.

Oh, well, that's the way the kite string breaks!

Frank H. Scott
Dayton, OH

IT'S ALL IN HOW YOU SEE IT

Here's a shot of a Jalbert Parafoil kite from a different angle, taken here in Dayton, OH. I wrapped the kite line



Scottiefoto

around my waist and shot the picture with an Olympus 1 camera with a 100mm lens and a polarizing filter which darkened the sky. The six airfoils appear to one with an imagination to be three people in slacks bending over and photographed from the rear.

Myron E. Scott
Centerville, OH

WORLD RECORD COMMENTS

Referring to "World Records in Kiting: Questions, Answers & Challenges" [Fall 1980 *Kite Lines*], I believe that a minimum time period of two minutes is too short for a "Largest Kite" flight. Launch, climb and recovery could consume this interval without achievement of stable

flight. I would prefer one minute of flight for each foot of maximum dimension. For heaviest kite, perhaps one minute per pound of weight.

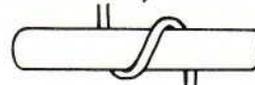
In addition to annual recognition the categories may also be used for regional records, i.e., "Largest Kite Flown in Maryland." I think that the codification of record categories in *Kite Lines* is a welcome addition to kiting.

Robert S. Price
Burtonsville, MD

We agree with the concept of "linkage" of size recognition to duration of flight. But wow! an 80-foot kite would have to fly for 1½ hours! We'd scale the standard back a bit. How about one minute per yard or (getting with-it on metric) one minute per meter of maximum dimension. For now, that will be the new Kite Lines standard, open (as always) to further comment and refinement. We would be pleased, though, to see Largest Kite efforts made to meet the Bob Price standard.

LINE FRICTION REDUCERS

One of the problems in letting out kite string with heavy kites is the strain on the hands even with gloves. To alleviate this I have used with much success a very simple friction principle device, namely a half-inch-thick by six-inch piece of dowel or steel rod. I hold the dowel in my left hand with my line looped once around the dowel so it feeds out through the gap between index and center finger. I use the right hand to feed line in. Two loops may be needed depending on wind velocity and thickness of the line. I have broken 112-lb. test line but there is no real strain on the hands to cut them. If I want to wind in an even bigger line for kites such as my 44 x 49 ft. one, I either use the tow bar on my car or else a brake bar which must be firmly tied



to something solid. Ropes from about 1/8" to 5/8" thickness

can be rove through the openings and solid bars, depending on the friction needed, and then the rope just let out with one single ungloved hand very comfortably.

Logan Fow
Hamilton, New Zealand

FLYING OVER THE MOORS

I caught the kiting bug a couple of years ago after buying a plastic stunter whilst on holiday in Norfolk. I have since built up a fair collection of types and sizes and spent many enthralling hours floating my bright rip-stop in the sky. I am fortunate in having an understanding wife (who remains immune from the bug) and in having a number of ideal flying sites within easy reach from home. I live in the foothills of the Pennines which largely consist of wide rolling moorland. My kites have soared many hours above the moors by Haworth (home of the Brontes), where in perfect peace I have felt the moor and the breeze and the sun and cloud through the line in my hand.

Earlier this summer I met Fred Coles. Fred is 70 or 80 years young and has flown another part of the moor near Gilstead, the village where he lives, for some 20 years. He specializes in nicely crafted cloth kites—Conynes, boxes, compounds, Eddys—usually of substantial size and often dyed bright colors. Fred and I have

flown together throughout the summer. Our site above Gilstead is more easily accessible and popularly used for family walks and picnics. We have noticed there are an increasing number of people bringing their own kites and the sky has begun to look quite busy at times.

We are members of the Northern Kite Group and look forward to our regular monthly fly-ins. We meet at various sites throughout the north of England and our membership is steadily growing.

I am looking forward to meeting yourself and other kiting colleagues throughout the world in the columns of your magazine.

Colin Richardson
Bradford, Yorkshire, England

MONTANA: THE CLOUDS BELOW

My husband and I are avid kitefliers, but the only *adults* we've seen flying kites during the past year or so were all gathered at Gasworks Park in Seattle, WA, for a kite contest. We do, indeed, feel very much alone with our "unusual" avocation. But we wish you city folk could share our

sky and our wilderness areas. Montana's nickname, "The Big Sky Country," isn't a wish—it's real. Some days it seems the whole world is Montana sky: clear blue and as endless as eternity. There's rarely a day without enough wind to fly. And places? We've still got places where no human has set foot—places where the only other person you *might* see in days is a forest ranger. It's an incredible experience to stand at the top of a mountain at sunrise and fly kites above the clouds that are rising *below* you!

Mrs. Dave Dube
Billings, MT

"THE KITE BROTHERS"

I've always been fascinated by kites, but a few months ago, after reading David Pelham's book *The Penguin Book of Kites*, I've made the art of kiteflying an interesting and involving avocation. A friend and I built a five-foot Sauls Barrage and two red Mylar® star kites which all fly well. (The Barrage needs a few refinements but flies well.) We were very impressed for

Look Lively, America . . . Here Come The British Rams

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Letters . . . Continued

our first attempt in building.

I have a six-foot delta which I built myself that has modified tail flaps. They give it excellent stability. We purchased a 16-sail tetra, two Valkyrie deltas and also a stunt kite that will keep us flying for a long time to come and also bring public attention.

Our friends jokingly call us "The Kite Brothers" because of our frequent expeditions to the mountains to fly, but I can seriously say that we've "earned our wings" with flying time and experience. Building kites is a bit complex; one can say it's an art in itself!

I can't tell you how much your magazine has brought us closer to a sport we enjoy very much. That your magazine is the only one of its kind in the U.S. makes me and others feel special!

Paul Rusnak
Reading, PA

DISABLED BUT UP FOR FLYING

I am disabled and confined to a wheelchair but have fair use of my hands. I would like to take up kiteflying as a hobby. Any practical advice on ready-made kites and gear such as reels would be a great help as

I cannot make my own. Do you have any disabled readers whom I could write to?

John Winfield
16, Raglan Gardens
Newark, Nottinghamshire NG244BS
England

Kiters, why not send John Winfield a few lines (both kinds)—and maybe a kite, too?

Readers are encouraged to write letters for this column and reply to writers and/or appropriate parties c/o Kite Lines, 7106 Campfield Rd., Baltimore, MD 21207, USA. Letters may be edited for publication.

CORRECTIONS

In Tal Streeter's article on "Kites as Art" in the Fall 1980 *Kite Lines*, one of the kites was improperly identified. On page 24, picture number 3 is of a "Delaporta" kite by Sandra Rhodes of New Haven, CT. Also on page 22, the Ghost Clipper kite was designed by Craig Stratton of Stratton Air Engineering rather than by Ken Bourgeois. "Ken the Bushman" has collaborated with Stratton and designed many kites—but not the Ghost Clipper. Tal Streeter and *Kite Lines* regret the errors.

Ben might have called them



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*Storied in the columns of *Life*, *Look*, *Associated Press*, *Reuters*, *Ford Times*, *Kite Lines*, *The New York Herald Tribune*, *The Miami Herald*, *The Baltimore Sun* and elsewhere.

†See story in *Kite Lines*, Spring-Summer 1980.

Based on the Brazilian papagaio, the kite that's the flying puppet of Rio's beaches. The kites duel and maneuver in the sky—or swoop down on the crowd and, using fishhooks on the wingtips, pick up a piece of paper off the beach hundreds of feet away—and then soar back up overhead.

The beautiful, precision-built cloth Falcon as patented by Hanrahan incorporates a number of improvements—an adjustable bridle, roll fold and modern durable struts. Flown regularly at the annual

Delaware duel for the Mid-Atlantic Championship and a favorite of many great kite enthusiasts, such as John F. Kennedy and other luminaries you might least suspect. After exclusive outlet's (Abercrombie & Fitch) bankruptcy, and subsequently sold only by Hanrahan personally, the Falcon is now, at last, released to fly everywhere—for as long as the limited supply lasts.

These limited edition Falcon kites are numbered and signed by Hanrahan himself. Each kite includes 200 feet of braided invisible line and complete instructions. Order red or yellow with black print or wicked solid black. Prices include surface shipping. Single Falcon kite, \$14.95. dueling pair, \$25. Replacement cord and struts available at nominal cost. Falcons last for years!



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What's New: Kites, Books, Sundries

Kites

By Mel Govig, assisted by Valerie Govig and A. Pete Ianuzzi

THE GENTLE RAM

Just when you think kite designs have been exhausted, along comes another fresh idea. The Ram is an interesting new soft kite by Paolo Ferrari, an English engineer of Italian descent and a kite enthusiast over the past eight years. In building frames for large deltas, Ferrari encountered logistical problems familiar to many of us. He turned to inflatable kites as a solution, but found that "as they grew bigger the sewing and rigging became increasingly tedious. I then decided to try to design from scratch my idea of an ideal kite. The following requirements had to be met:

- "1. It was to be inflatable, not rigid.
- "2. It was to be simple to build, rig and fly.
- "3. It was to be stable without a tail.
- "4. It was to be able to fly in high and low winds.
- "5. It was to be capable of being scaled up and down in size without a loss of performance.
- "6. It was to be attractive in shape.
- "7. It was to be able to be made to display a range of colours."

Ferrari has met his own requirements well with the Ram. His second criterion, "to be simple to build, rig and fly," is especially well realized. His kite is one of the simplest we have seen, consisting of seven uniform cones or segments of rip-stop nylon sewn together, side to side, for stiffening without sticks. On our sample, each cone or segment is about 33 inches long and tapers from leading to trailing edge. The upper section has about twice as much fabric. The finished kite is bridled at the two front corners. The Ram has, in fact, such simplicity that it may suffer from lack of mystique. It visits no agonies of initiation upon the flier as, for example, the Parafoil does. Yet the kite's simplicity is sure to stimulate recombinant processes in the collective kiting imagination.

However, to be fair it should be said that the Ram in flight (and it does fly) is not a world beater. It flies steadily in winds from 5 to 20 m.p.h., but the angle of flight is proportional to the wind speed. The kite flies at about 30 degrees on a 5 m.p.h. wind and climbs to a maximum of

about 50 degrees on strong winds. A heavy tail tied into the drogue attachment grommet raises the angle of flight only slightly.

In short, the Ram is a kite that does many things well, looks good in the air, exhibits a high quality of craftsmanship and is a very original design at a price that is not too expensive for an import, about \$30 (\$40 or \$50 for larger models). But if you love high-angle flying, you may find the Ram a bit of a let-down.

One interesting discovery I made in lateral trimming of the Ram was that trim was achieved by lengthening the bridle *opposite* the direction the kite was looping. This is exactly the reverse of what you expect with any other kite. With the assistance of Luther Hux, I bridled the kite for two-line flight and, sure enough, a pull on the *left* cord sent the kite to the *right* and vice versa! I know it happened, but I am still in the process of figuring out why. Perhaps someone out there can enlighten me. M.G.

TWO FROM MILE HIGH

Two tough competitors, both interesting hybrids, have been introduced into the fabric kite market by Mile High Kite Works.

The Javelin Delta is a fairly heavy, very tough kite with a high aspect ratio in heavy rip-stop and solid fiberglass sticks. In design it incorporates (perhaps unconsciously) the closed triangular keel of the

Martin Powell delta, the slotted fringe of Bob Ingraham's delta and the curtain hook connectors first used by Al Hartig.

The Javelin flies well in moderate to strong winds but does poorly on light winds and thermals; it is definitely most at home in steady winds of 10 to 15 m.p.h.

The Flare from Mile High is a credible flier in winds from 3 or 4 m.p.h. to over 20 m.p.h., flying without a tail or drogue, probably helped by the trapezoidal venting. This is not a kite to treat lightly in winds over 5 m.p.h. because it creates unusual lift for its size. It should be flown with care for possible line burns on stout line (I would recommend at least 40-lb. test). Like the Javelin, the Flare is a mixture of design elements. Basically the Flare as shown in Pelham's *Penguin Book of Kites*, it has an Ed Grauel venting and uses a system of connecting the upper spar very similar to that in Stormy Weathers's Winged Victory.

Both the Javelin and the Flare have fiberglass spars that leave those annoying, hairy splinters in your fingers. It's time manufacturers found a way to eliminate this nettle from the flower bed of kites. The first to do so will gain our praise.

LOIS CLARK'S HURRIKITES

About 18 months ago, a woman from Utah wrote to us and said she was making some kites for her own pleasure and wondered if there were any market for them. From her words and photographs, the kites

DATA CHART

	Dimensions	Weight	Materials	P	AT	ED	EWV	AF	SL
*Ram	33x39"	3.75 oz.	rip-stop nylon	E	0	E	5-20	30-50 ⁰	I
*Hurrikite (Lois Clark)	35x39"	4.5 oz.	cotton blend, fiberglass, dowel	E	1 min.	E	5-12	45-65 ⁰	N
Comet's Tail	32x64"	5.5 oz.	rip-stop nylon, ¼" dowel	E	1 min.	G	4-20	50-80 ⁰	I
*Javelin Delta (Mile High)	38x72"	8.5 oz.	rip-stop nylon, fiberglass	E	1 min.	E	8-20	45-75 ⁰	N
*Flare (Mile High)	39x68"	10 oz.	rip-stop nylon, fiberglass	E	3 min.	G	4-20	50-80 ⁰	N
Falcon	27x56"	4 oz.	cotton cambric	E	2 min.	G	5-15	40-65 ⁰	S

*Asterisk: Cloth carrying bag or tube supplied with kite.

Code: P=Portability; AT=Assembly Time (on field); ED=Est. Durability; EWV=Est. Wind Velocity (min.-max. m.p.h.); AF=Angle of Flight; Skill Level: N=Novice, I=Intermediate, S=Skilled
Ratings: P=Poor, F=Fair, G=Good, VG=Very Good, E=Excellent

a little puff:

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A. The line.

Q. What distinguishes an all-out kiter from a casual one?

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seemed to be beautiful, but only after seeing the kites themselves in Seattle did we realize how pale the descriptions had been in comparison to the brilliance and artistry shown by this crafter.

Lois Clark's kites do not compare to any others we have seen. They derive their design from the Nagasaki-Hata—nearly square, flown as diamonds, with tassels at the wing tips. A light fiberglass cross-spar lets them fly at winds from 5 to 10 m.p.h. Above 10 m.p.h. they can be flown by replacing the fiberglass with ¼-inch dowel and adding a loop of tail about 12 feet long from wing to wing. The flying is tamer than most fighters, but not utterly stable either, an appealing combination of traits to the experienced kiter.

As craft, they are beautiful in the hand, on the wall or in the air. Classic designs from the Pennsylvania Dutch, the Irish and the East are adapted and sewn in vivid color combinations, using satin stitch

on cotton blend fibers, inset (cut out behind) to give distinct color separation in the sky. The workmanship is about as near to perfect as human hand-and-eye could make it. We hear Ms. Clark has now begun to sell some of her kites in a few shops for prices that seem low, about \$65. We hope her work will find a wider market.

If you love beautiful things, you can't help but love Lois Clark's kites.

THE COMET'S TAIL DELTA

This new delta in flight is like most of the quality nylon rip-stop models on the market; it soars on light winds and thermals, requires constant line attention while soaring, flies best in steady winds of about 10 m.p.h., flies light on the line and generally behaves as deltas behave.

The Comet's Tail is a good kite at a good price, \$16.95 for the six-foot model we tested. But how is it distinctive? Well,

Reels Update

By Mel Govig; Chart by A. Pete Ianuzzi

Since our last review of kite reels (*Kite Lines* Spring 1979), some new models have come onto the market and some others have, regrettably, disappeared—while the search continues for the “ultimate reel.” So far, the most votes seem to go to the Cuban Yo-Yo and their (forgive the pun) spin-offs.

For myself, I prefer a reel I can tie off or brake to prevent accidental self-launching. For a flier like myself, the reel's main functions are to conveniently carry and store line, allow for rapid winding-in of the line (which I have invariably littered over half an acre) and to solidly anchor kites, especially when I wish to pass one to another flier or just hold while I light my pipe. So far, I have found few reels that beat a big deep-sea fishing reel, but in fact I use an assortment of equipment, some as crude as wire spools with sticks put through the center.

Though I haven't found my ideal reel (and am not sure I ever will), you may find yours in one of these new models now available. They all have merit if used for the proper kite, line and wind.

I concur with Pete Ianuzzi's statement applying to *all* reels now on the market: *none* should be used—or expected—to haul in hard-pulling kites under pressure directly onto the reel.

BOBBIN

Carey's Kite Winder is a good, stout bobbin reel for those who want the cranking leverage you can obtain from this two-handled design. Made of strong formed

plastic, Carey's has free-turning handles of convenient length and diameter as well as “ears” at the ends of the bobbin, curved out slightly to aid line feed. It stores flat and is capable of holding prodigious amounts of line—good for altitude buffs.

HOOP

The Peter Lynn Hoop: Those who have met Peter Lynn appreciate the craft and invention he brings to all his kites. Now Shanti Spools is distributing his small yo-yo, hand-turned from fine hardwood, that can slip into your purse or briefcase to accompany the little kite you sneak along on business trips or walks in the park. Only slightly smaller than the plastic yo-yo, it holds several hundred feet of line easily, is cool and smooth to hand—and is definitely more aesthetic than the plastic.

TRUE REELS

Two reels, the *KiteWinder* and Camborac's *Mile High Winder*, come equipped with “horns” that can and will do a job on the tender underside of your wrist if you fly any but small kites with them. The new *KiteWinder* is improved since its introduction in about 1976 by the addition of a simple, effective brake. The brake provides some buffer of safety to the finger-nicking spokes of the design. The *KiteWinder*'s other features are rugged molded polypropylene body and a line tensioning guide to prevent tangles in winding in.

Very similar to it is the *Mile High Winder* kit which requires assembly. This is simple to do with hammer and glue; the

its makers have incorporated a number of innovations of interest in their use of materials and their construction techniques. The cover is the softer rip-stop used in clothing manufacture, which gives the kite a gentle swish in the air rather than the crisp rattle we associate with the stiffer marine rip-stop. The wing spars are inserted into cotton blend tape hems sewn into the back of the sail—a tip from a tailor, perhaps. The keel stick is not enclosed in a hem as on most deltas, but is inserted at top and bottom into very tough nylon webbing pockets, which should eliminate punch-out at the nose and facilitate disassembly. The free keel stick also allows the formation of a small forward lift area between the end of the keel and the nose of the kite. This helps to keep the kite nose up and downwind in moderate to strong winds.

All in all, the Comet's Tail is a satisfying delta with a few new things to show.

directions are complete and clear. Assembly time for me was 30 minutes from package to finished reel. It's a good kite building project and a fair reel—as long as you use caution and gloved hands.

The Kite Hauler from the Cloud Connection comes as a pleasant surprise for those of you who like the fishing reel type but have worried about abusing your deep-sea reel with heavy pulling kites. This well-machined palm reel of polished stainless steel and fiberglass is very well made and smooth running. It is probably the best-made reel for long, dependable operation we have seen. Somewhat like the Deep-Sky Reel design known in England, the Hauler has an adjustable strap to fit every hand (though it tended to slip on some). Adjustable drag is the reel's most distinguishing feature. Expensive, yes; overpriced, no. Representative of Nancy and Hank Szerlag's professional style, the Hauler is class in reels.

AND STILL SPINNING. . .

The present crop of reels should be compared to the established models that have survived a few years on the market and continue to deserve consideration. We are listing them briefly here with prices (all without line, except where noted):

Hoops: The Cuban Yo-Yo (about \$2.75) and the Spool-Proof (about \$4.50).

Spools: Shanti's hardwood spool with strong cardboard core (\$3.50 to \$8.00); traditional bamboo-core spools from India (\$2.00 and up to opulent ones at \$50.00); various plastic spools at \$3.50; Flying

DATA CHART — KITE REELS

	Materials	Outside dia. (in.)	Inside dia. (in.)	Width (in.)	Volume (cu. in.)	Avg. take-up per turn	Overall size (in.)	Weight (oz.)	Line incl.	Cord guide	Hand wind	Brake	Winding ease	Ground action	Vibration	Remarks
TRUE REELS																
Kite Hauler, The Cloud Connection, \$39.95 ppd.	Fiberglass & stainless steel	5.2	3.2	1.5	20	13.2	5.2 x 4.2	24	N	Y	N	Y	VG	F	E	Very well made; strong.
KiteWinder, KiteWinder, Inc., \$14.95 + \$1.50 ship.	Molded reinforced polypropylene, steel brake	8.0 sq.	5.0 sq.	2.5	45	18.8	9 x 13.5	18.5	N	Y	N	Y	VG	P	P	Not for heavy pullers; good for small kites.
Mile High Winder, Camborac, Inc., \$4.95 + \$1.50 ship.	Solid pine, kit	8.0 sq.	3.2 sq.	2.1	38	14.6	7.2 x 14	12	N	Y	N	N	VG	P	P	Not for heavy pullers; good for small kites.
BOBBIN																
Carey's Kite Winder, about \$6.00	Molded plastic	9.1 flat	6.2 flat	5	100	14.6	12.5 x 9.2 x 1.2 flat	8.4	N	N	Y	N	G	P	P	Well built; turning handles; develops strong pull.
HOOP																
Peter Lynn Hoop, about \$5.00	Solid hardwood	5.3	4.0	1.0	7	14.0	5.7 x 1.6	3.5	N	N	Y	N	VG	E	E	Yo-yo in attractive wood.

CODE: Y = Yes, N = No; RATINGS: P = Poor, F = Fair, G = Good, VG = Very Good, E = Excellent

Tiger's nice little Spreel (about \$5.00) and Hungry Tiger (about \$4.50); and the Kite Factory's rugged Flightube (\$4.00).

True Reels: We regret to note that the Weathers reels, long the mainstays for heavy-pulling kites, are almost off the market due to a heart operation recently undergone by W.O. ("Stormy") Weathers. We hope he recovers soon and we suggest to those of you who either *must* have a Weathers reel or simply want to wish him well that you write to Stormy direct at 17707 S.E. Howard St., Milwaukie, OR 97222. Other true reels on the market include Gayla's handy little ratcheted model (now at a more expensive \$6.95);

and Bob Ingraham's Rayco Reel-E-Z, now back in production at his usual high standard of quality (and at \$25.00 a good buy).

REEL DEVELOPMENTS IN THE SHOPS

Some kite stores have cultivated local sources of supply for handmade reels, particularly wooden ones from good craftsmen, such as Charlie Miller in Maryland. His spool of solid pine for only \$1.50 at Kites Aweigh in Annapolis is just starting to trickle out to other retailers through distributor What's Up. Charlie also makes classic, well-finished wooden frame bobbins at \$3.95 and \$5.95 in area kite shops.

Similarly at Go Fly a Kite in New

York City, one of the truly smaller delights is the Frank Rodriguez skeiner, a little 2½x5" shape of masonite sold with line to drop in the pocket. Like a number of small spools, it's not for sale separately but is a good way for a basic supply of line to be sold. We'd like to see something like this in every batch of "kite line" sold as such on the mass market and usually wound (not tied to!) a clumsy round of cardboard.

A few other kite stores have blazed similarly enterprising trails in a quiet way, and browsers will often turn up some novel items (not only reels but kites and—of course!—t-shirts) that make a visit to your local kite shop a rewarding adventure.

Books

By Margaret Greger

"BETTER" THAN WHAT?

Better Kite Flying for Boys and Girls, by Ross R. Olney and Chan Bush (New York: Dodd, Mead & Co., 1980), 62 pages, \$5.95.

Yet another kite book for the My-Electric-Company-Gives-Away-a-Better-One shelf. It rehashes history, makes hash of kite categories and is so carelessly edited as to seem schizophrenic, i.e., "Use a coat hanger for a stiffener" (page 31) and "Never use metal in the building of a kite unless it is a special experimental kite..." (page 45).

Experimental is what's on if a young builder follows the book's advice:

"Take a stick or two, or no sticks at all, an old shower curtain, window shade, apron, or... a plastic garbage bag, and use your imagination. Some astounding shapes

have been built that fly well indeed."

Following this is the book's sole effort to give building instructions, for an "Eddy" kite which has pictures showing the frame being outlined with string before bowing, while the text tells the hapless builder to bow the cross spar before outlining the frame with string. No dimensions are given for the kite, which appears to have a cross spar considerably shorter than the longeron when the true Eddy kite is generally defined as having spars of approximately equal length.

Plagiarism runs rampant through much of the book, as in the safety rules which seem reworded from the original code in *Kite Lines* (without credit to the source).

In its favor are attractive layout and

photographs. The pictures, of better technical quality than usual in kite books, are all black-and-white except for the jacket picture of a beautiful centipede, probably by Tyrus Wong—and uncredited. Appearance is important for this book's age group (5-10 years), but content still matters.

The chapter on kite fighting raises a question of suitability for this young audience, though adult readers will find it interesting and virtually the only section that contains some material (from Vic Heredia) that is outright new.

Interviewing and research are no substitute for firsthand experience for the author of a kite book. Last but not least among the shortcomings: *Better Kite Flying* has no bibliography.

Kites Continued

A Personal and Frankly Unobjective Review of the Legendary Falcon Kite, by Mel Govig

When Ed Hanrahan announced that his kite, the famous Falcon, was coming out of his hidden warehouse (which has been nearly depleted for the 15 years I have known Ed) and being made available to the public through The Kite Loft in Baltimore's Harborplace, I was:

- surprised, pleased,
- a little sorry to see the myth of rarity dissolved, all of the above.

It is hard to review the Falcon without reviewing a significant part of my life on a string, since some of its choicest moments have been spent at the command of a Falcon. Some highlights:

The "Kiss of Death" duels (which I created with the indulgence of the Maryland Kite Society and woke up one day to find immortalized in Will Yolen's book*) were fought between Falcons armed with lipstick-coated lines. God what a mess!

Rick Kinnaird was attracted to kite-flying by media coverage of the Falcons' second favorite sport, providing backdrop and sunshade to vainglorious yarn-spinners such as the pre-eminent Hanrahan (and to a lesser degree Will Yolen, Delaware's Lt. Gov. Eugene Bookhammer, myself and Rick Kinnaird). Ed would sip his breakfast and describe the attributes of the Falcons and Falconesses as favored by the winds and the gods.

I'm reminded of the lasting friendships that I have begun on friendly fields of battle with the above compeers, Nat Kobitz, Ed Goldsmith, Ted Venetoulis and others. My title as Mid-Atlantic Champion was won from Gene Bookhammer at a stormy Great Delaware Kite Festival at Cape Henlopen and has been lost and reclaimed on that honored field several times since in the last decade. In every case, though we have tried



Bill Kocher

It's Govig (right) vs Bookhammer at the kite festival at Cape Henlopen, Delaware, 1976.

But it *is* dramatic and menacing-looking in the air. At over four foot from tip to tip, it is nearly twice as large as most

calls and laughter, as the case may be.

Techniques for fighting the Falcon differ a little from other fighters. Because all of the movements are broad, combatants unintentionally burlesque the actions of kite fighting; arms move instead of wrists or fingertips; yards of line are hauled in and payed out; contestants jump, dodge, run to urge their Falcons to the fray. All this animation carries over to the verbal infighting and byplay that are as much a part of Falconry as the flying.

And a final important part of the sport is the toasting and postmortems that seem as inevitably to cap the day as a stirrup cup does the end of a well-ridden chase. There is something almost medieval in the brotherhood forged by the sport. It's not a game for the timid or the "serious" kiteflier. It's a rollicking good time.

As to the kite itself, if you are not familiar with the Falcon it will surprise you by the weight and porosity of its fabric. I have tried slick fabric covers on Falcons and they don't seem to work. The Falcon's struts were specially made for the kite and are plastic-impregnated fiber tubes—very light and very strong but not repairable if broken (usually by being stepped on). Made around 1960 when the last handcraftsmen had not yet gone to computer programming school, Falcons were made with a lot of hand stitching and an unusually complex bridle and framing that required hand-tying of some 15 knots. It is doubtful the Falcon could be made economically today.

The bridle is unique; it was the one thing in the design that I feel may have justified the patent granted Hanrahan on what otherwise was a Brazilian papagaio kite with fiber tubes instead of reed struts.

In every case, the Falcon has been the chosen kite when the championship was on the line.

other fighter kites at times, the Falcon has been the chosen kite for the critical fights when the championship was on the line.

What makes this kite special, besides the web of magic that Hanrahan has woven about it in his oft-told tales of combat and ladies in waiting? In fact, the Falcon is not as responsive as an Indian fighter kite in a light wind. It climbs and dives with half the speed of a well-made Korean kite. It doesn't pack the heavy artillery of the Brazilian or West Indian fighters with their glazed strings and tails.

*Will Yolen, *The Complete Book of Kites and Kiteflying* (New York: Simon & Schuster, 1976).

fighters and probably four times the area of small Asian and bowed Brazilian fighters. It flutters in a strong breeze, giving a sense of movement even in steady flight. It looks very bird-like and, especially in black, like a bird of prey. It is somewhat pendular in its motions, hanging for a split second after changing direction and before charging off after its opponent. Every movement is easily followed by spectators on the ground. Because usually the kites themselves actually engage rather than hit at some invisible point on the line, the crowd follows the action with cheers and clapping—or with cat-

The four legs join like two Y's rather than V's and end at a common point. This bridle allows movement left or right, up or down, through a prescribed arc, whereas the typical four-point bridle forms a rigid harness.

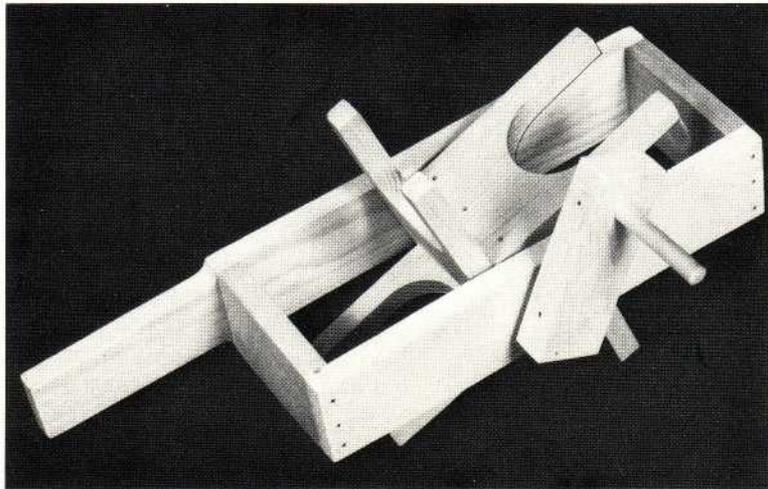
Now with the Falcons out of hiding, perhaps we will see new apprentices on the field, each wearing the prescribed cap, quaffing the regulation preflight lubricant and conducting the mandatory postflight conference. Custom permits some latitude in dress, choice of beverage and styling of eulogy, so long as the true spirit of Falconry is maintained. ◇

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Makes kite flying more fun!

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The kite HAULER reel



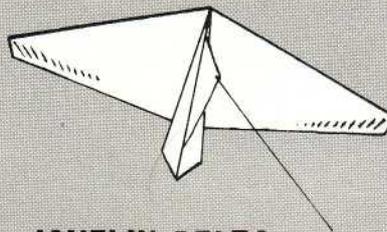
A SERIOUS REEL FOR THE ACCOMPLISHED KITEFLYER!

The "Hauler" is a compression molded, fiberglass-reinforced spool, backed with a stainless steel plate for strength. Worn like a glove by a sturdy, adjustable nylon strap, it's built for years of hard use. The unit features right or left hand convenience, plus an adjustable star drag. Quantities are limited.

Orders filled as received - \$39.95 postpaid.

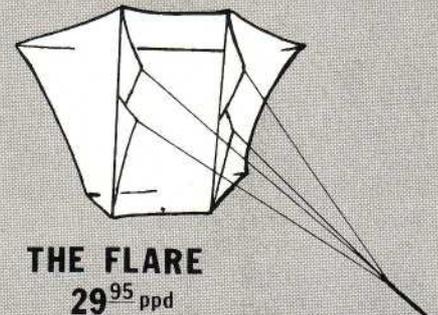


Box 36413 • Detroit, Michigan • 48236



JAVELIN DELTA 19⁹⁵ ppd

- : 80 in. wingspan
- : Very, very good stability
- : 50 lb line recommended
- : Comes with protective case



THE FLARE 29⁹⁵ ppd

- : 40 by 72 ins
- : Excellent stability
- : High lift, 75 lb. min. line
- : Comes with drogue and case

Both kites feature 3-color ripstop spinnaker construction, on an unbreakable all fiberglass frame.

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SUMMER SNOWFLAKE

A special offer of a completely unique new kite — from Kites of the Four Winds.

Totally unique kites come along only on rare occasions, in these times when most things that are new are merely variations. And, it is a rare occasion when a completely unique kite is refined to the point where it can be built in limited volume and made available to the kite lovers of the world. But, here at Kites of the Four Winds, Sallie and I have been working on this project for nine months.

AN ENGLISH ORIGIN

Our Summer Snowflake springs from an idea by Stephen Robinson of Derbyshire, England, reported in *Kitelines Magazine* (Winter '80). His kite was a four-sided cellular kite dubbed the "Facet Kite." Its uniqueness comes from the fact that unlike most cellular kites — which are extended by spars reaching out from the center to the perimeter — its extension comes from a stressed perimeter of spars that pull the kite to its extended pattern. (The same concept of new camping tents that are erected with external bows rather than internal poles.) This provides the opportunity for unique and unusual cellular patterns that would be impossible with internal extension.

We worked long and hard on Robinson's suggestion of a six-sided design and arrived at the Snowflake — 36 different cells of varying length, 54 different flying surfaces, 8 full yards of rip-stop nylon in a beautiful kite over 50 inches long at its center spar and bigger still in diameter.

WHY THE SUMMER SNOWFLAKE NAME

The true impact of the Snowflake comes from its beauty — too bad we could not afford a color photograph for this advertisement. Seven different colors of material

originate from the center and wander out through the cellular pattern to the perimeter. With the cutback of the cells as they approach the outer tips, each different color is visible at the same time. As the kite gently darts in the air there is an ever-changing relationship of these colors one to the other, giving the illusion that the kite is sparkling. On four of the first five days of test flying, an interesting thing happened. Each day the spontaneous comment, "It looks like a snowflake," came out of the crowd that gathered. It's nice to have something that names itself, and when you see it flying you will know why this is. The Summer Snowflake.

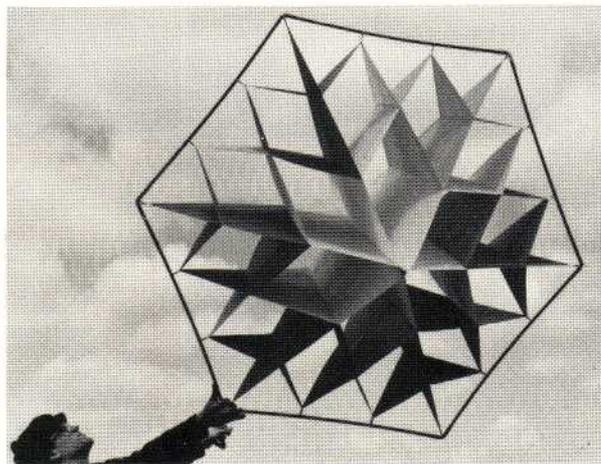


THE CARE AND CONCERN OF BUILDING

The same care and attention that goes into our big Feather Delta Kites has been lavished on the Summer Snowflake. Design and construction was quite a challenge. In the initial cutting of fabric, allowance has to be made for the many flexible seams. An amazing amount of machine time is needed and precision is essential. Even the slightest "wandering" on a seam will completely unbalance the beauty and performance of the kite. Outer spars are not the normally expected fiberglass. Hollow sectioned precision fiberglass tubing is used. This provides the rigidity needed with a saving in weight.

STABILITY IN FLIGHT

In spite of its size the Summer Snowflake is easy to hand-launch in a steady breeze. Due to the canted approach of all of the flying surfaces the kite performs best in moderate and high wind, a trait of all cellular kites. The kite is furnished with a two-string bridle which provides the modest darting that makes the kite so beautiful. However, a three-string bridle can be used if you prefer highly stable flight.



PROVING THE VALUE

As soon as Sallie and I had built our first three or four kites and perfected systems and design, we decided to build a Limited Edition of 100 Summer Snowflakes and offer them to a short list of the top kite shops throughout the country. A simple letter and a color photo of the kite went out. The response was amazing. Within two weeks all 100 were sold to the first 27 dealers that responded (I think it was the color photo that did the selling). As soon as the 100 were shipped we stopped production completely. We had to because we were organizing for the move of our operation from South Bend to our new home — a farm on the top of a kite-flying hill in western Massachusetts. Packing up all of our equipment, kids, and worldly possessions, and making the move to our new 150-year-old farmhouse that needs a lot of work has been fun. Now we are back at kite making.

SNOWFLAKE NOW AVAILABLE

This spring we've resumed work on a production version of the Summer Snowflake and it is still just as hot as before. The comments we get on the kite confirm what we thought when we made the first one. It is one of the most unusual and exciting kites introduced in recent years. All over the country they are flying at festivals, decorating offices, even hanging in theaters and museums. You can have one now. The selling price is \$138, plus \$5 for packing and shipping.

NO RISK TO YOU

We promise to ship your Summer Snowflake promptly. It will arrive in its own nylon slipcase, complete with instructions, all spars and bridle. Try it and fly it for ten days. If you are not completely satisfied, return it to us and we will refund the complete amount that you sent us. We are not set up to handle C.O.D. or credit card sales, so if you want a Summer Snowflake it will be necessary to send us a check for \$143 with your order. Make the check payable to "Kites of the Four Winds" and mail to Sallie VanSant, RR2, Box 126, Great Barrington, Mass. 01230.

ATTENTION — KITE DEALERS

This is a one-time offer of our exciting new Summer Snowflake. We hope to sell a few kites to cover the cost of our advertisement. **More important** we figured that it would be a good way to tell you about our enthusiasm for our new Summer Snowflake. Within weeks after this advertisement appears we will be under way with dealer quantity production of this new collector kite. More important than that, we are well stocked with our full line of Feather Kites and French Militaries that sold with such great success last year. If you would like to have full information on our kites, drop us a note at our new address — Kites of the Four Winds, RR2, Box 126, Great Barrington, Mass. 01230. Or, give us a call at (413) 528-4790. We love to talk kites at any time.

KITES OF THE FOUR WINDS



you ask what is DELTA

When is a triangle not a delta? (Or, when is a rectangle a delta?) The triangular symbol of the fourth letter in the Greek alphabet, long applied to swept-back aircraft, has been applied to kites since the 60s and has come to refer to something like this: a wing with two leading edges (stiffened along all or part of their length) and a center "keel" midway between the two stiffened edges. Two "wings" are thus formed in the general shape of conic sections of usually 180 degrees or less of arc and terminated at the apex of the cone or some point below it. Usually the angle between the two outside wing edges is maintained by a spreader stick or bar on one side of the sail. The spreader bar is symmetrically located at a point forward of the midpoint of the wing spars or stiffeners. This describes a more-or-less "standard" delta, which has a typical angle of about 90 degrees between the wing stiffeners. At the extremes, but still within the definition, are deltas with a high aspect ratio at somewhat less than 180 degrees or a low aspect ratio at somewhat more than zero degrees. This definition is a bit cumbersome, but we believe it covers all the kites generally regarded as deltas. Running across these pages in a frieze are examples of *delta* collected to confound the classifier and anticlassifier alike. M./V.G.

DELTA DERIVATIONS AND DERIVATIVES: How—when—where—was DELTA born? It's a question that pops up often and never gets answered very well. Delving into deltas, we find (as often happens with kites) that no single clear-cut moment, all by itself, shines out as the birth-hour of this great generic kite. The delta developed through contributions both curious and several. Some were major (▲), some minor (△). We track them here.



Ferdinand Lischtjak of Eggenberg, Austria-Hungary, filed two U.S. patents, one of which (on March 2, 1911) was for a bird-like kite with two wingspans pivotally joined to create dihedral and to fold for roll-up after flight. Though it used no spreader bar, the kite might be characterized as a delta precursor. The patent itself seems to have been the only literature written or activity engendered around this kite.



Francis M. and Gertrude S. Rogallo designed and built the first wholly flexible kite in their home in 1941. It was a substantially square shape of reinforced plastic sheet which assumed birdlike dihedral (two conic sections) in the wind by means of several bridle legs. The Rogallos filed for a patent on November 23, 1948. Initial efforts to manufacture and market the kite in the 60s through conventional toy outlets were not particularly successful, but a revival was attempted in the 70s by the Rogallo family direct to kite stores and through *Kite Lines* with more encouraging results. The Flexikite was only one of many varieties of stickless kites developed by "Rog" and his associates working for the National Aeronautics and Space Administration and using wind tunnels at Langley Field, Virginia.

Will Yolen, a New York City journalist at the time, became acquainted with Rogallo in the

late 40s and started flying the Flexikite everywhere—with the result of promoting not only the Flexikite and kiting but Will Yolen as President/Founder of the International Kitefliers Association. [See *Kite Lines* Spring-Summer 1980.]

The Rogallo wing's permutations were many and included hang gliders, which have had inspirational effects on tethered kite design. Many kites (Ansel Toney, beloved nonagenarian of Farmland, IN, for example) have made tethered kite versions of hang gliders, building on their own, purely by visual example. The popular belief has been that Rogallo designs were the forerunners of delta kites.



Gayla Industries, Inc., of Houston, TX, the largest manufacturer of kites in the world, began business as the hobby of an architect, Bill Green, and an engineer, Chris Christiansen. The first kites were made in 1953 or '54 and their design was the basis for the many improvements and expansions subsequently made on it. Lester F. Phillips purchased the business in 1961. He and Julius M. Christoffel filed patents for numerous kite production processes from 1968 through 1975 and the refinements and revisions continue each year, all based on the same design.

Les Phillips says, "I honestly feel that the hang glider came after delta kites. The Air Force purchased a substantial number of our kites and tested them long before the work on the Rogallo wing. I think it was Gayla delta wing kites that

brought this [the delta revolution] about. But I can't prove that."

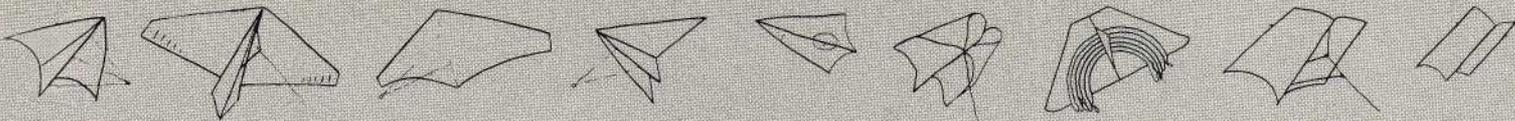
Although Gayla patents were not filed until years later, the kite was well distributed and accepted from the first. It was available, low in price, "modern" in design and easy to fly. Gaylas are still like that and for \$1.59 are a good value, even with the cartoons and bloodshot eyes.

As a footnote to this segment, Bennett Arnstein of Los Angeles, CA, in 1978 acquired a patent for a delta spar connector practically identical to Gayla's. An earlier Arnstein patent (filed March 24, 1975) was for methods of attaching plastic cover and struts in a delta marketed as a kit.



Alfred E. Hartig, better known as the Nantucket Kiteman, first began production of his now-classic kites in 1966 and filed a patent on them on June 30, 1966. Here for the first time were the elements we now consider standard in deltas: the curtain-hook spreader connections, trailing edge tuck option and multi-choice towing points in the keel. The Nantucket Kiteman 'n Lady have been successful to the limits of their manufacturing ability and consequently show no concern about the proliferation of models now for sale that are based (probably often unconsciously) on the Hartig original.

Hartig in his black derby hat with red band is something of a legend on the pleasant island of Nantucket, off the Massachusetts coast. A steady



flow of visitors and letters comes here asking for kites—the 4-foot Ace, the 6-foot Valkyrie, the Bat, the National Eagle and the (scarce) 14-foot Pterodactyl. His kites and his personality have been the subject of much good press.*

It all started from the Red Baron, the first kite Hartig made on a vacation to the Catskills with his wife Betty in 1963. He'd bought a red plastic Gayla kite to fly and within a half hour it was damaged by trees. He couldn't repair it and as an artist and model builder he decided to make one in cloth and a bit larger for extra lift. He bought red fabric for 78 cents and four dowels for 20 cents and spent about an hour and a half building "The Baron." It measured 33 inches at the center strut and 62 inches from tip to tip. He took it out to a hill.

"The wind was about seven miles an hour on a hot sunny afternoon. When I released the Red Baron, to my amazement it flew gently out of my hand, showing no signs of instability. I let it go up 10, 15, 20, 30 feet, and held the string tight. It flew straight over my head! I let it out another 100 feet—it was great! Betty came in about 20 minutes. As I brought the kite in about eight feet above the ground where the wind wasn't as strong, he suddenly started to glide and he came right over Betty's head and landed. But one thing bothered me, which was that it glided—because when it glided I no longer had control. And because of my being a model builder, I said: 'I can put a hunk of lead

*Recommended: Jack Denton Scott, "Nantucket Kites Can Fool Eagles," photographs by Alfred Eisenstaedt, *Smithsonian*, VI:1 (April 1975), pp. 65-70; and Peter Chew, *The Inner World of the Middle-Aged Man* (New York: Macmillan, 1976), pp. 232-235.

on the center strut in the back and make it tail-heavy.' But then, just on intuition, because the cloth on the front end was a little loose, I thought: 'Maybe there's too little drag at the apex, and if I shorten the wing struts and increase the drag area, maybe that'll be just enough.' So I took two inches off each end. And then I hand-launched it in the cottage and it stalled as it should. There it was. That's the only big change the Baron ever went through."

Back home in New York City, the Hartigs visited Central Park where they and their friends flew the Baron and other models. They were encouraged to make and sell their kites by Surendra Bahadur and George Kelly of the Go Fly a Kite store. Hartig set up the Ace-Hi Kite Co. and sent a sample of his "delta" to *Kite Tales* (predecessor of *Kite Lines*) for review. His accompanying letter used the term "delta" and Bob Ingraham also used it in his review. *Delta* was part of the language by at least that date (October 1966). The glowing report on the Valkyrie concluded: "For sheer simplicity and superb flying, we've never seen an equal to this kite."

A few months later, the Hartigs were given a chance to make kites on Nantucket and they realized their dream of escaping the city. Since then they have made thousands of kites but have never considered mass production. Almost reclusive on the island, they have many friends through kites.

5

Russell S. Hall of Indianapolis, IN, filed a patent on March 24, 1964, for an innovative low-aspect-ratio kite. Barely a delta, its sail is detached from the spreader bar which follows behind the sail and carries pennant tail arrangements. Tensioning line in the hem of the leading edge

provides the only stiffening there. This delta mutant's reputation is for poor performance and it invariably needs lots of tail.

6

The delta-Conyne variant was independently developed and shared by several kite designers, including the following more prominent ones:

Frank Scott of Dayton, OH, may have been the first with his Valkyrie-inspired kite in 1967.

Harold L. Wechsler of Monsey, NY, apparently the only inventor to patent a delta-Conyne, filed for his patent on May 16, 1972.

Delta-Conynes have also been made by H. L. (Hod) Taylor of Austin, MN (of Miami, FL, in the winter), honored kiter and maker of 20-foot-wingspan bird kites since at least 1973.

Curtis Marshall of Baltimore, MD, separately has designed and made elegant delta-Conynes since about 1975, all with collapsibility features and in sprawling sizes (to 24-foot wingspan).

Takeshi Nishibayashi in Tokyo and Wyatt Brummitt of Rochester, NY (Winter Park, FL, in the winter) have been making their superb delta-Conyne variations since at least 1975.

Somewhat more recently, Carol Master of Jamaica Plain, MA, in 1978-1979 designed simplified versions of the delta-Conyne for easy introduction (especially to children).

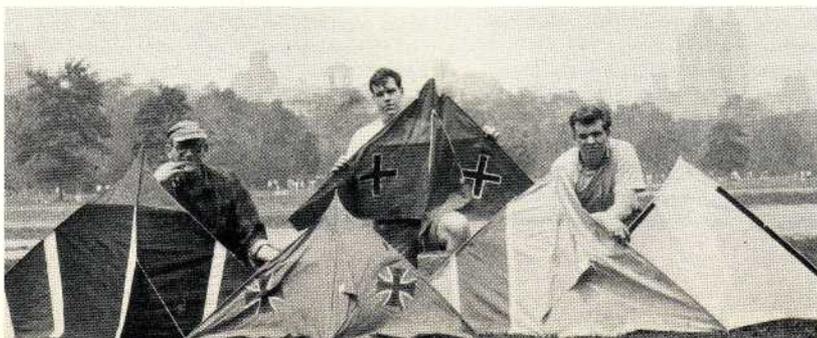
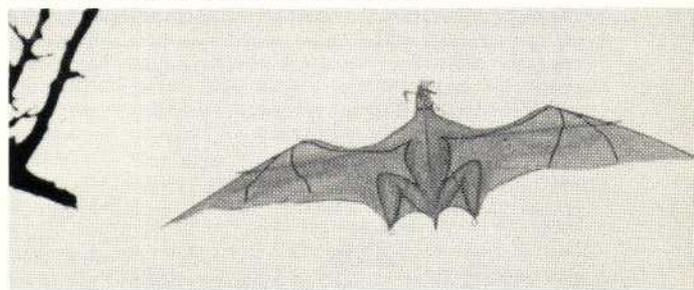
In 1977 John H. White of London, England, began experimenting with his HARDEC kite (high-aspect-ratio delta-Conyne), claimed to be the first of its kind in England. [See more about John White on pages 36-37 of this issue.]

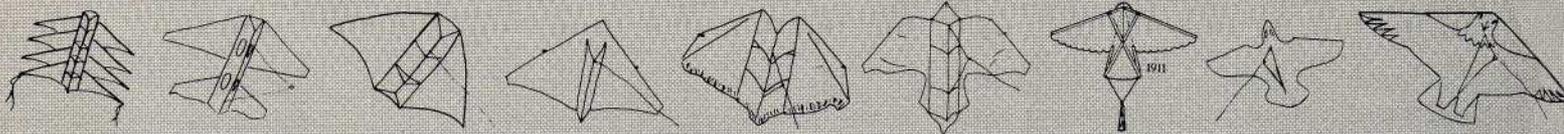
In 1978 John Sherburne, then of Rye, NY (now of St. Petersburg, FL), a Conyne disciple, became well-known at East Coast kite events for his well-made high-flying delta-Conyne bird kites.

Finally, we mention the latest example of the



From left counterclockwise: Al Hartig in the spring of 1980 flying the Red Baron (Al says: "He has logged over 1000 hours and I fly him only on perfect days. The fabric is getting 'brittle' and tears easily—so I have to be careful"); group in New York's Central Park in September 1963, including Art Hocking, whose kite is the white one on the right, "the first rip-stop nylon delta"; Hartig's most recent, his 10½-foot "Great White Whale—stupendous in the fog"; and "the largest delta I ever made," Hartig's 14-foot Pterodactyl. The first Pterodactyl is in the Smithsonian collection. (Photographs courtesy Al Hartig)





delta-Conyne, a tissue-paper model by Leonard M. Conover, founder of the Greater Delaware Valley Kite Society (NJ). His kite, aptly christened the "Hod Taylor Triangular Box Delta, also known as the Delta-Conyne," appeared in a recent issue of the club newsletter.



Ed Grauel of Rochester, NY (and Borrego Springs, CA, in the winter), is a well-known kite

Powell as a delta, but it meets all criteria to be the letter. The transvestite trailing skirt extension disguises the kite as diamond or Eddy-type, but a close look at the construction shows the delta genes are there.

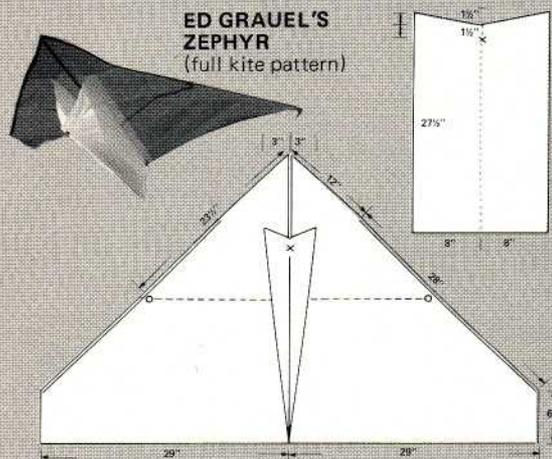


Helen Bushell of Melbourne, Victoria, Australia, has filed patents in the United Kingdom, Australia and in the U.S. on April 1, 1976, for her

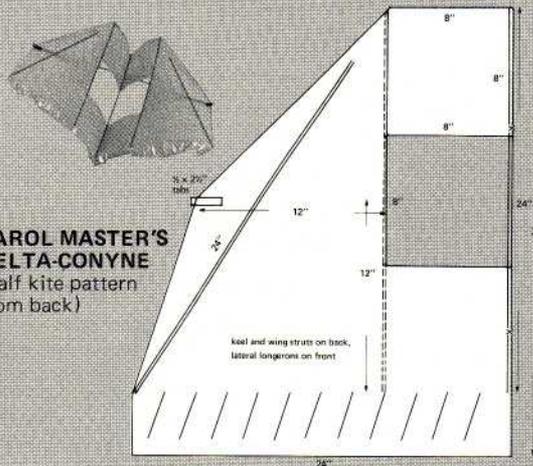
shapes up to seven feet high by three feet wide with an inverted curve and also many large serpentine dragon kites up to 40 feet long. Her largest Trefoil delta kite is 25 feet wide and is quite capable of lifting me.

"The word 'Trefoil' is derived from the three working foils joined at the center along an aerodynamic curve."

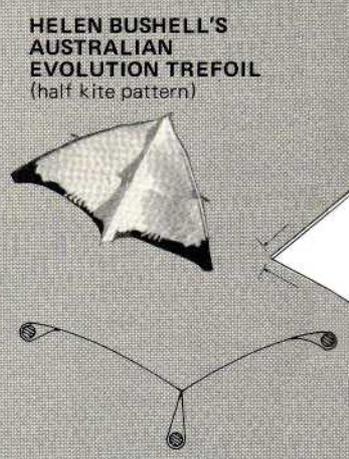
Since Bushell, the keel has been modeled in some other interesting ways, notably as done



ED GRAUEL'S ZEPHYR
(full kite pattern)

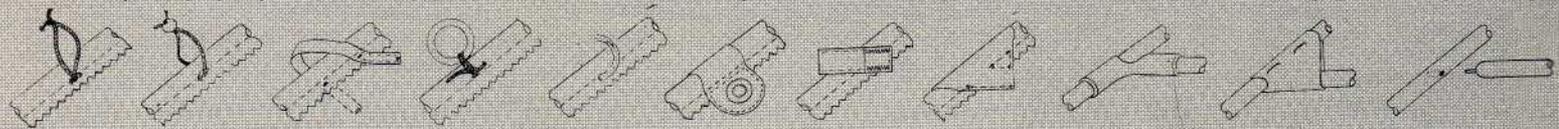


CAROL MASTER'S DELTA-CONYNE
(half kite pattern from back)



HELEN BUSHELL'S AUSTRALIAN EVOLUTION TREFOIL
(half kite pattern)

Here are drawings (not to scale) of some do-able deltas along with a collection of connectors for wingspars and spreader bars. The drawings are only a sampling allow for hems. Sizes are in the medium class, but all can be scaled up or down with care; that is, to scale up, use tougher materials and connectors; to scale (Mylar®, polyethylene), or tissue paper for small models. Masts and spars can be dowels (1/4" dia. for mid-size kites), aluminum or graphite tubing or fiberglass.



experimenter whose open-keel delta (patent filed November 27, 1974) is now manufactured by The Kite Factory and whose Zephyr is now in production through Hi-Flier Manufacturing Co., Gayla's strongest competitor and America's oldest kite producer. The "OKD" introduced a tapered, V-shaped channel designed to improve delta stability but it did not overcome the tendency of the kite to plane forward when the wind lightened. It remained for the Zephyr to carry the keel a step further with what Ed describes as "a two-sided, nontapered air channel open at one end to let air in and closed at the other end to keep the air inside—in essence, a 'balloon' keel. The air trapped in the keel causes the kite to float on the wind; hence the appropriate name, Zephyr." The kite is said to fly "steadily and reliably in any wind from 3 to 21 m.p.h. in porous material or 3 to 27 in nonporous material."



The Peter Powell Stunter is an exceptional departure from the delta as most recognize it, not because of its construction but because of its adoption by thousands of sporting enthusiasts. Its dual-line controls are not in themselves a new idea, but the Powell kite combines careful technical detail and a flair for showmanship that have made it very probably the most-copied kite in history. No wonder it was patented! The U.S. filing date was July 16, 1976. Some kites may be surprised that we classify the Peter

Australian Evolution Trefoil, a delta with a folded keel. Her son Alan writes from her notes:

"This invention has evolved as the result of 23 years of studying the effects of [delta] kite construction and eliminating those considered to be detrimental to balanced flight. These are:

- "1. Central stiffening member—causes strain and drag in the laminar airflow.
- "2. Extended ventral fin (keel)—distorts and throws the kite off course by presenting a curved leading edge to the oncoming laminar.
- "3. Central support for cross-stay—takes great strain where it crosses the longeron and also holds the kite flat, thereby not allowing the kite to conform to the laminar.

"To achieve a keel which divides the wind without distortion and to eliminate the central stiffening member effect, the mast or longeron was lowered [placed forward within the keel] to become the leading edge. This was done by stitching the two wings together roughly parallel to the mast.

"The slight tendency to overfly and to bow at the mast was corrected when a curve or camber was sewn into the top of the keel after observing butterfly, bird and aircraft wings.

"Development has not stopped yet. Many Trefoil deltas have been thoroughly designed, varying from wide, graceful seagull kites to fast, sharp storm designs. The effects of many curves and delta shapes have been studied and each design requires its own keel depth and shape. Helen has designed and built Trefoil "Door"

by John White in London. His folded keel delta was flown on October 29, 1978 (as recorded in *Kite Lines*, Fall 1979). The published drawings inspired Martin Powell of Rochdale, Lancashire, England (a member of the Northern Kite Group), to create his "Tunnel Keel Delta." More of a hollow wedge, the gusset feature doesn't channel air but rather deflects it in an elegant curve. As Powell tells it himself:

"Advantages? Well, the three-part bridle gives you good wind range adjustment, the extra lift provided by the splayed keel seems to help in marginal wind conditions, and the continuous curve cut into the trailing edge cuts out a lot of the flapping seen in deltas. Finally—it looks different and beautiful!

"There seems to be one disadvantage in high winds; the wing spars swivel alternately causing the kite to flap its wings in a rather bird-like manner, although this does not affect the stability."



The keelless delta variant has been "discovered" more than once. Except for Rogallo/NASA, Takeshi Nishibayashi was probably the first to try it, recognizing that the keel as a fixed bridle is heavier than line and can be eliminated to save weight, provided stall can be attained in other ways. In his book copyrighted in 1978, "Nishi" shows eight-to-ten keelless deltas. They are clearly illustrated, though all the text is Japanese in this particularly creative kite book. (Copies are available in the U.S. through the



Great Winds kite shop located in Seattle, WA.)

W. D. (Red) Braswell of Manassas, VA, built a very fine keelless delta, "Big Red," in 1980 (plans for which appeared in the AKA newsletter, August 1980). Made of lightweight Mylar,[®] the kite suffered little or no overfly on the occasions it was seen.

One of Ed Grauel's latest ideas, in gestation in 1980, was for a kite he called The Flapper, a keelless delta with a folded-back trailing edge to

Quinlivan calls it "this monstrosity" and uses unglamorous black trash bags rubber-cemented to wooden sticks. Other materials might look better, but, as Quinlivan says, the kite generates "an exhilarating amount of lift in a 10-15 m.p.h. wind—straight overhead with no overfly."

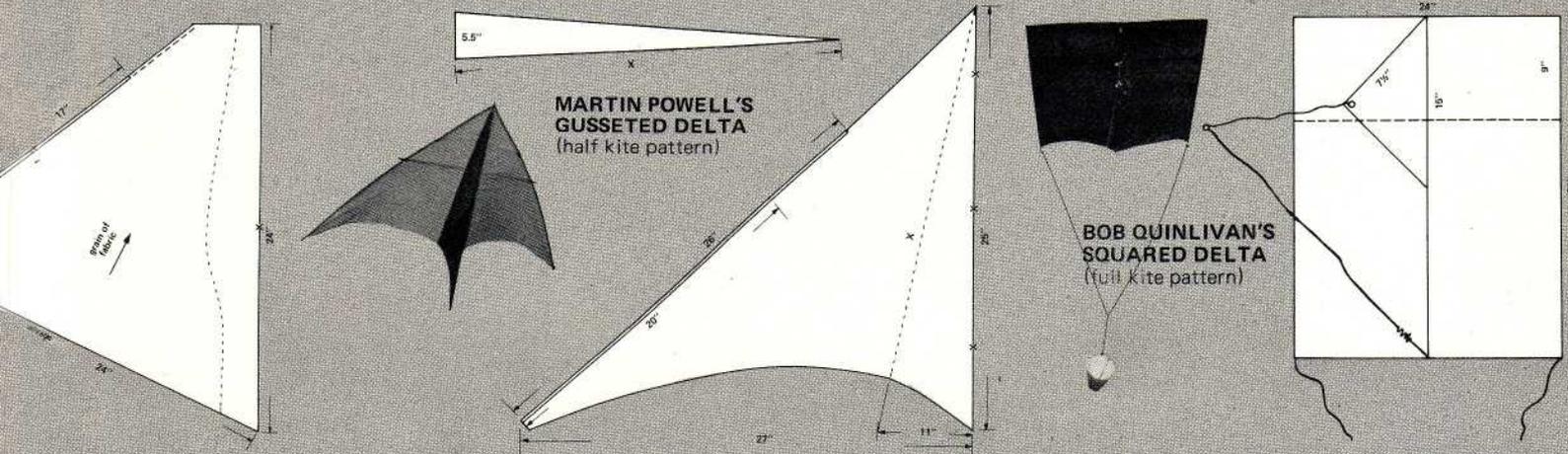


Deltas can be made quite simply, as Carol Master knows. So does Margaret Greger, Paul

Kite Lines thanks Ed Grauel for his index of kite patents which was especially useful in preparation of this article. (See Classifieds for information on the Grauel patents list.)

The kite sketches are by Mel Govig, who also arranged their order in the frieze across these pages to perhaps tantalize the taxonomists.

invite embellishment, as we know from the works of Ken Bourgeois, Tom Van Sant, Oscar and Sarah Bailey and Skye Morrison—again to



of some current ideas. The combinations of elements available to the creative delta-maker are almost infinite. The X's are bridle points. Measurements do NOT hold down, use lighter weight components and prepare to add tail. Sail material can be any of these: fabric (nylon, cotton, blends), Tyvek[®] (Type 14), plastic rods. Evenness of spar flex is essential. Try deltas in trains using slits for through-the-kite line attachment. Carol Master's holed delta-Conyne works well in train.



achieve stability. It is undergoing further tests and may appear in a future issue of *Kite Lines*.



The extremes of aspect ratio have been toyed with as much as keels/no-keels in deltas. At the one extreme (high aspect ratio) are the Soaring Wings made by Wind Mill Kites of Louisa, VA, and a few other brave examples (Nishi again deserves mention). At the other extreme (low aspect ratio) are the square deltas. Yes, square deltas. A contradiction in terms, you say? Well, we have seen them in two countries, Japan and America. To be exact, we have seen them in a Japanese book and in American correspondence.

The book was authored by Kazuo Niisaka and copyrighted in 1975 but received in the *Kite Lines* office in 1978. The correspondence started at the end of 1978 with a letter from Bob Quinlivan of St. Louis, MO, who told us of one day flying a kite when George Lohman happened by. Lohman is the kite designer for Crunden-Martin, another mass-market kite manufacturer, based in St. Louis. Lohman dubbed Quinlivan's kite a sled. Quinlivan didn't agree:

"It's not a sled, of course, because it's not bridled or structured like a sled. It's more of a squared delta. But anyway it was a sled to him and he was astonished that I had put a spreader bar on what he thought was a sled. Ridiculous." Curiously, the design was inspired by Crunden-Martin's own snub-nosed "Phantom" delta.

The squared delta requires a tail or drogue.

Thomas, Bill Lee, Jack Van Gilder and the 5/20 Kite Group—to name only a few. Deltas can be scaled up or down easily, and some very large ones have been made by Frank Rodriguez, Dan Lirot and the 5/20ers, whose 50-foot craft is probably the largest on record. Deltas also

name only a few. Honors for the most ornamentally inventive delta-based constructions must surely go to Neil Thorburn, designer of "Stacked Deltas" and super-kiter of San Jose, CA.

The chapter on deltas is anything but closed. Valerie Govig

DELTA BEHAVIOR MODIFICATION: Although deltas have become probably the most popular design in kiting in the past 10 years, they are sometimes a disappointment, especially for the novice flier. Here are some keys to the delta's character and some tactics to use in coping with it.

Almost without exception, delta kites have two annoying traits: they swoop and dive in turbulent ground winds; and they slip off to one side or glide past the flier in light winds and thermals. A look at some examples of well-behaved (and less well-behaved) deltas gives us some clues to the reason for these traits and some corrective measures we can use to offset them.

In turbulence and heavy winds, the kites with the least porous covers and highest aspect ratio tend to be the hardest to control. In this class, the Gayla and other plastic deltas are notorious for their unfriendly behavior near the ground. The extrawide (high aspect ratio) deltas (such as the Soaring Wing) also tend to misbehave in ground winds. In the case of the plastic models, the problem seems to come from the characteristics of the material—nonporous, with negligible surface drag. These kites are such efficient wind vanes that they follow the wind even in a small

vortex. On the other hand, the extrawide kites respond too slowly to ground control, apparently due to the small keel relative to the lifting area and the centrifugal effect of the long wing spars that tend to carry motion once started beyond the point of natural correction. It boils down to lack of leverage on a small keel area.

In either case, greater porosity in the kite cover tends to dampen the effect and make for more controllable flight. The high-aspect-ratio kites cannot be corrected without sacrificing the thing that gives them their appeal. In their case, a high, fast launch, performed with the confidence that comes only from failure, will usually get you out of the turbulence quickly enough to avoid disaster. Wingtip streamers on either the slick-sailed or extrawide deltas will often help you through problems at ground level without too much loss of efficiency in higher, steadier winds.

... Continued

WHAT IS DELTA?

Continued...

The problem of overflight, gliding and slip-off (which I feel are all symptoms of the same problem) is more universal and difficult to solve. Three elements contribute to the gliding syndrome: forward center of gravity; excessive lift at the trailing edge; and insufficient deflecting or stall-inducing surface at either the front or rear of the delta.

From my experience, here are a few corrective principles that seem to help:

1. The further the wing spars extend toward the nose of the kite, the more it tends to overfly and glide (the extreme case being the Glite, which will not fly on light winds without a tail).

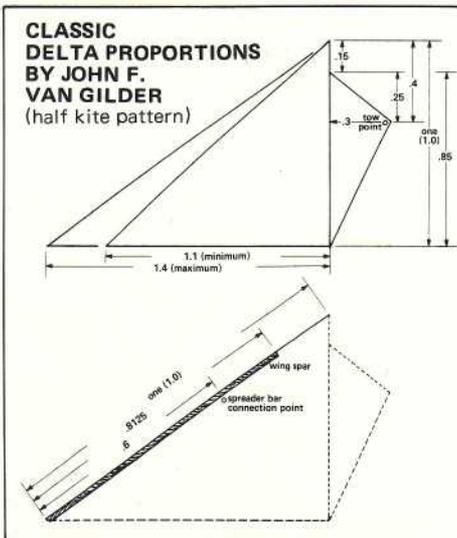
2. The further back the spreader bar is from the nose the less the kite overflies.

3. A keel which extends to the nose of the kite defeats the effect of wing spars which don't. For example, the Comet's Tail delta's keel, by not being attached to the longeron, actually increases the front lift by pulling the cover down along the length of the keel.

4. Some porosity helps the delta. The attractive, durable Valkyrie made by the Nantucket Kiteman 'n Lady is still the standard of comparison for deltas on the market, largely because of the porous fabric but also because of the carefully balanced proportions in the wing spar length and the flap at the trailing edge which induces drag and reduces rear lift.

5. Even with plastic or rip-stop nylon, surface drag and especially rear drag can be induced by fringes or slits in an "apron" at the rear, pioneered by Jack Van Gilder and Bob Ingraham and copied in the Javelin delta, the Frostline (kit) delta and some other kites.

CLASSIC DELTA PROPORTIONS BY JOHN F. VAN GILDER (half kite pattern)



6. Finally, forward lift and the necessary stall can be induced by imposing an airfoil shape on the wind-filled sails, as in the Australian Trefoil design by Helen Bushell and the "Tunnel Keel Delta" by Martin Powell of England.

There are other cures, but most tend to downgrade performance in one way or another and lose the soaring qualities we associate with the delta design.

Some comments on *efficiency* seem to be called for whenever we discuss deltas or a number of other kites. If you rely on the theory of low-speed airfoils and pull out all those often-misquoted and usually-misunderstood calculations of lift-to-drag ratios and centers of everything, it would seem that an ideal kite can be defined. Unfortunately, the craft described would probably be efficient as a glider. But efficiency as a *kite* can be defined only by the purposes of the particular kite and kiter.

In the first place, a kite must be in a permanent stall to fly well as a kite—that is, downwind at as high an angle of elevation as can be maintained. How hard it pulls on the line or how much of the pull is translated to lift are considerations of the flier's desires and (ideally) should be planned, not accidental. Because the delta tends to adjust its angle of attack to suit the winds, flattening against a light wind or thermal and curving as the wind increases, the pull on the line and the lift of the kite vary less with changes in wind velocity than do other kites. This tendency is regarded by many as a reflection of the kite's efficiency when in fact it could be regarded in quite different terms by classical formulae.

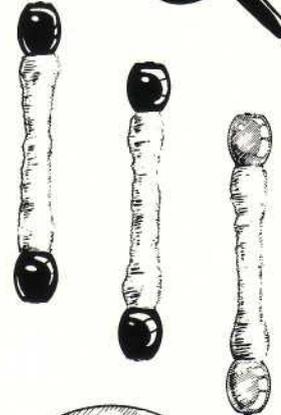
On the other hand the Jalbert Parafoil and the weighted-tail flat kites respond almost directly to changes in wind with proportionate changes in lift, varied only by the minimal surface drag induced at higher wind velocities (within the range of winds usually encountered—5-20 m.p.h.)

The characteristics which make the Rogallo wing an efficient and controllable glider design tend to be the same characteristics which need to be controlled to make it function well as a kite. And, because of the dynamic changes in the delta over a range of winds, solutions to the problem of induced stall may vary as well over the wind range. Complex bridling employed by Rogallo has been abandoned for simplicity in the delta kites, leaving only the framing, the shape, the porosity of the cover and the configuration of the keel to be adjusted.

Mel Govig

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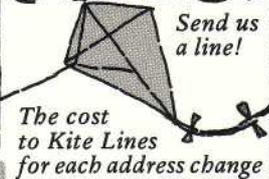
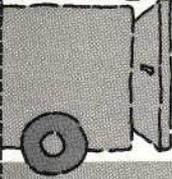


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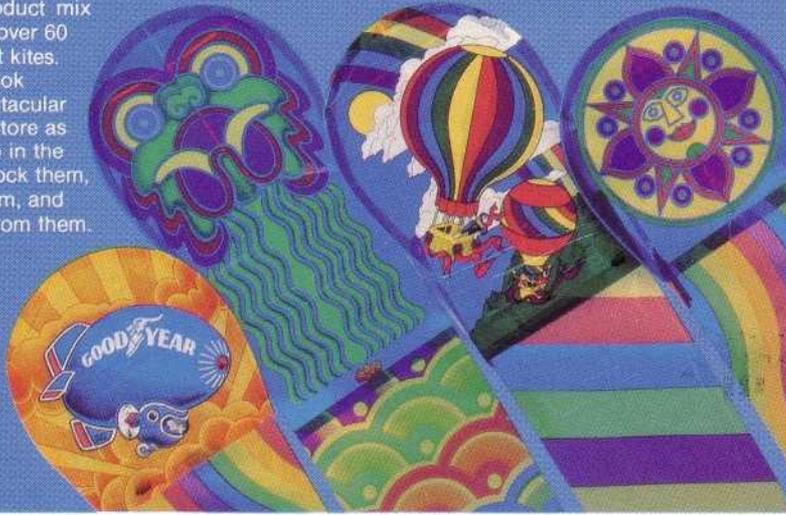
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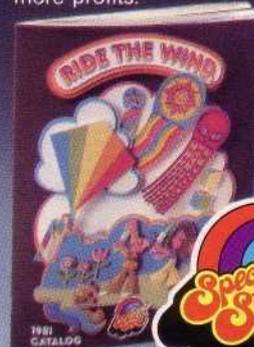
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Story and Photographs
by Douglas Cann

Knowing that Thailand is one of the kite capitals of the world, I decided to carry coals to Newcastle and take along two of my modified delta kites on a recent pleasure trip with my wife to Bangkok.

There are many locations in which to fly kites in Bangkok, two main ones being the Sanam Luang Park in front of the Grand Palace and Lumpini Park on Rama IV Road. As the main season for kiteflying is between February and April, my trip in March gave me an excellent opportunity to enjoy some kiteflying.

My two kites, which when flying resemble large birds of prey, were very different from the Thai kites generally available and would soon attract a large group of children and adults. Interestingly, the language barrier did not prevent me from communicating. Through kites, I made contact with the people in a way that would not have been possible as a "tourist."

Everybody expressed surprise at what, to them, was very thick line (30-lb. test). Also they admired my modified deep sea fishing reel. In the main, the Thai children use light cotton thread (or was it silk?) wound around an empty can. The Thais were equally impressed at how easily my kites collapsed down by removal of one wooden bar. The local *chula* and fighting kites do not collapse.

The children fly their kites every day after school till sundown and on the weekends. Needless to say, I spent many happy hours watching the children fly my kites.

At the end of my trip I purchased several kites from some young women who sold kites every day at the Lumpini Park. Bargaining is a way of life in Bangkok. We began negotiating at \$2.50 each for the kites and eventually agreed on a price of \$4.50 for three kites!

I talked to one young man who made *chula* kites. He informed me that he could make 10 kites a day, which surprised me when I looked closely at the detail in construction.

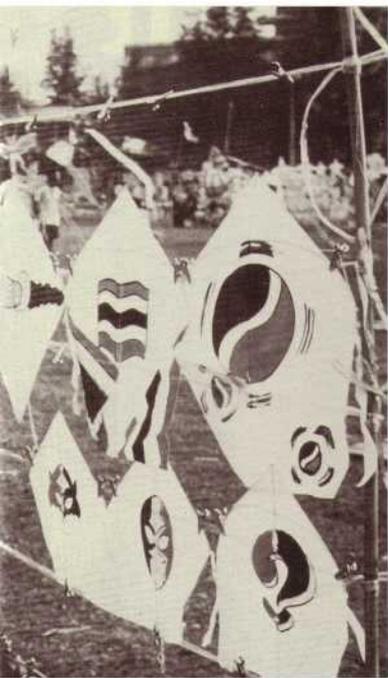
Everybody enjoyed having his or her photograph taken, and on the final day I left one of my delta kites with a keen young kiteflier. If I return to Bangkok, I wonder if I will see new designs in kiteflying in Thailand. The Thais have been making their beautiful indigenous kites for so long that, in my opinion, it would take a long time, if ever, before their kites would become "westernized."

My holiday is now several months behind me, but the memories will always be firmly imprinted in my mind. ◇

TALKING IN



KITES IN BANGKOK



Bangkok scenes, clockwise from top left: A successful sale has just been made in Lumpini Park; another kite shop doing business in the open air; at Lumpini Park, a first "western" kite is flown; at Sanam Luang Park, next to the Grand Palace, some Thai children reel in Douglas Cann's delta after a good flight; the kitemaker himself stands next to his kites with pride.

DOUG CANN, a property manager in Vancouver, B.C., Canada, has "been flying kites since I can remember—5 or 6 years old. Living near the coast in East Anglia, England, off-shore breezes were always available." Doug's 3½-year-old son has been kitesflying since the age of 15 months.

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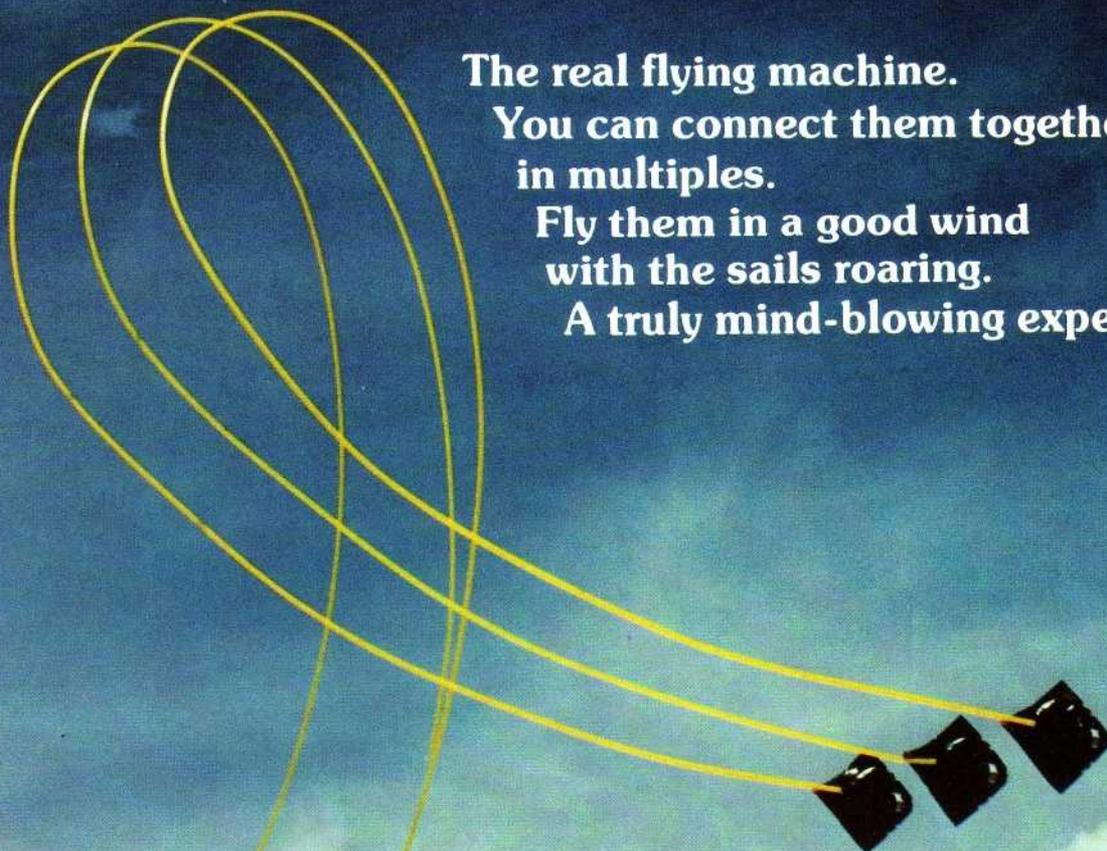
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photographs to be returned, please enclose a self-addressed envelope with sufficient postage. The winner's photograph (transparency or print) will become the property of Peter Powell Steerable Kites. The winning photograph will be selected by the Company and printed in an advertisement in a future issue of *Kite Lines* with the credits given to the photographer. Closing date will be 31 October 1981.

FLOW FORM FOLLOW-UP

We have received some inquiries about the Flow Form kite plans (published in *Design Workshop*, *Kite Lines*, Summer 1979) from kitemakers frustrated by trying to stitch straight-line seams to curved ones.

Margaret Greger, who worked on Ed Grauel's plans and contributed her sewing expertise, responded by saying that you treat this situation as you would in setting a sleeve into an armhole, by running a basting thread along the curved edge and pulling it to fit the straight edge. If you have a little extra material, just ease it or tuck it in as you go. Some further tips from Ms. Greger's experience after making several Flow Forms:

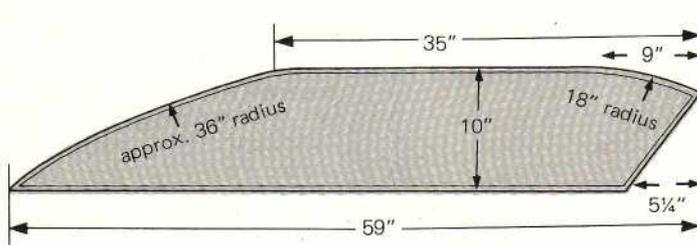
"Spinnaker cloth is recommended because of its crisp, papery quality.

"Listening to the Parafoil makers talk in Seattle, I also learned that they are now putting vents in the interior ribs. This allows air to flow from one tube to another and facilitates filling and launching, particularly with the monsters. I saw Flow Forms made of plastic, all taped with doublestick and tucked as needed.

"Les Varley of Victoria, B.C., Canada, said the ribs in the Flow Form pattern were not correctly shaped and sent me a copy of the rib pattern taken from a Flow Form kite made by Ed Grauel. The pattern does differ from the published one.

"Also, in San Francisco, Tom Henry, another Parafoil maker, said that his rib sections didn't always come out even with the fronts and backs. I asked him what he did. He said, 'I cut them off, just the way they do in the factory.' "

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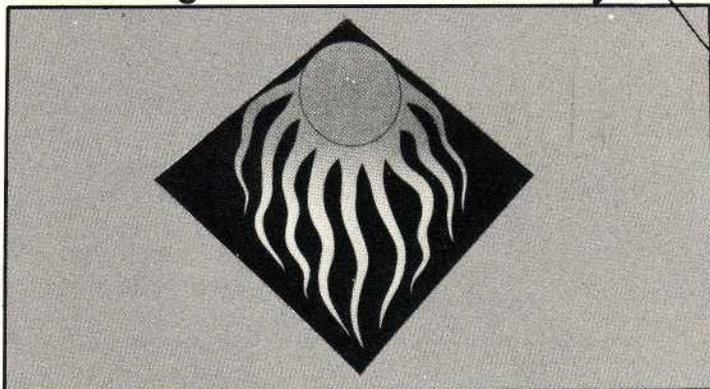
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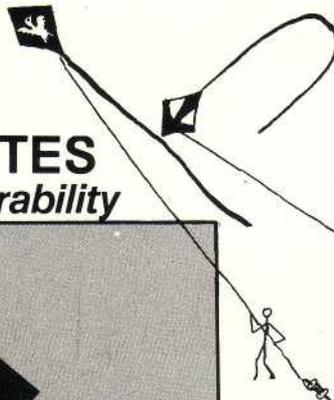


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Delightful DIEPPE! As seen by Jacques Fissier In Normandy

It was indeed a great gathering!

Since the Grande Fete du Cerf-Volant* organized in June, 1978, at Vincennes, near Paris, by Japan Air Lines and the *International Herald Tribune*, there has not been an event in France of the importance of this prestigious international meeting of kites at Dieppe, in Normandy, September 20 and 21, 1980. In fact, thanks to the perfect organization of the cultural affairs office of the town of Dieppe, and with the technical collaboration of the Cerf-Volant Club de France, this competition served to establish the consistent progress of techniques, of imagination and of talent among kitefliers of the "old continent."

Thus, little by little, the kite is becoming a means of universal expression, not reserved only to a minority of initiates, and demonstrates that it offers the individual a way to retain a certain equilibrium of the soul in a society robotized to an extreme.

Let us thank first and foremost the blessings of the Creator! He saved his storms and downpours for the night, freeing the winds, carriers of hope, during two beautiful days smiling with sunshine!

Meanwhile, the flights of migrating birds were streaming along the coast toward the southwest; the grass near the beach—usually the playground of area dogs—was like a soft green carpet; and, as if a rainbow had strewn large flowers from a futuristic world, the kitefliers arrived, one by one, or in small groups. Each cortege was watched by the dazzled eyes of the inhabitants of Dieppe. One

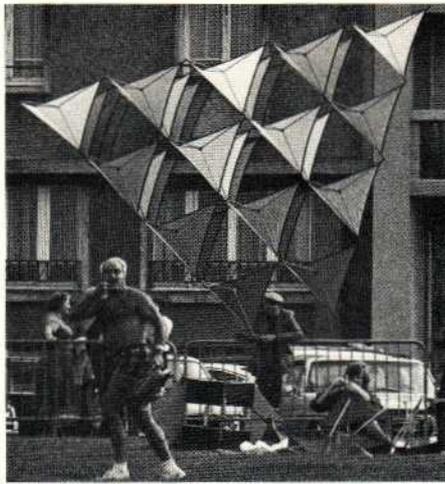
*Described in "Streeter in Paris," an article with photographs of the event which appeared in *Kite Lines*, Spring 1979, pages 36-38.



Andre Cassagnes works on one of his bird kites while his striking multicolor cellular star attracts admirers.

THE WINNERS: Contest 1, Motley kite (decorative effect of mixed materials)—Andre Cassagnes; Contest 2, Painted kite—Andre Mignard; Contest 3, Multiform kite—Peter Waldron; Contest 4, Fantasy kite—Alain Jeanne; Contest 5, Efficiency (flight angle)—Bodey; Contest 6, Traction (in proportion to wing area)—Alain Jeanne.

Left, Thibault Guilet threads his artwork skyward. Below, Cassagnes lofts his tetrahedral kite.



was reminded of an invasion of citizens from a strange planet. . . and it was maybe a little (or a lot) like that, because the man or woman or child who likes to "send himself in the air" with a kite is without doubt an individual very different from others; while the mass of humanity is stooped and crushed by fate and adversity, the kiteflier raises his eyes, looks on high, facing the divine light—or more prosaically takes a good breath of fresh air.

England's Enthusiasts

The most early-rising were the English. They debarked from the Brighton car ferry, at least 30 of them. They had crossed the Channel—very serious, determined to defend their reputation if not their honor. Leading the delegation was the gracious Miss Julie Williams and her friends of the Croydon Kite Group, their arms filled with excellent equipment—Cody, barrage and roller kites, Flexifoils, variations of boxes, hexagons, Conynes. In numbers was strength!

One could not help but notice proud-as-a-potentate Ron Moulton, president of the British Kite Flying Association, who threw himself into the arms of the president of the French club, Jean-Louis Bouisset. Their friendship was truly a pleasure to see.

Discreetly and effectively, Gill and Jonathan Bloom from Ilford, Essex, took from their pockets the fifth issue (congratulations!) of their "Kitefliers Occasional Newsletter."

Above all, the presence of (Sir?—he certainly merits the title!) John White was noted along with that of one of his

sons, Angus, almost nine years old. They carried quite a few cases, from which they extracted some marvelous apparatus, including an impressive "HARDEC" (High Aspect Ratio DELta Conyne) of 42 feet total width by 9 feet height.

This dear John merits special mention. For those who do not know him, he gives a strange impression, mysterious, exalted, to the point of causing fear among the less secure. I must insist, however, upon the great gentleness, kindness and even delicacy of John. I will elaborate still more in favor of his knowledge of the wind, linked with his great care for aesthetics and perfection. John White is a teacher of chemistry and mathematics. He lives in the southwest of London and belongs to the BKFA. Probably he could also teach the *art* of constructing and flying magical kites. John is one of the wise people who embodies "kite power" without violence—and with Angus, his worthy heir, we are certain that our philosophy will always be well defended in Great Britain.

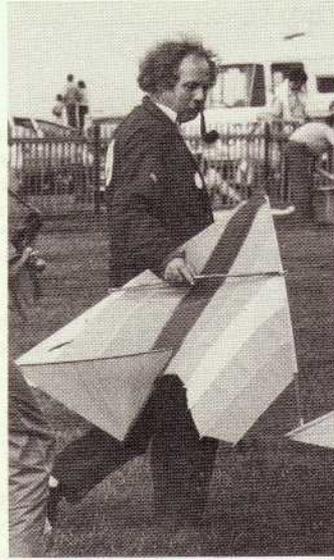
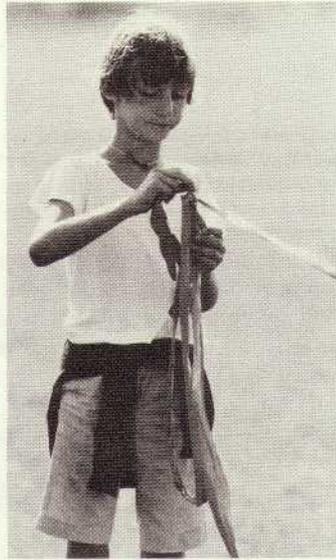
Flying Camembert

Holland was represented, among others, by three eminent persons: Harry Daalmeyer, Ton Oostveen and the celebrated Helmut Schiefer, champion of the Low Countries. Members of the Nederlands Vlieger Gezelschap (Dutch Kite Society), they tried to drop (with an ingenious system of "go and come") one of those famous and odorous Camembert cheeses of Normandy. Thanks to Helmut, Ton and Harry for this happening! For the first time in the history of the serving techniques of gastronomy, the Camembert flew without the least wasting of energy. Let us salute these great pioneers and epicureans!

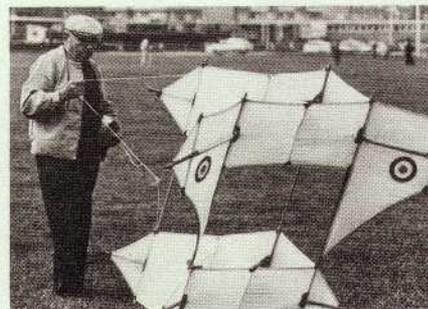
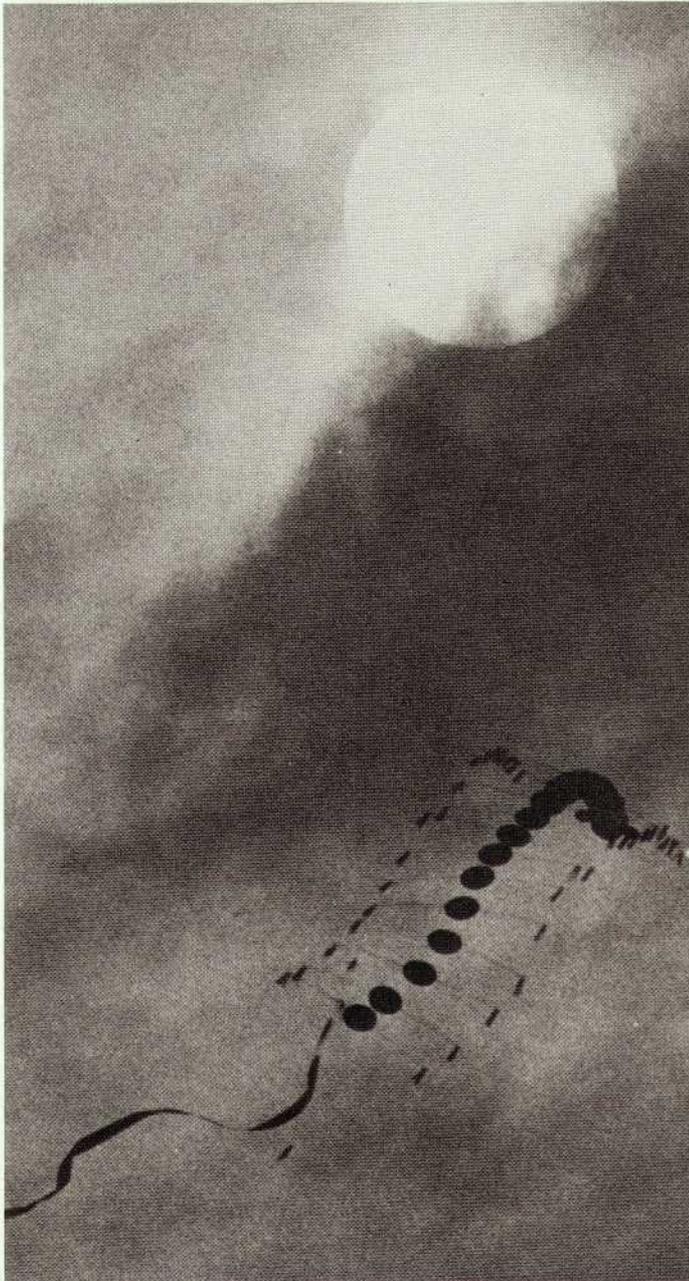
In Threes—Belgium and West Germany

Concerning the Belgians, we were not very happy because, despite a widely circulated and early notice, only three members of the Cerf-Volant Club de Belgique—A.S.B.L. had responded to the invitation: Michel Dusariez, treasurer and founding member of the club; Nicole, his charming wife; and Marc Hiernaux of Brussels. They will do better next time.

Let us also notice the very quiet participation of three kitefliers from West Germany and Westphalia. So retiring in their little corner, or too timid, our



Above from left: John White at work; a child at play (one of the few at Dieppe); Helmut Schiefer, champion of Holland.
Below left: the centipede of Chantal Barrett surprising the sun. Below right, from top: Georges Cavin carrying his "iron" kite;
Andre Mignard, Club Secretary; Jean-Louis Bouisset, Club President; Francis Vilbe, "le doyen" with one of his several fine kites.



Left, from top: Juan Carlos Tedesco, refugee with kite; the sweet energy of Guy Gerard; the mannequin by Alain Jeanne tumbling among the delighted, laughing children.



German friends should have without doubt merited more interest in themselves and their intriguing "flying cylinders." The next time, someone must go to their gatherings and pull these kilters toward the main event. Ah, if all kitefliers would extend their hands to each other!

Out in Force—the French

"And the French, what did the French do?" you ask. At home, they are sure to set an example of good will. On the honor roll let's write the name of the good president Bouisset. Always friendly, always ready to give information, always devoted to the cause of kiteflying. The only regret in this regard is that, too occupied by the administration of the event, Jean-Louis didn't have time to try the wind with one of his creations. On the other hand, the president of the Cerf-Volant Club de France made a frank self-criticism of the meet: he thinks that, as is true in other things, it would be better to keep the actual judging only for club members and make different rules for the people at large in order to introduce more numbers to kiting.

A happy coincidence of the Dieppe event was that the "doyen" of the French club, Francis Vilbe, celebrated his 80th birthday at this occasion! This happy grandfather of La-Guerche-de-Bretagne has been a lover of kites since 1906. This dear and worthy Frenchman is the oldest known kiteflier in France—perhaps even in Europe. He is especially happy when he sends his Cody into the air, and never talks of quitting. It is fantastic at this age to be so young.

Why does Georges Rivals, the vice-president of the Cerf-Volant Club de France, separate himself from the crowd? Georges secretly works on kite aerial photography. He obtains some good results by triggering his small Rollei, thanks to a dethermalizer fuse. (Hush, we will speak of Rivals later and also of Vilbe, the old-timer of the kite world.)

We must not forget the other good friends of *Kite Lines*: Andre Mignard, secretary of the Cerf-Volant Club de France, a true master of the sky; Andre Cassagnes, who is called *gros nounours* (big bear cub) and whose creations are extraordinarily diverse, testaments to a great talent. Alain Jeanne, of Calvados, flies a stuffed manne-

quin, to the great delight of the children as the hilarious man climbs and descends.

Miss Chantal Barret has a workshop of kites in Paris. She works there with enthusiasm and, in the company of a friend, Francine Devienne, sells her products to a famous boutique *Le Nain Bleu* (The Blue Dwarf). A beautiful centipede by Chantal leaped joyously into the sun, to the point that the king of stars reddened it, then the kite veiled its face by surprise behind some clouds.

Very noteworthy also were Thibault Guilet, of Nantes, with Miss Roseline Compagnon—a quiet and engaging couple. Thibault refuses to be enrolled in a club; he prefers his solitude, and that is his right. For him, kiting must be a flying work of art and he orients his research in plastics and graphics in this sense. Very interesting!

A Refugee and a Metaphor

The meet at Dieppe also permitted Juan Carlos Tedesco, a political refugee from Argentina, to make new friends—kitefliers! His discovery of kiteflying is recent; it is not strange he would wish to escape from an imperfect world. Juan Carlos has found a certain insight to the soul, thanks to his winged hexagon. Like many small things in life, his kite had at first its highs and lows; then, spurred on by the hope of a better tomorrow, it gained altitude when given more line.

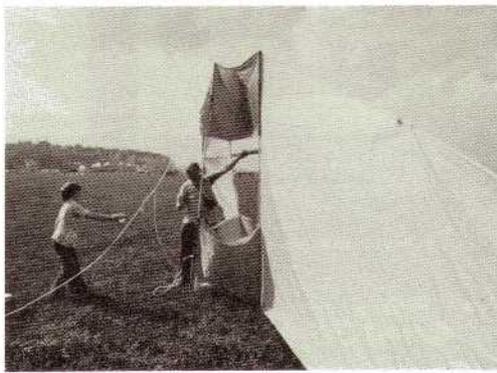
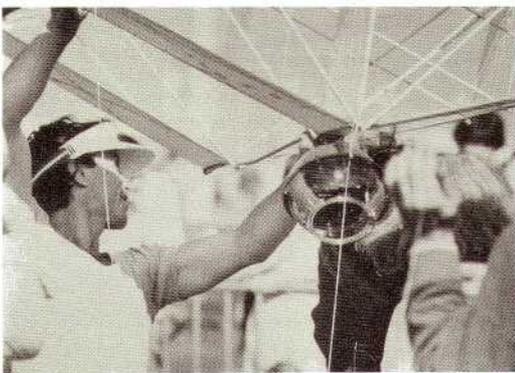
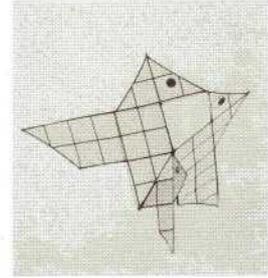
Paradoxically, in French one says *retenue* to describe the line, using a word with the double meaning of reserve, discretion, restraint. This line, which restrains or holds back the kite, also allows it to climb. Thus it is for Tedesco: the *retenue* liberates him!

An Historic Note

Kite Lines and kilters everywhere congratulate the benevolent members of the meet's committee in the town of Dieppe, who served a pleasant repast to the participants a hop-and-skip from the beach. It was at this place in August, 1942, that a raid by Canadian soldiers to liberate France resulted in a terrible defeat. This is not a simple coincidence because all of us bow before the sacrifice of these men. It is necessary to enjoy again, to be flown by the kite, during the two too-short days for bringing together ideas and hearts. ◇



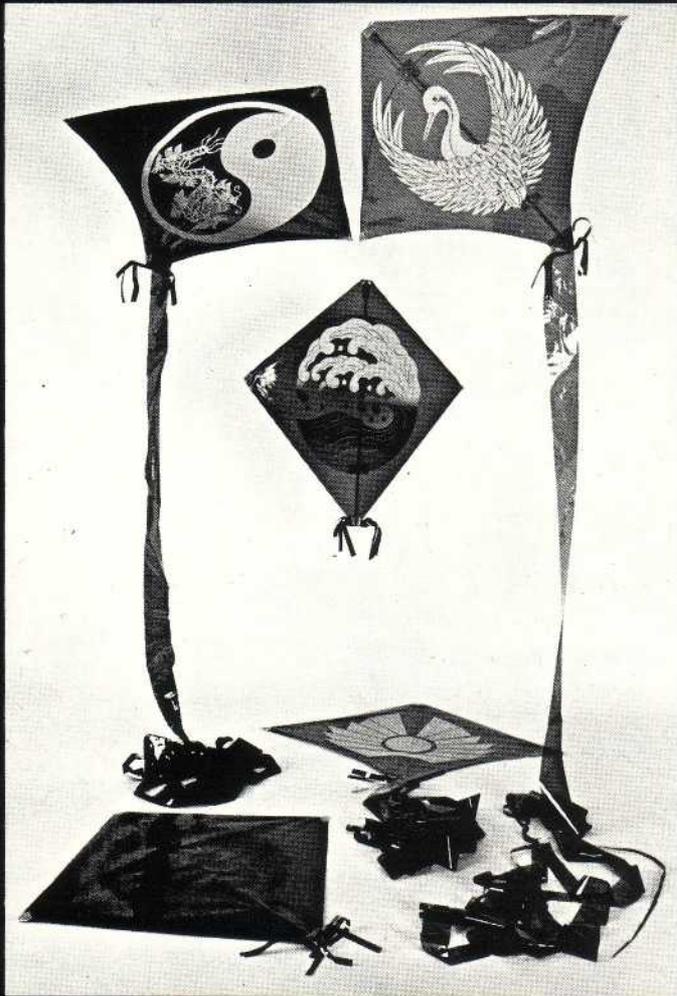
Counterclockwise from top left: Banner of the Cerf-Volant Club de France; Alain Jeanne, flier of the mannequin; the Flying Camembert operation in care of Daalmeyer and Oostveen of Holland; an English visitor showing a crystal ball rig for a camera kite-lift; John White and his son Angus preparing to fly a "HARDEC"; kite pull being measured by a civic official of the Town of Dieppe; more inventive kites by Cassagnes; a light paper creation by Thibault Guilet; a ladder kite on the climb.



JACQUES FISSIER is a journalist and photographer extraordinaire who lives in France and loves kites.

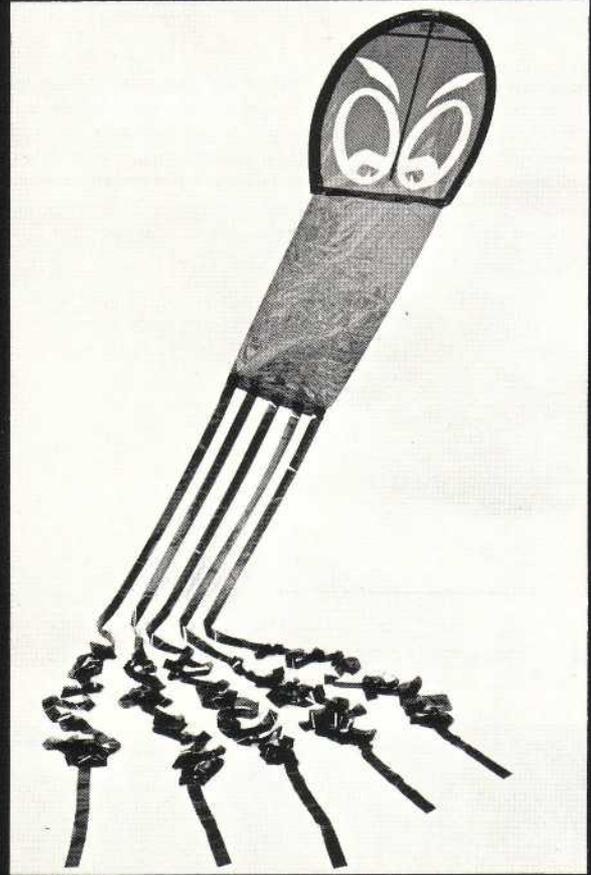
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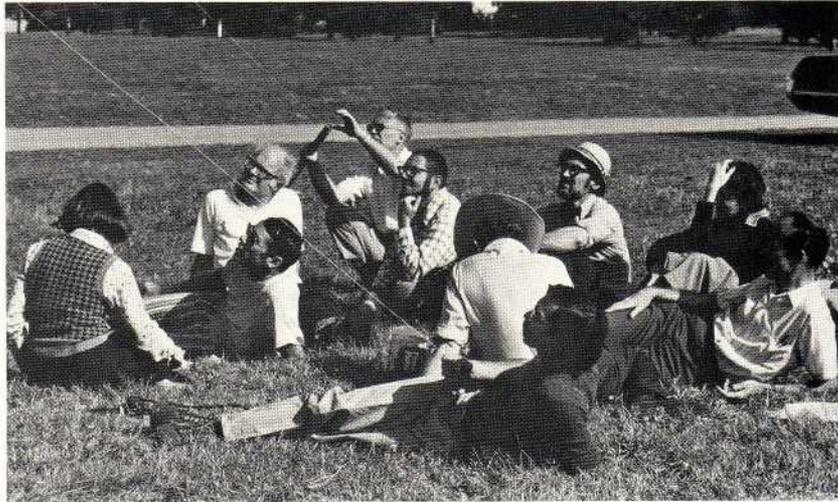


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A day in the life of the Maryland Kite Society, October 5, 1974, Burtonsville, MD. An unexpectedly memorable moment of fine winds, fine friends, fine kites. Photo: Anneke Davis

86% growth in three years! How many avocations can show that kind of vitality? In 1978, when *Kite Lines* first surveyed kite clubs and associations, there were 28 of them active. Now in 1981 there are at least 51.

On the next pages we list them. But we see other indexes of growth, too—more kinds of kites to fly and make, more kite shops opening at what seems a feverish pace, more readers of *Kite Lines* than ever.

What is happening here? And how do we know? Any single locality or kite or club is not indicator enough in itself. It's the global view that reveals the phenomenon.

HOW THEY RUN

What is an association, anyway? It's a question that arises because kite clubs seem to be less "associated" than most. They are independent, diverse and fascinating. Some of them seem to be the creations of strong-minded personalities. Sometimes quietly, these people *do the work*. Their investment of time, energy and resources, which builds each year, earns them few rewards except those occasional riches—great days full of fine kites and friends. That's what it's all about.

And yes, the leaders earn the right to influence and control, too, operating as kindly despots in a mine-field of kite egos. It is well to set aside illusions when you "join" a club and exchange your trust and perhaps a few dollars for the distinction which "membership" affords you. Clubs are mutual endorsement systems. If, however, everybody understands the rules, they are usually lots of fun.

In kiting, there are many shades

and grades of "association," including some that are no more than independently printed publications or volunteer auxiliaries of kite shops. Some of these de facto clubs are more reticent than others, anticipating misinterpretation of motives. It happens, however, that some of these agents provide quite well for the interacting functions of a club without either sharing responsibility or assuming bureaucratic overlay (the double sides of advantage/disadvantage in association control). An example is the shop Let's Fly a Kite in Marina del Rey, CA, which everyone knows is kite headquarters in the Los Angeles area. Another case is the San Francisco Bay Area *Kite Flyer* newsletter, which (like *Kite Lines*) avoids "club" pretenses.

WHY A LIST?

It would be presumptuous—even ridiculous—for us to "judge" kite associations in any way, and we list them in these pages as an information service only. However, all except the smallest clubs produce publications which have reading value to "outsiders" that is worth examining. Often printer's ink not only glues a group together but carries forward the focus of interest and becomes (let us be bold in saying so) *product*.

As such, kiting bulletins can be a source of serendipitous delights. We recommend that you sample them. In fact, we go so far as to say that the true enthusiast will feel that some of them are required reading and deserving of support.

And of course if you live near a club and have not been aware of it till now, we are happy that *Kite Lines* may be your introduction.

DOING THE SURVEY

We have tried to reach all clubs with this survey, but 100% response is never to be expected. We have listed only clubs we know to exist.

Unfortunately, a number of non-responding clubs are still in our file pending verification. Definitive as we want this directory to be, we see that it will always be in flux as new groups form and old groups fade away. Change is a constant in kite clubs as in everything else.

Of special interest are several incipient kite clubs, still in the early nucleus stages, which we have not included but look forward to adding at our next survey.* And very probably there are kite groups in existence that we've never heard about before—but we hope to!

We have noted as "chapters" those clubs which have so identified themselves. Not many did so at this time, a situation which might change if the national organizations begin work on chapter development.

MISSING INFO?

Where information is missing from our listings (as for example, where no dues, newsletter or membership card are given), it's because the club either doesn't offer them or didn't answer our questions.

*Two incipient groups are of special note, in Boston and Chicago:

"Kites Over New England," invitational flies started in May 1981, have potential for providing a nucleus of hoped-for organization. Contact: Theodore Kuklinski, 269 Main Street, Watertown, MA 02172.

The Chicago Kite Club is still trying to get off the ground. Contact: LeRoy and Anita Hoover, 2528 W. Wilson Avenue, Chicago, IL 60625.

DUES

Note that we have given all dues in the currency of the association's country (for example, not converting to U.S. dollars from Australian dollars). Also some associations have lower dues for family or junior members. We have printed only the one-year single adult rate. Also, overseas and airmail services are a great expense for the club and should be added to dues where appropriate.

OFFICERS, ET AL

Most of the associations are young and small (66% were founded in 1977 and after) and did not fill out the "officers" section of our survey. In particular we found that *election* of officers was the exception to the rule. Elections, along with all other benefits, vary from one kite club to another and *no benefit* should be taken for granted unless there is specific information to the contrary.

THE NUMBERS

In listing kite publications and clubs together, we caution against comparing membership figures to *circulation* figures. A single "subscription" often equals two or more "members." Also note that "circulation" is a combination of subscription and over-the-counter sales for many publications. We asked the associations in our survey to give us the number of member-*households* on their rosters and we have printed the numbers which they gave us.

LOOKING AHEAD

Kite Lines will update the club directory from time to time. Kites, seek out your fellow fliers! Then thank us by telling us and others you did.

Continued...

kite club directory

INTERNATIONAL

KITE LINES

Founded (as *Kite Tales* and American Kitefliers Association) in 1964. Founder: Robert M. Ingraham.

Contact: Valerie Govig (Publisher-Editor), 7106 Campfield Road, Baltimore, MD 21207.

Annual Subscription: \$9.00. Circulation: 5000 paid (at least 11,000 readers).

Benefits: *Kite Lines*, the quarterly journal of kiting worldwide; comprehensive, full-size magazine of 48-58 glossy pages, with full-color cover, some inside color, plans, photos, articles, reviews. Conducts occasional events (International Exposition of Asymmetrical Kites). Of note: Maintains up-to-date kite records and information, corresponds with kites individually and publishes additional material such as *Annotated Kite Bibliography*.

INTERNATIONAL KITEFLIERS ASSOCIATION (IKA)

Founded: 1963.

Founder: Will Yolen. Contact: Will Yolen, 31 School Street, Box 27, Hatfield, MA 01038. Members: Over 36,000.

Benefits: Membership card. Occasional sponsoring of events (Ben Franklin International Fly-Offs in Sarasota, FL in mid-January).

EUROPEAN KITEFLIERS ASSOCIATION (EKA)

Founded: August 1977.

Founders: Nick Werner Laurie, John Peyton, David Turner, Martin Lester, Jane Selman, Bob Fredrick. Contact: Nick Laurie (Editor), Rushley Cottage, High Ham, Langport, Somerset TA10 9DG, England. Annual Dues: £6; £9 overseas.

Circulation: "1000 readers." Benefits: Membership card; *European Kiteflier*, "irregular but reliable" full-size magazine of 32 pages and glossy 2-color cover with plans, photos, articles, calendar. Discount of 5-10% with some kite merchants. Helps conduct kite events.

AUSTRALIA

AUSTRALIAN KITE ASSOCIATION (AKA)

Founded: Reorganized from National Gallery group March/April 1977. Founder: Tony Johnston.

Contact: Tony Johnston (Chairman) or Helen Bushell (Secretary), 10 Elm Grove, E. Kew 3102, Victoria. Members: Approx. 20 throughout Australasia.

Benefits: Monthly one-page newsletters + information sheets, plans

and 3 books. Conducts Melbourne Moomba Kite Fly the first Sunday in March; one meeting per year; many workshops/displays; occasional picnic flies.

Officers: "Junta [sic] of 3" (Tony Johnston, Helen Bushell, Doris Smith).

Chapter of American Kitefliers Association.

Of note: "All of our members make marvelous kites!—Peter Travis, potter/artist/teacher of design, exhibits kites throughout Australia; John Porter follows Hargrave's footsteps; Helen Bushell is designer of the Australian Trefoil."

AUSTRALIAN KITEFLYERS SOCIETY

Founded: 1977.

Founders: John Silk and Ted Stevenson.

Contact: Ted Stevenson, Box 11, Holme Building, Sydney University, Sydney, New South Wales. Annual Dues: \$2.00 (payable at Festival)

Members: about 30.

Benefits: Membership card and newsletter (not seen). Conducts informal flies and Festival of the Winds, September, Bondi Beach, Sydney. Of note: "Tom Hanks, innovative kitemaker; John Silk, founder of the Festival of the Winds; Peter Travis, Australia's No. 1 kite artist."

KITE FLIERS ASSOCIATION

(SOUTH AUSTRALIA), INC. (KFA-SA)

Founded: June 23, 1977.

Founder: Bob Hains.

Contact: David Ayling (Hon. Secretary-Treasurer), 4A Hazelwood Avenue, Hazelwood Park, South Australia 5066.

Annual Dues: \$6.00.

Members: 16.

Benefits: Monthly 6-page full-size newsletter with plans, calendar. Flies first Sunday afternoons each month except January in South Parklands, adjacent to Adelaide. Additional outings ("deep sky") or picnic flies 2-3 times a year. Also holds meetings, workshops, Christmas party.

Officers: President, Vice-President, Secretary-Treasurer, Youth Representative, Publicity-Officer-Editor, all elected.

Of note: R.E. Ted Padman is a well-known correspondent for KFA-SA.

TASMANIAN KITE FLYERS ASSOCIATION (TKFA)

Founded: 1975.

Founders: C.H.B. (Kent) Stevenson and Don Jones.

Contact: Kent Stevenson, 8 Summerleas Road, Fern Tree, Tasmania 7101, Australia.

Annual Dues: \$3.00.

Members: 6.

Benefits: Noncompetitive gatherings the first Sunday of each month at Queens Domain, Cenotaph End, Hobart, Tasmania.

Chapter of Australian Kite Association.

BELGIUM

CERF-VOLANT CLUB DE

BELGIQUE A.S.B.L.

Founded: October 18, 1979.

Founder: William Tchang.

Contact: William Tchang, 33 rue Defacqz, 1050 Brussels.

Annual Dues: 25\$.

Members: 56.

Benefits: Membership card; *Le Cerf-Voliste* triannual newsletter of 24 pages in small format with plans, articles, in French and Flemish. Conducts 4 kite events, 3 meetings, 14 workshops/displays annually.

CANADA

TORONTO KITEFLIERS

Founded: April 1979.

Founder: Garry Woodcock.

Contact: Garry Woodcock, 1055 Shawnmarr Road, No. 68, Mississauga, Ontario, Canada L5H 3V2.

Annual Dues: \$3.00 (\$2.00 new). Members: 132.

Benefits: Membership card; 2-4 page quarterly legal-size newsletter with photos, plans, calendar crammed in. Helps run Toronto Kite Competition on first June Saturday. Conducts 30+ informal flies, 4-5 workshops/displays, 3-4 social gatherings.

Officers: "2—appointed to workshop committee."

Of note: Leading members—Ken Lewis ("Mr. Kite Canada," organizer of the Canadian National Exhibition kite festival, August), Jim DeLaurier (Univ. of Toronto Institute for Aerospace professor), Skye Morrison (textile designer/kite artist) and indefatigable Garry.

BRITISH COLUMBIA KITEFLIERS ASSOCIATION

Founded: March 1980.

Founders: 33 people.

Contact: Rosemary Meyer (Secretary), 3991 Puget Drive, Vancouver, B.C., Canada V6L 2V3.

Annual Dues: \$5.00.

Members: About 95.

Benefits: *Windsor* newsletter of 2-3 legal-size pages, approximately quarterly, with plans, cartoons. Helps conduct Harrison Kite Spectacular at Harrison Hot Springs and the Sea Festival Fly, in Vancouver, both in June, and the Great Pacific Rim Kite Festival in Vancouver in April. Conducts informal flies, meetings, workshops.

Officers: President (David Pinner), Secretary, Publicity, Workshop Committee, all elected.

VICTORIA KITE CLUB

Contact: Bernard Stewart, 207 - 1615 Belmont Street, Victoria, B.C., Canada V8R 3Y9.

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: Conducts informal flies, meetings, workshops/displays and the Festival de la Cometa in 3 locations in Colombia.

FRANCE

CERF-VOLANT CLUB DE

FRANCE

Founded: 1977.

Founders: About 30 persons.

Contact: Jean-Louis Bouisset, 17 rue Lacharriere, 75011 Paris.

Annual Dues: 1980-81, 80 francs; 1981-82, 90 francs.

Members: Over 100.

Benefits: *Le Lucane* newsletter, approximately quarterly, full-size, of about 20 pages with plans, articles, in French. Conducts one meeting and several events on request of communities in France. Officers: President, Vice-President, Secretary, Treasurer and 4 administrators, all elected.

Of note: "We are proud of the fact we have initiated an association after a breathing space of 50 years." Conducted a Kite Aerial Photography Contest in September 1980.

GREAT BRITAIN

BRITISH KITE FLYING ASSOCIATION (BKFA)

Founded: October 12, 1975. Revival of the Kite and Model Aeroplane Association, founded in February, 1909, which featured lectures by Baden-Powell, Marconi, et al.

Founder: Ron Moulton.

Contact: Ron Moulton, P. O. Box 35 Bridge Street, Hemel, Hempstead, Herts. HP1 1EE.

Annual Dues: Were £2.00.

Members: Were 400.

Benefits: Membership card; occasional leaflets published. Conducts semiannual national kite rallies in May and October at Old Warden Aerodrome, near Biggleswade, Bedfordshire.

KITEFLIERS OCCASIONAL

NEWSLETTER (K.O.N.)

Founded: September 22, 1979.

Founders: Gill Fennemore, Jon Bloom, Allan Martin, John Barker.

Contact: Mr. and Mrs. John Bloom, 31 Grange Road, Ilford, Essex IG1 1EU.

Annual Subscription: £2.00.

Circulation: 250.

Benefits: Quarterly *Kitefliers Occasional Newsletter* of 22-24 pages in small format with plans, cartoons, calendar, articles.

Of note: Handmade badges given to article contributors. Started as free publication sent to "kiting leaders." Recently converted to paid.

BLACKHEATH KITE ASSOCIATION (LONDON)

Founded: February 1977.

Founders: Chris Field and David White.

Contact: Terry Shea, 47 Roydene Road, London SE18 1PZ.

Annual Dues: £1.00.

Members: 27.

Benefits: Conducts 8-10 meetings,

4 social gatherings and 2 major kite events: European Kite Extravaganza in mid-April and the annual Kite Festival on 3rd June Sunday, both at Blackheath (London SE3). Of note: Badges and flying jackets available.

BRIGHTON KITE FLYERS

Founded: Mid-1979.

Founders: Allan Martin, David White, Gregor N. Locke.

Contact: Greg Locke, Flat 1, 6 Norfolk Terrace, Brighton BN13AD, Sussex.

Annual Dues: £1.50.

Benefits: Membership card (not seen); newsletter with calendar (discontinued). Attends a full schedule of flies, 20 social gatherings and conducts 2 major events: Brighton Kite Festival in early May and Sussex Kite Festival on 2nd August Sunday.

Of note: Strong interest in records: altitude, duration, trains, sea distance and others.

CORNWALL KITEFLIERS

Founded: February 1979.

Founders: "As a result of the wishes of many people."

Contact: Tessa Bell (Secretary), 78 Pendarves Road, Falmouth, Cornwall TR11 2TP.

Annual Dues: £3.00.

Members: 22.

Benefits: Membership card (not seen); quarterly full-size newsletter of 2-20 pages with tips, news. Conducts meetings, workshops/displays, informal flies on 1st Sundays at Gear Sands plus 2 overnight flies at Yelverton, Devon, and the annual Goonhilly Downs Festival, Cornwall, in late May.

Officers: Chairman, Vice-Chairman, Secretary, Treasurer, Membership Secretary, Fetes-Fairs Organizer, Newsletter Editor, all elected.

Of note: Newsletter is thick, amusing and gossipy. Group is exceptionally active for its size.

CROYDON KITE GROUP

Founded: June 1980.

Founders: Adrian Wild, Julie Williams, Michael Fay.

Contact: Julie Williams and Adrian Wild, 9 Northumberland Court, 22 Normanton Road, South Croydon, Surrey.

Members: 15-25.

Benefits: Conducts informal flies every Sunday at Croydon Aerodrome, attends many major kite events in Europe.

ESSEX KITE GROUP (EKG)

Founded: October 1976.

Founder: Clive C. O. Rawlinson.

Contact: Clive C.O. Rawlinson (Hon. Secretary), The Croft, Parsonage Lane, Howe Street, Gt. Waltham, Chelmsford, Essex CM3 1BS.

Annual Dues: £2.

Members: 97.

Benefits: Membership card; *Kite Wings*, quarterly full-size newsletter of 6-10 pages with calendar,

tips, sometimes color cover. Conducts 3 major kite events (Kite Day—Woburn Abbey, Kite Festival—Hylands Park, Gt. Waltham Kite Festival), 40 informal flies, 3 meetings, 6 workshops/displays.

Officers: President, Chairman, Secretary, Treasurer, Membership Secretary, Editor, all elected.

Chapter of British Kite Flying Association.

Of note: Publishes annual program with kite flies named in honor of historic figures in kiting.

THE MIDLANDS KITE FLIERS

Founded: April 1, 1979.

Founders: Bill Souten, Mike Hale, Nick Hale, Jim Whitehouse.

Contact: Bill Souten (Secretary), 76, Oxhill Road, Handsworth, Birmingham B21 9RH.

Annual Dues: £4.00.

Members: 134.

Benefits: Membership card (not seen), quarterly full-size newsletter of 26 pages with plans, articles, calendar. Conducts 12 informal flies, occasional meetings, several workshops/displays, an annual dinner (Kite Fliers Ball) and the Weston Park (Shropshire) Kite and Boomerang Festival in June.

Officers: Chairman (Mike Hale), Secretary (Bill Souten), Treasurer (Rena Souten).

Unofficial chapter of British Kite Flying Association.

Of note: 75% club attendance; 1980 Project KARA (Kite Altitude Record Attempt), a beautifully planned and documented failure.

NORTHERN KITE GROUP (NKG)

Founded: November 5, 1978.

Contact: David Holmes (Editor) or Ian Walton (Secretary), 12, Yarrow Avenue, Maghull, Merseyside L31 9DQ.

Annual Subscription: £4.00.

Members: 60.

Benefits: Bimonthly 'kite,' a full-size newsletter of 12-20 pages with 2-color cover, plans, calendar, historic material. Attends major flies, conducts informal flying.

Officers: Chairman (Mike Ware), Editor, Secretary, Treasurer (Martin Powell), International Secretary (John Spendlove).

Of note: 'kite' is carefully done, substantial in contents and a tribute to today's copier technology.

SHEFFIELD KITING CLUB

Founded: April 1977.

Founders: John Green, Frank Green, Bob and Richard Norris, Stephen Robinson

Contact: John Green, 77, Rainbow Avenue, Sheffield S12 4AR.

Annual Dues: Donations accepted.

Members: 10.

Benefits: Conducts demonstrations, picnic flies, workshops for children and annual Sheffield Fly (jointly with Northern Kite Group) 2nd weekend in June.

Officers: Workshop Coordinator (Frank Green), Hon. Secretary

(John Green), Field Officer (Bob Norris).

Of note: Special dedication to youth.

SHROPSHIRE KITE GROUP

Founded: 1977.

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

Members: "Small group."

Benefits: Attends major kite festivals but mainly flies together.

JAPAN

JAPAN KITE ASSOCIATION (J.K.A.)

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: 2000 yen.

Members: About 1000 (as of July 1979).

Benefits: Semiannual magazine of 58-86 pages in small format and glossy paper with plans, photos, entirely in Japanese. Conducts annual meeting and 2-3 kite festivals; supports festivals sponsored by other organizations.

Chapters in Hakodate, Osaka, Hiroshima, Nagoya, Kumamoto, Okinawa and others.

Of note: Shingo Modegi's legacy, the Tokyo Kite Museum, fills the fifth floor over Taimaiken Restaurant.

SHIRONE KITE ASSOCIATION

Contact: Kazuo Tamura, Shirone-shi Sakuramachi, Niigata-ken 95012.

Of note: Maintains old village kite traditions; set a "largest kite" record on March 20, 1980.

KOREA

KOREAN KITEFLIERS ASSOCIATION

Contact: Mr. Ro, No. 182 Yeon-Hee-2-Dong, Nue-Dae-Moon-Gu, Seoul.

Of note: Believed active; independent confirmation not received.

MALTA

KITEFLIERS ASSOCIATION (OF MALTA)

Founded: 1977.

Founders: Alfred and Josephine Darmania Gay.

Contact: Alfred Darmania Gay, 3/107 Rudolphe Street, Sliema. Annual Dues: £1.00.

Members: 20 paid.

Benefits: Membership card; *The Kitefliers Newsletter—Malta*, medium-size, of 6-10 pages with tips, news, sometimes color cover. Conducts an annual meeting and 4 flies, including the national kite festival in early May.

Officers: "Committee of 5, automatically elected."

THE NETHERLANDS

NEDERLANDS VLIAGER GEZEL-SCHAP (DUTCH KITE SOCIETY)

Founded: Summer 1978.

Contact: Ton Oostveen, Tolhuis 15-74, 6537 PJ Nijmegen.

Benefits: Publishes an annual calendar of European kite events.

NEW ZEALAND

WAIKATO CHAPTER, AKA

Founded: 1972.

Founders: Clarence P. Croft and Logan Fow.

Contact: Logan Fow, 62 Paul Crescent, Hamilton.

Benefits: Newsletter approximately quarterly (not seen recently).

Officers: President and Secretary-Treasurer.

Of note: Logan Fow is a well-known kite explorer and experimenter.

TAIWAN, REP. OF CHINA

TAIPEI KITEFLIERS ASSOCIATION

Founded: November 30, 1980.

Founder: Kin Kan Hsieh.

Contact: Kin Kan Hsieh, 42, Sung Chiang Road, Room 702, Taipei (104).

Members: 55.

UNITED STATES

AMERICAN KITEFLIERS ASSOCIATION (AKA)

Founded: September 21, 1978, by *Kite Lines*, successor to *Kite Tales/ AKA*, founded October 24, 1964, by Robert M. Ingraham.

Contact: AKA Headquarters, 1104 Fidelity Building, 210 N. Charles Street, Baltimore, MD 21201.

Annual Dues: \$10.00.

Members: About 700.

Benefits: Membership card; *AKA News*, bimonthly newsletter of 12 full-size pages with photos, plans, calendar. Discount of 10% with some kite merchants. Conducts annual meeting and festival in early October.

Officers: President (Bevan Brown); 1st, 2nd and 3rd Vice-Presidents; Corresponding and Recording Secretaries; Treasurer. President and regional directors are elected by the members.

Of note: Newsletter has a good calendar of events. Annual meeting/festival continues a big success.

California

SAN DIEGO KITE CLUB

Founded: 1974.

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

Contact: R. Victor Heredia, 3260 F Street, San Diego, CA 92102.

Benefits: Second Saturday flies, including fighter kite stunt contests in May and November and the Mission Bay Kite Fly in August. Two sporadic rival small newsletters have appeared in 1981.

Of note: "Benny, our oldest and most dedicated flier, 84 years old." A celebration fly was conducted on the return of Richard Morefield, Iranian hostage.

KITE FLYING CLUB OF

COACHELLA VALLEY

Founded: September 1974.

Founders: Youth Committee of the Holy Name Society and The Fun

Factory, Palm Springs, CA.
Contact: Dr. George Yahn, 151 W. Alejo Road, Palm Springs, CA 92262.
Members: Youth only.
Benefits: Kite instruction and flying.

KITE FLYER:

THE SAN FRANCISCO BAY AREA KITE FLYING NEWS
Founded: July 1978.
Founders: Leland Toy and Paul Walker.
Contact: Leland Toy (Editor), c/o 861 Clara Drive, Palo Alto, CA 94303.
Annual Subscription: \$5.00.
Benefits: *Kite Flyer* bimonthly newsletter of 6 full-size pages in a different paper color each issue, with plans, photos, tips. Helps run frequent informal flies at Marina Green and other local spots.
Of note: Club was attempted and found not wanted, but newsletter is well done, friendly and useful.

North Carolina

CAROLINA KITE CLUB
Founded: March 14, 1980.
Contact: John and Ora Parker, 6109 Rosecrest Drive, Charlotte, NC 28210.
Annual Dues: \$5.00.
Members: About 80.
Benefits: Flying almost every week; kite classes.
Officers: President (John Parker), Vice-President (L.E. Dobbins).

Colorado

BEULAH VALLEY ASSOCIATION FOR TETHERED FLIGHT (B.V.A.T.F.)
Founded: 1976.
Contact: Frances A. Weaver, 8978 Squirrel Creek Road, Beulah, CO 81023.
Members: 6.
Benefits: Occasional pasture kite-flying; annual Mothers Day Kite Festival, Pueblo.
Of note: Frances Weaver made kiting fashionable as a tension-reliever through an article she wrote for *Vogue*, March 1978.

Georgia

GONE WITH THE WIND KITE CLUB
Founded: February 1981.
Contact: Billy Davis or Ronald Witt, 1836 Harper Road, Atlanta, GA 30318.
Benefits: Monthly flies and newsletter planned. ("Any established clubs with ideas on creating and maintaining a successful club please write.")

Hawaii

HAWAII CHAPTER, AKA
Contact: Wayne J. Baldwin, 47-120 Uakoko Place, Kaneohe, HI 96744.

Maryland

MARYLAND KITE SOCIETY
Founded: January 25, 1969.
Founder: Valerie Govig.
Contact: Carolyn Staples, 7361 Kerry

Hill Court, Columbia, MD 21045.
Annual Dues: \$5.00.
Members: About 250.
Benefits: Membership card; *The Windy Notice*, bimonthly newsletter of 4-8 full-size pages. Conducts the Maryland Kite Festival at the end of April, informal flies throughout the year, numerous workshops/displays and two general meetings.
Officers: Executive Secretary (Carolyn Staples), Secretary, Treasurer, Archivist, Festival Chair and Newsletter Editor.
Of note: A major regional group with continuity and a newsletter (edited by George Fohs) that is one of the best.

Michigan

5/20 KITE GROUP
Founded: May 20, 1978.
Founder: Hank Szerlag.
Contact: Hank Szerlag, 1961 Hunt Club Drive, Grosse Pointe Woods, MI 48236.
Annual Dues: \$5.00.
Members: 224 (as of late 1980).
Benefits: Membership card; *5/20 Group News*, variably published (3-4 per year) full-size newsletter of 6-8 pages with photos, building plans. Conducts Detroit Kite Kaleidoscope in mid-September plus flies, meetings, workshops/displays. Discount of 10% at some kite shops.
Officers: "Executive committee of 7 members, appointed."
Of note: One of the best newsletters and the most stylish. Patches, buttons, other paraphernalia offered.

New Hampshire

KEENE KITE FLIERS
Founded: April 1978.
Founders: Chester E. McMartin, Bob Sherwin and Keene Recreation Department.
Contact: Chester McMartin, c/o Keene Recreation Dept., Keene, NH 03431.
Members: 5-6, ages 3 to 75.
Benefits: Conducts Annual Foliage Fly first October weekend plus flies every Sunday evening and workshops/displays.

New Jersey

GREAT DELAWARE VALLEY KITE SOCIETY (G.D.V.K.S.)
Founded: January 17, 1981.
Founder: Leonard M. Conover.
Contact: Leonard M. Conover, P.O. Box 426, Newfield, NJ 08344.
Annual Dues: \$5.00.
Members: Over 100.
Benefits: Membership card; *Tight Lines*, bimonthly 8-page newsletter with photos, kite plans, calendar. Helps at festivals, conducts meetings, workshops/displays.
Of note: Regional club encompasses Philadelphia. Their peppy newsletter carries an extensive calendar of East Coast kite events.

New York

LONG MEADOW CHAPTER, AKA
Founded: 1970.

Founders: Wyatt Brummitt, Ed Grauel
Contact: Ed Grauel, 799 Elmwood Terrace, Rochester, NY 14620.
Members: About 45.
Benefits: Postcard mailings of events; third Saturday flies at Monroe Community College, May-October.
Officers: "Wyatt Brummitt appointed President-for-life, Ed Grauel appointed Permanent Secretary."

LONG ISLAND KITEFLIERS ASSOCIATION (L.I.K.A.)

Founded: 1973.
Founders: James T. Linnen and Ed Mills.
Contact: Jim Linnen, P. O. Box 362, Holtsville, NY 11742.
Members: 50.
Benefits: *Wind Psalteries*, rare newsletter (last seen in October 1978). Conducts informal flies on April Fools Day and at other times at Jones Beach.
Officers: President (James Linnen), Vice-President (Ed Mills).
Chapter of American Kitefliers Association.

Ohio

CENTRAL OHIO KITEFLIERS ASSOCIATION (COKA)
Founded: July 12, 1980.
Founders: Gary Herbst, Tim Preston, Miller S. Makey, Sr., Robert Kloss.
Contact: Betty Makey, 2557 Clark Drive, Grove City, OH 43123.
Members: 20-35.
Benefits: Informal flies every even-numbered Saturday at High Bank Metropolitan Park north of Columbus. Helps conduct area-wide annual contest. Conducts many workshops/displays.
Of note: Group does work with the handicapped.

OHIO SOCIETY FOR THE ELIMINATION OF KITES (OSEK)

Founded: Spring 1977.
Contact: Thomas Rask (President), 3125 Corydon Road, Cleveland Heights, OH 44118.
Annual Dues: \$2.50 (as of mid-1977).
Benefits: *Shoot the Breeze* newsletter, monthly in season, 4 pages in small format with photos, calendar. Conducts flies, meetings.
Of note: Quiet in the past year.

Oregon

ASSOCIATED OREGON KITEFLIERS (AOK)
Talked about since 1977, false-started in 1979, now active.
Contacts: (in Portland) Grant Raddon, Wind Play, 212 N. W. Couch Street, Portland, OR 97209; (in Eugene) Mary Lou Seubert, Kites & Other Delights, 99 W. 10, No. 11, Eugene, OR 97401.
Benefits: Informal flies (in Portland) Sunday afternoons at Waterfront Park; (in Eugene) last Sunday of the month, February-October, at Amazon Park.
Of note: (in Portland) widespread recent publicity; (in Eugene) "Maurits de la Rambelje, maker and flier of Indonesian fighter

kites; Joyce Kommer, kite class instructor at Lane Community College Art Dept.; participation in Wistec Science Museum kite festival in May 1980."

South Carolina

FLORENCE KITE FLYING ASSOCIATION
Founded: 1974.
Founder: Robert Liger.
Members: 9.
Benefits: Frequent informal flying; assistance at annual festivals in Florence and Columbia, SC.
Contact: Robert Liger, 1807 Hazel Drive, Florence, SC 29501.

Virginia

PINEY MOUNTAIN AIR FORCE (PMAF)
Founded: November 10, 1979.
Founders: Guy and Dorothy Aydlett.
Contact: Guy D. Aydlett, P. O. Box 7304, Charlottesville, VA 22906
Annual Dues: None per se, but subscription to *Data-Letter* is \$7.50.
Members: unlimited (10 at a time).
Benefits: Membership card in preparation; monthly *Piney Mountain Air Force Data-Letter* of 4-6 full-size pages is "research-oriented," includes plans, charts. Conducts flies on even-numbered Saturdays.
Of note: *Data-Letter* features precision drawings, filigreed prose.

Washington

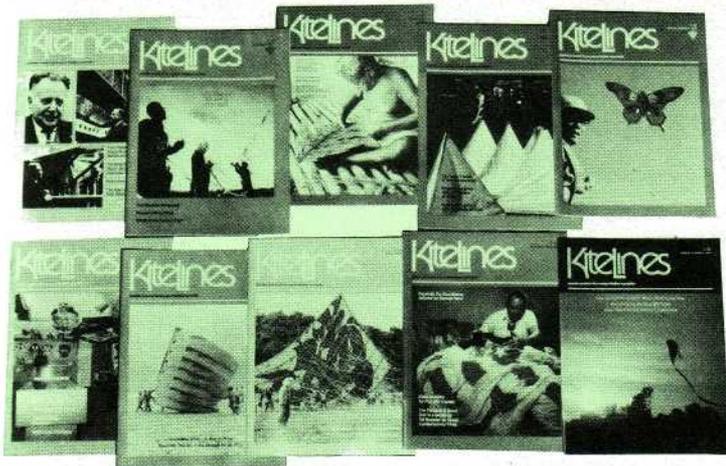
WASHINGTON KITEFLIERS ASSOCIATION (WKA)
Founded: Summer 1971.
Founder: David M. Checkley.
Contact: Bob McCort (President), c/o Pacific Science Center, 200 2nd Avenue N., Seattle, WA 98109.
Annual Dues: \$5.00.
Members: 137.
Benefits: Membership card; bimonthly newsletter of 2 legal-size pages with photos, calendar, news. Conducts informal Sunday afternoon flies at Gasworks Park plus 4 major festivals, annual workshop/display at Science Center and meetings, lectures, parties.
Officers: President, Secretary-Treasurer, elected; Newsletter Editor, Chairman of Board, appointed.
Chapter of American Kitefliers Association.
Of note: Preeminent kiting city with links to the Orient.

Wisconsin

KITE SOCIETY OF WISCONSIN
Founded: 1978.
Contacts: James and Verdell DeYarman, 2943 N. Dousman Street, Milwaukee, WI 53212.
Annual Dues: \$10.00.
Members: 70 (as of spring 1980).
Benefits: *Tangled Lines*, sporadic 1-2 page full-size newsletter with calendar, tips. Conducts 7 flies from May-September, including the Motts Memorial in mid-September. Also conducts workshops and an annual meeting.
Officers: Jim DeYarman, President (elected).

ARE YOU MISSING SOMETHING?

There's a wealth of information and ideas in back issues of KITE LINES!
All issues now available in paper or microfilm.
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Readers tell us they regard KITE LINES as an education in the art and sport of kiting—more of a reference source than a magazine because of the timeless and hard-to-find nature of its contents. And because new information and ideas keep popping up in kiting, we don't expect to repeat ourselves editorially.

Of our 10 back issues, 8 are still available in original copies and 2 in microfilm. As paper copies become "sold out," it will be our policy to make them immediately available in microfilm at the same price so that the serious kiter need never miss an issue entirely. We suggest you ask for back copies first at your nearest kite store. If they can't fill your order, use the order form on this page to get your copies from us. Here's a brief rundown on contents of our back issues for your convenience and reference.

SPRING 1977 (Vol. 1, No. 1):

Outrigger Kite Plans; Tracing Japan's Customs; Brummitt's Kite Categories; Profile: Paul Garber; Exhibits in New York and Paris; Two Marconi Kite Plans; Use of the Glue Gun; Featherstone-Kite by Rowland Emmett; Heart-Stopping Kite Festivals of Japan, by Tal Streeter; Reviews: kites—Octopus Kites, Corner Kite, Fighters, Better Builds and Wright Flyer kit; book—Greger; News from AZ, CA, FL, ME, MD, OH, WA, WI and Japan (1,585 kite train record); Talking about Tails; Ingraham's History of the Magazine; Brown Bag Kite Design.

SUMMER 1977 (Vol. 1, No. 2):

Which Is the Perfect Kite?; Person-Lifting Kites; Trains—The Multikite Phenomenon and Proposed Standards for World Records; Profile: Mike Welety; How to Conduct Trains, by John Van Gilder; Tom Van Sant's Trampoline; Reviews: kites—Flare, Firebird and 8 stunters, with Pfund on Dynamics of Controllables; books—Dolan, Lloyd et al and Dickson; Survey of Readers; News from AL, CA, CO, DE, DC, FL, HI, IL, IN, LA, MD, MT, NY, NC, OH, TN, TX, WA, Australia, Canada, Japan and New Zealand; Greger's Dutch Kite.

FALL 1977 (Vol. 1, No. 3):

Gull Delta Drawing; Tail Selection Study; Profile: Ansel Toney; All Saints Day in Guatemala's Hills; Stormy Weathers's Kite Fishing System, Sled Designs and Fishing Story; Kite Fishing in Micronesia; Kite Reels Analyzed (and

12 samples reviewed); News from CA, CT, MD, MA, MI, NJ, NH, NY, NC, OH, TN, TX, WA, Australia, Canada, England, Japan, Malta, Netherlands and New Zealand; Flags, Banners and Kites Exhibition in Seattle; The Sycamore Fire; Ingraham on Temperature Effects on Kites; Greger's Vietnamese Kite; The C.P.S.C. and the Aluminized Dragon; Excerpts from Hearings Transcripts.

WINTER 1977-78 (Vol. 1, No. 4):

Letter with college kite course prospectus; A "New" Medieval Dragon; Thorburn's Stacked Deltas; Reviews: kites—Grandmaster Kite, New Dragons, Spinning Janny; books—"Create-a-Kite," Thomas, Bloch-Laine et al; Symposium on the Many Facets of the Tetrhedrals: Opinions and Theories (17 expert comments); Comparison Table of Equivalent Kites; Simplified Construction; Trials of the Tetras; Tips for Tets; News from CT, HI, MD, MA, NY, OH, PA, TN, WA, Australia, Canada and Japan; England's Jubilee Year; Ingraham on Shipping Kites; Making Kites with Hundreds of Kids.

SPRING-SUMMER 1978 (Vol. 2, No. 1):

Rogallo Corner Kite Plans; Lincoln Chang's Modified Rokkaku Kites; Profile: J. C. Young's Chinese Kites; Reviews: kites—Flexifoil, Prof. Waldof Box, Wind Mill Kites and Firebird; Reels by Shanti; book—Dwiggins; Death of the Rotoki; Inventor; Aydlett's Rebuttal of Brummitt; Spindlove's Towards a Taxonomy of Kites (poster pull-out); New American Tradition: Kite Festivals! (why, how and the Longevity Factor); Braswell's Figure Kiting; Cerf-Volant Club de France; Announcement, First National AKA Meeting; National Issues and Safety Council; Ingraham on Publishing Problems; Directory of Clubs.

SPRING 1979 (Vol. 2, No. 2):

Reviews: New Roundup of Kite Reels (12 samples reviewed); Kites—Covered Wagon kit; books—Tyrrell, Hiroi, Van Gilder's Hand-Hold Reel Design; Kites in Museums—Tokyo and the Smithsonian; Deaths of Shingo Modegi and Frank Mots; Streeter in Paris; Kites in the Wilderness; Record Efforts—altitude, most on a line, indoor duration; Nirvana in Nags Head; Braswell's Two-Stringing the Delta; News from CA, CO, KY, MI, NM, NY, OH, WA, England and Japan; Profile: Stephen Bernstein and his Chinese Bird Kite Plans.

SUMMER 1979 (Vol. 2, No. 3):

Letters disputing altitude record effort; Reviews: kites—Flying Lines, Winged Victory, Cloud Pleasers and Rainbow Stunt Kites; book—Bahadur; Flow Form Kite Plans; Marshall's New Nylon Cutting Technique; AKA Meeting and Grand National Kite Festival in Ocean City, MD; Brummitt: The Sky Is Big Enough for All of Us; News from CA, CT, NY, OR, Canada and England.

FALL 1979 (Vol. 2, No. 4):

Reviews: kites—Craftsmanship from Sri Lanka (6 samples reviewed) and the Soaring Wing; book—Mitton; Symposium on Monumentality in Kites: Is Bigger Better? (23 expert comments); Ianuzzi's Critique of Japan's Giants with Weight Comparison Chart and Bedsheet O'dako Plans; Profile: Louise Crowley; Trebilcock's Lighthouse Kite Fishing Method; Record Efforts—kite-boat traction, "junior" record; News from IL, MI, MT, NY, OH, TX, WA, Australia, Canada, England, Ireland, Japan, Malta; Kurle's Super Conyne plans.

WINTER 1979-80 (Vol. 3, No. 1):

Reviews: kites—Rotors (3 samples reviewed) and Bull-Roarer Effect; book—Lloyd-Thomas; Brief Guide to Safe and Sure Kiting; Grauel's Shooting Arrow and Bull's-Eye Target Kites; Profile: George Ham's Parafoils; Death of William Allison; Innovations: Facet Kite by Robinson; Andrew Jones, Ray Merry and the Flexifoil, by Tal Streeter; '79 Events: in Beulah Valley, CO; Kill Devil Hills, NC; Seattle, WA (visited by Shirone, Japan); and Manassas, VA; The Miracle of Sagamihara, by Carl Poehler; Kites and the Cambodian Spirit.

SPRING-SUMMER 1980 (Vol. 3, No. 2):

Reviews: kites—Skynasaur, Four Winds kites, Soaring Scimitar, Heart's Delight, Spinnaker Diamond; book—Marks; Searching for the Real Will Yolen; David Slays Goliath with Patchwork Special; Variations on a Theme (Tetrhedrals), by Bevan Brown; Kite Aerial Photography—Who's Done It and How: practitioners, history, how-to by Garry Woodcock, Robert S. Price, Stanley Crinklaw, Dale Fleener; Antique Kites, by Robert Ingraham; Record Efforts—largest kite by Shirone Kite Association; How to Bridle a Giant Japanese Kite, by John Van Gilder; News from CA, FL, WI, Australia, England and Japan.

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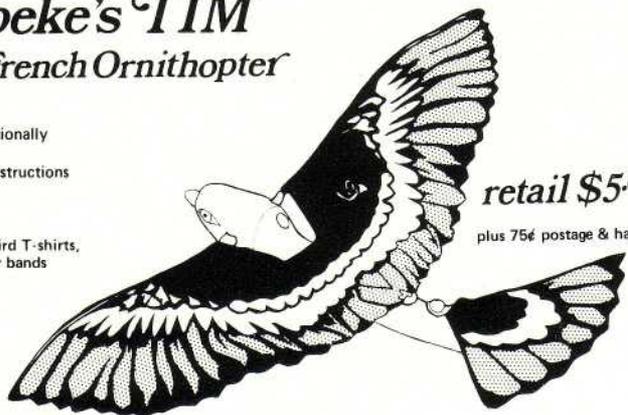
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A team of three kites of the Washington Kitefliers Association in Seattle set a new world's record for duration of flight indoors on February 9, 1981. Carl Brewer and Tom Sisson, joined this time by Bob McCort (President of WKA), broke their own previous record of 9 hours 13 minutes with a 39-hour 53-minute flight. The site was again Seattle's Kingdome and the time was almost exactly a year after the first effort. The feat took place during home games of the Seattle Sonics basketball team and was mentioned at half-times.

Dave Checkley sent his observations:

"The kite (glider) was made of condenser paper and balsa, 26½-inch wingspan (the same as the World Class Indoor Competition model airplane), 32 inches long, 190 square inch lifting surface and 5½ grams in weight (about five times that of the typical World Class airplane model, strengthened to withstand the stress of repeated pull-ups). It had been made in about eight hours by Carl Brewer.

"When Bob McCort was flying, a pull-up took 12 seconds, release 28 seconds and total cycle 40 seconds. A pull-up brought the kite from a furthest-out 80 feet to a straight-up 40 feet. A 40-second cycle gives 90 cycles per hour. The record of 39 hours 53 minutes represents about 215,390 cycles. Bob was pulling about two feet at a time, so on this basis there were 4,307,400 separate pulls—and each time the wings were stressed. Each of the three fliers pulled an average of 1,435,800 times—between naps in a sleeping bag on the floor. No wonder their arms were sore!

"The first attempt on February 6-7 was terminated when the kite broke up after seven hours. Carl repaired and reinforced it and started again at 3:00 a.m. February 7.

"The main problem was string occasionally dragging on the concrete floor, picking up abrasive dirt and grit, which was ground into the string during the pulling action."

Bob McCort on duty during indoor record flight.



Dave Checkley

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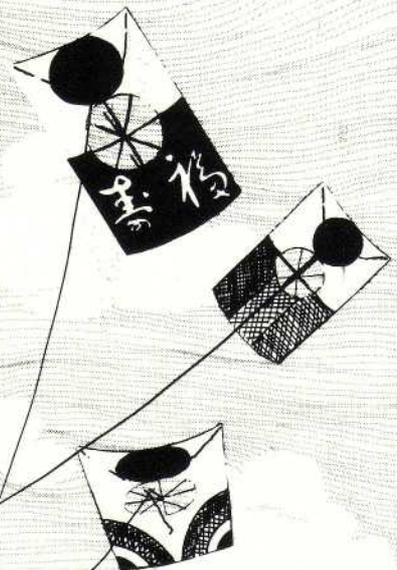
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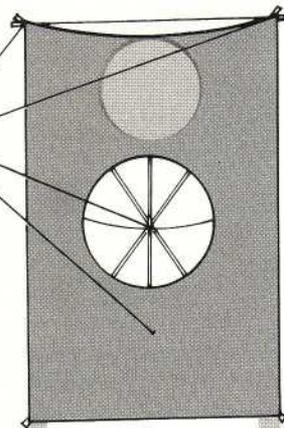
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BATTLE STRATEGY: KITE VS. MODEL AIRPLANE



By Walt Whippo

To do some quiet, Sunday flying I had tamed my 24-by-30-inch Korean fighter kite with twin paper ribbons. I was flying from an extreme downwind corner of a large field to avoid interfering with the radio-control airplane fliers who occasionally share the field with me. They prefer to fly upwind, so we usually stay out of each other's way easily.

Once in a while on these occasions the temptation becomes irresistible and a model plane flier sends his craft downwind to circle my kite in a mock attack, but always at a safe distance. I know the modeler who does that is bluffing. I can build or repair my kites quickly at practically no expense. The radio fliers, in contrast, have an investment of hundreds of dollars and as many hours in their planes. That had always kept them from being too bold—until today.

The roaring passage of a model plane right through the ends of my kite tails did no damage but was startling. I watched the intruder bank and turn for another pass, and suddenly I knew who my attacker was: a young competitive flier of superb skill, a compulsive contest winner, a natural aggressor. What chance would my bamboo-and-paper kite have, handicapped as it was by the stabilizing tails? None at all, unless my attacker should succeed in clipping the tails off; then the kite would at least be able to maneuver in the traditional manner of fighter kites.

My first impulse was to reel the kite in quickly, but then this unique challenge caught my fancy and I started letting out line rapidly. I hoped that my opponent's judgment would get worse as the kite went higher and farther away from him. That seemed to be what was happening; as the kite rose higher his attacks missed

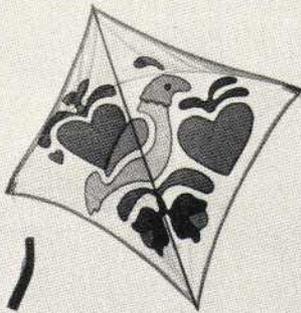
by increasingly wider margins and I began to feel more comfortable as the kite reached an altitude of around 500 feet.

I remembered the Naval Barrage Kite of World War II, flown on steel lines to destroy marauding aircraft. I let out line knowing that my opponent was concentrating on the location of the kite and on flying his plane, and I hoped that he would overlook the fact that a 40-lb.-test nylon line connected the kite to me. He kept making pass after pass, sometimes coming very close to the kite line, and I thought, "Sooner or later..."

Then it happened. I felt a sharp tug on the line, so hard that it almost took the reel out of my hand, and the kite dipped violently. The model plane had hit the kite line with a wing tip. The kite recovered instantly, unhurt, but the plane started down in a flat spin accompanied by shouts of alarm and consternation from the modelers. Halfway to the ground the flier regained control and immediately brought his plane down to a very rough landing, so he could inspect it for damage.

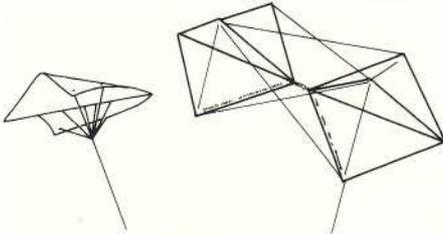
I tied the kite line to a post from which the kite could fly unattended. I was, all at the same time, angry at the attack, proud of my kite, apprehensive of the damage I might have caused and full of exultation over my victory. I made myself go to the other end of the field to sympathize with the loser. I forced myself to look dismayed. A little chivalry in victory, I reminded myself, shows good breeding. I held my grin back and apologized to my opponent for causing him such a humiliating defeat, and honestly did my best to sound sincere. Then I turned and walked back to my kite and that grin, finally released, spread all over my face.

In the war when you had five aerial victories you became an ace. I had one down and four to go. ♦



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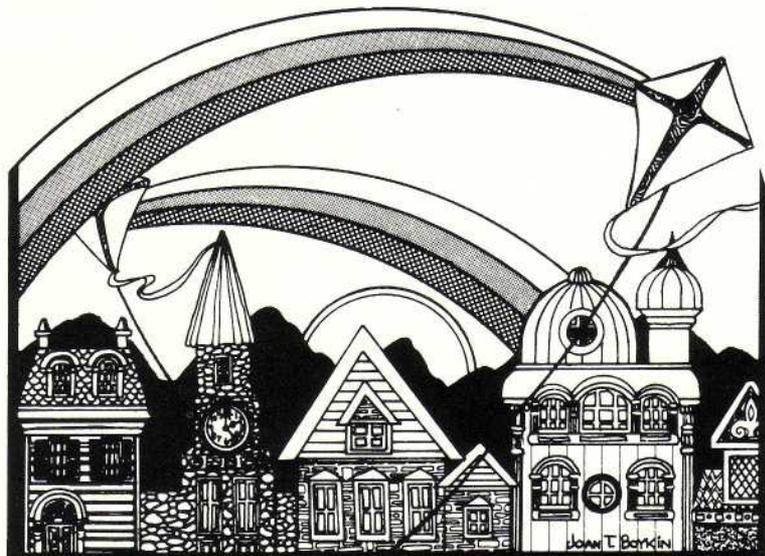
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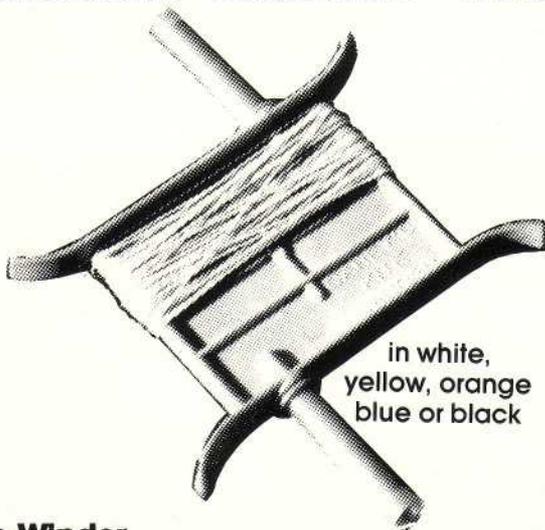
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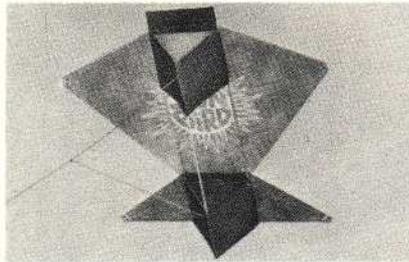
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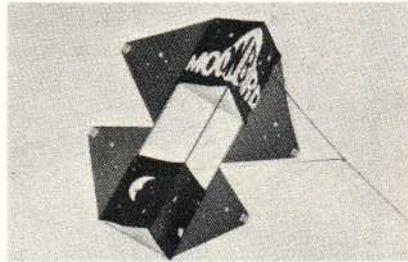
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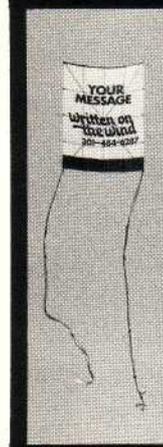
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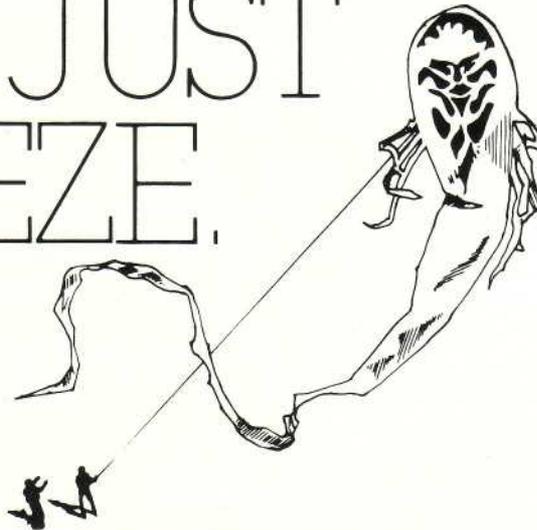
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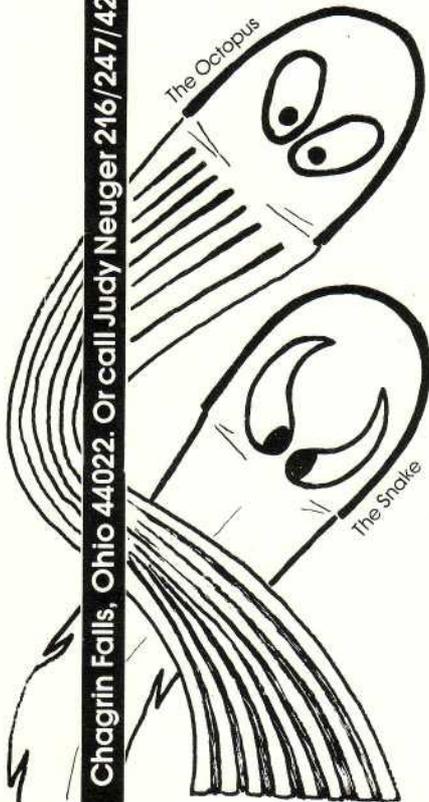
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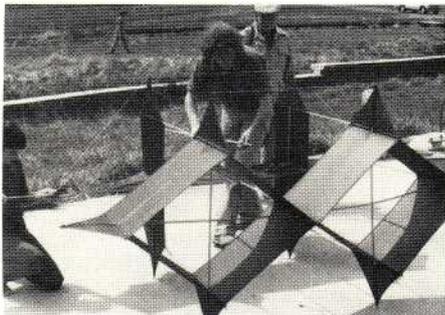
Billy Davis sends two reports:

On March 29-30, 1980, Helen, Georgia, was graced with the presence of one of England's premier kite designers—Nick Morse (cover of Fall 1980 *Kite Lines*). Mr. Morse brought a wide selection of his wonderfully constructed kites—a six-foot Cody war kite, a Cody compound, an incredible 16-foot tetrahedral and several beautiful flares.

Due to unfortunate circumstances, attendance was embarrassingly low. Imagine, Nick Morse's American debut with only eight kitefliers present!

The Kite Site in Helen is the sole distributor of Nick's Skycraft deltas, Malays and hexagonal kites.

It seems that the communications gap between kitefliers in the great state of Georgia is about to end. The Gone With the Wind Kite Club of Atlanta is now



Above, British kiteman Nick Morse demonstrates his craft at the 4th Annual Alpine Kite Festival in Helen, GA, in 1980. The 31-year-old painter-turned-flier is making his first appearance in the U.S. Below and right are scenes at Will Yolen's kite day in New York's Central Park. Crowds fly kites and surround Yolen (Karen Schlesinger of Go Fly a Kite is at right).

open for business. Even though our club is still in the early stages of birth, our plans are strong and far-reaching. We intend to have regularly scheduled monthly flights and a newscard for the exchange of ideas and information. Georgia fliers who are interested, write to the GWTW Kite Club, 1836 Harper Road, Atlanta, GA 30318.

NEW YORK

The East Meadow in New York City's Central Park has been kite-busy this spring.

On April 11, the Department of Architecture of the City College of New York ran a competition for first-year students flying kites made as a design problem.

Intermittent rain and variable winds didn't stop the fliers, who ran in heats for the jury of architects and artists.

Prizes were architecture-related books and drawing instruments for kites in eight categories, including "most humorous," "noisiest" and "sexiest." Coordinator and professor of architecture Cynthia Peterson presided as dozens of kites were flown,



including a centipede, while a brass band played "the best music of the last 600 years" by Scott Joplin, Mozart and others.

On May 3 in the same location, a kite bash organized by the Go Fly a Kite shop was held in honor of Will Yolen, President of the International Kitefliers Association.

At 73, Will is retiring from competitive kiteflying, but he came out to enjoy a fine sunny day and light breezes. A good crowd enjoyed the low-key occasion and non-serious prizes.

On hand were New York kites Caleb Crowell and Frank Rodriguez. Frank flew his fighter kites and a large compound model covered in Tyvek®. From East Orange, NJ, came Marty Lowell, who flew his new horseshoe crab kites and a delightful tiny train of multicolored stars. A number of buzzer-equipped Bermuda-style kites were seen—and heard. Mel and Valerie Govig from Baltimore, MD, flew assorted kites, including the *Kite Lines* star and an experimental box.

At midafternoon, the American Parkinsons Disease Association presented Will Yolen with an award for his contributions to kiteflying.

Will has recently moved from New York to his daughter's home and would enjoy letters addressed to him at 31 School Street, Box 27, Hatfield, MA 01038.

OREGON

A tremendous turnout estimated at 5-7000 people came to Portland's Waterfront Park on March 8 and brought the city alive to kites as never before. All three television stations covered it and *The Oregonian* did a major full-color story on kites and kiteflying locally.

Soaking up some glory were W. O. (Stormy) Weathers with his Winged Victory and Star Victory kites, the skilled fliers from Grandmaster Kites and Grant Raddon of Wind Play kite gallery who handed out 500 used kites as "loaners" for the festival. This method assured participation and hooked new kitefliers at the same time.

On this occasion and others this spring, Grandmaster Kites demonstrated its new procedures for handicapped persons to fly kites from wheelchairs.

Continuing Sunday afternoon flies are being held at Waterfront Park for people of all ages and kiteflying experience. ◇



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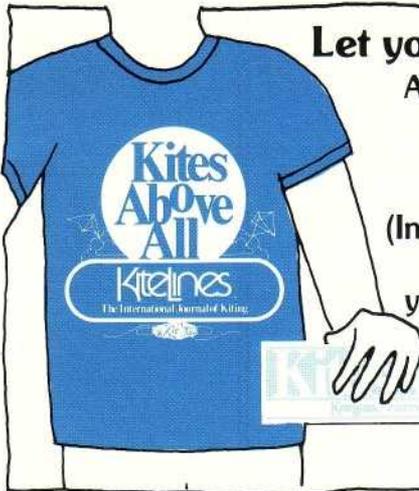
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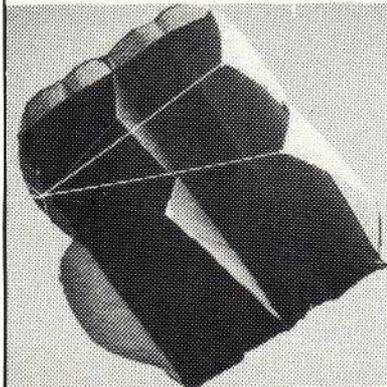
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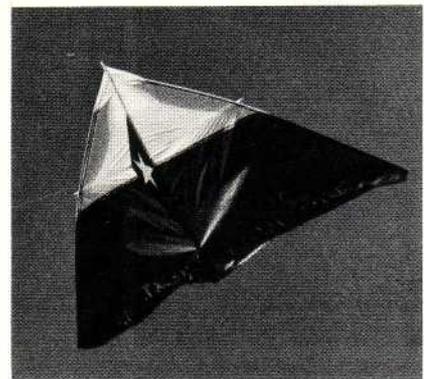
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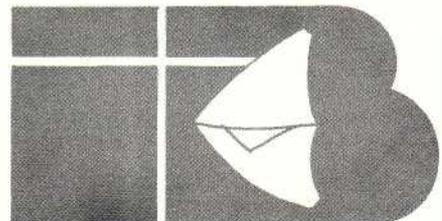
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WANTED

BACK ISSUE of KITE LINES, Spring-Summer '78 in paper, any cond. Will pay \$5.00. Bill Tyrrell, 675 E. St. Rd., #1310, Warminster, PA 18974.

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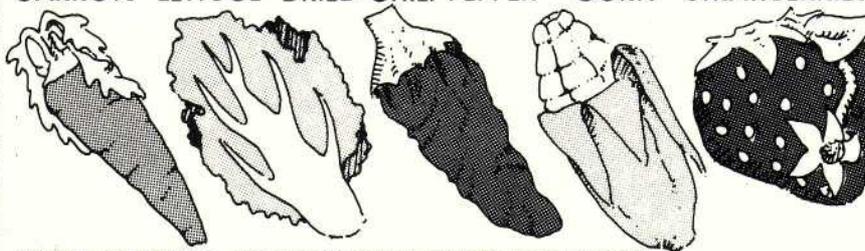
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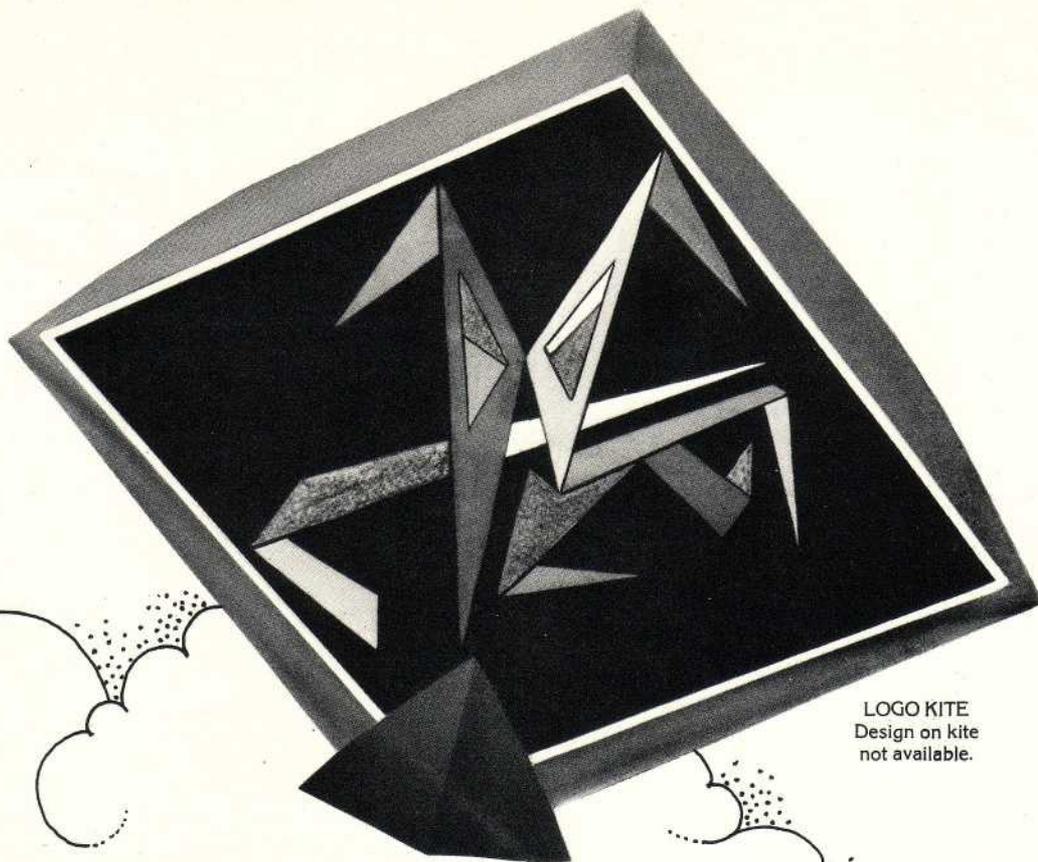
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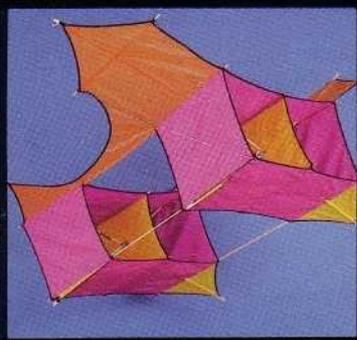
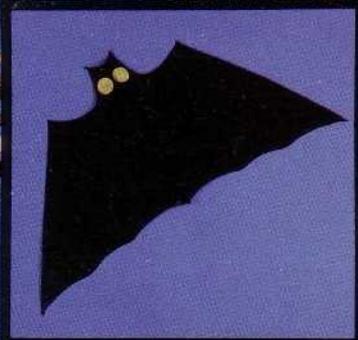
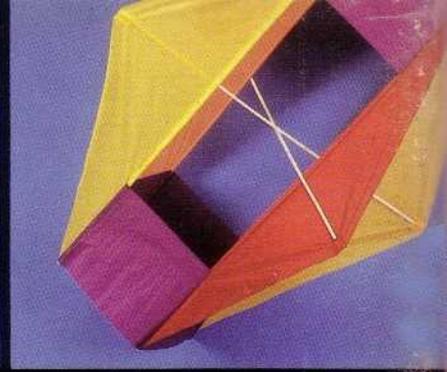
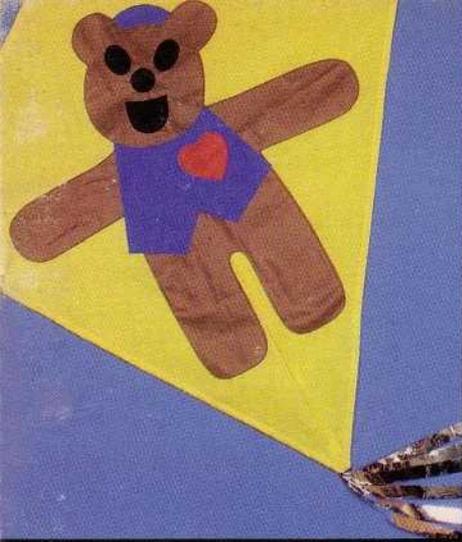
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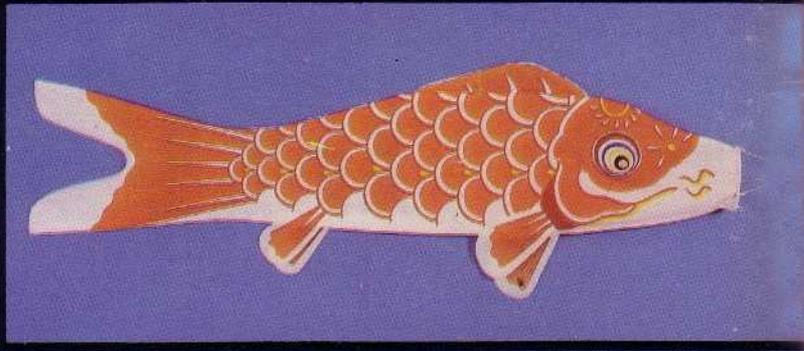
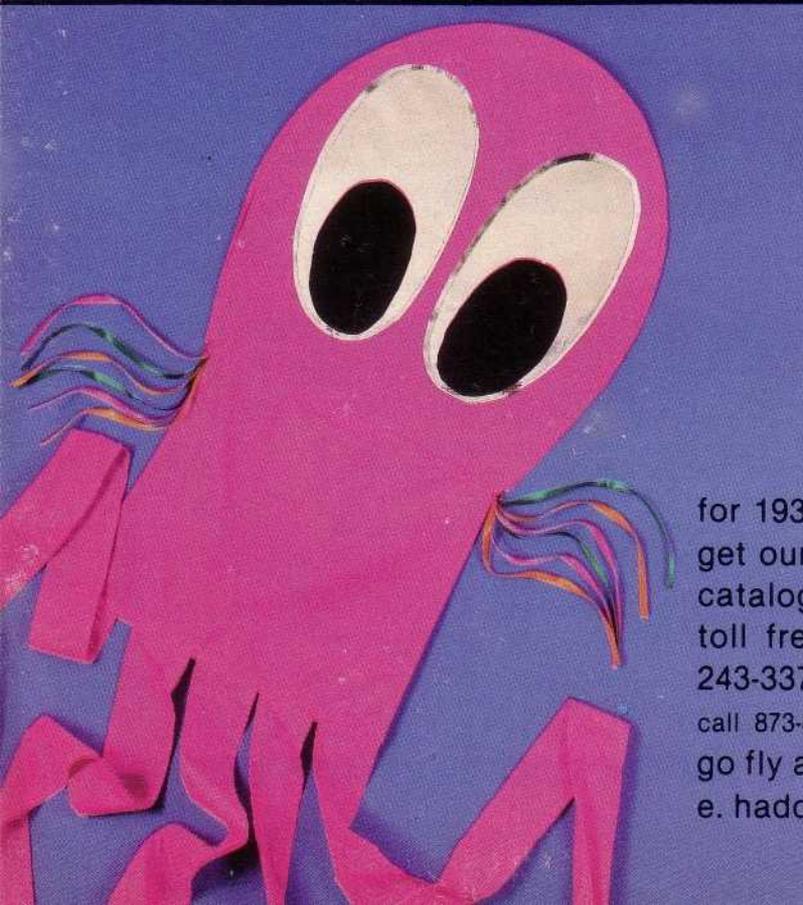
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