

# KiteLines™

\$ 1.50  
SPRING-SUMMER 1978



quarterly journal of the American Kitefliers Association

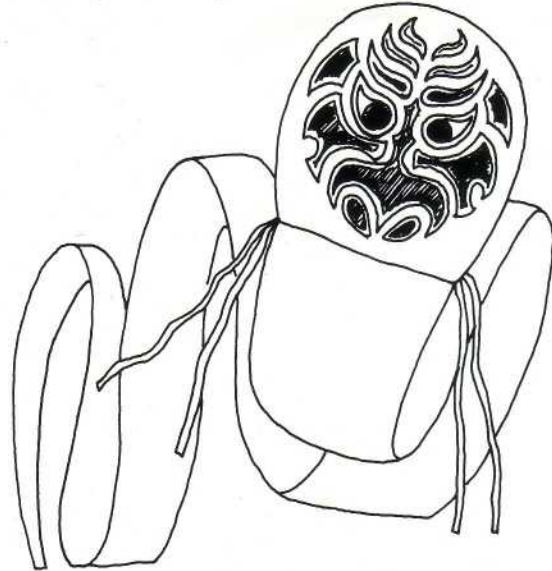
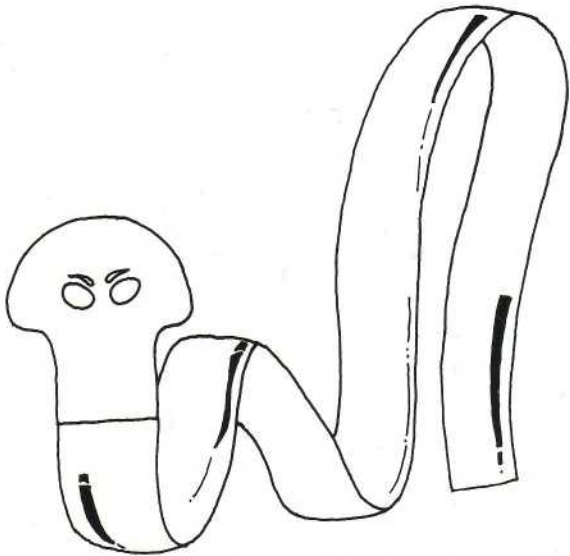


**New American  
Tradition:  
Kite Festivals!**

**Bonus Poster  
Inside: A  
Taxonomy  
of Kites**

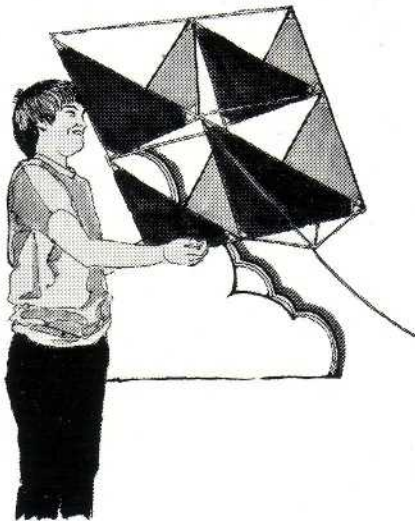
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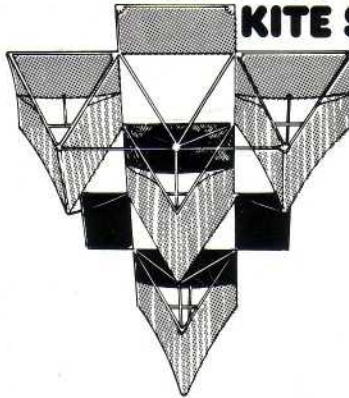


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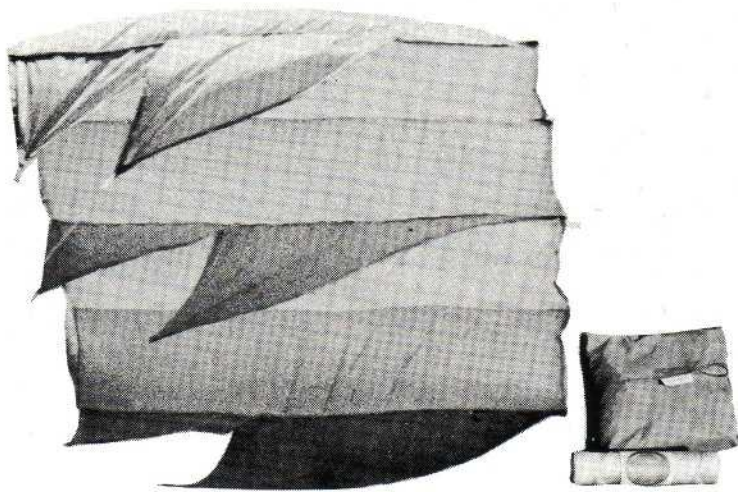
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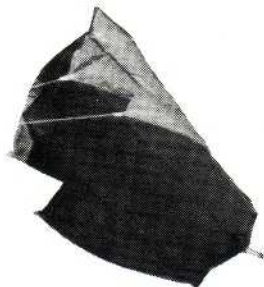
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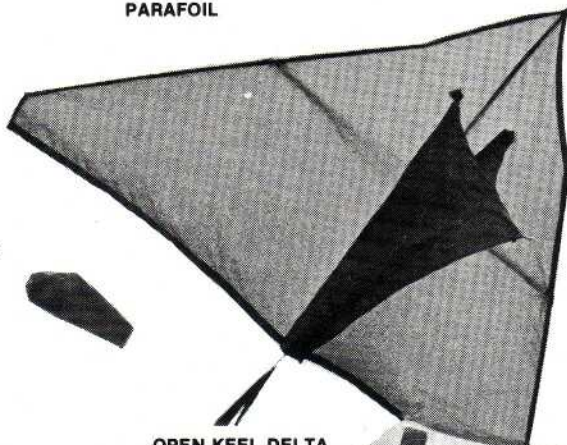
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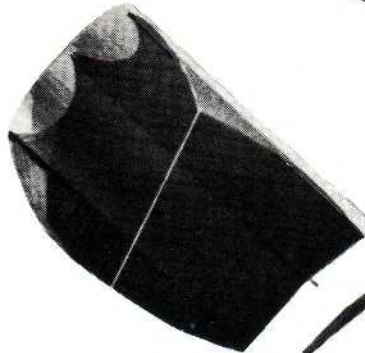
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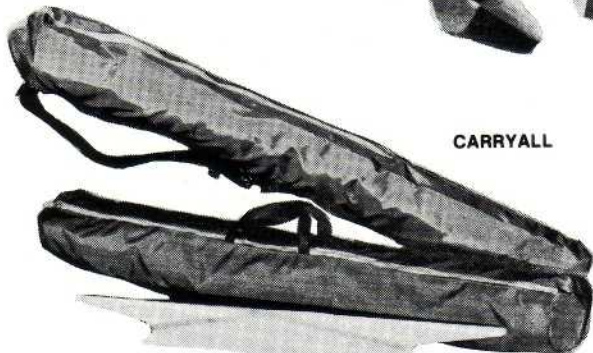
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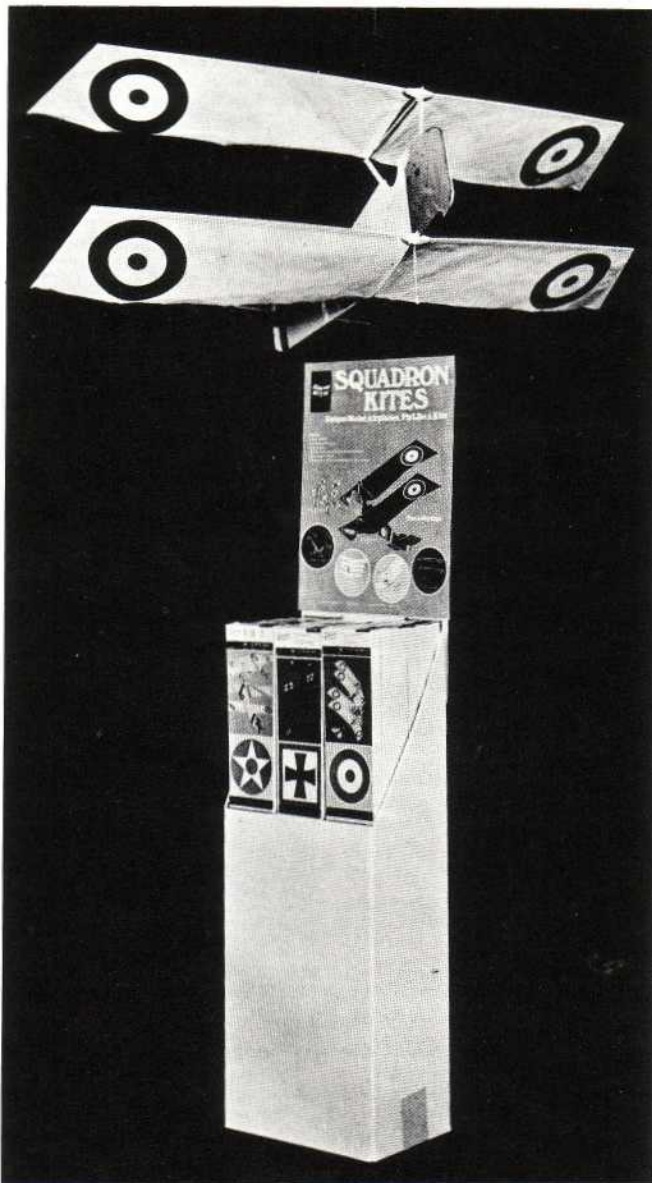
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**FREE\* KITE KIT!**  
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updated by Mel Govig  
in easy-to-make  
KIT form.

An AKA Special  
Offer for signing up  
new members plus a  
Mini-Contest to  
challenge you.

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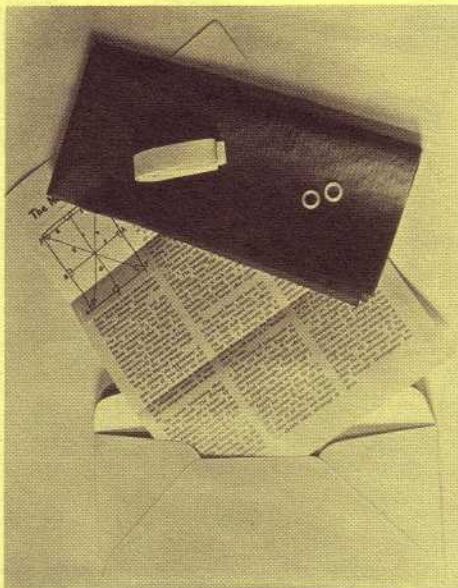
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This kit is very simple. It includes the complete printed instructions, tape, O-rings and one 18x24" piece of top-quality, super-light rip-stop nylon in one of various colors (randomly selected). All you will need to add are 1/8" dia. dowels (four 36" or three 48"), line and tail. Access to a sewing machine will be useful for hemming one seam and attaching seven small pockets, but instructions for hand sewing are also included. This will be your kite.

The plans are complete, carefully drawn and easy to follow, assuring success for anyone, including youngsters from 10 years up. Flying and safety tips are included, along with philosophy on the distinctions between the Japanese war kite and the Korean fighter.

\*How do you get your free postpaid Nisei Kite Kit? Easy! Send in *two new members* at



\$6 each (no renewals) for AKA. Or you may send *one new member* and pay \$2, postpaid, or send *no members* and pay \$4, postpaid. Simply fill out the membership form(s) on the colored sheet in this issue, enclose check(s) or money order(s), and send to AKA. You will receive your Nisei Kite kit by return mail.

P.S. Do you want more than one set of materials, for more than one kite? We will send *one extra set of materials for each new member* besides your first two. Line up all your kiteflying friends — and make a train of these kites!

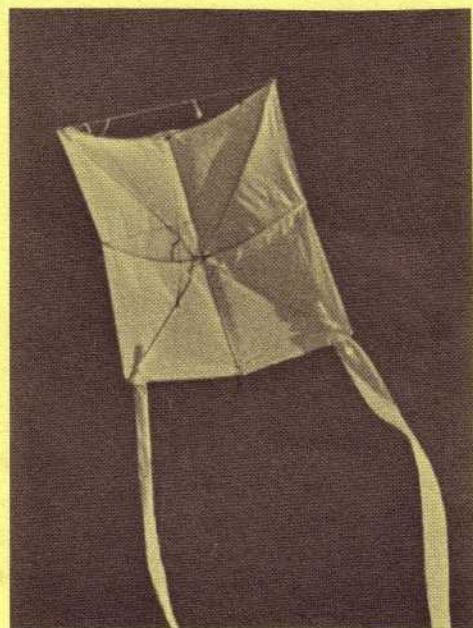
Alternatively, if you already have the materials and want *plans only*, you may obtain them for one new member or for \$2.

This Special Offer expires on September 1, 1978, or sooner if quantities are exhausted. (Quantities are limited to 2500 kits.)

**Note: Special Mini-Contest:** The person sending in the *most new members* by September 1, 1978, will receive a gift of 10 yards of rip-stop (worth about \$27!) (For this purpose, running totals will be kept and after you send in your first two members additional names may be added one at a time and need not be sent in all together.)

To aid you in bringing enlistments to AKA during this offer or at any time, you may want to distribute our Little Puffs about AKA (our information folders with membership applications). Puffs are free on request; just send a stamped, self-addressed business-size envelope, please.

Offer not good in states where prohibited or restricted by law.



The American Kitefliers Association is a world-wide organization devoted to the advancement of kiteflying. Its quarterly magazine, *Kite Lines*, is published by Verve Enterprises, Inc., for AKA, with editorial and business office at 7106 Campfield Road, Baltimore, Maryland 21207, USA telephone: (301) 484-6287. This journal is on file in the libraries of the National Air and Space Museum, Smithsonian; the National Geographic; the National Oceanic and Atmospheric Sciences Administration; and the University of Notre Dame Library's Sports and Games Research Collection.

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Active Chapters of AKA are based in Baltimore; Seattle; Rochester and Utica, NY; Hawaii; Cleveland, OH; Florence, SC; San Diego, CA; Beulah, CO; Australia and New Zealand. Ties are maintained with other groups also, national and international.

**Memberships and subscriptions:** One year (4 issues), \$6; two years (8 issues), \$11; three years (12 issues), \$15. Subscription rates include membership in AKA at no additional cost. Single copies @ \$1.50 are available from the publisher or fine kite shops throughout the U.S. Postage outside U.S., \$1 per year additional. Special air mail rate for foreign mailings, \$5 per year additional. Subscriptions always begin with the next issue, unless current issue is specified. Back issues are available for \$2 (\$2.50 outside U.S.).

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Advertising rate sheet and information is available on request.

**Contributions** and correspondence are always invited. Enthusiasts who contemplate sending substantial material should request our guidelines for writers and photographers. Contributions used become the property of *Kite Lines*. 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 or of the American Kitefliers Association.

**Closing Dates** for advertising, articles and news are Jan. 1 for Spring, Apr. 1 for Summer, July 1 for Fall and Oct. 1 for Winter.

**Postmaster:** Second class postage paid at Baltimore, Maryland. If undeliverable, please send address change Form 3579 to *Kite Lines*, 7106 Campfield Road, Baltimore, MD 21207.

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# Cover

A butterfly on the breeze—in the great tradition of China's kites, kept alive through the artistry of J. C. Young. This craftsman, however, has been quick to adapt old designs to new techniques and materials, while working from memory alone. Mr. Young moved from Taiwan to Seattle where he was photographed by an admiring fellow kiter, John F. Van Gilder. (Story on page 18.)

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# Letter from the Editor

My letter to you this issue will not be a tidily contained essay. Rather it will sprawl weed-like in the form of a series of answers to questions you may have, in order of probable importance:

1. **Why is Spring and Summer combined in one issue?** Because it became very hard on our advertisers to have ads delayed past the time intended. We put them all in this one, extra-fat issue so none would have to wait. As most of you have probably noticed, scheduling has been our worst problem in this first year. The lag really occurred last summer and we simply have not caught up. There are so many reasons for this it would take pages to explain and I'm sure no one really wants to know. We are confident, however, that the systems are now in place for smoother and timelier production henceforth.

2. **Does this issue count as one or two quarters in my term of membership?**

One! You don't lose an issue! Your term has been automatically extended for one quarter.

3. **Where is that AKA Bibliography I've been expecting?** It's in the works and will be out between this issue and next.

4. **Do I get a membership card?** Yes! You will get it shortly.

5. **What's this issue all about?** We left out a few of our regular departments this time in order to bring you this Special Issue devoted to kite festivals. We have had so many requests for information about them that we decided to give this difficult subject a trial run. If this issue is well received we may do something similar in the future. Please, will you send me your reactions as a guide to planning future issues around kite festivals?

Speaking of kite festivals, you'll note there is a new one planned for September 16—the Ocean City, MD, Grand National. It's of interest that the long-

hoped-for, now-a-reality national meeting of the American Kitefliers Association has been scheduled to precede this event, making it convenient for kitefliers to enjoy two great get-togethers in one weekend trip. I urge you to mark your calendars now and start making your plans to attend the meeting on the morning of September 15. See page 76 for further information about the meeting, and pages 78-79 for a rundown on the Grand National. Complete information about the meeting will be mailed separately to all members soon, but do plan now to be with us for this exciting double bill on the Eastern Shore!

Breezily yours,

*Valerie*

In response to insistent demand . . .

## BUMPER STICKERS!

Philosophical disclaimer: The population is divided into two never-to-be-joined camps: those who love bumper stickers and those who hate them. We're not about to take sides. But if cars are going to have bumper stickers, we'd just as soon they carry ours!

We claim our bumper stickers have everything a bumper sticker

should have—the physical properties: durability, readability and enough stickum to cover up a naked bumper or an embarrassing lost vote from an old political campaign; and the psychic properties: wit, style, novelty, identification of the driver with a high cause and an unusual interest.

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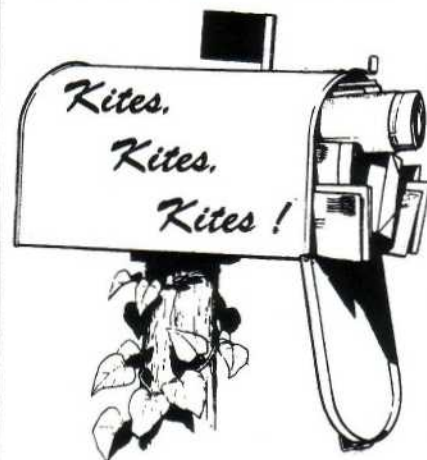
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## A FRIEND IN ENGLAND

The caravan was packed, the weather looked set fine for a fortnight in Cornwall and my wife was busy checking off the list of items we needed to take. That list gets longer every year and now it includes the paraphernalia of my son Ian's new interest—kites!

The list was ticked off: two reels, spare nylon line, the Dunford and Peter Powell dirigibles, 12-foot rip-stop delta, eight-foot double Conyne, double sail roller, semi-flexible soarer and a plastic sled. All the home-made kites came from details in David Pelham's *The Penguin Book of Kites*. This book, together with TV publicity for the Peter Powell kite, has helped to create a revival of kiting in this country.

Time for a quiet smoke before the "off"; the delay being well rewarded, for there stood the postmistress carrying a mysterious brown parcel with U.S.A. stamps—five back copies of *Kite Tales*. There was a feast of reading indeed should the weather prove wet. It did. Never mind, there were all those magazines just waiting to be read. What a mine of interest they proved to be.

We can give a couple of hints for delta constructions by way of adding our two-cents worth (tuppence worth in England): A few inches of strong nylon line passed round the spine during construction and brought out on the top where the spreader bar crosses, can secure a rubber band through which the spreader is threaded. This allows the spreader to move but retains it under elastic tension during a sudden gust and prevents breakage at the most vulnerable point, the center of the spreader.

The second tip concerns getting the center of gravity right. We temporarily pinned the spreader anchoring tapes in place and flew in a very light wind. If the kite floats down while remaining horizontal all is well. For a tail-heavy attitude the spreader is moved slightly forward and back if the nose dips.

Finally, while on deltas, what about those fringes and flaps that appear on some designs? They obviously add drag, which sends the kite down-wind, but does any increase in stability improve the flying characteristics?

Attempts to fly from cliff tops at Cape Cornwall with the roller and double Conyne convinced us of something we have long suspected. There is a great deal of turbulence associated with hills and cliff tops that can make launching difficult if not downright impossible.

Confirmation came a few days later when we flew the delta in a five mile-per-hour wind in the middle of Woon Gumpas

Common, a large flat open area near St. Just. We had easy launches and flights as steady as a rock, and—something I've always wanted to see—the kite disappearing into cloud to reappear with a flash of sunlight on red nylon.

We met a young man flying a new Peter Powell stunter kite on Porthleven beach a few days later. Our offer to help was gladly accepted. The kite flew like the seagulls above with slow, smooth turns.

The beaches were full of dirigibles, most of them blatant copies of the Peter Powell design, and all had one thing in common. None flew like the original!

The obligatory visit to the famous port of St. Ives was well rewarded. The library was selling off surplus books, and there was Hart's *An Historical Survey of Kites* for 50 pence (about 35¢).

Nice to see your constructional articles are still in the good old fashioned feet and inches. Here in the U.K. we are half way to metrication. Literally, since the screws in one of our local hardware stores are Whitworth and all the nuts have metric threads.

Time to put away the magazines, however, for holidays and kiteflying, like all good things, must come to an end.

The long journey home was relieved by day-dreaming of all those kites yet to be made, as well as finishing the radio-controlled camera for aerial photography from a kite.

The post waiting for us at home included the usual pile of bills, but there at the bottom was yet another brown envelope with U.S.A. stamps—yes, the first copy of *Kite Lines*. I suppose the caravan unpacking can wait awhile; we have to get our priorities right!

If any readers are taking a holiday in the U.K. this summer and find themselves anywhere near the Midlands, please call in for a chat and, weather permitting, a spot of kiteflying at our local site. If the weather turns foul—well there's always the pub at the bottom of the hill! Give us a ring first on Sedgley 70162. The postal address is 19 Denise Drive, Bilston, West Midlands, WV14 9LG, England.

In the meantime we would welcome letters from any enthusiasts. Tight lines, as the anglers say.

Jim Whitehouse  
West Midlands, England

## FORMULAS FOR KITE REEL PRESSURE

My brother and I both liked the Fall issue, but the article on reels left out one important point: when line is allowed to spin off the end of a spool, it gets a twist in it. This can cause tangles or breaks. The Kite

Factory's Skeiner and many oriental reels get around this by winding loops alternately clockwise and counterclockwise so the twists cancel, but they are more difficult to handle.

I have mastered the crook-of-the-arm method, but I am not familiar with the two-handed orbital motion. (It was not explained in the article.)

I can keep a light kite in the air by spinning the line in at about five miles per hour, but for heavier kites I get someone to pull the line in hand-over-hand while I spin the reel. Sometimes I shove a  $\frac{3}{8} \times 12$ " dowel through a spool of monofilament. If in a big hurry to go somewhere, I can attach my geared hand drill to the end for fast winding. I have had 15-lb. mono crush a solid pine spool.

A three-inch wide,  $3\frac{1}{4}$ " diameter spool with 1000 feet of line under four pounds of tension will experience a pressure of 964psi. The formulas are  $n = \frac{1}{2} \pi r$ ,  $T = nS$  and  $P = T/wr$  where  $l$  is the length of the line in inches,  $r$  is the radius of the spool in inches,  $n$  is the number of windings (which may be rounded off to a whole number),  $S$  is the tension in the line in pounds,  $T$  is the tension in the windings in pounds,  $w$  is the width of the spool in inches and  $P$  is the resulting pressure on the surface of the spool in pounds per square inch. In the derivation I have neglected the thickness of the windings. It is usually small compared with the diameter, so the error is small.

Gary J. Hinze  
San Jose, CA

## THOSE INSTRUMENTAL BOXES

As a professional meteorologist, I have long been interested in the historical role played by kites in early atmospheric research. I am particularly interested in learning more about the kite-related research conducted by the Weather Bureau station at Blue Hill, MA, and would welcome the opportunity to correspond or converse with anyone who worked with the Weather Bureau kite network during the period spanning 1899-1933. Are there any AKA members who can help me?

Bruce Springer, Capt., USAF  
95-106 Hiikua Place  
Mililani, HI 96789

## TWO-LINE KITE FISHING?

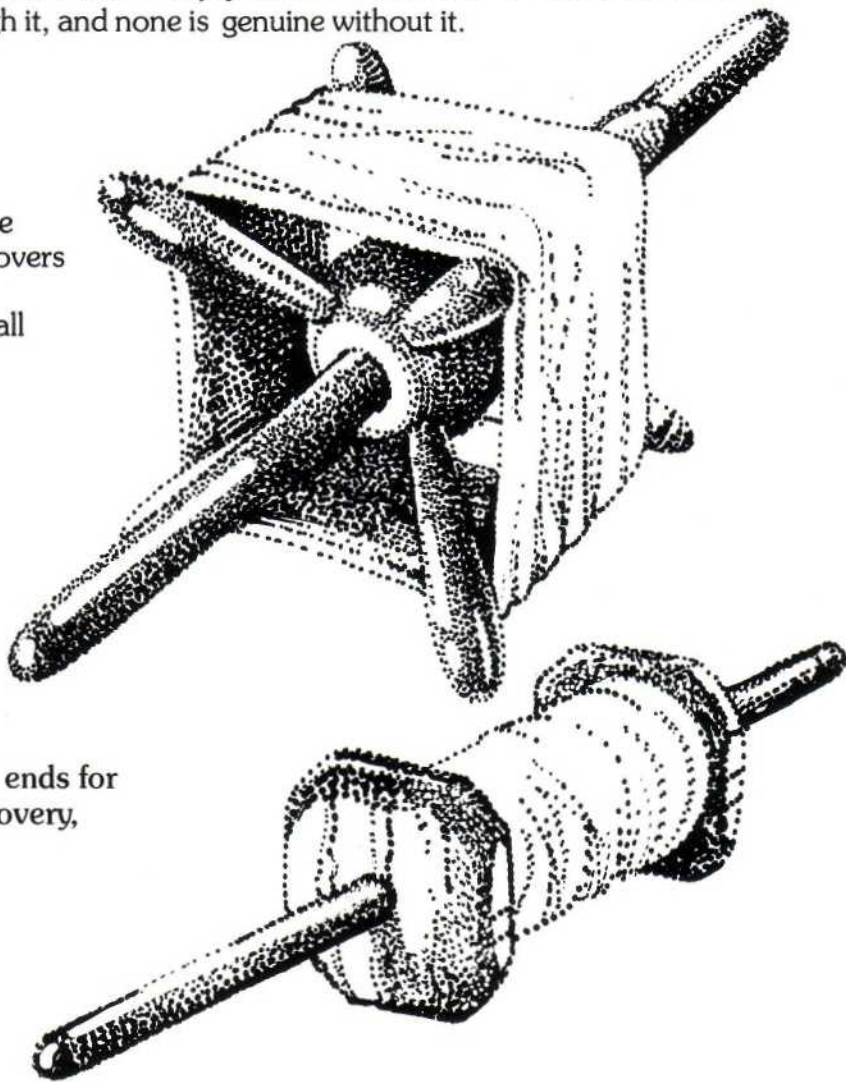
The Fall 1977 edition of *Kite Lines* has a lot of class. I liked Wayne Baldwin's article on the island native kite fisherman.

It would seem practical to fish from two-string guided kites. The fisherman could draw a spinning lure from side to side in the manner of trolling. He could

# More "Tigers"\* as Treasured Pets

ANNOUNCING our new 27 lb. **braided "TIGER-TETHER"**\* flying line. This, like all our other lines, has been specially processed to practically eliminate all stretch and kinking. It is made of first quality dacron, and together with our new **HUNGRY TIGER**\* and all our other spools, was designed, tested and approved by expert kites for the better use and enjoyment of **all** kite fliers. Our braided line has a black **"TIGER"**\* stripe running through it, and none is genuine without it.

The **HUNGRY TIGER**\* is an innovative, rugged and very practical spool. It is used just like the Indian crushable (see "Kite Lines", Fall 1977 issue) fibre-core type, but recovers almost **twice** as much line **each** revolution, actually about 350 feet per minute. It is sturdy all hardwood construction in natural finish, polished, lacquered and waxed, equipped with approximately 1000' of **braided "TIGER-TETHER"**\* and weighs less than 6¼ ounces. Handles are detachable for your convenience. Price \$10.00. This **HUNGRY TIGER**\* also available with other lines and lengths.



The new **TIGER**\* spool with squared circle ends for identification, and larger core for faster recovery, carries approximately 500' of braided **"TIGER-TETHER"**.\* Price \$5.00.

This and all other regular size **"TIGERS"**\* are now made with recessed and glued ends for greater strength.

Check or money order only, please.

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Please add \$1.50 per spool, UPS Air and handling.

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## FLYING TIGER ASSOCIATES

\*Trade Mark of Flying Tiger Associates

P.O. Box 48634 Los Angeles California 90048



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SAN LEANDRO, CA 94577 (415) 895-8373

## Letters

... Continued

wind his catch in with the kite if he constructed a two-reel winder of the type used on the Garber Target Kites of World War II. I constructed one of scrap lumber that works quite well. Of course, dwellers of small islands can always provide themselves with an off-shore breeze with a short trip the leeward side of the island. We continent-bound folks aren't always so lucky.

Neil Thorburn  
San Jose, CA

### A FAN LETTER

The Fall 1977 issue of your magazine arrived today, and I must tell you it was well worth waiting for. All the articles were excellent, but I was especially impressed by the first-class layout and typography. Evidently you have a fine art director in Weston Phipps.

Congratulations on your fine publication.

George Cohen  
Athens, OH

### KITE PEN PALS SOUGHT

I would like to correspond with fellow kite enthusiasts in the States, Canada, the Caribbean and Latin America.

I'm in my early forties, with a wife and

two children under school age. Currently between jobs ("redundant") in aircraft engineering, I have been kiting most days for nearly a year now. I build my own kites and do some designing too.

Having some knowledge of musical instrument electric pick-ups, I have designed a special transducer to enable me to record the noises made by the kite and its tow line during flight. The range of sounds and quality can be beautiful at times.

John D. Green  
77, Rainbow Avenue  
Hackenthorpe  
Sheffield, S12 4AR, England

I arrived home from work and there was *Kite Lines*. Nobody saw me for the rest of the evening; even my favorite TV programs were given a miss. May I compliment you on a fantastic publication. I found each and every page interesting.

I would like to hear from other "addicts" in the States and other parts of the world. Kiteflying is still regarded here fairly much as kid's stuff, but it is slowly changing. I feel this is mainly due to several new kites available on the market here. Two of them are stunters, one a diamond one a delta. They both perform well and are a common sight on a good day. Another is a Bell tetrahedral available in two sizes. More often than not when Dad takes his kids kiteflying it's Dad who ends up holding the line and poor Junior has to

amuse himself in some other way.

Here in New Zealand we have plenty of wide open space still and there always seems to be some sort of breeze. I live just up from one of the beaches on the Auckland Harbor so I have that when the tide is out and an adjacent playing field if the tide is in.

Since buying Pelham's *Penguin Book of Kites* I've made a few of the kites which have caused a lot of interest. At the moment I'm in the middle of getting a parafoil together. I've had a few of the "ethnic" kites up and also a parawing and various sleds. By the way, it's really great to have Ed Grauel in Design Workshop. An outrigger kite (Spring 1977 *Kite Lines*) is on my list of musts.

I can't get over the availability of ready-mades and equipment you have in your part of the world. Here in New Zealand we have to improvise in most cases but we do get flying.

Kenneth Beale  
18 Rodney Road  
Northcote Point  
Auckland 9, New Zealand

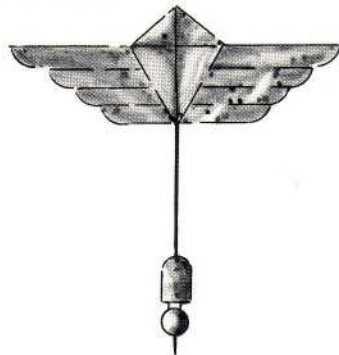
*Readers are encouraged to reply to letters, and we will route them to appropriate parties whenever possible. Address your letters to Kite Lines "Letters," American Kitefliers Association, 7106 Campfield Road, Baltimore, MD 21207. All letters become the property of Kite Lines. The editor may edit letters for publication.* ◇

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Designed for that wind powered aviator by the Flying Di Donato Bros.

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Sterling Silver \$20.00  
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Chagrin Falls, OH

# Design Workshop

Here are some competition caliber kites: the Corner Kite, honored at the 1977 Smithsonian Kite Carnival, and Lincoln Chang's kites, prize winners many years at the Oahu Kite Contest.

## 1 THE ROGALLO CORNER KITE By Ed Grauel

If you have been searching for a kite to make that is quite novel in appearance yet flies well, this may be it—the Corner Kite. Francis Rogallo invented this kite for use as a radar reflector, then allowed it to gather dust in the Patent Office until his family's enterprise, Rogallo Flexikites, started producing it commercially. Kite buffs may obtain an original for \$30 from Rogallo Flexikites, Kitty Hawk, NC 27949. Or if you wish to make your own, *Kite Lines* is privileged to present the instructions, with "Rog's" kind consent.

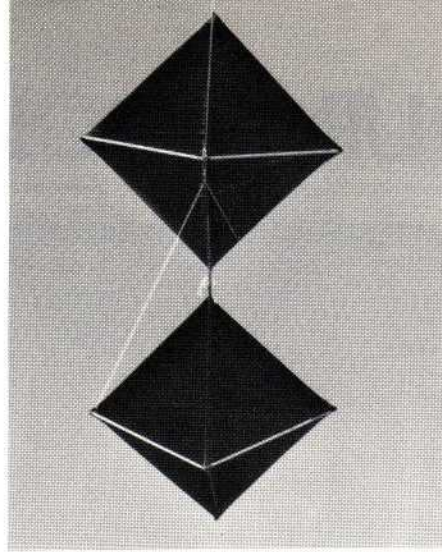
Actually the Corner Kite is a two-cell box kite with four rigid side vanes emanating from the center of the kite rather than formed into squares—in other words, a cross (+) rather than a box (□). Interestingly, the kite is easier to construct than the customary box and requires only four pieces of material 23 inches square. Plastic or Tyvek® can be used, but lightweight rip-stop nylon is recommended because it permits firmer sleeves for the mast and spreader sticks. Avoid mixing different materials for the cover or the two cells because variation in porosity will result in poor flying performance.

### MATERIALS

- 4 pieces of 23"-square covering material—nylon rip-stop, plastic or Tyvek (larger by ½" on each side to allow for hems if necessary)
- One center mast stick, ⅜" dia. x 67" long (2 sticks 33½" may be joined by tubing, such as brass, about 4" long)
- 8 spreader sticks, ¼" dia. x 23" long
- Guy lines and flying line: braided polyester, about 30-lb. recommended
- Miscellaneous: 8 each grommets and curtain hooks (or extra pocket fabric)

### TOOLS

- Sewing machine (or a deft hand with needle and thread)
- Drill (optional—see story)



Ed Grauel

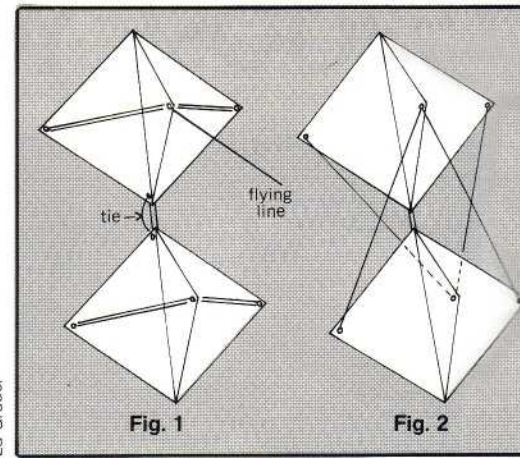


Fig. 1

Fig. 2

### INSTRUCTIONS

1. Mark a 1" wide sleeve diagonally on each of the 4 fabric cover sections (see Figure 3).
2. Join the 2 cover sections together by placing one on top of the second so the diagonals are aligned and sew 2 rows of stitching, forming a diagonal channel or sleeve, which will form the center of the 4 vanes of the cell and receive the central mast.
3. Repeat the same sewing procedure for the remaining 2 cover sections.
4. Sew pockets or attach grommets to the vane tips. To explain: The corners of the vanes must be extended to build this kite. Rogallo uses neat cloth pockets for this purpose. I have found that the grommet-curtain hook system is easier to make and use (see Figure 4). I put grommets in the vane tips which accept the spreader sticks fitted with curtain hooks. If pockets are used, they must be placed on each side of each of the open corners, making 8 pockets for each cell, or 16 pockets for the 2 cells. If grommets are used, only one per corner is required since the hooks can go into one eyelet from both sides.
5. Insert the center mast. To explain: The center mast which connects the two cells is 67" long. I use two ⅜" dia. dowels, each 33½" long, which slip into a piece of brass tubing 4" long, and which acts as a connector at the center of the kite. Insert the center mast into the open ends of the diagonal sleeves on each cell. I drill a hole in each of the mast sections near the open ends of the sleeves and by means of needle and thread tie the cells to the mast to keep the cover sections from slipping up the mast. Rogallo puts eyelets near the inner ends of each open sleeve and ties the two cells together in the center with cord. (see Figure 1).
6. Insert 8 spreader sticks ¼" dia. x 23" long into the small side pockets, or the grommets as the case may be, to open

up the vanes and give them rigidity.

7. Now tie the supporting guy lines diagonally from vane tip to vane tip and repeat this process in the opposite direction on the other side of the kite (see Figure 2). The guy lines should be tied snugly, but not made so tight as to distort the configuration of the cells.
8. The flying line goes directly to any one of the 8 grommets holding the spreaders, omitting the necessity for a bridle.

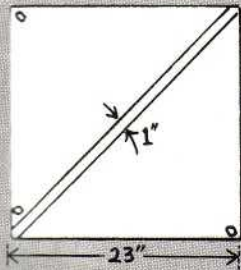
### FLYING

Your Corner Kite should now be ready for airing. If it has been made carefully and the two cells are in good alignment and the center mast straight, it should take off from your hand in an 8 mile-per-hour wind and fly steadily and reliably as long as the wind stays under 20 to 22 miles per hour. If you want to attach a 14" drogue at the bottom of the center mast, the kite should take a maximum wind of 30 miles per hour.

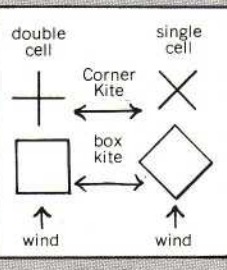
### VARIATIONS

I hear the question arising—what about a single-cell Corner? This version will fly very well if bridled differently. While the double-cell Corner Kite flies on the principle of a box kite flown flat to the wind, the single-cell Corner flies on the principle of a box angled to the wind (see Figure 5). To fly the single-cell version, use a two-leg bridle attached to the top and bottom of the center mast, just long enough to clear the spreaders, but not long enough to slip outside the vane tips on either side. An equal-sided three-point bridle attached at the top of the two adjacent horizontal corners could also be used. In my tests, the single-cell Corner had a wind range of 7 to 20 miles per hour using a 14-inch drogue, and attained an unusual angle of elevation of 60 degrees.

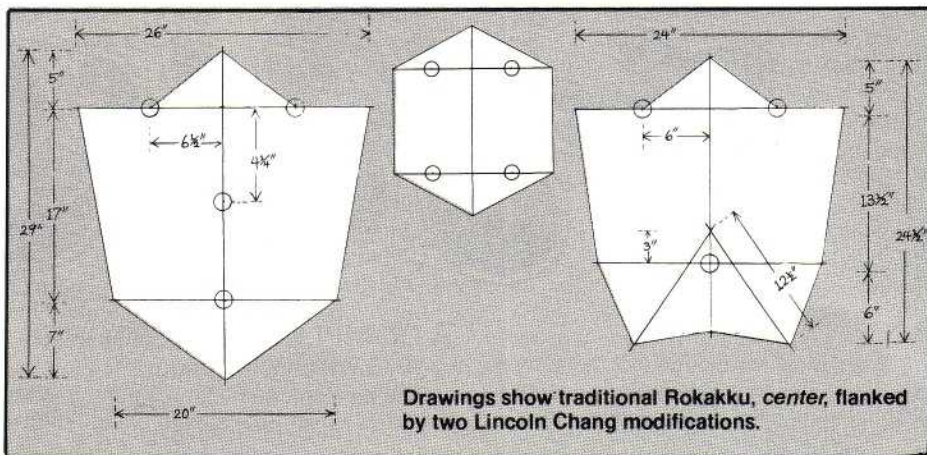
**Fig. 4**  
curtain hook attached to stick with strapping tape or glued thread



**Fig. 3**



**Fig. 5**



**Drawings show traditional Rokakku, center, flanked by two Lincoln Chang modifications.**

## 2 THE CRAFTSMANSHIP OF LINCOLN CHANG

By John H. Hartsook

During a visit to Hawaii last year I had the pleasure of meeting the late Lincoln Chang. He was kind enough to share many kiteflying sessions with me and divulge some of his "trade secrets," acquired over many years of building, flying and experimenting with kites. His favorite kite was the Japanese Rokkaku, but he also built other oriental kites, following traditional Chinese, Korean and Philippine designs.

You could be sure to find him every Saturday and Sunday morning in Kapiolani Park, a wide expanse of palm-fringed, grassy fields just across

**Lincoln Chang shows his craft to an admirer.**



John H. Hartsook

the road from Waikiki Beach. You might also find some of the members of the Hawaiian chapter of AKA, such as Warren Zane, Wayne Baldwin or John Osaki, who looked upon Lincoln as their mentor.

You won't see any deltas in Kapiolani Park. With trade winds usually from 18 to 20 knots, this is fresh to strong wind country. Although on the leeward side of Oahu, the winds in the park have not lost much of their strength rushing over the spine of mountains, spilling most of their moisture on the way. While the northern, or windward, side of the island is often cloudy, the leeward side enjoys sunshine most of the time. It is a kiteflier's paradise—if you like wind, that is. Strong construction, strong materials, strong lines are a must.

Lincoln developed certain modifications to improve the Japanese Rokkaku, the design of which, he claimed, has not been altered for 300 years. It has always traditionally been made by professional kite makers, who have handed down their secrets within the family from generation to generation, much like Italian violin makers.

The most important modification, he felt, was to lead the outline above the top spar from the top of the mast to points halfway between the center and the ends of the spar. In the traditional design the outline is carried to the ends of the spar. This modification allows the spar to assume a compound curve, bending downward as well as backward, and facilitating the forming of pockets which provide stability. Another modification is the shortening of the lower spar, while yet another is the alteration of the outline of the bottom by the addition of spreaders forming an inverted V lashed to the mast and lower spar. The accompanying diagrams show the traditional Rokkaku and two Lincoln

Chang kites, from which I took the dimensions.

The masts of those two kites are of whole stalk bamboo and the spars of split sections. The two spars are bowed. The mast and spars must be as stiff as possible, consistent with light weight, so that there is limited flexing with changing wind pressure. The outer portions of the upper spar, however, are free to bend downward.

Lincoln covered his kites with transparent synthetics, such as Mylar® or "Brown-in-Bag," and decorated them with traditional faces of Japanese warrior heroes, using acrylic paint applied with a brush after carefully cleaning the plastic surface with soap and water. The transparency of the plastic gives the colors a stained-glass window effect against the sky, enhanced by broad black outlines separating the colors. The covering is cut into three horizontal panels attached to the mast, spars and string perimeter with contact cement, and overlapping along the spars.

The diagrams also indicate the bridling points, at the circles. The bridle leg attached to the center of the mast of the larger kite is to keep it from assuming a concave curve in strong wind. The smaller of the two kites, Lincoln explained, does not need the additional bridle leg because the mast is relatively stiffer. A loop of line is tied to the stick at each bridle point and the bridle legs are then attached to these loops with a tiller hitch, making quick adjustments easy.

For flying line, Lincoln used 100-lb. test braided Dacron® polyester. His reels were flat wooden frames, for convenience in storing the line, not for retrieving; he preferred to walk down his kite.

All of those who were privileged to know Lincoln Chang will join with me in saying *in memoriam*: "Aloha oe!" ◇

# The Kite Site

**A COMPLETE KITE STORE**  
 1075 Wisconsin Avenue, N.W.  
 Georgetown, DC 20007  
 (202) 965-4230

## About Our Materials

We decided that good long-range interest in kitemaking would be helped by more people getting involved in making their own kites. But although the new interest in kites has been greatly aided by new materials and new applications of old materials, there has not been a convenient single source for obtaining them.

We hope to remedy this by carrying the largest and best possible stock of materials geared solely to kitemaking. We think the types and brands we have selected are of the highest quality available. If you have any suggestions about what we should carry, please let us know.

*A note 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 have tried to establish our prices to be fair to the customer while respecting good business practices. As our volume of sales of kite materials grows, we will pass our savings along to you.

## Materials List

### Rip-stop Nylon

Rip-stop nylon is probably the lightest and most durable fabric made. It generally weighs anywhere from .50 to 2.3 ounces per square yard. Our rip-stop is from Howe and Bainbridge, the noted sailcloth makers. It comes in two weights, 1.5 oz. and 1.2 oz. (Stabilkote III). We feel it is the best rip-stop for kites that you can buy. It is best fastened by sewing;  
 41" wide:  
 1.2 oz. in red, orange, yellow, green, blue or purple ..... **\$3.50/yd.**  
 1.5 oz. in red, orange, yellow, green, blue, purple, white or black ..... **\$2.75/yd.**

### Tyvek®

Tyvek is the trade name for a DuPont product. Technically, it is a spunbonded 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 and not as strong (though still very strong for its weight and softness) and also much more drapable (*i.e.*, it conforms to the wind more easily). Both kinds are white and can be colored, painted and printed. Tyvek resists the elements well and can be sewn, glued or taped.  
 Type 10 (1073D), 51" wide, ..... **\$1.25/yd.**  
 Type 14 (1422R), 56" wide, ..... **\$1.00/yd.**

### Mylar®

Mylar is the trade name for a

polyester film made by DuPont. It is transparent (semi-transparent if colored), extremely lightweight, and has a very high tensile strength. If it punctures, the tear will "run" unless mended with tape. It cannot be sewn and is somewhat tricky to heat-seal or glue. Cellophane tape or fiberglass strapping tape are the best means of fastening it. We carry ½ -mil thickness (what you usually find dragon kites made of) in a fluctuating stock of colors. We almost always have red, plus sometimes dark purple, fuschia, green or blue; 48" wide ..... **\$1.00/yd.**

### 100% Polyester

This is a more common fabric, frequently used as a lining for coats, etc. It is lightweight, fairly porous, and a bit easier than rip-stop to cut and sew. Its chief virtue is that it drapes very well and is aesthetically pleasing, with a colorful "soft" look. (Many of the cloth dragons are made with this fabric.) It is 45" wide in red, orange, pale yellow, gold, lime green, emerald green, light blue, royal blue, purple or brown. . . . **\$1.80/yd.**

### Tissue Paper

Our tissue paper is made by Crystal Tissue Co., the largest specialty tissue company in the U.S. and a leader in quality products. The tissue we carry is a No. 1 Standard colored Fourdrinier MF tissue. It is nonbleeding and quite strong (for tissue paper). It comes in a pack of 10 sheets, each 20 x 30" and each in a different color. We regret that we cannot change the color assortments of red,

pink, orange, yellow, gold, lime, emerald, turquoise, dark blue and purple.  
 ..... **\$.50/pack of 10 sheets**

### Silkspan®

Silkspan is an old model airplane paper that came into heavy use around World War II when silk became very scarce. It is heavier than tissue paper but also stronger. The well-known Stratton airplane kite kits include covering of Silkspan (medium thickness). We carry three thicknesses, all white:  
 Size OO (thin), 19½ x 24½" ..... **\$.20/sheet**  
 Size GM (medium), 24 x 36" ..... **\$.40/sheet**  
 Size SGM (thick), 26½ x 33½" ..... **\$.45/sheet**

### Vinyl

We occasionally stock vinyl in various colors and thicknesses. We decided not to offer it for mail order because of the lack of an inexpensive dependable supply but if a demand is indicated we may renew our efforts to build a regular stock.

### Hardwood Dowels

The "old familiar" of kitemaking. You can get them in any lumber yard or hardware store—but can you get them in 4-ft. lengths? All of ours are 4 feet long; diameters are:  
 ⅛", each ..... **\$.14**  
 ⅜", each ..... **\$.18**  
 ½", each ..... **\$.22**  
 ⅝", each ..... **\$.32**

### Aluminum Tubing

This stuff is either Reynolds or Kaiser aluminum in a grade of 6061 T6. For the non-technical, that's a good compromise between strength



and price. We carry 4', 6' and 12' lengths but cannot mail order the 6-ft. tubing unless you tack on an extra two bucks per order and promise not to tell us if it arrives bent out of shape. (And don't even think about the 12-ft. lengths. Sorry about this, but we can't find 6-ft. or larger mailing tubes.) Dimensions given are outside diameters by length; wall thickness .035":

- 1/4" x 4', each..... \$1.10
- 1/4" x 6', each..... \$1.70
- 3/8" x 4', each..... \$1.80
- 3/8" x 6', each..... \$2.70
- 1/2" x 4', each..... \$2.50
- 1/2" x 6', each..... \$3.70
- 3/4" x 4', each..... \$3.30
- 3/4" x 6', each..... \$4.95
- Wall thickness .058"
- 3/4" x 4',..... \$6.40
- 3/4" x 6',..... \$9.60

**Fiberglass Rod**

This is high-quality fiberglass made by Lunastran, the largest supplier of kite fiberglass in the country. It is heavier than aluminum, more durable and more flexible. (Same conditions for mailing apply as to the 6-ft. aluminum, though damage is less likely.) Sizes are:

- 1/8" x 3', each..... \$5.00
- 3/16" x 4', each..... \$8.80
- 1/4" x 4', each..... \$8.85
- 1/4" x 6', each..... \$1.30

**Bamboo**

Outside bark. Light, flexible and strong. Interesting to work with. Good for fighter kite bows. It comes in strips (*i.e.*, already split) of 4' length:

- 1/16", each..... \$1.12
- 1/8", each..... \$1.14
- 1/4", each..... \$1.16
- 1/2", each..... \$2.20

**Rattan**

Looks like a dowel rod but is actually a round reed. *Very* light and *very* flexible. Good for dragon kite heads:

- 1/4" x 4 1/2", each..... \$3.35

**Spruce**

Spruce is a straight-grain, lightweight strong wood. It is heavier than balsa but much sturdier. It has been used for aircraft (people-carrying type) for about as many years as aircraft have been around (*e.g.*, Howard Hughes's "Spruce Goose"). It works well for a variety of kites. 3' long:

- 1/16" x 1/4", each..... \$2.24
- The following are all 4' long:
- 3/32" x 3/32", each..... \$2.28
- 3/32" x 3/16", each..... \$3.32
- 1/8" x 1/8", each..... \$3.30
- 1/8" x 1/4", each..... \$3.38
- 1/8" x 3/8", each..... \$5.50
- 1/4" x 1/4", each..... \$6.62
- 3/8" x 3/8", each..... \$9.90

**Basswood Strips**

Light, strong, evenly cut. Great for miniature kites; 22" long:

- 1/32" x 1/32", each..... \$1.12
- 1/16" x 1/16", each..... \$1.12

**"Surgical" Tubing**

Clear plastic tubing is handy for connecting various round struts. There are many types and different grades of this tubing and although many are often called "surgical" tubing, *actual* surgical grade tends to be super expensive. What we have is plain old tubing, but of a very good quality.

- 3/16" ID x 5/16" OD..... \$1.14/ft.
- 1/4" ID x 7/16" OD..... \$2.24/ft.
- 3/16" ID x 9/16" OD..... \$3.38/ft.

**Vinyl Ribbon**

For tails, both decorative and functional. In red, orange, yellow, green or blue; 1" wide..... \$1.10/yd. or \$4.00 per 100/yd. roll

**NOTE**

Fabrics sold in 1/2 yd. increments only. Struts sold in listed sizes only. Tubing sold in 1 ft. increments only. Ribbon sold in 1 yd. increments only.



**A COMPLETE KITE STORE**

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Dear Sirs: Please send me the following materials:

Quantity	Name of Item	Size	Color Choices:		Price Per Item	Extended Price
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Deliver to: \_\_\_\_\_ Sub-total \_\_\_\_\_

Street Address: \_\_\_\_\_ Shipping **\$2.00**

City, State, Zip: \_\_\_\_\_ Total enclosed \_\_\_\_\_

Make check or money order payable to The Kite Site. Personal checks must clear the bank before shipping. Money orders and cashier's checks insure fastest shipping. For foreign orders, please remit in U.S. dollars and add \$4.00 for surface shipping.

- 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.

# Profiles ...

This page, top, J. C. Young with his Chinese hawk kite. The back, working side shows hinges at the wing roots that allow the kite to simply fold, center. Below, in flight, the hawk's tail hinges, making the body/fuselage very short and producing a lifelike, wing-flapping motion. Opposite, top, Young's seven-foot Chinese phoenix bird of bamboo, nylon and Mylar<sup>®</sup> sprayed with florescent paint. In the background is a Jack Van Gilder 50-delta train. Opposite, center, J. C. Young with his Chinese dragon, distinguished from a centipede by its four legs, horse-like head and 17 disks rather than the 60 or so for some centipedes.

IN SEATTLE, J.C. YOUNG CREATES

# ANCIENT CHINESE THAT LIVE AND

Photographs by John F. Van Gilder

The soft winds of Seattle, WA, are not like the strong ones of Taiwan, so in making his kites J.C. Young says, "I have switched to paper." In semi-retirement in Seattle for about two years, after a career in government in Taiwan, he still wears the coat, tie and hat uniform of his former job. But where his kites are concerned he definitely has adapted.

J.C. Young has only been making his own kites since about 1973. He simply remembered how it was done from his childhood and started making them again. He now numbers more than 10 designs in his collection of intricate, perfectly balanced creations — including a dragonfly, serpent, goldfish, star, centipede, butterfly, dragon and phoenix bird.

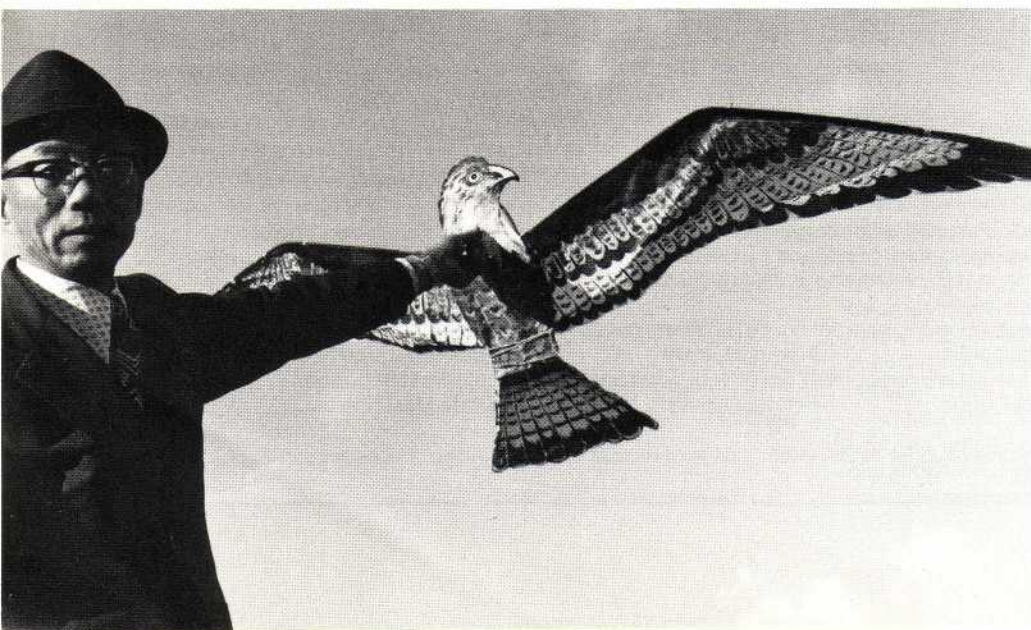
While expertly assembling one of his favorites, the butterfly, he remarks, "You need the same part of bamboo for each side so that the kite is perfectly balanced. If it's not right, you'll never get it back in one piece."

He sends the kite up on 30-lb. test fishing line with a jerk of his arm. In 1977, Young entered the Seafair com-

petition held on Elliott Bay, entering a 60-section centipede. Of the four centipedes entered, his was the only one that got off the ground. "The trick is in the center line," he says. "If it's right, one pull will get it up."

Born in Yunnan province, J.C. Young's father became a general in the army of Chiang Kai-Shek. His father liked to fly kites but let his subordinates make them for J.C. and his brothers. J.C. fled to Taiwan with his family in 1949 at the time of the Communist takeover. While still there, where two of his six children still live, Young and a friend constructed his most ambitious effort. Working two to three hours daily for a month, they built a 120-disk centipede measuring 250 feet in length. They won a first place prize with it.

Now Young is living in Washington state, where he is a member of the Washington Kitefliers Association. His butterfly kite was designed on a bet. He asked his friends who were making this type of kite why they didn't make it so that it would break down for portability. They said it couldn't be done. So Young made one — and won the bet (see cover and this page).

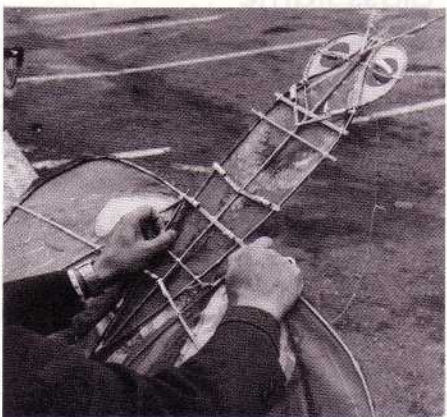


The kite on our cover: J.C. Young's butterfly being removed in five parts from its case, which measures 36 by 20 inches.

# KITES FLY

J.C. Young is now a familiar figure at WKA flies, where he provides an example of that odd blend of behavior so characteristic of kitefliers—competition and relaxation. He spends hours creating his kites and then takes pains with the proper manipulation of the line—yet he muses: “I enjoy myself kiteflying and it gives me peace of mind. An old Chinese philosophy says that when you’re fishing, you’re always looking down. But when kiteflying you’re looking up.” One might observe that Chinese sayings are as good as Chinese kites.

J.V.G./V.G.



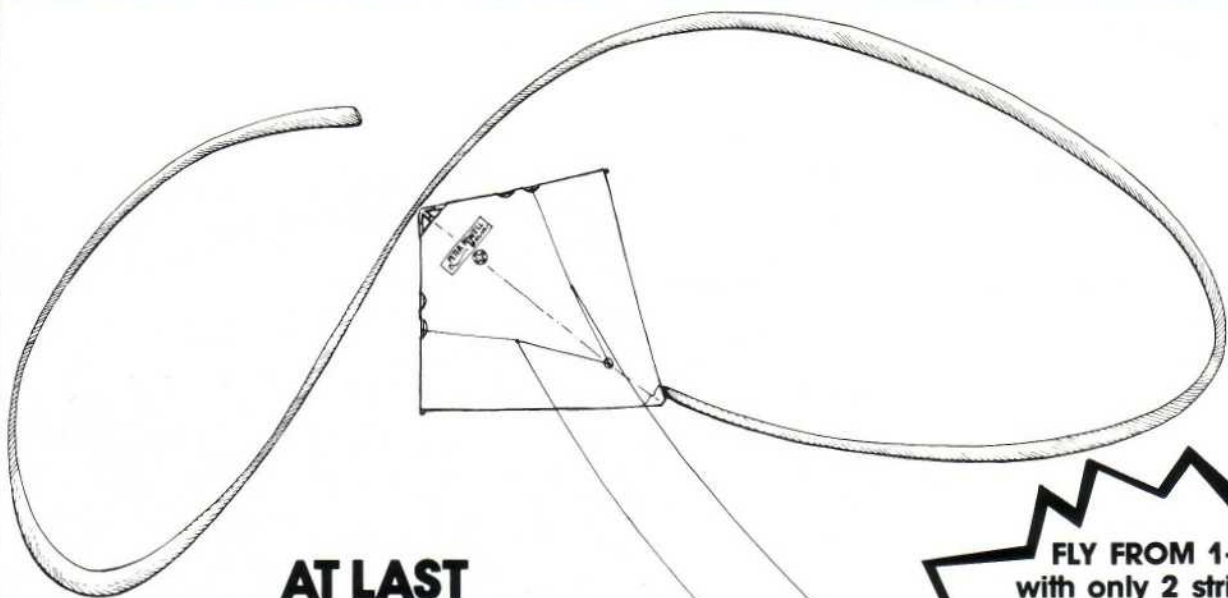
The two lower wings are inserted into aluminum tube sections. The antennae are spring steel wound with bright-colored yarn.



The top pair of wings are inserted next. Spars lock to the body with rubber bands (note banding below wrist watch). The eyes rotate.



Assembled! Total elapsed time: six minutes. This view shows the back of the butterfly. (The front of the kite may be seen on our cover.)



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# What's New: Kites, Books, Sundries

## Kites

By Curtis Marshall and by Mel Govig, assisted by Theodore L. Manekin and Rick Kinnaird

### REALLY NEW: THE FLEXIFOIL

There is no Ultimate Kite. For some, the ideal is a kite so stable it appears painted on the sky. For others, more aggressive, a very "active" kite is the goal. Some are pleased only by a fighter kite and some only by elaborately constructed box kites. I find myself drawn to any kite which represents a departure from the usual—a kite which shows originality and shouts defiance at the "tried and true." I had heard of and had seen pictures of the Flexifoil, designed in England by Ray Merry and Andrew Jones, but was not impressed until I saw an actual sample. I was first intrigued and, in the space of a few minutes, fascinated. Thus, I was pleased at the opportunity to review the Flexifoil for *Kite Lines*.

The design of this kite is, at first glance, relatively simple, *i.e.*, a 23-inch by 68-inch nylon wing, filled, like a Parafoil, by the ram of the air. Closer consideration, however, shows that it is not merely a Parafoil without fins, but rather a different aerodynamic entity with the center of lift very near the leading edge so that the ventral fins, so vital to the Jalbert Parafoil, would play no role on this kite. The fact that the center of lift coincides simultaneously with the center of gravity (*i.e.*, the cross-bar) and the bridle point makes the weight of the single cross-bar of little importance, provided it is within reason. The vents across the leading edge are covered with cloth mesh which tends to maintain the geometric stability of the openings. There are ten "cells" with no openings through the airfoil septa. This seems to me to approach the minimum number of cells and I would be happier with 15 or 20 which would be narrower, but this would significantly increase the labor of construction.

The materials used are relatively straightforward: rip-stop nylon for the sail with a single cross-bar, a double tapered fiberglass tube. This cross-bar slides into a tunnel of cloth along the leading edge just below the line of

the vents and appears to be two fishing-rod segments which separate at the center. A soft rubber grommet at each tip allows one to attach the flying lines which then pass through metal rings attached to each end of the cloth tunnel. This mode of line attachment provides some give, so as not to overstretch the sail during moments of increased wind speed. In addition, the direction of pull causes the halves of the cross-bar to be forced together during flight.

The sewing is adequate, but not elaborate. The airfoil sections are not hemmed prior to assembly but then there is little stress at such locations. There is more than adequate reinforcement at those locations where significant stress occurs.

The "control bar" furnished with the kite is a three-foot  $\frac{7}{8}$ -inch dia. hardwood dowel notched deeply at each end to act as a bobbin upon which the control lines are wound. Although this could be improved upon, it is adequate and fulfills the requirements without increasing the cost. The kite comes with dual 225-foot twisted nylon control lines which are usable to begin with but will need replacing after much use.

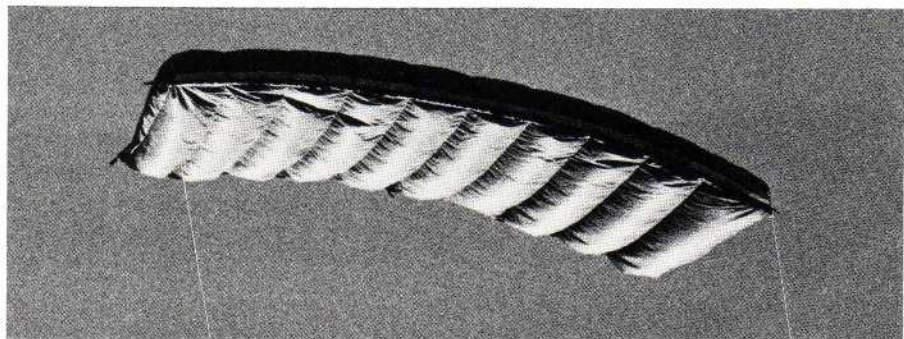
The Flexifoil's remarkable ability to withstand high impact crashes stems inherently from the basic design. The single rigid unit in the structure can readily flex and so in itself is almost immune to fracture. The remainder of the kite, being soft, can only be injured by something akin to a barbed wire fence or a bonfire. The soft rubber cross-bar grommets did not remain in

their appointed places for me, so I replaced them with solid nylon cups drilled crosswise to permit anchorage of the flying lines.

From the point of view of portability, the Flexifoil is fine—an important consideration for anyone who wishes to travel *cum* kite. The sail, cross-bar, flying lines and line control bar fit neatly into the included 39-inch by 2½-inch rip-stop bag. The entire package weighs in at a scant 18 ounces. I travel extensively and always take along a few kites. Although many of my larger kites have a wing spread of up to 18 feet, I will only build a kite which can break down to fit into a three-foot bag. Thus, the Flexifoil satisfies my traveling requirements, as well as those of commercial airlines which take a dim view of any kite which will not fit beneath the seat or which, when packaged, is longer than three feet.

Aesthetically, the commercial Flexifoil for me leaves something to be desired. Proportions are not as pleasing as they might be and the single color tends to hide eye-pleasing movements and attractive contours which might otherwise be revealed in flight. However, when I thought about it I came to the conclusion that any real artistic endeavor would most likely call for some unpleasant increase in what is already an intimidating U.S. import price of about \$76. But I *would* like to see the drabness broken up by a few circles, or a giant pair of ruby lips, or perhaps even a moire pattern created by the interplay of top and

The Flexifoil: a different aerodynamic entity, sure to father a series of new kites in turn.



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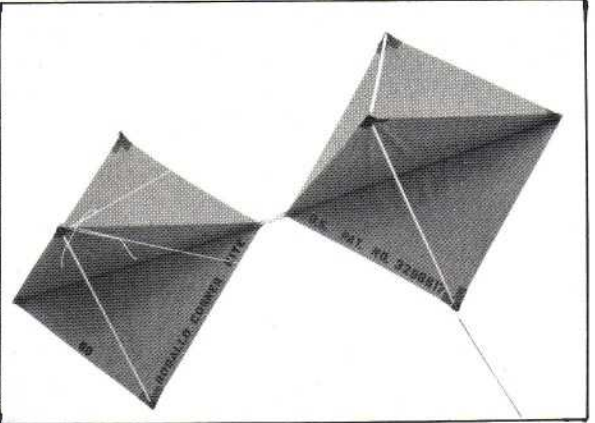
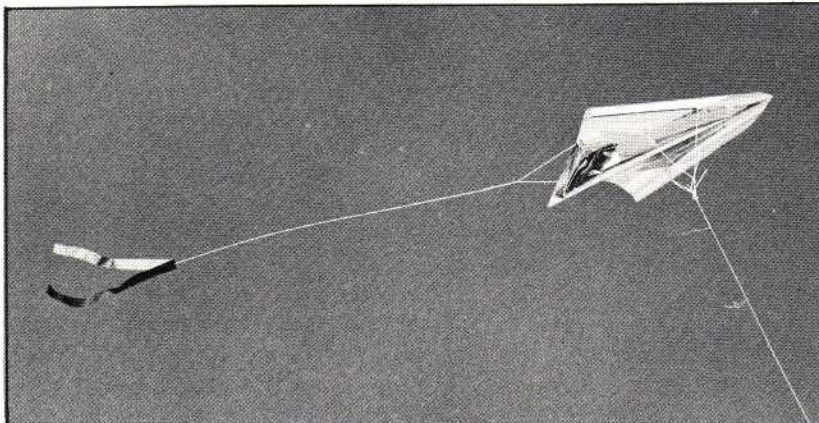


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## Two Originals Designed by Francis M. Rogallo:

### ● ROGALLO FLEXIKITE

### ● ROGALLO CORNER KITE

The Flexikite embodies the same aerodynamic principles as the delta wing hang glider. A 15-inch square "silver" Mylar® kite (22-inch keel length) which you can fly on one line in normal fashion — or maneuver aerobatically like an airplane, on two lines, making loops, figure 8's, dives, landings and take-offs. Comes complete with flight instructions and 55 yards of nylon line. Choose as a kit with instructions for easy assembly, **\$5 ppd.** Or have the assembled kite, ready to fly, **\$6 ppd.**

The Corner Kite was originally designed by Rogallo as a radar reflector. Arresting in the air, yet very easy to fly. Easy to assemble, ready to fly in minutes. After flight, it breaks down to fit into its own drawstring bag only 25 inches long (1½ inches diam.) — easily stored almost anywhere. Assembled, kite measures 5½ feet in length, with over 14 square feet of sail area. Covered in red nylon. Each kite is handmade, test flown and serially numbered. U.S. Patent No.: 3,296,617. **\$30 ppd.**

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# What's New

... Continued

bottom designs.

If one holds the kite by one end of the cross-bar, swings it through the air to inflate it and then releases it, the wing glides admirably. This at the outset suggests the likelihood that it may, under certain circumstances, overfly at the zenith or glide upwind during momentary lulls, producing unmanageable slack line. This characteristic must be kept in mind when flying this type of kite. The instructions provided with the Flexifoil are explicit and helpful.

We finally come to the moment of flight. The Flexifoil, in a word, is *different!* It is not a light wind kite, but requires a moderate breeze of more than five knots. The person who walks the kite out to the end of the line wants to aid by giving the kite a slight upward toss to get it started. This just does not work; the kite simply dives to the earth. It will, however, take off very nicely on its own from either earth or hand if it is first well inflated from the ambient wind. Thereafter, a slight tug on the lines will shift the wing to a tail-down position and up

she goes. During the vertical portion of the ascent there is a strong drag and a marked arching of the cross-bar as well as of the entire kite. But when the zenith is approached, it floats, unlike its Parafoil relative, with almost no lift. However, if a strong wind hits it and so pulls it somewhat downwind, the lift can become noteworthy. It is at this time, when heavily bowed, that the kite demonstrates its least endearing trait—it performs a flapping motion, about four per second. During this activity, control becomes somewhat less than precise. However, under most conditions, a tilted control bar will initiate a turn, a power dive, or a horizontal sweep, accompanied by sufficient increase in drag and lift to let the flier know that he indeed has a live one on the line. With little effort, the kite can be made to perform the usual stunting actions, including a reasonably fast hedge-hopping just above the ground, but the success of such a maneuver is dependent upon the degree of ground turbulence, especially when the winds are light. A cross-wind can collapse the cells and make recovery difficult if not impossible.

The kite itself is not heavy, although

its mass is distributed evenly along its six-foot width and this, in itself, provides some rotational inertia when snap turns are attempted. Also one must accept the inertia of the trapped air which can be best appreciated when the kite with its load of air dives to the ground. Thus, the Flexifoil is not as responsive as some other more compact and lighter designs of two-string kites, but then too, speed of response is not the only yardstick with which to measure a controllable kite. Further, the Flexifoil has definite advantages of its own, such as smooth recoverability. Finally, I would not compare the Flexifoil only to stunters but to the whole genera of kites, in which company it more than holds its own. Also the ease with which the kite can be rigged to fly in multiples will endear it to many.

In much the same manner by which Rogallo's Flexikite or Jalbert's Parafoil gave rise to whole families of kite designs, so the Flexifoil, in its generation, most surely will father a series of new kites. The do-it-yourself kites will be undeterred by the construction requirements which are in fact simpler than those of the Parafoil. In general, it appears that the basic design is quite

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colorful  
all hand-made  
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#T20 peacock



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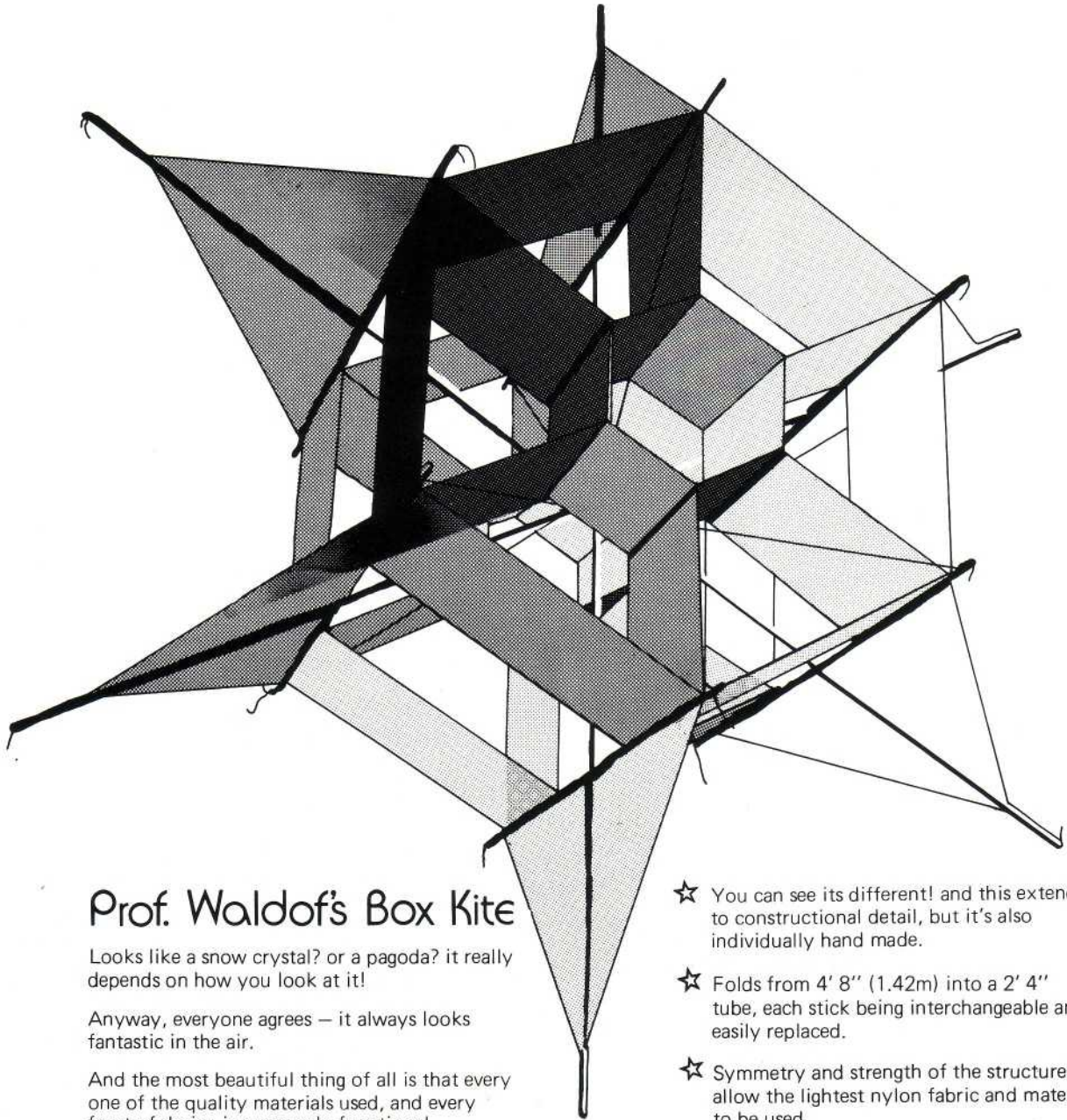
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# Prof. Waldof's Box Kite



## Prof. Waldof's Box Kite

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## What's New

... Continued

forgiving and that modest errors of dimensions and assembly will have relatively little effect on the performance. I tend to doubt that garbage-bag plastic versions will appear; the effort of creating a construction of this complexity would be hard to justify with materials which could be destroyed in one crash.

For whom is this kite suitable? I would think that anyone of average weight and 12 years of age or older who has average hand-eye coordination could enjoy this kite. As testimony to the pleasure one can achieve from flying this kite, let me state that it has succeeded in rekindling an active flying interest in a number of my friends who previously had become somewhat jaded with exposure to repetitive kite designs and the predictable sureness of their own flying skills. The combination of the unique characteristics found in this design will assure it a place in the collection of the serious kiteflier for many years to come.

C.M.

### PROFESSOR WALDOF'S BOX KITE

This arresting, crystal-like kite, named Professor Waldof's Box Kite, is difficult to describe. It's a hexagonal box with twin concentric hexagonal cells. The center cells dynamically suspended by six rip-stop nylon vanes, are the basis of the kite's strength and stability. The six upright sticks are stretched by six spreader sticks which support the kite's wings. Pretied bracing strings hold the assembled kite rigid. Completed size is 27½" high by 27½" wide with 13¾" wings at the six angles.

The designer's signature on this kite is obvious. Nothing about it just happened. Even the materials are planned with an attention to detail that testifies to the sophisticated mind of its inventor, Peter Waldron. For instance, all the nylon pieces, including cells, wings and tubes for sticks, are cut from nine-inch wide strips of rip-stop, a very well-planned use of either 45- or 54-inch material. The kite leaves you with the feeling that you could rediscover the Professor's careful planning one piece at a time and still have one more surprise.

The kite's main attribute is the remarkable stability and lift of its

strange shape. It is twice as wide as it is high. The high aspect ratio makes it very responsive to changes of wind direction. It flies almost like an Eddy kite insofar as its wind-seeking character is concerned.

It would be easy to underestimate the strength of line needed for this kite because of the relatively small overall size. But don't attempt to fly Professor Waldof's kite on less than 40- or 50-lb. test line. It has nearly 30 square feet of lifting surface, approximately the equivalent of a five-by-six-foot rectangular kite. Such a special kite (at such a special price—about \$65) should not be lost because of being flown on inadequate line.

We encountered no problems with the assembly. The step-by-step instructions add their own pleasure, unfolding slowly the imaginative design of this beautiful sky sculpture.

M.G./T.L.M.

### WIND MILL KITES

There's a new kid on the block and he looks pretty impressive from the "tree-tested" models that were sent to *Kite Lines* for testing. Warren Berger and his wife Sara have started business as



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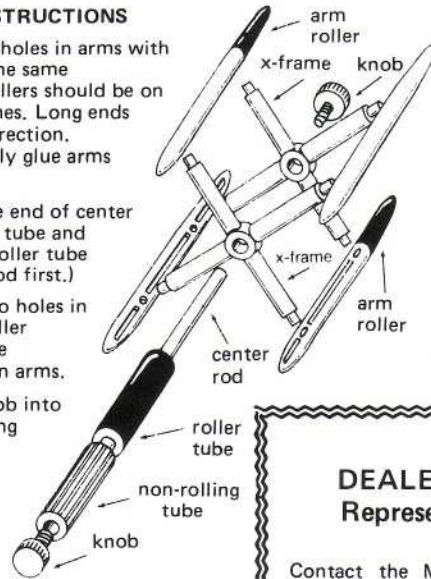
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1. Insert x-frames into holes in arms with roller ends pointed in the same direction. Arms with rollers should be on opposite sides of x-frames. Long ends should point in same direction. (For permanent assembly glue arms into holes.)
2. Screw knob into one end of center rod. Slid on non-rolling tube and then the roller tube. (Roller tube may be put on center rod first.)
3. Insert center rod into holes in x-frames. Center rod roller should point in opposite direction from rollers on arms.
4. Screw remaining knob into center rod. Tie kite string around all 4 arms.
5. Holding center rod roller in right hand and arm roller in left start cranking kite line onto completed reel.



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# **MAGIC KITE REEL**

# What's New

... Continued

Wind Mill Kites in Louisa, VA. According to Warren, he has been interested in kites for a year and a half, and has applied his learning and machinist's skill to devise some truly new kites.

We tested four kites from Wind Mill. All are constructed of one-mil Mylar® and birch dowels. Three of the four are sled variations. All the kites carry very attractive printed designs by artist Steven Fisher. Prices run from \$8 to \$13.50.

The Wind Mill Sled, true to its Allison origins, was a better-than-average sled, but we most enjoyed the Winged Sled, a very high aspect design with two added keels attached to the kite along the sticks; it is 24 inches tall and 48 inches wide. More important than what it is, is what it does: it flies in the manner of a Parafoil or a Flare, except that the Winged Sled requires no tail or drogue. Parafoil fans will be pleased with the high angle and lift of this little wonder.

The Hooded Cobra is the Winged Sled with keels slightly modified and long tail added. While the kite has a very novel appearance and flies well in good breezes, the cobra tail decreases the efficiency of the kite and makes it fly at a much lower angle.

The last kite from Wind Mill is radically—one might say courage-

DATA CHART								
	Size	Materials	P	AT	ED	EWS	AF	SL
Flexifoil	23x68"	rip-stop nylon, fiberglass	E	1 min.	E	5-30	20-85°	I
Prof. Waldof	27x54"	rip-stop nylon, dowels	E	3 min.	E	4-25	60-95°	N
Winged Sled	24x48"	Mylar, dowels	G	assembled	G	5-12	65-70°	N
Hooded Cobra	24x48"+ 45' tail	Mylar, dowels	F	assembled	F	7-15	35-45°	N
Soaring Wing	24x72"	Mylar, dowels	G	1 min.	F	3-8	75-80°	S
Firebird (Quicksilver)		Mylar, fiberglass, rattan	G	assembled	G	3-14	45-70°	N

Code: P=Portability; AT=Assembly Time; ED=Estimated Durability; EWS=Estimated Wind Speed (min.-max. mph); AF=Angle of Flight; SL=Skill Level: N=Novice, I=Intermediate, S=Skilled  
Ratings: P=Poor, F=Fair, G=Good, VG=Very Good, E=Excellent

ously—unusual; a six-foot wingspan delta bird with maximum chord measure of only one foot. The Soaring Wing is quite well balanced by means of very original treatment of the spreader bar and keel. During first assembly, I had my doubts about this one but it did fly well and reached an angle of 85 degrees without overflying. I would not recommend this kite for the beginner because of the tricky launch presented by so high an aspect ratio. But keen kites may enjoy this kite's strong personality. The keel on our Soaring Wing had to be repaired; a little reinforcement along the first six inches of the keel in advance of flying is recommended as a preventive ounce for kitefliers.

M.G./R.K.

## QUICKSILVER'S FIREBIRD

The Firebird is basically a Mylar® fighter kite with a dramatic Phoenix print and 18 feet of tapered Mylar tail in two "tongues" of fire red. It flies like a fighter tamed; although it can be made to maneuver with exaggerated line action, its natural tendency is toward stable flight. My sample flew well in light winds, but in winds above 15 knots the Firebird went into long, uncontrolled loops.

The designer may have hoped to capture maneuverability and stability in the same kite—a valiant attempt at an impossible ideal. The kite succeeds, however, as an especially attractive design and a good flier in light winds. It's well-made and reasonable at \$8.

M.G.

## Reels Follow-Up

By Mel Govig, assisted by A. Pete Ianuzzi

Just after the Fall 1977 *Kite Lines* was out with a major article on reels, some new models came on the market, so we are looking at them now. We will review some more reels in the next issue with a Data Chart to summarize the new models.

### NEW SPOOLS FROM SHANTI

Shanti established itself with Indian-type spools made with chipboard end discs that were just a little rough for light-weight line, so we were glad to see the new wooden versions from Shanti. The Oak Spool, about \$3, and the Super Spool, about \$4, both include 500 feet of line.

Shantis are no different in design from other Indian-type spools and have the advantages and disadvantages of the type. Their cores are larger than some, smaller than others. The two new reels are practically identical

in appearance when loaded with their line. But the Oak Spool has a heavy cardboard core while the Super Spool has a solid hardwood core.

The line furnished with the spools we tested was a very good hard-finished nylon of about 20-pound breaking strength, a good choice for one-line maneuverable kites or other light models.

Both spools are finished with high quality lacquer. Their primary difference is weight. The Oak Spool is very much like any Indian reel in weight and ease of winding. The solid core of the Super Spool gives it a lot more momentum in quick wind-ins and also has a lifetime guarantee. I doubt whether the average kiteflier could ever crush the core of the Oak Spool. I doubt whether any flier could crush the Super Spool, except perhaps by leaving it in the path of a car.

### A NEW KOREAN REEL

The Magic Kite Reel is not magic but it is a reel worth having at \$8.

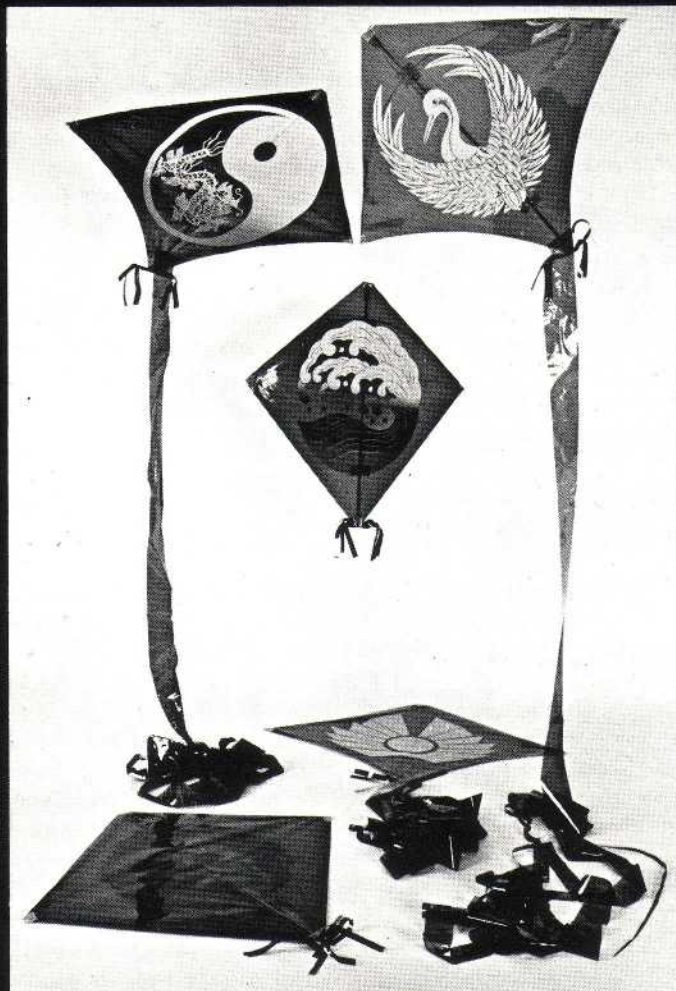
Made of heavy cast vinyl, the weight of the reel and its size make it a very fast reel-in for small fighter kites. It takes some practice to guide the line to the center of the reel and to reel fast enough to make a fighter kite maneuver, but I think the practice should be well rewarded in useful fighting techniques. With no practice at all, I was able to make the Quicksilver Firebird perform very well in winds over 15 knots. It was possible, just with reel cranking, to stall, dive and recover this slow fighter/fast cobra. I'm convinced that a little practice would make the Magic Kite Reel an ideal choice for handling Korean, tissue Indian or Mylar fighter kites.

I found the reel should be used at eye level, to bring it into the action

# Zenith Kites

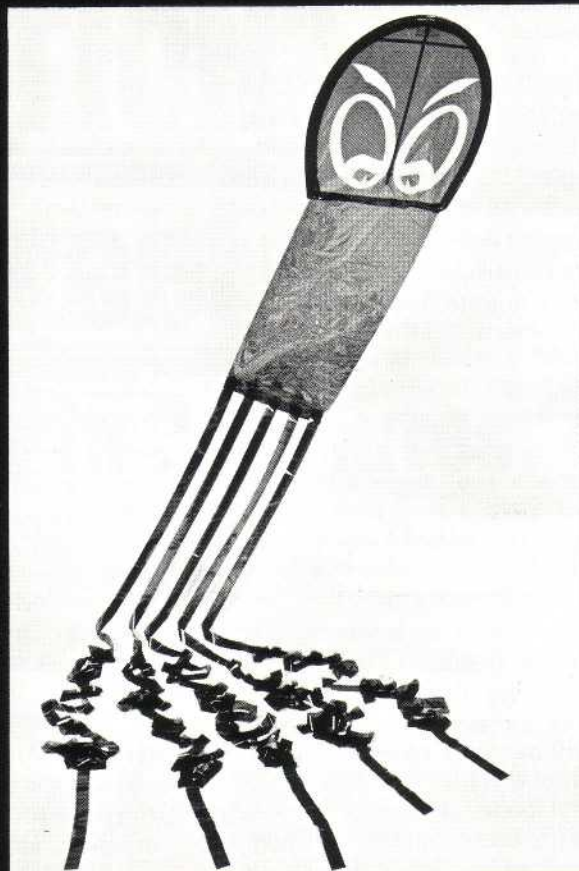
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## What's New

... Continued

and reduce the chances of winding off the end. Each Magic Kite Reel comes in a box printed with good instructions.

About two years ago, I had the opportunity to use Lee's four-arm Korean-type reel. This reel is made of beautifully finished hardwood with a long handle that tucks under the arm

for extra leverage. At the time I used the reel, I flew one of Lee's bird kites, which did not suggest the reel's true potential, as a fighter kite would have. I believe that the Lee reel, which sells for \$30, would perform with fighters as well or better than the Magic Reel.

Neither of these reels is intended for mule-hauling a hard-pulling kite. Korean reels are the extension of the

hands of the flier for flying fighter kites. If you can master the reel it could save a lot of lost and tangled line for fliers who are used to dumping the line in piles at their feet. Also the artistry of a practiced user of the Korean reel is something to behold. I've witnessed it twice, once in real life and once in movie scenes of Tom Joe. Both times I saw skills that reminded me I still have plenty to learn about kiteflying.

## Books

By Gary J. Hinze

### HOT AIR

*Why Kites Fly: The Story of the Wind at Work*, by Don Dwiggin (Childrens Press, Chicago, 1976), 25 pages of text, color pictures, short bibliography, \$6.60.

This book is supposed to introduce young readers to aerodynamics in terms of why kites fly. Basic principles are to be clearly and simply explained with easy-to-understand diagrams. A brief history of how kiteflying led to the invention of the airplane is included.

The aerodynamic force on a kite is first explained as a Newtonian reaction to the air which is deflected downward by the inclined wings. This theory overlooks the fact that the air rises upward some distance ahead of the wing as well as flowing downward behind it.<sup>1,2</sup> The forces calculated from the Newtonian impact theory do not agree at all with those measured on a flat plate in a wind tunnel.<sup>3</sup> Although the force of the air on the wing is equal and opposite to the force of the wing on the air, this does not explain the origin of the pattern of flow which produces the force.

Later the aerodynamic force on a curved wing is explained with the famous Bernoulli theorem. Unfortunately, this theorem is part of the classical theory of ideal fluids. Another theorem from this mathematical theory, known as D'Alembert's paradox, proves that neither lift nor drag is possible in an ideal fluid.<sup>4</sup> Thus Bernoulli's theorem can't possibly explain aerodynamic lift in real, viscous fluids like air.

The correct explanation of the aerodynamic force, discovered in the late 1800's, is not mentioned.<sup>5</sup>

The book implies that a flat kite is pushed upward solely by the impact of air on its lower surface. Actually the mechanism of fluid flow is the same for flat and cambered airfoils. Most of the lift on a flat airfoil is due

to the decrease of pressure over the top surface.<sup>6</sup>

The forces acting on a kite in equilibrium are discussed and illustrated by a diagram. The text is unclear and appears to conflict with the diagram. The diagram is incorrect, showing a mathematically and physically impossible arrangement of forces.<sup>7</sup>

The topic of balance of forces leads to a discussion of bridling. It is stated that the string should be attached to the kite's center of pressure. This is located by placing a finger behind the kite so that the wind holds the kite steadily against the finger. The reviewer tried this method several years ago and found that it does not work. There is a large range of positions for which the wind will hold the kite against the finger. There is no single center of pressure location; it varies with attack angle. The bridle point does not coincide with the pressure center, but will be somewhere ahead of it. A kite may fly with any of several bridle locations, but the exact determination of the optimum location requires a detailed knowledge of the kite's aerodynamic and physical characteristics.

Several other aerodynamic subjects are discussed, but the treatment is no better. The whole subject of stability gets one short paragraph comparing a kite's tail with an airplane's tailfin.

The brief history section is so oversimplified that it misrepresents the actual events. The Wright brothers did not simply add a small engine to a box kite.<sup>8</sup>

This book is a compilation of the folklore of kite aeronautics. The reader gets a confused, inadequate and inaccurate account of the subject. A young reader will eventually have to unlearn what he has read. It is unfortunate that the author didn't spend more time researching the subject, as this is the only book published

exclusively on kite aeronautics. In the author's favor I can say only that his treatment isn't much worse than that given elsewhere.

<sup>1</sup>John J. Montgomery, "Discussion on the various papers on soaring flight," *Proceedings of the Conference on Aerial Navigation*, Aug. 1-4, 1893, pp. 247-249; reprinted in *Aeronautics*, Vol. 1, No. 10, July 1894, pp. 127-128; reprinted in Arthur Dunning Spearman, *John Joseph Montgomery, Father of Basic Flying*, University of Santa Clara, 1967 and 1977, pp. 185-186.

<sup>2</sup>Frederick W. Lanchester, "The soaring of birds and the possibilities of mechanical flight," unpublished paper read before the Birmingham National History and Philosophical Society on June 19, 1894. This formed the basis for his *Aerodynamics* (1907) and *Aerodanetics* (1908), pub. by Constable and Company, London.

<sup>3</sup>L. Prandtl and O.G. Tietjens, *Applied Hydro- and Aeromechanics*, McGraw-Hill Book Co., Inc., New York, 1934; Dover reprint, 1957, arts. 54 and 55, pp. 86-88.

<sup>4</sup>S. Goldstein (ed.), *Modern Developments in Fluid Dynamics*, 2 vols., Clarendon Press, Oxford, 1938; Dover reprint, 1965, vol. 1, art. 7, pp. 21-26.

<sup>5</sup>Sir Oliver Graham Sutton, *Mastery of the Air*, Basic Books, New York, 1965. A popular account of aerodynamics. Chapter 4 explains the modern Lanchester-Prandtl theory of lift.

<sup>6</sup>Sir Horace Lamb, *Hydrodynamics*, Cambridge University Press, 6th ed., 1932; Dover reprint, 1945, art. 370, pp. 678-680. Kites fly efficiently at attack angles of 5-10° and stall at angles of 15-20°.

<sup>7</sup>Charles F. Marvin, "Kite experiments at the Weather Bureau," *Monthly Weather Review*, Vol. 24, Nos. 4-7, April-July, 1896, pp. 113-123, 156-166, 199-206 and 238-255. The system of forces is discussed on pp. 156-162 and 242-244.

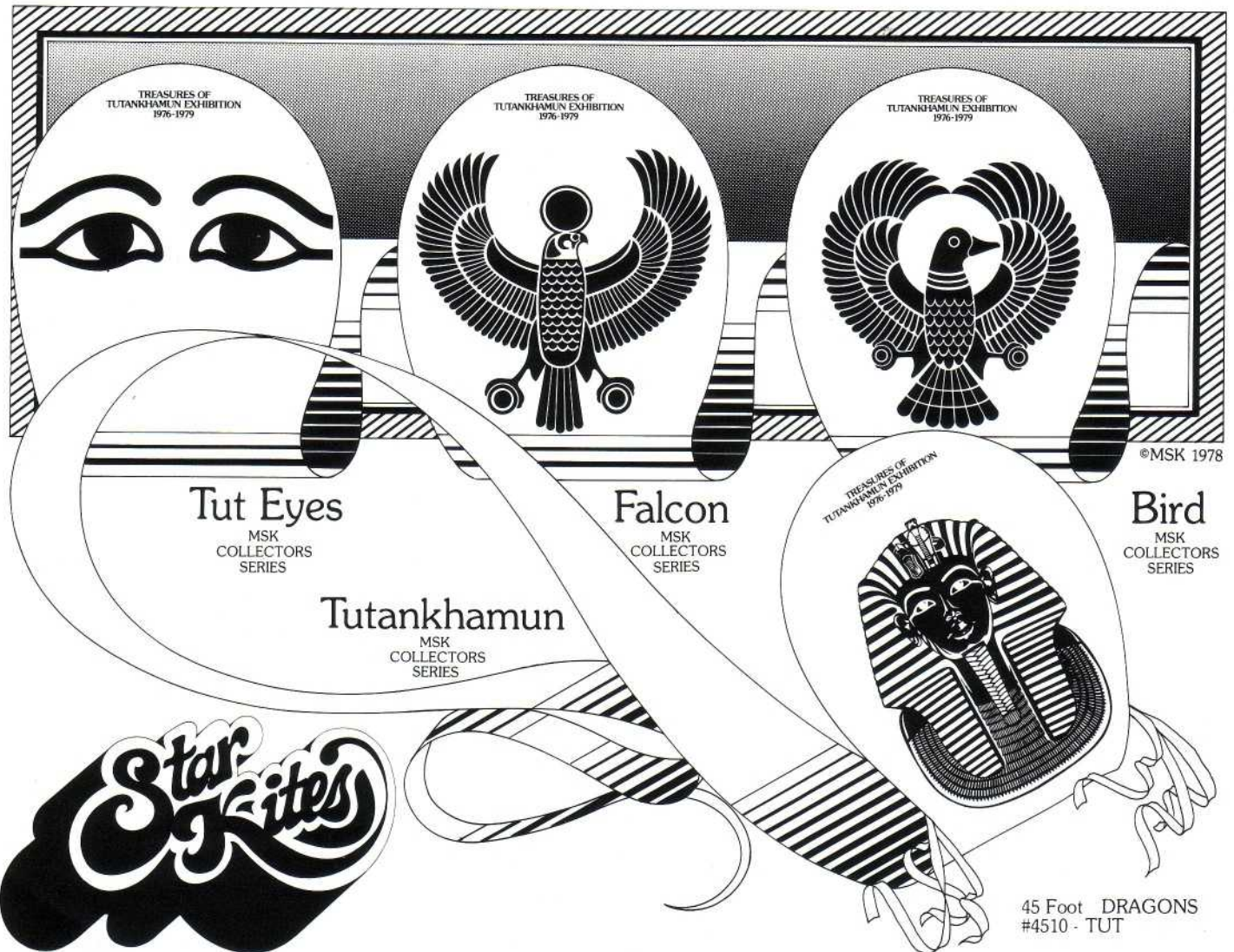
<sup>8</sup>Marvin W. McFarland (ed.), *The Papers of Wilbur and Orville Wright*, 2 vols., McGraw-Hill, New York, 1953. Vol 1 describes the Wrights' experiments with kites, gliders and the first powered planes. It also contains their 1901 wind tunnel measurements on flat and curved surfaces.



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# CALENDAR

## June

(June-July), **286th Annual Naruto Giant Kite Festival** (Tokushima Prefecture), on Hiroto Beach, Okazaki District, Japan.

### 3

**International Kite Fighting Championships**, Redondo Beach Pier, flying over the water, Redondo Beach, CA. \$5 entry fee; invitational due to limited space. Write or call in advance. Sponsor and contact: Sunshine Kite Co. (c/o Randy Joe), 233-B Fisherman's Wharf, Redondo Beach CA 90277, tel: (213) 372-0308.

### 6

(June 6-11), **300th Annual Iris Festival and Shirone Giant Kite Festival** (Niigata Prefecture), on banks of Nakanokuchi River, Japan.

### 10

**Vic's Fighter Kite Contest**, with 25' tails, south of Redondo Pier, Redondo Beach, CA. Sponsor and contact: Sunshine Kite Co. (c/o Randy Joe), 233-B Fisherman's Wharf, Redondo Beach, CA 90277, tel: (213) 372-0308.

**International Kite Festival**, Scheveningen beach (The Hague), Netherlands. Sponsor and contact: Gerard van der Loo, Vlieger-OP, Rijswijkseweg 74, 2516 EH Den Haag, Holland, tel: 070-882250.



Anneke Davis

A super-size Jalbert Parafoil gives a brief lift to young cargo at the Harpers Ferry (WV) Fly.

### 18

**2nd Annual Back to the Hills Kite Fly**, non-competitive, Kendall Hills, Cuyahoga Valley National Recreation Area, Akron, OH. Sponsor and contact: Ohio Society for the Elevation of Kites (c/o Tom Rask, President), 2687 E. 128th St., Cleveland, OH 44120, tel: (216) 791-6563.

(Late June Saturday), **2nd Annual Inn on the Park Kite Festival**, \$1 admission fee, E.T. Seton Park, Toronto, Ontario, Canada. Sponsor and contact: Inn on the Park (c/o Sharyn Thomas), 1100 Eglinton Ave. E., Toronto, Ontario, Canada M3C 1H8, tel: (416) 444-2561.

**Blackheath Kite Association Kite Rally** at Blackheath (London). Contact: D. White, Hon. Secretary, 234 Plumstead High St., Plumstead, England SE18 1JL.

### 25

**3rd Annual Great Waltham Kite Festival**, non-competitive, The Playing Field, Great Waltham, Nr. Chelmsford, Essex, England. Promoted by the Festival Committee and organized by the Essex Kite Group. Contact: Essex Kite Group (c/o Clive C. O. Rawlinson), The Croft, Howe St., Gt. Waltham, Chelmsford, Essex, England.

**Kite Festival at Stanford Hall**, Lutterworth, Leicestershire, England. Organized by Jim Whitehouse, 19, Denise Drive, Bilston, West Midlands, WV14 9LG, England.

(Late June or early July Sunday), **Harpers Ferry Family Kite Fly**, non-competitive, Harpers Ferry Caverns grounds, Harpers Ferry, WV. Contact: Maryland Kite Society, P. O. Box 10467, Baltimore, MD 21209, tel: (301) 484-4861.





Karl Schmid of Westminster, MD, right, poises his tetrahedral for take-off at Nags Head, NC. Low winds let Karl and his kite down.



There's lots to see at Seattle's kite events, as Jeri and Darren Prewitt find, "sittin' on the tailgate, watchin' all the kites go high."

# July

## 1

**Kite-Nic**, non-competitive, on the beach south of the Redondo Pier, Redondo Beach, CA. Sponsor and contact: Sunshine Kite Co. (c/o Randy Joe), 233-B Fisherman's Wharf, Redondo Beach, CA 90277, tel: (213) 372-0308.

## 4

**4th Annual Kite Flying Festival**, recreation field, Ocean City, NJ. Sponsor: Ocean City Recreation Dept. Contact: Ocean City Public Relations Dept. (c/o Mark Soifer), Box 174, Ocean City, NJ 08226, tel: (609) 399-6111.

## 9

**2nd Annual Lake Erie Islands Kite Festival**, Commodore Perry Monument, Put-In Bay, OH. Sponsor and contact: Ohio Society for the Elevation of Kites (c/o Tom Rask, President), 2687 E. 128th St., Cleveland, OH 44120, tel: (216) 791-6563.

## 15

**7th Annual Galleon Esplanade Kite Contest**, on field north of Galleon Esplanade, Nags Head, NC. Sponsor and contact: The Galleon Esplanade (c/o Kay Culpepper), P. O. Box 67, Nags Head, NC 27959, tel: (919) 441-5505.

**3rd Annual Port of Seattle/Seafair Kite Contest**, at Myrtle Edwards Waterfront Park, Seattle, WA. Sponsors: Port of Seattle and Seafair. Contact: Washington Kitefliers Association, c/o Pacific Science Center, 200 Second Ave. N., Seattle, WA 98109, tel: John F. Van Gilder, (206) 938-0550.

## 16

(Tentative date), **7th Annual St. John's Kite Festival**, non-competitive, on Confederation Hill overlooking city and ocean, St. Johns, Newfoundland, Canada. Sponsor and contact: Memorial University Extension Service, 21 King's Bridge Rd., St. Johns, Newfoundland, Canada, tel: (709) 753-1200, ext. 3484.

## 22

**5th Annual Summer Festival**, non-competitive, on the beach near the Venice Pier, Venice, CA. Sponsor and contact: Let's Fly a Kite (c/o Gloria Lugo), Fisherman's Village, 13763 Fiji Way, Marina del Rey, CA 90291, tel: (213) 822-2561.

## 29

**6th Annual Seafair/Capitol Hill Chamber of Commerce Kite Festival**, Volunteer Park, Seattle, WA. Contact: Washington Kitefliers Association, c/o Pacific Science Center, 200 Second Ave. N., Seattle, WA 98109, tel: John F. Van Gilder, (206) 938-0550.

Continued on page 36 . . .

# YOUR BEST REEL ALTERNATIVES

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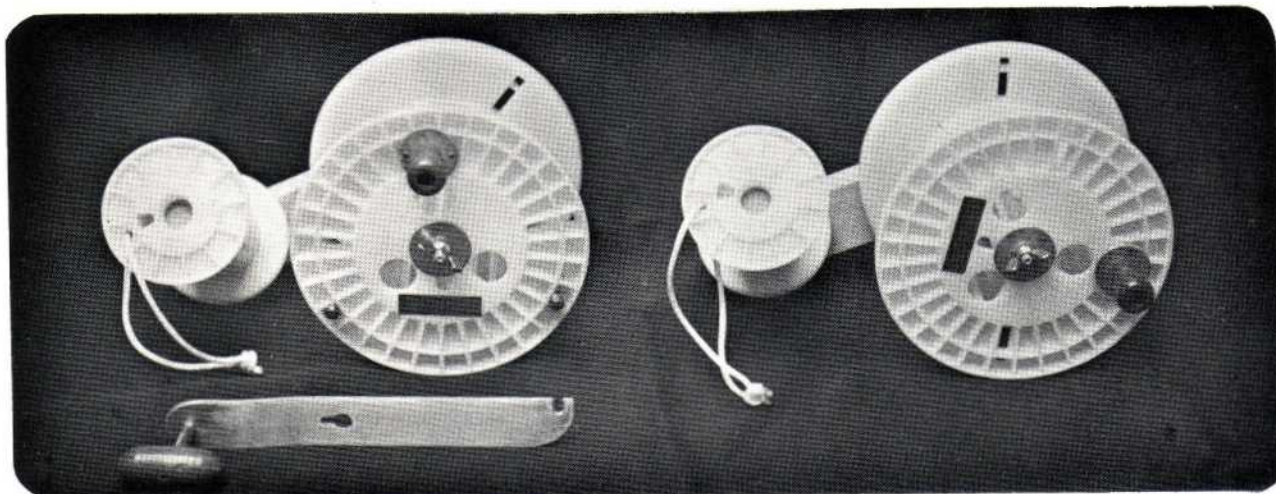
Drag brake that you can hold for a light drag or set for a full lock.

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## CALENDAR

... Continued from page 33

# August 6

**Team Kite Fighting Tournament** with lessons from an expert; preregistration and \$5 entry fee, which includes cutting line, are required; on the beach south of the Redondo Pier, Redondo Beach, CA. Sponsor and contact: Sunshine Kite Co. (c/o Randy Joe), 233-B Fisherman's Wharf, Redondo Beach, CA 90277, tel: (213) 372-0308.

# 13

**3rd Annual Cleveland Games Kite-In**, Convention Center Mall, Cleveland, OH. Sponsor and contact: Ohio Society for the Elevation of Kites (c/o Tom Rask, President), 2687 E. 128th St., Cleveland, OH 44120, tel: (216) 791-6563.

**3rd Annual Kite-Nic**, non-competitive, Ski Beach on Mission Bay, San Diego, CA. Sponsor and contact: San Diego Kite Club (c/o Vic Heredia), P. O. Box 3248, San Diego, CA 92103, tel: (714) 239-1992.

# 19

**4th Annual Cape Cod Kite Festival**, non-competitive, Race Point Beach (National Seashore), Provincetown, MA. Sponsor and contact: Outermost Kites (c/o Gabriel Dix), P. O. Box 1032, Provincetown, MA 02657, tel: (617) 487-3766.

# 20

**5th Annual Sunny Sunday Kite Fly**, non-competitive, Inner Harbor, Baltimore, MD. Sponsor: Downtown Coordinating Committee. Contact: Maryland Kite Society, P. O. Box 10467, Baltimore, MD 21209, tel: (301) 484-4861.

# 26

**2nd Annual Bikes, Kites and Bluegrass Day**, Rockford Park, Wilmington, DE. Sponsor: Delaware Kite Club, Contact: Floyd S. Cornelison, Jr., M.D., Suite 14, Professional Bldg., Augustine Cut-Off, Wilmington, DE 19803, tel: (302) 654-8351.

**2nd Annual Utica Kite Flight Festival-Thon**, Utica, NY. Sponsor and contact: Utica Chapter of AKA (c/o Betty Devins), 1038 Albany St., Utica, NY 13501, tel: (315) 733-3343.



# 27

**Canadian National Exhibition Kite Festival**, Bandshell, Exhibition Place, Toronto, Ontario, Canada, \$1 entry fee for entire exhibition. Write in advance for entry form. Contact: Ken Lewis, c/o Sports Dept., Canadian National Exhibition, Exhibition Place, Toronto, Ontario, Canada M6K 3C3, tel: (416) 366-7551.

## September 2

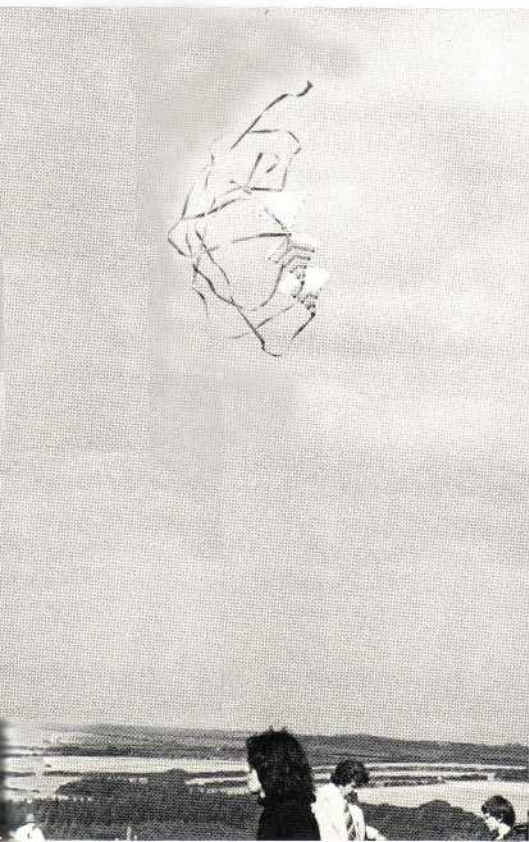
(September 2, 3, 4), **Eighth Convergence of the New Jersey Section**, International Kitefliers Association, Tel Aviv, Israel, Testimonial Dinner Award. Contact: A. Alan Leveen, 1st National State Bldg., Suite 508, 241 Main St., Hackensack, NJ 07601.

# 10

**2nd Annual Kite Get-Together**, non-competitive, Edgewater Park, Cleveland, OH. Sponsor and contact: Ohio Society for the Elevation of Kites (c/o Tom Rask, President), 2687 E. 128th St., Cleveland, OH 44120, tel: (216) 791-6563.

*Opposite page, top: The New York City Kite Festival takes grand advantage of October. Bottom, the Venice Pier Kite Festivals are held each year in California. These non-competitive beach bashes attract such stellar kites as the Tom Vant Sant centipede shown here.*

*This page, below: Stunters make the scene at Truro, Cornwall, England, in September.*



Ron Moulton

# 17

(Tentative date), **2nd Annual Truro Kite Festival**, Royal Farm, Kenwyn, Truro, Cornwall, England. Contact: John Sweetman, Mah-Jong, Forge Way, Shortlanesend, Truro, Cornwall, England TR4 9DB.

# 21

**1st National Meeting, American Kitefliers Association**, Ocean City, MD. Contact: AKA, 7106 Campfield Road, Baltimore, MD 21207, tel: (301) 484-6287.

# 22

**Ocean City Grand National Kite Festival**, with hundreds of dollars in prizes, on beach at 2nd St., Ocean City, MD. Sponsor and contact: Ocean City Chamber of Commerce, Dept.: Flight, Rt. 1, Box 310-A, Ocean City, MD 21842, tel: (301) 484-4861.

# 30

**1st Annual Rubber City International Kite Fly**, non-competitive, University of Akron, Jackson Field, Akron, OH. Sponsor: Student Art League, University of Akron. Contact: Chris Meyer, Art Dept., University of Akron, Akron, OH 44325, tel: (216) 375-7348.

## October

# 1

(Oct. 1 or 8), **6th Annual San Francisco Kite Festival**, with \$1000 for largest kite, other big prizes, polo field, Golden Gate Park, San Francisco, CA. Also, in preceding week, Indoor Kiteflying Competition, lobby of Hyatt Regency Hotel, San Francisco, CA. Sponsors: Come Fly a Kite, Inc., Anchor Steam Beer, KFRC Radio. Contact: Ron Young, Solutions, 507 Howard St., San Francisco, CA 94105, tel: (415) 495-0100.

**Fall Fly and Meeting**, Maryland Kite Society, Burtonsville, MD. Contact: Maryland Kite Society (c/o Robert S. Price, Executive Secretary), P. O. Box 10467, Baltimore, MD 21209, tel: (301) 421-9620.

# 7

**2nd Annual Yachats Kite Festival**, on beach at Yachats, OR. Sponsor: Yachats Chamber of Commerce. Contact: Mike Stone, P. O. Box 522, Yachats, OR 97498, tel: (503) 547-3360.

# 8

**4th Annual New York City Kite Festival**, Sheepmeadow, Central Park, New York City, NY. Sponsor and contact: Go Fly a Kite, Inc. (c/o Andrea Bahadur), 1434 Third Ave., New York, NY 10028, tel: (212) 988-8885.

**Autumn British Kite Flying Association Rally**, Old Warden Aerodrome, Nr. Biggleswade, Bedfordshire, England. Contact: Ron Moulton, B.K.F.A., P. O. Box 35 Bridge St., Hemel Hempstead, Herts., England HP1 1EE.

# 28

**Fall Kite Festival**, non-competitive, on the beach near the Venice Pier, Venice, CA. Sponsor and contact: Let's Fly a Kite (c/o Gloria Lugo), Fisherman's Village, 13763 Fiji Way, Marina del Rey, CA 90291, tel: (213) 822-2561.

# 29

**6th Annual Windsor Hills Fall Kite Fly**, Crimea area, Leakin Park, Baltimore, MD. Sponsor: Windsor Hills Neighbors, Inc. Contact: Bruce L. Godfrey, 4202 Prince George Rd., Baltimore, MD 21216, tel: (301) 542-7562.

## November

# 1

**Todos Santos**, All Saints Day or the Day of the Dead, Santiago de Secatepequez, Guatemala, traditional day of kiteflying over hillside graves to release the souls of the dead.

To send us your date, request our Calendar Information Form. Events listed must be open to adults. Listing does not constitute endorsement by AKA, but is done as a service. Events are free and competitive unless otherwise specified. Schedule is subject to change; visitors should verify dates beforehand.



## DEATH OF THE ROTOKI INVENTOR

We have recently learned with much regret that Stanley E. Albertson, Jr., former AKA member and the inventor of Rotoki, an ingenious form of rotor kite, died at the age of 61 in Dearborn, MI, on October 19, 1977. He was born in Detroit on September 24, 1916.

In common with many other AKA members, Mr. Albertson as a youth enjoyed building and flying conventional kites. His dedication to the design and the flying of kites persisted despite the demands of his automotive engineering vocation-of-maturity in Livonia, MI. His creative urge to develop a unique concept in kiteflying compelled him to devote many spare-time hours to researching, developing, testing, patenting and ultimately offering his brain-child, Rotoki, as a commercially available manufactured product. Two patents involving Rotoki, 3,026,073 and 3,255,985, are on file in the United States Patent Office.

Rotoki was incorporated about 1960 and lasted as a happy family "cottage industry" venture for about six or



Stanley E. Albertson, Jr., inventor of the Rotoki, in the family fabrication facility in the 1960's.

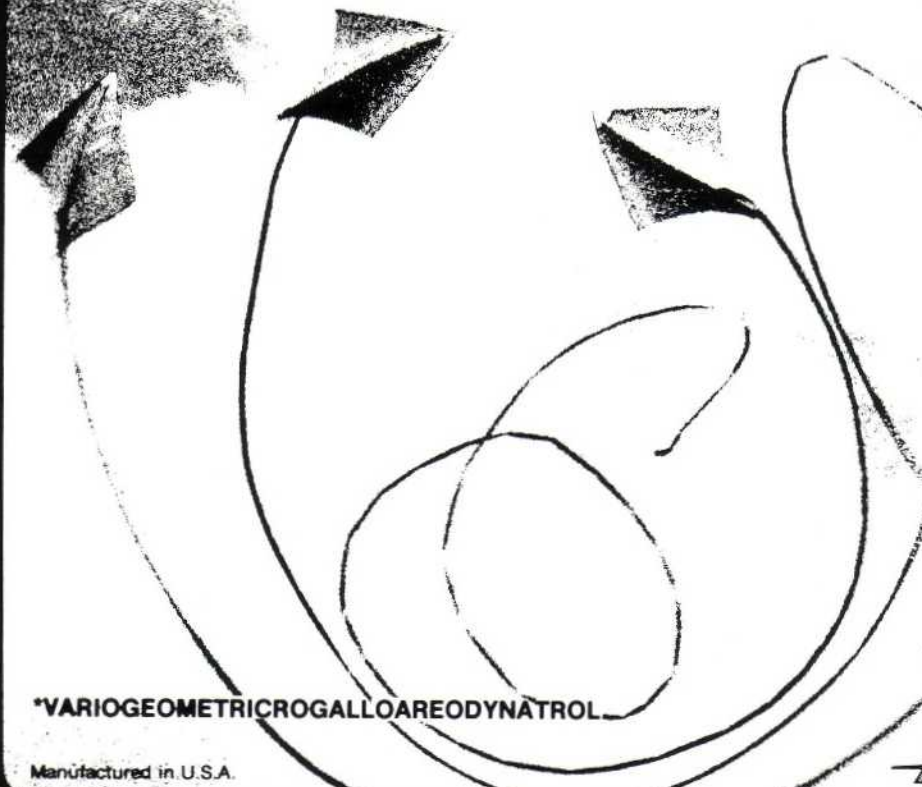
seven years.

Surviving specimens of Rotoki are much prized by their owners not only for their rarity but because the kite represents a distinctive development-effort in the rotor kite genus.

Knowing of my great interest in the history and development of rotor kites, William V. Gillmore, Mr. Albertson's stepson, reported the news of the inventor's death to me.

Guy D. Aydlett

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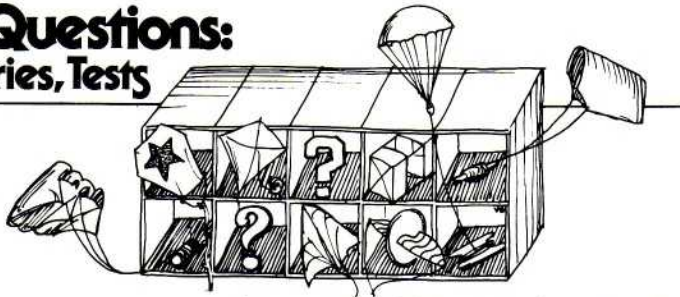
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# Ultimate Questions: Studies, Theories, Tests

## BRUMMITT'S BLASPHEMIES REBUKED

By Guy D. Ayddlett



As an erstwhile *keit flein* companion of genial Wyatt Brummitt (I have moved 450 miles south of his former residence in Rochester, NY), I am proud of his effort titled: "Kite Categories: Can We Divide and Conquer?" in the first issue of *Keit Leins*, Spring 1977.

Please note that I said: "... Proud of his effort"! Joyfully, I am joining those who may become a host of throwers of flack (and throwers of more disagreeable stuffs) and at least shall attempt to tingle his line-scarred knuckles with a friendly rap or two...

I am proud of Auld Reynard for his outright temerity in throwing his motley gage of kite categories in the teeth of philistines who have their own stubborn opinions on how kites should be classified.

One blackguard that I know insists Wyatt played eeny-meeny-miney-mo with his selection; that his paradigm was the rattled horseman, immortalized in our literature, who: "... Mounted his horse and galloped madly in all directions."

But I suspect Wyatt of sneakily trolling a line attached to an enticing lure of discord, slyly reasoning that he'd provoke spirited rebuttal, hangings-in-effigy and threats of mayhem from one extreme faction—and entice bouquets, prime steaks and bottles of Scotch from the other.

Since I prefer to control my blood pressure on one hand, and selfishly, thriftily enjoy the good things (hic!) with the other, I shall weasel through a middle course, nit-picking rather than launching the more traditional "slings and arrows."

One flagrant collop of heresy was Wyatt's persistent use of uncouth words such as (r---y) and (r---ies) in his discussion of *rotor kites*. Could they but know of his fall from grace, pioneers Magnus, Flettner, Tietjens, Prandtl, Thom, *et al* would centrifuge themselves into whirling, atom-busting tizzies!

As a matter of significant interest, Capt. Hornbeam Thatch and Beau-force Stringfellow disdainfully refrain

from entertaining any further discussion of Wyatt's "street language." The curious case of Braidy Lyons is still green in their memories:

That gullible young AKA member from Short Pump, VA, read Wyatt's article, took the nomenclature seriously, gathered together his entire fugal of *rotor kites*, and hitch-hiked all the way to Charlottesville (courting the hazards of John-Boy Country en route) to attend an announced meeting of a civic group called "R---y", whose motto is "Service." It was an honest mistake; the young lout had been misled into believing he was making a pilgrimage to fly kites with other *rotor-craft* aficionados! He was courteously received, enrolled as a member, and fined \$50 for being late to the meeting. Before he escaped, he was fined another \$100 for cluttering the cloakroom with empty telephone-wire reels—another victim of the tyranny of words.

I implore Wyatt, Ed, Bob, and other offenders to curb their improper language; their young disciples could go out in the world and suffer incalculable harm.

As to the greatness of Signor Bernoulli's contributions to the arcanery of fluid mechanics, there is not one iota of disagreement here; but Wyatt short-circuits Herr Flettner by denying him the greater share of the glory for researching, calculating, and reducing *rotor-lift* phenomena to practice. Let me cite you a parable:

Oom and Ooma, pre-Neanderthal spouses, contrived to fabricate a crude crosscut saw from flints, varmint's teeth, wood saplings and the sinews of the tough oornak beast. They sawed a slice from a hardwood log, invented the wheel, and as a spin-off, discovered pi. As the result of their genius, they are honored to this day for being principally responsible for the development of both the Model T and Mrs. Fancher's Fancy Frozen Farkleberry Pi's.

Back to Wyatt's article: He states: "... Further to complicate things, the autogyro's rotating blades are, themselves,

*perfect Bernoulli airfoils.*" (!) If undergraduate aeronautical engineers read that one, I'll be surprised if *Kite Lines* is not crammed full of opportunistic ads touting elementary correspondence courses in fluid mechanics.

And he left out a basic kite type (among others)—the *viscous drag* kite! Spiders know all about it:

*Aranea diadema*, a little garden spider, was born in our beech tree last spring. He thought the tree was his mother. He learned to spin, to set nets, and he waxed in health and size because of his diligence. But one day he got the wanderlust. On that same day, a local contractor and I stood by the beech tree and idly watched "Ara" as we discussed the prospective construction of a pool house. The little spider payed out a length of new-spun filament which wavered downwind a meter or two before it began to rise in a mild thermal. Eventually it passed over our heads and rapidly went up! Spellbound, we ceased talking and watched Ara, the resourceful, spin out more and more line as his "kite" continued to rise. At a critical moment, the little rascal quit spinning, seized the line, loosened his grasp on the beech tree (his "mother") and FLEW over our heads to finally disappear from sight as he went up and away towards Piney Mountain. "Why, that little son-of-a-beech!" exclaimed the contractor (who'd never heard of viscous drag).

Yes, indeed... Wyatt, would you classify Ara's Phase I as kiting? Phase II as hang gliding?

Undoubtedly other AKA members even now are deluging our spritely editor with reams of letters detailing similar gospel-truth phenomena with the aim of augmenting Author Brummitt's Categories. I hope she publishes their stories. ◇

*Editor's Note: One such story follows in the form of a poster because the author expressed his ideas in artwork as well as words. We are pleased to present this unusual bonus and are contemplating making the poster available separately. Readers and kite retailers are invited to request the poster and response will dictate its availability and price. Announcement of the poster's availability will be made in the next issue of Kite Lines.*

*AND NOW: To safely remove your bonus poster underneath, carefully unbend staples, pull out pages, then push down staples.*

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# GRANDMASTER™ KITE



The GRANDMASTER KITE is dedicated to Will Yolen. The world's greatest kiteflier.

By John Spendlove

**T**axonomy" (more properly "taxinomy," a form seldom used) is the science of classification. The word is used for systematic classifications, as of plants and animals. Can one order kites on so regular a basis?

Pelham in his *Penguin Book of Kites* lists "seven generic groups": flat, box, compound, sled, Parafoil and delta. In an article in the first issue of *Kite Lines*, Wyatt Brummitt gives an extended list, for, although he omits "compound" and substitutes "parawing" for "delta," he adds "rotary." He notes, however, that the modification of any one type under the influence of others means that classification is tricky, and getting trickier.

Is taxonomy, in fact, a good idea? Briefly, "if necessary." One who simply enjoys flying a kite from time to time would find it pointless, whereas one more closely interested might think it worthwhile. A retailer, for example, may list his stock categorically, for the benefit of mail-order clients. Any enthusiast may find classification either of intrinsic interest, or useful for reference.

A system based upon exemplars appears to fail because of the many variants and compounds available, as Brummitt says. It was reflection on a question raised by him which gave rise to my own analysis. He asks, "Does a flat two-sticker become a bowed kite when the counteracting forces of wind and tether drive back the wing tips?" The manner in which I avoid having to answer this question will be seen to be fundamental to the system I propose. I suggest that, detail being required, a more analytical method is of use, and submit the attached plan for consideration.

Approximately seven main points, listed below, are needed to describe many kites. Cellular and compound forms often require more detail; a

possible way of beginning to supply this is put forward later.

1. Basic characteristics: three groups —  
**Stable:** kites inherently stable without any form of tail. Anything from a Cody War Kite to a sled.  
**Stabilizing:** those becoming stable as necessary. The term covers fighters, and, although it may also describe other kites, I suggest that it be reserved for fighters alone, as the only type requiring controlled instability.  
**Stabilizable:** Kites inherently unstable, needing external stabilization. This is usually some form of tail; but the Flexifoil comes into this category, stability being effected with the control lines. Most other twin-line stunters are modified stable kites.

2. Details of any necessary external stabilization.  
 3. Whether a stunter (dirigible) or not.  
 4. Some details of frame, if any.  
 5. Certain details of design.  
 6. Further design details.  
 7. Bridling.

See the plan for details. It should be noted that not all choices are mutually exclusive; thus a kite may be both dihedral and plane in respect to different sets of wings, or both airfoil and plane. The Lamson Aerocurve (Pelham, p. 45) is an example of the latter case.

It is possible by using this method to classify kites which fall between two categories if the type-derived system is used. A Flexifoil, for example, is anomalous if classed as a Parafoil, for a "pure" Parafoil has no spar. Putting it in the class "airfoil" avoids this pitfall. Similarly, the distinction made between "bowed" and "bowed" referred to above, does not have to be answered. This is not merely evasion of the issue. There seems to be this implicit proposition behind the question: that such kites must be either plane or else bowed. With all respect to Brummitt, I disagree. The distinction put forward above is real,

and decreases ambiguity. At this point, it may be useful to clarify my term "partly-framed". By it I mean a kite which, like the sled, has some framework, but which still requires something other than the frame (namely wind pressure) to keep the kite in shape. The term should not be extended, however, to include kites such as Russell Hall's (Pelham, p. 211), on the ground that the wind shapes the mainsail. The term "setting (negative) dihedral" covers such a case.

Here are three specimen analyses.  
 1. *An Arch Top:* A plane framed keelless stabilizable static kite, flown with a string-and-bows tail, from a two-leg bridle.  
 2. *A Delta:* A static framed setting-negative-dihedral ventrally-keeled stable kite, bridled directly to the keel.  
 3. *A Flexifoil:* A stabilizable twin-line-dirigible partly-framed 10-stopped-cell inverse-bowing double-surface wind-inflated airfoil kite, bridled directly to each end of a spar below the leading edge.

It will be seen that the analyses are not specific, in the technical sense. Shape and most construction details are omitted, for example. Thus the Arch Top analysis could equally well apply to a "classic" diamond or to a lzenge kite.

I use the word "analysis" deliberately, for, although "description" is less technical, its use would obscure my point. This is: the fact that the first analysis applies equally well to three designs shows that they are indeed of a class. The details are sufficiently accurate for this purpose. Total accuracy entails complete description, and complete description would be specific rather than general. As I see it individual description serves a different purpose from that of general classification, and classification is of necessity a form of shorthand.

There is obvious clumsiness. The Flexifoil analysis is hardly poetic. Since, however, classification attempts to provide the maximum necessary detail in the least space possible,

technical jargon is inevitable. If it is used more in a written than in an oral medium, the clumsiness may be less of a defect than it appears — I hope!

The matter becomes less easy to handle when box kites and compounds are studied. The "Notes on Cellular Configurations" and "On Compound Cellular Forms" appended are an attempt to fill this gap, at least in part. I suggest that "cellular" and "cells" be used to mean open cells, unless the stopped variety are specified; this makes for a marginal decrease in jargon. Similarly a keel is perhaps best considered ventral unless specified as dorsal.

The "Notes," then, apply to box kites, and here they are fairly successful, even with extraordinary configurations. They can be used to analyze (just!) Lecornu's unusual cellular kite, depicted in the foreground of a photograph in Pelham (p. 68). An important proviso is that tetrahedral forms are not included. I guess that, if someone says, "I've made a 16-cell tetra," we can all visualize the kite. However, try analyzing Dr. Bell's "Oionos" (Pelham, p. 64 bottom right, p. 65 lower). It may not literally defy description, but it certainly defies mine. Perhaps an expert in this field can come up with a method of analysis for such forms.

Winged compounds offer so many possibilities that I fear classification may be so complex as to be of little value. Nevertheless, the notes appended on the subject are a beginning, and may stimulate others to consider the matter more successfully.

I make a distinction between fins, vanes and wings. The accompanying definitions will, I trust, clarify the distinction.

The question of how extensions are added to the cells comes up next, and, lastly, their shapes. The "Notes on Addition of Extensions" and "Shapes of Extensions" provide an attempt to deal with at least some of the possibilities. I need hardly say that not all are covered. I incline to the view that, while any compound may be described individually, there

are so many extant (let alone possible) that classification is well-nigh unattainable. Pelham, it is true, suggests "compound" as a category in itself; but this is so general as to be unsuitable for detailed analysis. Can his "Bat" and a Conyne really be held to be of a single class?

Here are some trial analyses. Three are given for box kites, then three for compounds, and finally, for the record, an attempted analysis of the Lecornu cellular kite mentioned above.

1. *Basic Box Kite* (Pelham, p. 188): A stable framed cellular kite, of the form 1 dia post 1; flown from a two-leg bridle.

2. *Blue Hill Meteorological Box Kite* (Pelham, p. 179): A stable static framed cellular kite, of the form 1 post (1 se super 1); flown from a line directly attached to the leading edge.

3. *Bell's Multicelled Triangular Box Kite* (Pelham, lower p. 192): A stable static framed cellular kite, of the form triangular, 1 inverted tangent in 1 post ditto; flown from a two-leg bridle.

4. *Early Cody Compound Kite* (Pelham, page 187): A stable static framed cellular compound kite. The form is a plane hexagon, of greater span than length, both dorsally and ventrally keeled in two places, post a cellular form, 1 dia se ad 1, radially vated as split lozenges; flown from a four-leg bridle.

5. *Prof. Waldof's Box Kite* (see sketch): A stable static framed cellular compound kite, of the form dia hexagonal, 1 vertically radial in 1 post ditto, radially vated as a series of split lozenges; flown from a two-leg bridle.

6. *French Signal Kite* (Pelham, p. 198): A stable static framed compound cellular kite, of the form triangular three-astern, horizontally vated as a split lozenge; flown from a three-leg bridle.

7. *Lecornu cellular form* (Pelham, p. 68, foreground of photograph): A stable static framed cellular kite, of the form (1 se ad 1) se super (se ad four abreast), se super ditto inverted, the

whole being dia tangent in 1. Bridling not clear from the photograph; the accompanying sketch seems to indicate a three-leg bridle, two legs being attached to the ends of the lower leading edge, the other to the midpoint of the elevation.

The use of jargon is again evident. It should be noted that analysis of a rear structure precedes that of a forward section. Some analyses are less successful than others; for example, that of the early Cody, no. 4, strikes me as less than ideal. I think analysis no. 7 — the Lecornu — is accurate enough, but it looks pretty baffling. In it, and also in no. 2, I have used brackets in describing the cellular format. I am not certain that it is necessary with the Lecornu; I can best clarify the reason in respect to no. 2. 1 post (1 se super 1) is a single cell behind two, of which one is on top of the other. If the brackets were omitted, it could be read as (1 post 1) se super 1. That would mean a very different form, the altogether less likely one sketched at the end of "Notes on Cellular Configurations, 2."

The limitation of the system proposed is shown by my being unable to analyze, for example, the Cody War Kite. Since its fore and aft extensions are connected, are they to be considered as vanes or wings rather than as fins? What is one to do with the fact that the upper forward extensions are longer than the others? If one takes the circumcircle of elevation to be that of a single cell, which is my intention, they are wings. Since, by my definition, it is span rather than chord which classifies a wing, does that mean that the rear extensions are merely part of the wings, by virtue of the connecting sweep of material?

Even a double Conyne, a simple enough compound in all conscience, occasions some difficulty. Analysis seems plain enough; it is "a stable static framed compound cellular kite, of the form 1 ad 1 post ditto, the cellular columns connected by a horizontal interface and the whole horizontally vated or winged as a split diamond." The problem is in

the phrase italicized. Since the dimensions of the cells sort vanes from wings, different proportions of cell used will make one Conyne type vated and another winged. Suppose the extensions are of 18-inch span, and the cells of 12-inch span by 18-inch for the other two sides. In this case, construction of the circumcircle shows the extensions to be vanes. If, however, the longer sides of the cell elevation are only 15-inch, the extensions are wings. Such fine distinction may well be a disadvantage. This demonstrates how hard it is to find a midpoint between over-vice categorization on the one hand, and too vague a classification on the other.

Reference is made in the analyses above to "split lozenges" and a "split diamond." These terms refer to the shape of extensions, and five of the most common are shown in the Notes on this subject. Their limited application, however, shows that rethinking may be valuable.

Pelham's book gives plans for around 100 kites, and contains pictures of perhaps 40 more designs. Despite my owning a mere fraction of this number, I have at least three not included in Pelham and can think of others I have seen or heard of elsewhere. No doubt my experience will be that of most readers.

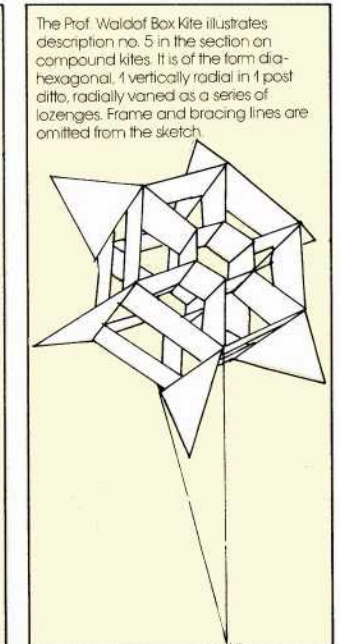
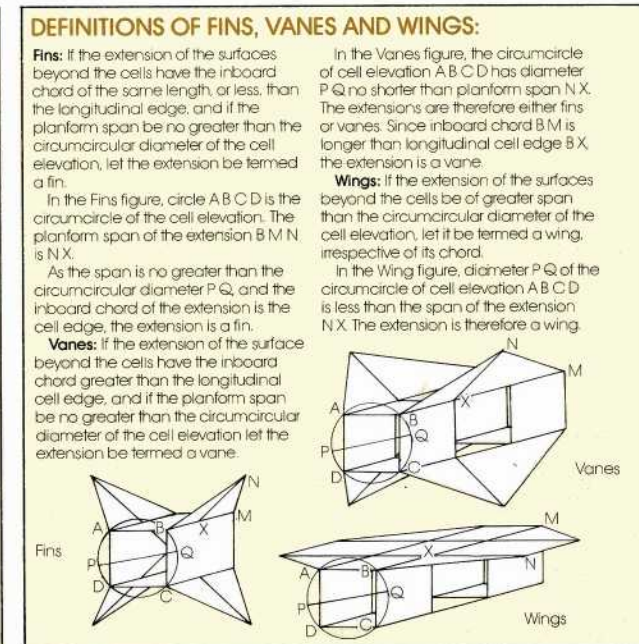
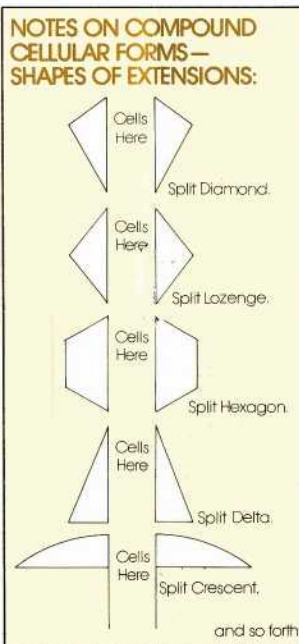
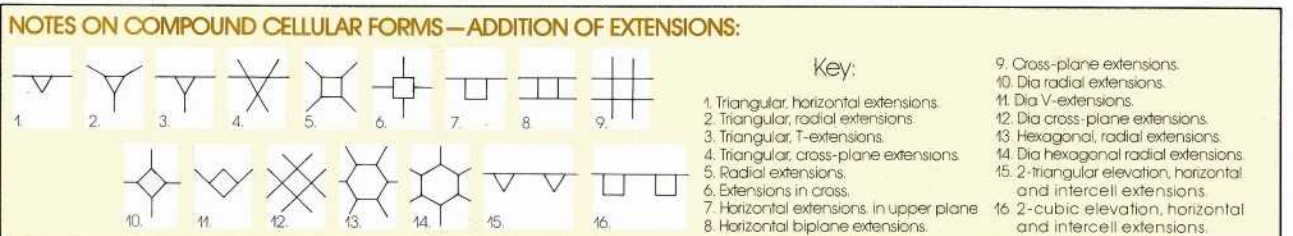
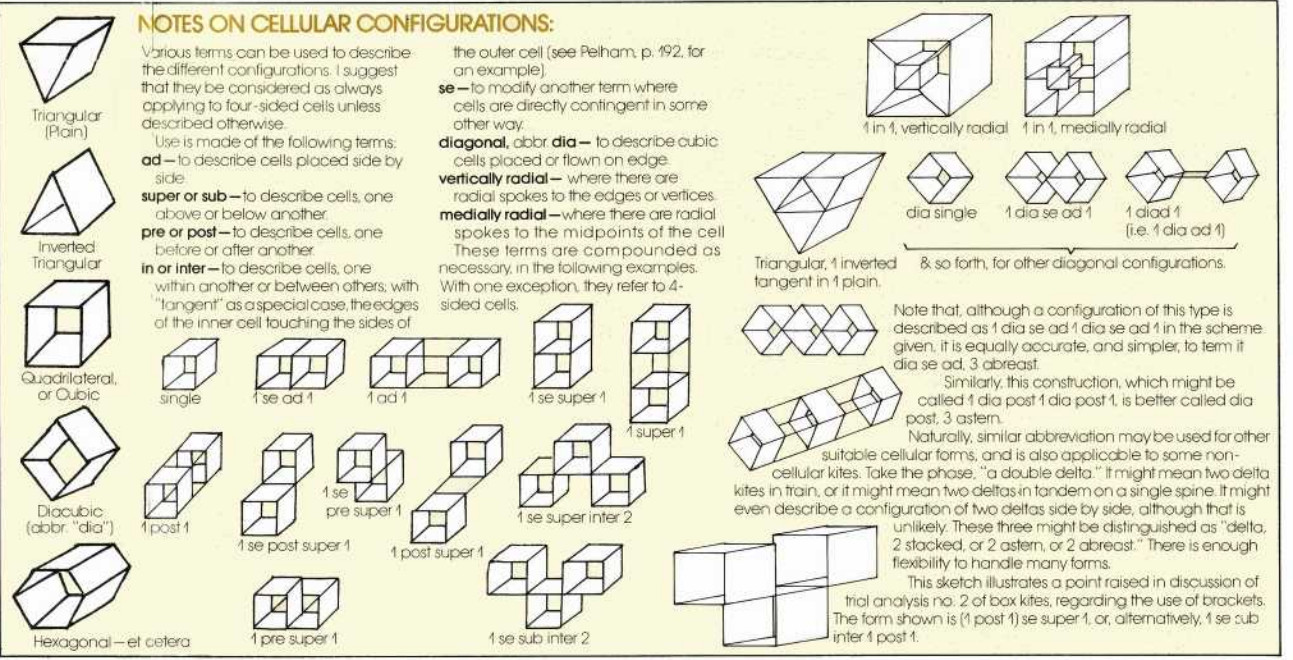
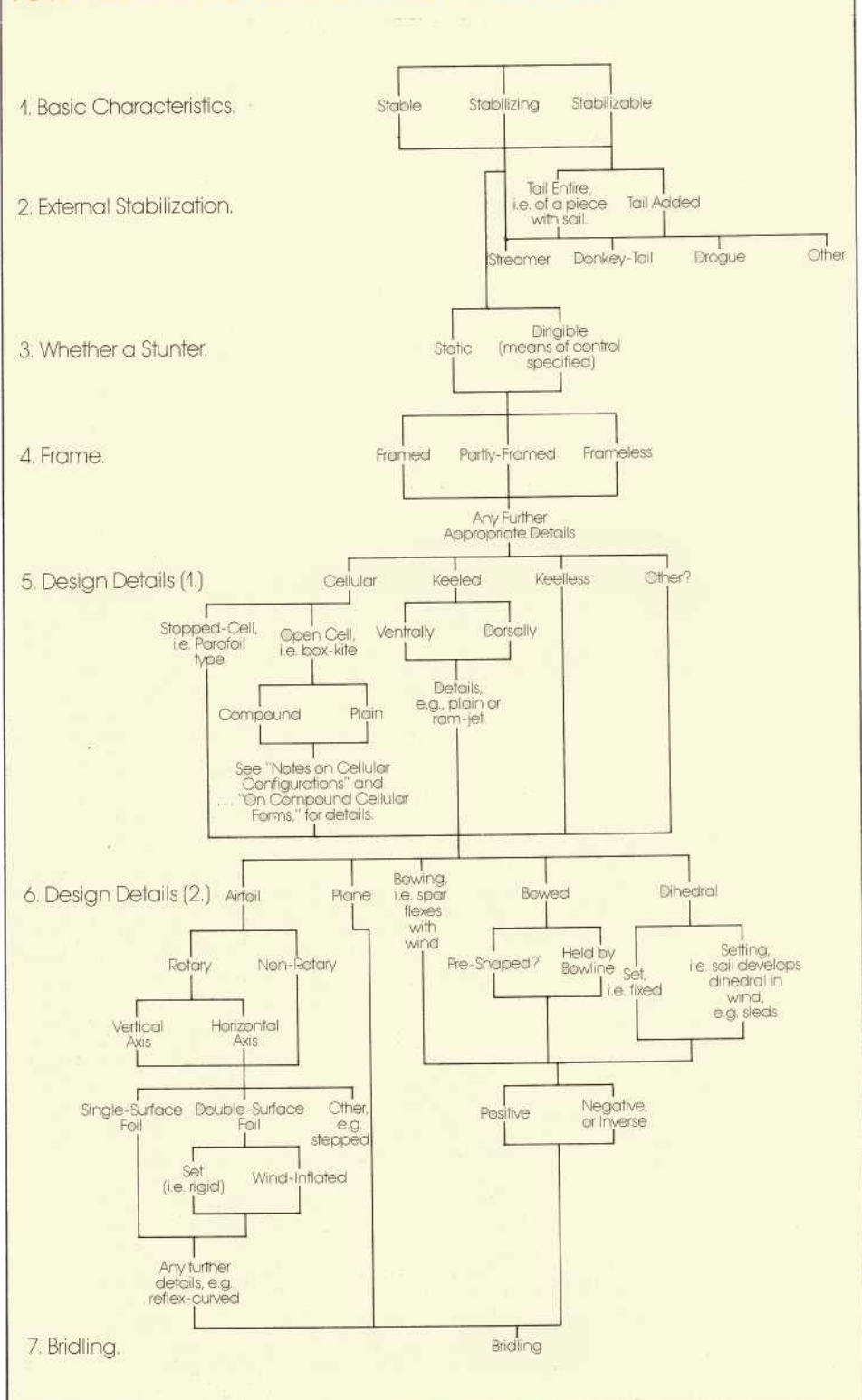
The analytical system given will not describe all the kites cited by Pelham; how much less will it analyze every kite there is. Still, it provides a way around some anomalies of the generic method of classification, and I hope it may be of use, if only as a jumping-off point for more complete treatment.

"Kiting, New York, 1976, p. 148.

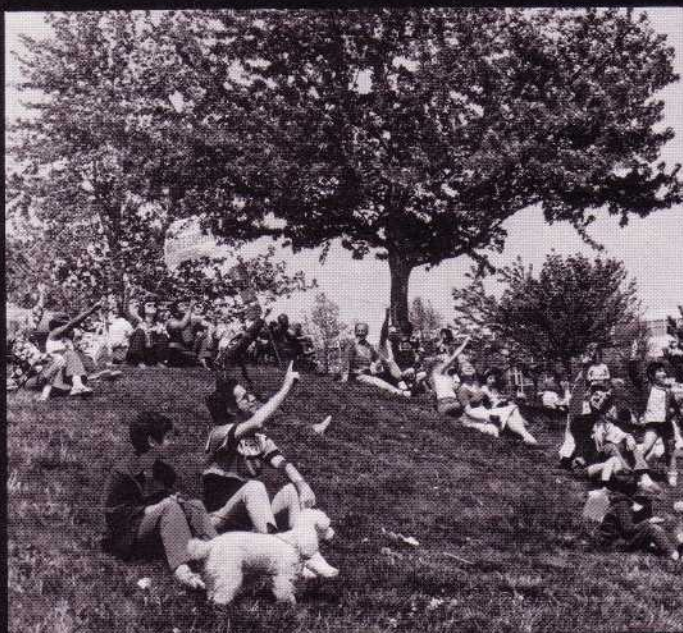
JOHN SPENDLOVE lives in Preston, northwest England, and over the past two years has gradually become more interested in kites. He has acquired 19 kites by purchase and 35 by construction. Among his home-built models are a 12-inch Russell Hall ("no good," he admits) and an eight-foot modified Eddy.

# Towards a TAXONOMY of Kites

## TOWARDS A TAXONOMY OF KITES — MAIN PLAN:



# New American Tradition:



Top left, "Most Entertaining Acrobatics Unconsciously Performed while Kiteflying" Award? Top center, winning sentiments bring honors to Lee Braswell's kite, here framing her husband, Red, while awaiting heavenly flight. Top right, a kite shop is the pit stop for a busy kite festival. At some events it may double as a kite hospital, too. It allows the unprepared to participate and helps parents entertain tots. Bottom left, publicists should not forget to "sell" a kite festival as a spectator event — which it surely is. Bottom right, queuing up is the vexation of many kite festivals. Organizers should strive to forestall lines and get kites in the air and off the ground. (Kite by Ahmad Nabi Naimi illustrates.)

# KITE FESTIVALS!

By Valerie Govig

Enjoy a sunny sky full of brilliant aeromechanisms over a crowd of jubilant fliers. Or suffer a spectacle of tangled lines and jangled nerves. You can experience a kite festival to fit either or both of these descriptions. Which kind you have in your area depends on several variables. This article will try to unravel them.

Because festivals bring to the sport of kiting its main portion of public attention, these occasions cannot be dismissed out of hand. There's excitement in the air at the 80 or so annual U.S. and Canadian kite festivals known to *Kite Lines*. The number of festivals is up about 10% from last year. In addition, the trend in kite festivals is to schedule them throughout the calendar; they are no longer regarded as exclusively a springtime thing. All this is good news for kitefliers.

However, kite festivals are fiendishly difficult to organize. That is why so many are done poorly and so few are done well. The reasons for this are multiple, but one is that the literature and culture attached to kiting are pitifully underdeveloped (as compared, for example, to baseball). Every kite festival organizer invents his or her own game.

An additional reason lies in the nature of kite-flying itself, a pursuit that uniquely combines diverse disciplines in art, aerodynamics, hand-crafts, sport and flying skills, all demonstrated under capricious outdoor conditions. Also the judging of the kite and the kiteflier is combined, mixing the sportsman and his or her gear together as in no other sport.

Another reason kite festivals are difficult to produce is that it takes a lot of personnel and planning in combination with the right physical factors and a degree of luck to do the job — and these are often scarce or at best hard to control. Yet at the heart of most kite events there is usually much good will. With this article as a starting reference, we can hope to see that spirit move with more direction. As kite festivals grow and become sophisticated enough to satisfy today's new breed of kiting enthusiast, the mutual benefits can be far-reaching indeed.

## WHY A KITE FESTIVAL?

Most kite festivals (about 70%) are competitive. It is very American to turn everything into a contest, and kiteflying is no exception. It is clear that for many kitefliers there is nothing like the thrill of the chase. Some enthusiasts plan most of their vacations and leisure hours around making kites, practicing kiteflying and hitting the top tournaments. There are certain personality types who thrive on recognition and competition.

Rather than resist these traits, a kite festival can be an opportunity to channel them and at the same time accomplish several other objectives. The motivations of the organizers bear scrutiny. Here are some which I've heard voiced:

## Reasons for Conducting Kite Festivals

1. To promote the sport of kiting and advance the state-of-the-art in kites.
2. To enjoy and exhilarate in kites (not always a simple thing).
3. To create good feelings among people about themselves and their community.
4. To provide a good learning opportunity for participants.
5. To promote community image and/or tourism for an area, park, resort or town.
6. To add extra color to an existing event or festival.
7. To raise money, as for a charity.
8. To give the kiddies something to do in March (the Cub Scout imperative).
9. To make the sponsors look good (the Jaycees imperative).
10. To fill out the dead spot on the recreation calendar between basketball and baseball (this was stated once, straight-faced, by a recreation director).

There are probably other reasons for conducting a kite festival, and it is well to ponder them because a clear idea of the ends is necessary in arranging the means. Incidentally, my listing of reasons in descending order from admirable to dubious is intentional, but wholly personal. Reason number one, for example, is in my mind wholly self-justified, a rationale unto itself. But someone else might regard learning or social health or economic benefit as first for him. Differing values are natural and make life interesting; but since in today's wilderness of institutionalized pressures there are few voices crying out for "kiting for kiting's sake," I feel a special duty to (ah, yes, Ohio\*) elevate kites.

## WHAT QUALITY OF KITE FESTIVAL?

Whatever the motivations of the organizers, the "best possible kite festival" is subject to community limitations. Where and when can you hold the event? How well can you succeed in enlisting others to carry out plans? It is very important to consider your community's resources and needs. What will be best in your area? What qualities should you seek in a kite festival? An event can be fairly judged only in relation to its goals.

Nevertheless, as something of a connoisseur of these things, I'm recklessly presenting a list of

qualities that I look for in a kite festival, though I know it is a purely personal list. Also some of the characteristics result from the realization of others. I have ordered the traits by their importance as I see them, and I fully expect — and welcome — disagreements.



Anneke Davis

The encouragement of innovation is the mark of a top drawer kite festival. Here's an example: Lt. Col. Bevan H. Brown with his "Revolution-airy" kite featuring carvings of Paul Revere and his men rigged to whirl about the Old North Church as the kite flies. Note the 13 spokes.

## Traits of a Good Kite Festival

1. Encouragement of innovation in kite making and flying
2. Spectacularity of kites
3. Competence of judges
4. Adequacy of facilities:
  - a. open space, free of hazards
  - b. public address system
  - c. lavatories
  - d. good turf
  - e. food
  - f. parking
  - g. kite hospital
5. Wind and weather (averaged over several years)
6. Quality of organization and judging system
7. Character, atmosphere, attractiveness of setting
8. Flexibility and/or appeal to kitefliers on all levels
9. Number of kites flown and number of kitefliers participating

\*Ohio Society for the Elevation of Kites

## THE LONGEVITY FACTOR

### a small essay

What is the life expectancy of a kite festival? From our observations, one thing is sure — they often outlive any one generation. It is interesting to look around America and see how many really old kite festivals there are — oldies but goodies, of course.

As with wine and intellect, mere aging is not a guarantee of quality in kite festivals. It is nevertheless a trait that deserves high respect. Anyone who has ever directed even one kite festival will know that. The second and third years are a particular challenge to maintain the momentum. During subsequent years a foundation of habits and expectations should develop among enough people to carry a festival forward, perhaps indefinitely. But because this continued desire cannot ever be taken for granted, any kite festival that recurs annually is praiseworthy.

In some ways it is more difficult to perpetuate a kite festival than to create one afresh. The media, for example, having heard your story before, will send a second-string reporter who may stifle a yawn while asking what's new at the old annual kite festival. Well, everything is always new!

Kite festivals depend not only on weather but on interested people creating kites for days or weeks beforehand. Festival news releases may state that there will be beautiful kites, unusual kites, hundreds of kites — but the remarks are an act of faith. How can the organizers really know? The kites are not a reality until the participants come forth with them. Attracting those participants each year is another challenge, for which the media must recognize a share of responsibility.

Another hazard of time is attrition among volunteers. Some may come to feel they have done enough over an arbitrary number of years or that they are unappreciated or not vitally necessary.

Offsetting these negative effects are the positive values of experience and improved smoothness of operation. Of course, the desire to improve will bring changes in formula which may cause temporary upsets along the way.

In sum, a community that can maintain a kite festival for many years should be saluted. The



Long Beach Recreation Dept.

### Honor Roll of United States Kite Festivals at least 25 years old

53

Kiwanis Kite Tournament  
Sac City, Iowa

53

Jacksonville Kite Tournament  
Jacksonville, Florida

52

Long Beach International Kite Festival  
Long Beach, California

50

Zilker Park Kite Tournament  
Austin, Texas

48

Carmel Kite Festival  
Carmel, California

30

Ocean Beach Kite Festival and Parade  
San Diego, California

History has repeated itself many times since this 1937 picture of the Long Beach (CA) Kite Festival, then in its 11th year. President Roosevelt was popular; he had just won his second election.

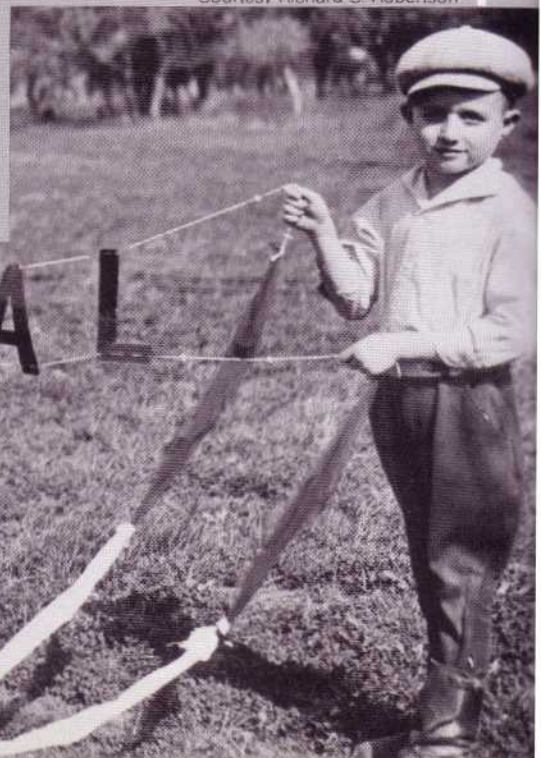
following Honor Roll is an attempt to do that.

Kite Lines will update and rerun this list from time to time in appreciation for the committees that conduct these annual kite festivals. (But just in case any of them become unduly self-impressed, we remind them of Japan's amazingly resilient kite festivals, beginning with the Hamamatsu Kite Festival, approximately 403 years old!) The accompanying Honor Roll is presented with great humility.

VG

The 50-year-old Zilker Park Kite Tournament in Austin, TX, on its 8th year in 1936, Texas's Centennial year. Ten-year-old Charles Gorin won the medal for "Unique Kite."

Courtesy Richard S. Robertson



CENTENNIAL



Innovation on display: Michel Berard of Le Cerf-Volant Club de France attends a British Kite Flying Association rally in London with a large double triangle box kite with topsail and bridle spreader bar.



Bill Kocher

The inventive Vincent Brown at 15 years in 1976 holds his registration card in mouth and his space ship kite in hand.

10. Prizes given (prestige, size and appropriateness)
11. Community benefit
12. Longevity
13. Number of spectators
14. Media attention

### WHEN A KITE FESTIVAL?

March is a typical time to hold a new kite festival in the U.S. Long-established events are apt to be held later in the year. The reason for this is that organizers learn from experience. Except in the South, March is not a month for reliable weather. Of course, March can have the occasional lovely day, but it should be overall pattern that you're looking for, to get the best odds. Kiteflying is a very weather-dependent activity — not only for the kites but even more for the people who fly them. The best advice you can follow is to study your local weather. Use weather department statistics, consult local farmers and talk to kitefliers who have flown for several years in your area. Don't be bound by tradition. Be open-minded. Consider one of fall's wonderful days.

Just what kind of weather should you seek?

First of all, avoid cold. People just won't come out in it, or if some real enthusiasts do they won't enjoy it as they should. Second, avoid typically rainy seasons. It is true that you can — and should — have a rain date, but it is always better not to have to use it. Lack of rain is not really ideal in itself, though; for our perfect day we want sunshine! Third, after cold and rain the next most disastrous weather is excessive, kite-crushing winds, followed by, fourth, no wind, the next worst condition. On a windless day you can at least use high starts and running launches (it's sad but you'll survive). Water-side locations may offer some insurance against no wind. (Incidentally, I have never heard of a kite festival failing from too hot weather unless it was accompanied by no wind.) In sum, finding the best weather in your area for a kite day is a matter of balance of probabilities. It would indeed be a challenge for a computer programmer.

Besides weather, consider setting your date (and rain date, too) to avoid conflict with other community events. For example, don't hold your kite festival on the opening day of baseball. Watch out, too, for religious holidays which fall at different times on the calendar each year.

You may feel that community acceptance will be stronger in the traditional spring, or in connection with a regular main event already established in your area, such as the Mardi Gras in New Orleans or the Seafair in Seattle. The reverse of that logic may apply, however. For example, Baltimore's Preakness Festival has such a long list of associated activities that the Maryland Kite Society avoids holding its festival then because its publicity would be drowned in the sea of attractions. For them, using a different weekend gives them a sporting chance in the media race.

The main thing to avoid, though, in setting a kite festival date, is running in competition with another kite festival! Tread lightly if your area already has an important, well-established kite event. It may be better to help improve an existing festival than spread the interest too thin by starting another one. A single big, well-run kite festival is usually more valuable than several little ones.

On the other hand, there is not much conflict between kite events if they vary in style, atmosphere and ambition level. In an active community such as Seattle, for instance, it is possible to have three or more big events a year, well separated in time, and surround them with informal kite flies every week. That isn't too much. It is only when big festivals collide, with their heavy commitments of planning, fund-raising, personnel and publicity, that good feelings are damaged. Much depends on the local talent pool. Organizers need a nice sense of just how far they can go to avoid abuse of good will on the one hand — and neglect of enthusiasm on the other.

In my post at the helm of AKA, I note with pleasure that kite events nationally and regionally are well scattered across the calendar. Whether by accident or design, this circumstance allows the kite travelers among us — and there are several — to run a circuit each year with their latest kites.

In naming the day for a kite festival, always set a rain date, and include it in all publicity. Theoretically, a no-wind date would be good, too,

but it may be difficult for people to guesstimate whether it is windy enough or not. If you can persuade a local radio station to confirm your weather decision on the air, and you feel your community can respond to this, you have the best situation. The commonest choice for a rain date is the following week, same time and place. This gives you a better shot at improved weather. However, large events that attract contestants from great distances should have a next-day rain date whenever possible, for it's less disruptive to visitors and stands a better chance of retaining them. Any time you use a rain date, though, the committee must verify every personnel and equipment assignment to be sure each will appear as expected.

A final consideration in selection of a date is lead time. To plan a casual, simple event, four weeks' time can be enough, but larger events take more time, at least two to four months. For major international festivals, a year is the very minimum time necessary for planning. Much depends, of



Long Beach Recreation Dept.

A major kite event like the Long Beach International Kite Festival makes plans a year or more in advance. This enables distant visitors, such as members of the Japan Kite Association, to attend. Here a representative of the Association brings a special kite, a bumblebee with buzzer.

course, on the number of planners and the time each has to devote to the cause. Also a long-established event will be much easier to run than a brand-new one. A good kite festival, though, will never rest on its laurels. Shortly after each festival there should be a meeting for review of the past event and for setting the gears in motion for the next one. Action a year in advance may be essential for such matters as securing substantial sponsorship or reserving a popular field or park.

One last point, to answer the question of how much time to allow for the day: three hours is about the minimum and four or five hours is normal. Setting up the field beforehand and clearing it afterwards should be figured into the planning for field reservation purposes.

### WHERE A KITE FESTIVAL?

A kite event can be held in almost any community, but if you're starting from scratch you can adjust your plans to fit the population. I would like to see more urban areas holding kite festivals, for I am positive there are closet kitefliers everywhere just waiting for the stimulus of a big event to

show their surprising talents. However, cities are often very short of open space, and you need a lot of it for a kite festival. The larger the event the more space is necessary. For a big city festival you should not consider an area of less than five clear acres. Even a neighborhood festival will need two clear acres as an absolute minimum. (You'd be surprised at how tangled the lines can become in a seemingly ample space.)

In a major metropolitan area, there are sure to be a few kite buffs, so that a degree of sophistication in planning may be possible from the beginning. For a small town, you should expect fewer and less original kites. In any setting, however, you will find that an annually repeated contest gradually becomes a real force for the development of kite making and flying.

After determining size of field in relation to population, you should seek a site in a good wind pattern (fly a few kites there first to see), with no trees, wires, antennas or tall buildings in the way and without heavy traffic nearby. Good turf is important, too, not only for aesthetics but for safety; people (regrettably) often run backwards while kiteflying, a practice which turns bushes or ground depressions into treacherous obstacles. Check also to be sure the field isn't in the path of an air traffic pattern so the Federal Aviation Administration will be cooperative when you call them later. It's helpful if the field is near easy-to-find highways or landmarks for the convenience of visitors. A central location may be important. Lavatories and parking should be adequate. Electricity may be wanted for a public address system (an important element and much superior to voice guns), and perhaps also for cooking food. Scenic quality and character of the site should be considered, too, as rewarding to kitefliers and photographers alike.

### WHAT'S FIRST ABOUT A KITE FESTIVAL?

Approach your kite day by marshaling all the kitefliers you can find in your community. If a kite club or AKA chapter is already active in your area, consider yourself lucky. If not, look around; talk to the recreation department, the local newspaper and/or the library to find kitefliers — or people with related interests: arts, crafts, model airplanes, science, weather. Check appropriate schools, colleges and/or industries for instructors and professionals in sculpture, aerodynamics and so on. Consider appealing to kitefliers through your local newspapers. Once you have your kitefliers and potential kitefliers identified, call a meeting and have a brainstorming session. This group will be the nucleus of your committee and will help as judges and other personnel in advance of the festival and on the field that day.

One of the first tasks of the committee will be to draw up a budget and find a source of funds. A kite day can be self-supporting, but there is risk involved. For example, if food and kite sales booths are set up at the field, the profit from these can support the event's expenses. The expenses, though, must be paid in advance, and cloudy weather may produce smaller crowds and lower profits one year. A recreation council is the kind of organization that can absorb these risks. Individuals should not. However, the council may or may not be a help with the added manpower

that is needed at booths for a self-supporting festival. Will your band of kite enthusiasts want to spend the day aslosh in mustard or soda pop instead of flying kites?

Alternatively, the local recreation department may be able to handle outright subsidy for the event. In many cases the committee will have to work with recreation professionals when requesting use of a field or equipment, such as tables and chairs and public address system. Professional recreation directors can be an enormous help — or more drag than a heavy kite tail. In any case, they will seldom know much about kites. My advice: don't count them out, for they may learn fast, but don't depend on them for everything either.

Besides recreation bureaus, civic clubs such as the Lions may be willing to foot the costs outright or at least handle the manpower and risk elements for a self-supporting day. Different arrangements are used in various communities. A tourist promotion bureau or a large business might underwrite the festival for public relations benefit. Many radio stations (e. g., WIND in Chicago and KYTE in San Antonio) sponsor kite festivals, a striking coincidence that I have never understood.

Another scheme for funding is that used by the Committee for the Better Use of Air in Boston, MA. The Committee undertakes balls, auctions and such to raise funds for the Great Boston Kite Festival — much in the manner of society groups raising funds for the symphony or art museum.

A desperation solution is to charge entry fees to the kitefliers at the festival. I am opposed to this because I feel that the kites people bring are their tickets. Flying should be free, especially for children. In any case, entry fees, unless exorbitant, usually will not begin to cover expenses.

Sponsorship rightly conceived is more than a financial transaction. It is involvement and assistance in planning and running the day — an expanded energy base. It represents commitment and is not to be lightly accepted. Although a core of kite buffs should be the technicians for the festival (and will, incidentally, be a convenient buffer for the sponsor in any disputes over prizes), the right sponsor can do a great deal for a kite festival. Often the sponsor will have a complete publicity studio, for example. The initial planning should start with the assumption that, barring fiasco, the kite festival will be an annual event and the relationship of sponsor and volunteers will be ongoing. Thus, the first year involves an extra step, searching for a sponsor, that in subsequent years may not have to be repeated.

Incidentally, it is best to have a single sponsor. One, two or at most three names is all you can expect the media to mention, if that, and a long list of sponsors dilutes the value of each name on the list.

### HOW MUCH A KITE FESTIVAL?

All planning starts with some kind of budget, and that certainly includes kite festivals; you will need to have concrete figures to recruit a sponsor. Here is a rough guide to an inexpensive local kite festival, based on a crowd of 500 to 1000 people (including spectators as well as participants):

Expenses	
Prizes, trophies, ribbons . . . . .	\$70
Publicity: circulars, news releases . . . . .	90
Field supplies: registration cards, certificates of participation, kite hospital supplies, judges' information, clipboards, etc. . . . .	60
	<b>\$220</b>

Donations  
Public address system, publicity, artwork, photography (not every committee might be so lucky)

Receipts (if self-supporting)	
Food sales profits . . . . .	\$160
Kite sales profits . . . . .	60
	<b>\$220</b>

This is a modest budget (the Maryland Kite Festival costs between \$500 and \$1500) and for a large affair could be increased in all aspects, not necessarily proportionally, for every budget is as individual as communities and people are. The budget given is mainly a reminder list of the kinds of expenses to expect if you are starting from scratch.

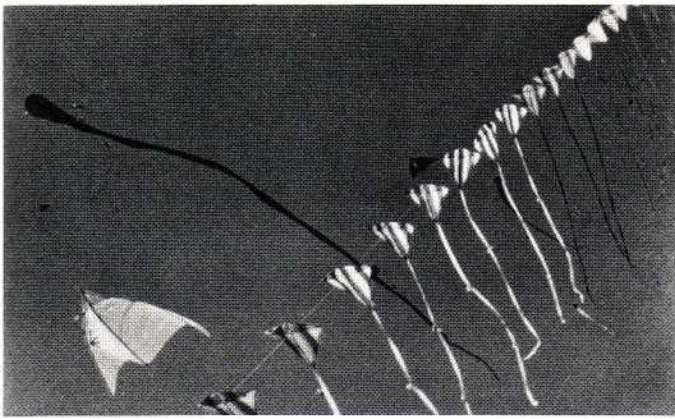
### WHAT STYLE OF KITE FESTIVAL?

Kite festivals presently in operation seem to fall into five general types: (1) noncompetitive; (2) comprehensive judging; (3) field events; (4) maneuverable kite contests; and (5) kite fighting. Many factors affect the choice made by the organizers. Field, facilities, personnel support and — especially — the local kiting population are some of the factors. All plans the committee makes depend on the style initiated for the day.

The five types of kite days listed are not necessarily mutually exclusive. Combinations are possible, but of course a more complicated festival makes more demands on the organizers. Each style has different advantages and disadvantages.

**A noncompetitive kite day**, planned just for fun and with no judging, can be very successful. The Venice Pier Kite Festivals in California, organized by Gloria Lugo each season, are outstanding examples of the good noncompetitive fly. Although the only real expense is publicity, this becomes more important when there is little or nothing spent for prizes. Gloria works hard for coverage, and the event has become well-known and well-loved as a social and sharing event for kitefliers in and near the area. A noncompetitive festival needs little headwork for advance planning, but much legwork for publicity as a compensating attraction.

You can modify a noncompetitive format by introducing frivolous prizes or humorous ribbons or certificates. For this you need a number of hosts/hostesses or observers (we won't call them judges) to roam about the field and be sociable and quick-witted in recognizing interesting kites and kitefliers. This is essentially the pattern followed by the Great Boston Kite Festival, an affair that is so huge and unstructured that careful deliberations are abandoned in favor of "awards" made on a casual basis by strolling committee members; the "winners" are announced later by public address. A popular embellishment of this format calls on the kitefliers themselves to name their own awards. Wild stories can come from this routine, resulting in such awards as "Most Creative Tangle," "Longest Rescue Run," "Best Swimming Kite" (if near water), "The



REGISTRATION AND SCORE CARD, OWNER-MADE KITES DIVISION			JUDGING CATEGORIES	
<b>The Maryland Kite Festival</b>			each scoring 1 to 20	Judge's Initials
SPONSOR: The Maryland Kite Society Baltimore, Maryland			DESIGN AND INGENUITY	Scores
PLEASE FILL OUT THIS SIDE OF CARD (and please PRINT)			CRAFTSMANSHIP	
Name (first, last)	Age	Birthdate	BEAUTY	
Address	Zip	Telephone	LAUNCH (QUALIFIED? Yes ___ No ___)	
School and Grade (Business or Group if entering Class E)			CONTROL	
CLASSES (Circle One)			RETRIVAL	
A. Primary (through 3rd grade)	C. Secondary (junior and senior high)	D. Adult	GRAND TOTAL SCORE <input type="text"/>	
B. Intermediate (4th to 6th grade)	E. Group or Business (Kite as Advertising)		KITE DESCRIPTION AND JUDGES' COMMENTS:	
FOR FAMILY AWARDS write your family name here:		WHERE did you learn about the Kite Festival? Check:		Type
How many in family are entering? (Must be two or more members of two or more generations)		<input type="checkbox"/> Radio <input type="checkbox"/> School Flyer <input type="checkbox"/> TV <input type="checkbox"/> Newspaper <input type="checkbox"/> Poster <input type="checkbox"/> Direct Mail <input type="checkbox"/> Friend		Color
				Decorations
				Tail
				Rest
				Size
				Advertising
				Special Effects
				Handling

The Venice Pier Kite Festivals are held each year very successfully with "no rules, no fees, no judging." Sponsored by the Let's Fly a Kite shop in Marina del Rey, CA, the day attracts a spectacular train of multicolor Eddys by Bill Everett and Eva Creek.

Charlie Brown Award for Best Fed Tree," etc. The imagination of people given such an opportunity is inexhaustible.

A very simple routine that works well is to have the observers personally hand out ribbons on the spot to nearly all kites of any distinction - in fact to nearly all kites! These ribbons may be printed whimsically with such exclamations as Wow, Fantastic, Super, Smashing, Outasight, etc. In every case where I've seen them used, these ribbons have been received with delight - and even saved from year to year. I recommend this system for organizers lacking in one or

more of the critical basics, such as expertise, funds, personnel or lead time. This kind of event offers nearly effortless fun and will not promise more than it can deliver. Its drawback, like that of any noncompetitive festival, is that it can never be taken seriously or become a wholly satisfying event intellectually.

**Comprehensive judging** usually won't have the shortcomings of the noncompetitive event; it will have its own disadvantages. The emphasis of this system is on kites made by their fliers.

For this style of day, the contestants register and then carry their kites with their registration-score cards past a round of judges who specialize and score points on different aspects of kites. (An alternative and less flexible arrangement calls for sending the judges past the assembled kites.) The last judging is for flight performance. After the kites are flown, the scores are totalled, giving a

relatively objective, analytical overall score. Comparisons are made between total scores of all kites within an age division, so the more age classes you have the more ribbons and prizes you can give. More age groupings and more awards are always better. Also, youngsters do not compete with older entrants (a basic principle in any competition). The highest score achieved in overall judging should earn the best and biggest prizes or trophies you have to offer. In my experience, comprehensive judging is the fairest way to judge kites, and it is smoother than other ways, too. I might venture so far as to say that, in principle and especially for owner-made kites, it is the method of choice. It is also easy to set up on the field, physically, as well as satisfying, psychologically.

The categories of judging and the apportioning of points relate to the kite qualities the organizers want to encourage or reward. Some committees have copied the system of the annual Kite Carnival

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**Judging for Design at the Smithsonian Kite Carnival in 1976. Here the standard holds complexity above originality, and a canny contestant will build a kite with lots of sticks.**

on the Washington Monument grounds sponsored by the Smithsonian Associates, National Capital Parks and DC Recreation Dept. and directed by the Historian Emeritus of the National Air and Space Museum, Paul Garber. Scores from 1 to 10 are earned in Design, Ingenuity, Craftsmanship, Beauty, Take-Off, Climb, Angle of Flight, Stability and Retrieval.

The Maryland Kite Festival's version combines Design and Ingenuity into one category and has only three flight performance categories: Launch, Control and Retrieval. Also a Maryland departure is the number of points per category, 1 to 20. The range needs to be sufficient for judges to differentiate without mental blurring, which causes them to "round off" scores.

The procedure for comprehensive judging calls for the contestants to go to the field in turn, giving their score-cards to the flight assistants. There is no penalty for requiring help with launch; quite the contrary, the organizers will have planned to have at least one flight assistant to help each flier individually. A panel of two or more flight judges using flash cards will score on each aspect of performance and the flight assistant will record the points on the flier's card. This structure encourages good quality in flight judging. There are other systems, and I grade them as follows:

**Worst method:** one judge observing several kites



**To what lengths, indeed, can a tetrahedral kite go in competing for the Largest Kite award? At the WIND Radio kite festival in Chicago in 1977, this question was replaced with: Does this kite have any competition in the race for Most Spectacular Crash?**

at once; **next worst method:** a number of judges observing several kites at once; **better method:** one judge observing one kite; **best method:** a number of judges observing one kite. If in using the "best" method the judges confer among themselves, the effect is for one judge to decide – and the method slips back one level. All the judges need to work. This will minimize error and maximize objectivity and expertise.

Besides awards for overall points in each age class, many special awards can be given, but organizers should introduce them with care, especially if the categories are judgmental. Having measurable and objective standards will keep you above criticism, though staying strictly with objective areas may be unsatisfyingly timid. For example, almost every kite festival wants to name the most beautiful kite. And it should; but this is also the aspect most apt to be criticized, since everyone has a different concept of the beautiful. The Long Beach Kite Festival presents a Spectators' Choice award. It can be adopted to serve partly as a means of offsetting this kind of criticism.

What is a good list of special awards? The answer to that is another question: How many awards can you really judge, fully and fairly? The Smithsonian offers a long string of 17 special awards.

The Maryland Kite Festival's list of special awards is more limited, and half of them are strictly objective: (1) largest kite (in any dimension, but square feet of lifting area has been used some years); (2) best-flying three-inch or smaller kite (vs. "smallest kite," which leads to disputes over what constitutes "flying"); (3) oldest flier; (4) youngest flier; (5) flier from farthest address; (6) most ingenious kite breakdown and assembly; (7) best advertising kite; (8) wittiest kite; (9) most beautiful kite; (10) best asymmetric kite; (11) highest average scoring family; (12) spectators' choice.

Awards numbered 6 through 10 require special judgment and recruiting of extra judges. Beauty is judged as part of the comprehensive scoring, so extra judging of it is unnecessary; however, ties among high-scoring kites may have to be broken. For this purpose, a brief description of each kite is written (and/or sketched) on each registration-score card so that the judges' memories can be easily jogged in making further award decisions.

The Smithsonian Kite Carnival has for many years awarded trophies to its numerous special

category winners, but without involving extra judging. Its system is simply to allow each kite to register in a maximum of two of their special categories and award the kite as best for its category if it achieves the best comprehensive score. There have been times when the kites with the best comprehensive scores were not the best in their categories but selections have been monitored more closely in the last couple of years. Organizers need to recognize their responsibility for making judgments on the qualities they purport to be rewarding. In other words, special categories must have special criteria and special judgments.

**Field events**, on a time-scheduled or heat system, are the basis of many kite festivals. A typical format runs different categories of judging at half-hour intervals, such as Largest Kite at 11:00 a.m., Most Beautiful Kite at 11:30, Altitude at noon, and so on. This system is easier on the organizers, since awards are disposed of in neat compartments, comfortably spaced over the day, instead of piled up at the end of the festival. Contestants accumulate less anxiety, too. For a really large crowd, this is a practical routine and of course it is the only way to handle competitions related to flying skills. However, heats have the disadvantage of being inflexible. Each kite is limited to a specific category. Adjustment among categories is not possible, and scoring on an overall basis is difficult. Achievement for younger entrants is likely to be limited because age divisions are hard to observe when the number of kite categories is already extensive.

Essentially what happens with heats is that individual attention is lost and curve grading will apply rather than absolute standards. Categorical statements are dangerous, but here is one: judging several kites at once reduces sensitivity in the judging. This applies to all aspects, but especially to flight performance. If the festival organizers are concerned for recognition of flight quality in making awards, they will see that performance is judged one kite at a time. If scarcity of judges forces them to depart from this high standard, a simple qualifying time of one to five minutes of flying is an option.

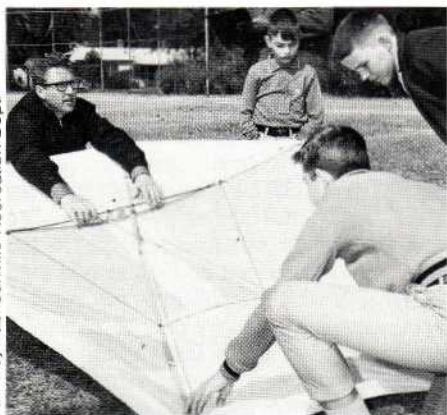
Scheduled heats, though, are appropriate and necessary for contests of skill, as in altitude, pulling power, kite "drag" races, reel-outs, reel-ins, duration, etc. Efforts of these kinds can be most readily compared within prescribed time frames. Also, field events like these are the only meaningful kinds of competition for fliers with commercial kites. Even if purchased or received kites are permitted to enter comprehensive judging, for design, craftsmanship and beauty they are likely to be discriminated against.

Here a fundamental question arises: Should kite competitions be open to owner-made kites only or to commercial kites as well? The answer depends on the general nature of the event – and on philosophy. Do you want to encourage people to come out at the last minute and fly whatever they have in a spontaneous way? Are you primarily interested in furthering the state-of-the-art in kites and do you want to direct your resources mainly to that end? Will you be selling or giving away kites at the festival and do you believe those who buy the kites should be

able to compete using them? Is your community already supportive of arts-and-crafts and aerodynamic enthusiasms? Is yours a well-established, well-funded event with a regular large crowd, or is it a new or small-town event seeking to attract maximum numbers, including novices?

Let us suppose the committee's decision is to permit entry of commercial kites, yet the organizers want to encourage home craftsmanship. Can a comprehensive judging system be open to all kites? Yes, and it is not as outrageously inappropriate as it might seem, especially for new festivals, where not many handcrafted kites can be expected.

The committee must agree first that a kite in which the owner has vested personal crafting efforts can't be compared to any purchased or received kite. This is not because a purchased kite is inferior (it may itself be handmade or even beautifully machine-made) but simply that for purposes of a contest any kite made by the entrant is superior. On the basis of this assumption, the scores can either be graded by the judges to favor owner-made kites or increased by a multiplier on the score card, such as double the score for "made with physical help of another person" or triple for "made entirely by the flier." After a few years, when kite making has caught on in the community, the kite festival can separate comprehensive judging to apply only to owner-made kites and hold some field events to cater to fliers of purchased kites.



Courtesy Jacksonville Recreation Dept

**At the Jacksonville (FL) Kite Tourney of 1969 (the event's 44th annual running), a finely crafted model competes for Largest Kite. If it fails, will it have a chance for recognition on craftsmanship? Multiple award opportunities are a feature of well-run contests.**

Sometimes field events are the choice from the beginning or will be the whole focus of a particular festival. There are a number of contests of skill you can run on the field. One or two of these are ideal for a Cub Scout day. A large turnout may require running of elimination trials and finals in each event category. Contrary to information in various kite books, there is no point in grouping entries by kite types for any of the field events with which I am familiar. Also, all ages normally compete together on these (with the exceptions noted). I have planned kite field events locally and observed kite games at other festivals over several years and I think the following are do-able activities. Doubtless there are many others and I make no claim that this briefly annotated list is definitive.

### Some types of field events:

Pulling (or Lifting) Power, using a weight scale. The field judges may measure one of these:

- (1) simple pull; or
- (2) pull compared to area; or
- (3) pull compared to kite weight; or
- (4) simple lift, calculated from pull and angle of flight; or
- (5) lift compared to area; or
- (6) lift compared to kite weight.

Choice of method will depend on the fancies of the field judges recruited to carry out this contest. The average contestant will not care as long as the standard is consistent.

Messenger Event, a simple contest for kids. Issue slit cards or looped ribbons to the kite-fliers with their kites flying on a minimum line length and instruct contestants to place the cards on the line at a signal. The first, second, third or more to have their "messages" reach their kites' towing points will be tapped by roving observers.

Dropping for Accuracy. Organizers can mark the field in a bullseye pattern and provide sacks of flour or other drops along with release mechanisms for contestants to borrow.

Duration (popularly and well dubbed Endurance), an event that varies with the wind. Unless you are encouraging contestants to go for the world record (presently seven days and two hours), you should set a cut-off hour, such as midnight. Workable rules set by the Galleon gift mall in Nags Head, NC, for its annual July contest provide for the flier to hold the kite line throughout and to have a five minute break each hour. Running to maintain flight may or may not be allowed, but is poor form in any case.

Most Kites on One Line. AKA proposed guidelines state that all kites must fly, must be approximately the same size and must be retrieved to count. This event consumes lots of space, time and manpower and can result in severe tangles and controversy. Better hold this on a separate day or impose a time limit on it.

Climbing Speed Contest or Reel-Out, using measured line to a specified length, such as 200 feet. A test of flying skill and kite lift. Standard loaded reels may be loaned to entrants while they are clocked by stopwatch. Maximum size of kite and angle of flight should be specified in the rules and contestants may be disqualified for not rewinding all the line neatly on the reel after the timing. Awards should be divided by age groups. (These suggestions are from the system developed by A. Pete Ianuzzi.)

Kite Dash (not to be confused with the disfavored practice of running to get a kite up). In gentle winds only, on a measured course (such as 100 yards each way), fliers must have kites out on a minimum length of line (say 200 feet) and run (or walk) with the wind, without taking in line, and back, against the wind, to the starting line. Groups in the same age class may compete or individuals may run against a stopwatch.

Reel-In, a contest of reels and of talent with reels. Assistants help launch kites at a pre-measured distance and the contestant reels in the line at his or her top speed. Tangled reels may cause disqualification. Age classes should be observed. Groups may compete in heats or

individuals may race against a stopwatch.

Triathlon, a three-part big event made up of three little ones, Climbing Speed, Kite Dash and Reel-In. In this case, however, the borrowed reel used in the Climbing Speed event is used for the Reel-In. Age classes apply. Heats of groups are better and more fun than individuals against time.

Kite Assembly Contest, for use with small groups of children in age divisions using identical un-assembled two-stickers, cord and tape or glue. On signal, contestants start assembly. No physical assistance is permitted except for launching release, but plenty of verbal advice and encouragement may be given. The winner is the first to assemble and fly his or her kite on at least 50 feet of line (kite must fly, not dangle.) May be done outdoors or indoors adjacent to a field.

Drag Races. We have never done these, but have speculated that we would do a cross-water drag by tying uniform sections of two-by-fours to kite lines at a specified distance from the kites. The winning kite would be the first to haul the wood from one side of the harbor or pond to the other.

Though space does not permit exhaustive treatment of kite games, perhaps we can explore them in future issues. Probably the most popular field judging is for altitude. Though some sophisticates disdain it, others think it is the whole point of kiteflying.

Altitude. There are several creative ways of measuring this. (It should not be necessary to



Anneke Davis

**An altitude event conducted using a measured height. Sighting is done while a reading is taken of the angle. An additional reading is charted and trigonometric calculations determine altitude. Left, Curtis Marshall sighting; right, Rick Kinnaird, reading.**

mention that any self-respecting kite contest will not confuse altitude with mere length of line out.)

Your festival resources and the number of participants will determine whether judges use an observed height or a measured height. A basic decision is whether to judge altitude within a specific time limit. If the time is short, say less than three minutes, you may in reality be judging climbing speed rather than unrestricted altitude.

The easiest and quickest (not the best) way to judge altitude is simply to "eyeball" the kites at a scheduled time of day. The judges, in their authority, observe the kites and pronounce one the highest. When you have one kite clearly flying above the others this method is indisputable.

If, however, you have several kites in contention

After 2500 years, someone finally invented

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A slot in top of the frame enables you to feed line evenly across all four paddles. Prevents strain and crossed line blockage.

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Two tension bars in the slot help prevent the line from looping over paddles on to the shaft.

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KiteWinder works equally well for right or left-handed persons.

## Win kiteflying contests

Most kiteflying contests are judged on the basis of how far and how fast you can get your kite out. KiteWinder puts your kite into the windstream almost immediately; allows you to let out line as rapidly as the wind will pull it. Enables you to outfly contestants using old-fashioned reels.

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You can put almost a mile of line on KiteWinder. Enough to fly your kite out of sight if you wish. Or fly several kites in tandem.

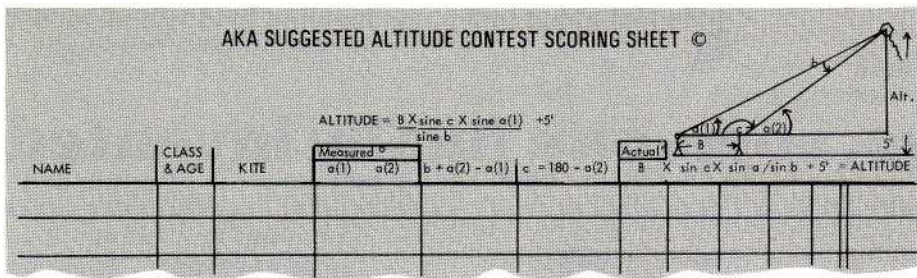


**KiteWinder** is made of polypropylene reinforced with fiberglass and will withstand great pressure without distortion or buckling.

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for honors as the highest – and especially if the kites vary in size, thus throwing off depth perception – the judges may be hard put to name a single winner. An outside observer, perhaps with binoculars, is thus desirable for more accurate judging or as a buffer against disputes on the field. This outside observation requires the right situation, such as a nearby hill, tall building or helicopter. At the Long Beach Kite Festival in California, a police helicopter cooperates for this purpose and lends a moment of drama to the day. The police radio a verbal description of the highest kite to the beach below and that kite wins.

So far the altitude judging methods described depend on the contestants being in a certain place at a certain time. If you want to free your event from this restriction or if you wish to undertake a more "scientific" approach, you can measure the altitude of the kite entries. This can be done with plenty of open space, good turf and two competent people to take measurements. No consideration is given to amount of line out, size of kite or any other factor; even the age of the contestant is normally disregarded.

This method was used at the Maryland Kite Festival in past years, before the site was changed to a field next to a hill. Bill Bigge, Mel Govig and Nat Kobitz worked it out. It contains no great mystery but so far as we know has never been published before.

This method for measuring altitude calls for observing and recording the angle of elevation of the kite at two points, a measured distance apart, in direct line to the kite. Taking these two angles and the distance between the sightings, with trigonometric calculations the judges determine the elevation of the kite above the line-of-sight, then add the height-to-eye of the observer (approximately five feet) to arrive at the actual altitude of the kite. The sightings are done with a gravity level (available in a hardware store) attached to a straightedge or gun sight for greater accuracy in alignment on the kite. You can also use a rangefinder, but only the expensive ones will work because the accurate range required will always be over 500 feet. A rangefinder will give you distance to the kite but you will still have to measure one angle and calculate the altitude. After the sighting judge locates and sights the kite to be judged, using the level, the recording judge reads and records the angle to the nearest 1/10th degree under the column a (1) on the accompanying chart. Using a measured line or premeasured pacing, the sighting judge moves across the field in the direct line to the kite. The recorder will be sure he or she stays in a straight line. The recorder then enters the distance in column B. The second angle is then sighted and recorded and the results entered

under column a(2). Calculations can be done at a later time if there is a press of other kites to be judged, but the judges should check to see that the data are entered in columns a(1), a(2) and B. Judges should note that if a kite changes altitude during measurement a recheck is necessary. Also if the differential is small between the first and second readings, the judges should extend the baseline. (A specific baseline is included in the chart's formula, but judges may use what works best.) Sightings should be made at an angle of less than 60 degrees if possible to avoid the inaccuracy of high-angle sighting and calculation. About 30 to 45 degrees is best. No calculation is included for uneven terrain; everyone takes a chance on this. As final advice, we suggest that judges check their calculations against reality from time to time by eyeing the kites. I've seen this method produce strange figures on occasion – one kite was recorded as flying underground – and when it does the judges must remeasure.

**Maneuverable kite contests** are a new branch of kiting competition in America, grown out of the stunter kite phenomenon that began with Peter Powell's kites which were brought from England in 1975. The two-line control idea was not new (witness Paul Garber's highly controllable Navy Target Kite and reel used for gunnery practice at sea in World War II), but the aggressive marketing of good ready-to-fly equipment to adults was new. The sport of stunting represents a new wave of kiting enthusiasm that is still going strong. There are now at least 17 "imitation" Peter Powells, or variations of stunter kites, available commercially.

Stunters must be handled with respect, for they are very space-consuming and people-threatening as they dive and swoop over the terrain. Only a festival with ample space and good crowd control systems should incorporate a stunting event or demonstration into its program. Also only good wind (10 miles per hour or more) can accommodate most stunter kites.

Those provisos aside, stunter contests are certainly fun. Development of competition standards for stunters, though, is even newer than the kites themselves. Probably the first formal U.S. attempt to score stunting techniques occurred in Ocean City, MD, on October 25, 1975. I was one of the judges and was impressed to find that the system worked out by Bill Ochse ran smoothly. The essential features were: a backdrop for visual aid in comparing maneuvers, several judges, a point system, specified maneuvers and standards for judging them.

In the Ocean City model, six 16-foot stakes were positioned downwind in a line about 100 feet long and a streamer was attached across

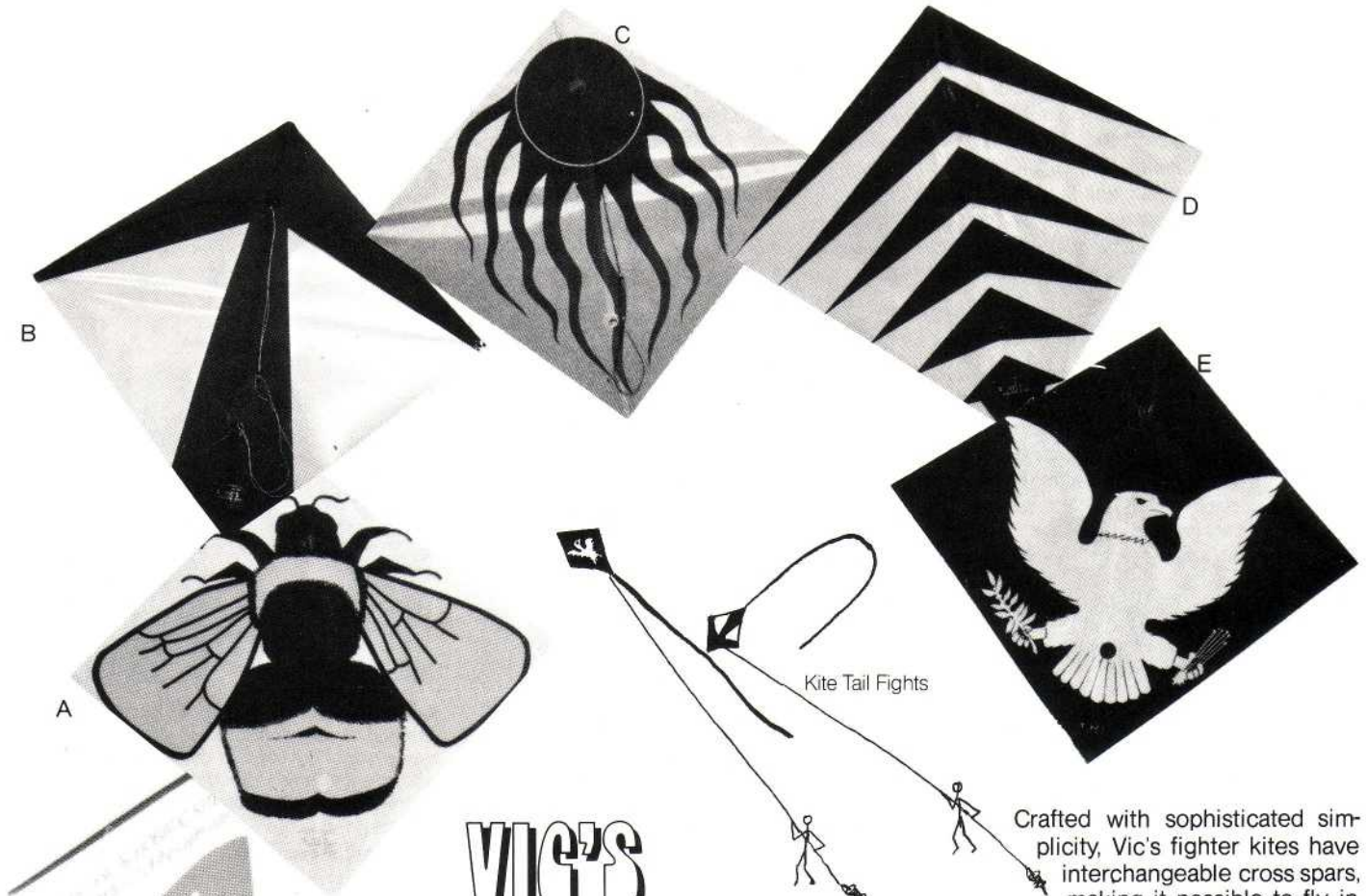
the top of the stakes. This line of sight was set 160 feet from the fliers' baseline and the kite flying lines were measured at 150-foot lengths, assuring consistency and a visual yardstick for comparison of kite maneuvers done immediately in front of the stakes. The exact measures are not as important as consistency. Three or more judges are needed, preferably persons knowledgeable about the kites, and in Ocean City four were used, one of whom was Peter Powell himself. The judges sat at a table on a flatbed truck, which gave them a good vantage point, and raised flash cards for scoring – an efficient system. Points from 1 to 9 were given (probably 1 to 10 would be more conventional) on four basic kite maneuvers. Three tries were allowed for each maneuver by each contestant and the average of the three tries was recorded. Afterwards the judges agreed that having three tries was excessive and slowed down the competition to no advantage. I think two tries or even one would be adequate unless the organizers want to use up time. The maneuvers on this day were performed piecemeal and not necessarily in any particular order. They included: (1) power dive; (2) vertical figure eight; (3) horizontal figure eight; and (4) horizontal flight, either left or right. Standards for judging were: smoothness of flight (breaks bringing a zero score), accuracy and degree of risk.

I believe the next logical development in judging of dual-line maneuverable kiteflying has arrived with Red Braswell's Pattern B (see page 57). The judging techniques of the Ocean City competition would apply, but the maneuvers would be patterned and increased in number; smoothness of total execution would be an added component. The success of the combined Ocean City model and a patterned concept will be tested in September, given good winds, at the Ocean City Grand National Kite Festival.

**Kite fighting** is fast becoming part of the American scene. In California, teams are engaging in round-robin tournaments, such as the one at the San Francisco Kite Festival in Golden Gate Park. Individual combat is catching on, too. The pleasure of mastering the control techniques and doing kite "dances" in the sky are themselves an interesting challenge. These kites now made in the U.S. of Mylar® are practically indestructible and have increased the options for kiteflying enormously. The main thing for festival organizers to remember about either two-line or one-line kite competitions is to clear the field for these events. This is a fundamental safety responsibility. In some places in India, kite fighting has been restricted by law because of grisly accidents with glass-coated cutting line.

#### HOW A KITE FESTIVAL?

Assuming your date and site are selected, sponsorship secured and a nucleus of kite buffs have a format in mind, the next thing is to divvy up advance jobs. A batch of sub-committees or a collection of hard-working individuals are needed in the following general areas: (1) judging system planning; (2) field arrangements and procurements; (3) awards; (4) recruiting, hospitality and invitations; and (5) publicity, including all



# VIC'S

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- B. Arrow, \$6.00
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- D. Fishbone, \$6.00
- E. Eagle, \$6.00
- F. Clear, (not shown — to paint your own!), \$6.00

**COLORS:** red, blue, green, yellow or black for all designs except Fireball (red/yellow on white) and Bee (black/orange/clear only).

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The jobs interrelate sometimes. For example, those who are planning the judging system will have to list the categories for the awards chairman. The publicity chairman will need to know the names of judges recruited, including special background information about them. The telephone will hum. I've made out some fancy manpower charts and logistical countdowns in my time, but I believe work methods would vary greatly from one community or committee to another. Instead here are a few miscellaneous tips.

### Judging System Planning

In planning the judging, don't expect the judges to know much about kites; they may know a great deal, but it's safer to underestimate. Provide them with a judges' guide a few days in advance. (I have an eight-page sheaf that is the first test of a judging staff.) An alternative or a supplement to a written guide, for some situations, is to have a judges' meeting in advance or a judges' breakfast the morning of the day. If you have a simple judging system and can call on a lucid, reliable instructor to give the judges a crash course on their jobs, you can skip the written guide. But it is very important that no judge be permitted on the field before he or she has been fully briefed on his or her job.

A written guide has the advantage that it can carry all the stored-up wisdom of the organizers in a form that can be studied carefully. It can cover the sticky questions, such as how to assure consistency, how to adjust for variability in wind and what is the standard for qualifying flight. The disadvantage of a written guide is that some people may not read it carefully — or may hardly read it at all (shocking but true).

Preparing the judging system also involves designing a registration-score card and formulating rules and regulations. A sample of the Maryland Kite Festival card appears with this article as an idea-starter. It is by no means an ultimate card. The committee redesigns it every year! The back of the card may be a convenient place to print the rules and regulations of the kite festival, and/or a list of the awards. Some suggested rules to consider are the following:

- Only kites made by their fliers may be entered in Comprehensive Judging. For young children, the kite must be substantially the work of the child and not merely decorated by the child. Scores will be graded with consideration for entrant's age.

- Kites purchased, received or made from kits are permitted to enter Field Events only.

- Kites must fly, to the judges' satisfaction (usually one minute), to qualify. In Comprehensive Judging of Flight Performance, if there is variability in wind the judges will adjust scoring.

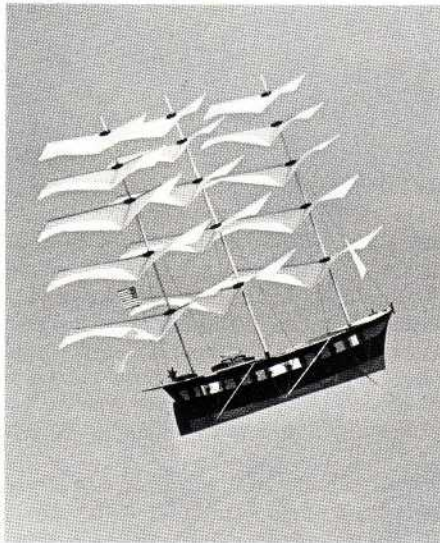
- Kites must be scored in all categories of Comprehensive Judging to qualify.

- Any one kite may be entered only once, by one person.

- A contestant may enter only one kite for Comprehensive Judging, except that he or she may enter several kites as one if flown in train or tandem. Entrants are encouraged to bring more than one kite, for different wind levels, but may compete with one only in the Comprehensive Judging. In the Field Events, a contestant may

use different kites for each event or the same for all, as desired, but may enter only once.

- There is no restriction on size or design of kites entered, except that no rockets, balloons, gas, motors, or electric, mechanically powered or explosive devices may be employed to assist



Anneke Davis

**A model of the U.S.F. Constellation in flying form using components of the Stratton Ghost Clipper kite kit. Made by AKA Life Member Dr. John H. Seipel of Fairfax, VA, for the 1976 Maryland Kite Festival, this ingenious kite won high scores and the crowd's applause. Some festivals permit kites made from kits to compete with owner-made kites. But festivals that don't should be flexible enough to allow for entries like this one.**

launch or maintain flight of any kite.

- It is the contestant's responsibility to leave his or her registration-score card with a field official on completion of scoring in order for his or her kite to qualify for any award.

- Placing kites of previous festivals may not enter competition in this year's festival. (Exact duplicate models of past winning kites are regarded as the same as past winning kites.)

- At the discretion of the judges, there may be more than one winner, or no winner, of any award.

- The judges reserve the right to disqualify any kite or kiteflier for reasons they deem sufficient.

Incidentally, the question sometimes arises of whether qualifying trials are useful. I think they are not only unnecessary but a bad idea. They drain time and effort in advance, all for the purpose of eliminating kites! It is hard to imagine having too many kites, especially if they are owner-made. Preliminaries would only put added risks on fragile kites, create rejections and prevent the kiteflier from exposure to the best source of inspiration for next year — the festival. It is wise, of course, to advise contestants to test fly their kites before bringing them and also to make more than one kite, for different wind speeds.

### Field Arrangements

What's needed on the field? Basics are tables, chairs, roping and stakes, signs and a public address system. A good p.a. system makes a great difference, especially if you have a talented,

knowledgeable announcer. Without announcements, people will not have the background to appreciate and really see what's happening.

Signs are important and should be made in advance for main areas such as Registration, Judging, Scorekeeping, Kite Hospital, Refreshments, Kite Shop and Rest Rooms. Subsidiary signs may also be made for judging categories and field events. Hazards can be noted by signs, too (e.g., Beware! Kite-Eating Tree!) Rules and regulations can be posted by sign if they are not printed on paper for participants. Directional signs for convenience of drivers on their way to the festival may also be helpful.



Bill Kocher



Bill Kocher

**Good communications are a basic at any kite festival. Some contests can make do with voice guns, but for a large crowd a public address system is recommended in addition to the guns. Left, Rick Kinnaird directing at the Maryland Kite Festival; right, Paul Garber at the Smithsonian.**

Thought should be given to parking needs, particularly to reserving space for workers who must haul heavy or awkward objects to the field.

Also needed are trash cans, two or three bull-horns for on-field communications and bleachers, if available. Smaller important items include clipboards and pens for the judges, assorted paper weights and a calculator for the scorekeepers.

Field arrangements will vary with the site. The sketch accompanying this writing applies to the Maryland Kite Festival held on the field at the Inner Harbor in Baltimore. Note the indication of a circle for the flight performance judging area, so that if and when the wind shifts during the day, launching alignment can be adjusted accordingly. Specific field layout will depend on terrain, prevailing winds and surrounding physical features, such as trees, streets and buildings. The illustration is suggestive only, to show ideas and relationships among the areas.

It's a good idea if the field arrangements allow for some way of sequestering the scorekeepers so they will not be subject to pestering by participants anxious to know if they won anything. A van, tent, adjacent indoor facility or roped-off area might be used.

The field chairman should also alert the local police in advance about traffic and parking jams. Your area Red Cross may be able to send a mobile first aid unit to save you safety worries. Don't forget to request air clearance from the FAA.

There are many extras you can incorporate into your kite festival, based on costs or philosophy. A food stand and a kite booth (with a good range of kites and plenty of line) are necessary services, as is a well-stocked and staffed kite hospital.

Continued on page 58 . . .

# Figure Kiting

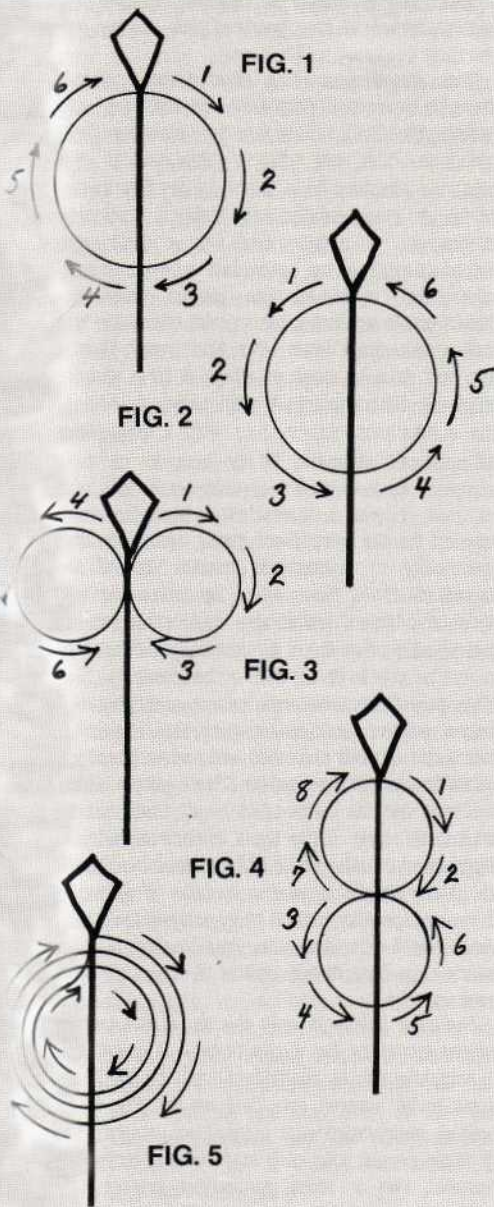
By Welka D. ("Red") Braswell

Are you in control of that kite? This question is often asked by observers who are not sure about a kite's acrobatics. Is the kite performing as the flier wants it to or is it out of control? Even experienced kitefliers are not sure of the operator's control over the kite or to what extent they are controlling the kite.

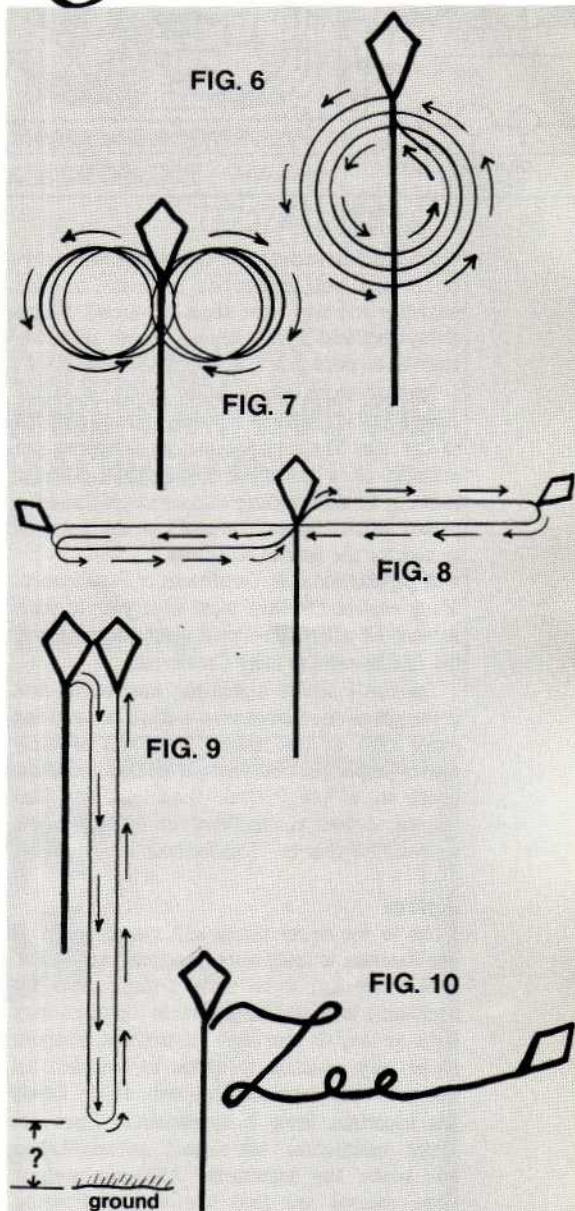
Figure skaters in competition perform in a sequence with one planned maneuver following another. Radio-control model airplanes are also flown in preset patterns. Therefore, I suggest that a system of patterns be used when flying controllable kites in competition.

Any number of patterns could be established for practice or competition. I would like to propose my flying pattern which I will call pattern "B". (I will leave pattern "A" for Peter Powell to develop.)

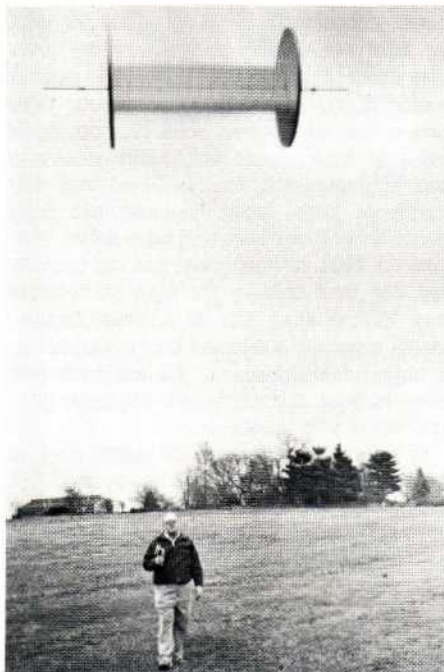
I would also like to suggest that judging of patterned flights be similar to that used for Olympic figure skating competition, insofar as the figures be true, smooth and flowing from one step to the next—points being allotted for accuracy of performance. Kites with long tails would be easier to score than kites without tails, as the tail follows the shape of the figure performed. ◇



**Fig. 1:** After the kite is in place and the tail is straight out, the flier makes a large loop clockwise using all of the tail to form a circle and ending back at the starting point. After stopping long enough for the tail to straighten out, the flier starts . . .  
**Fig. 2:** The same as Fig. 1 but counterclockwise. After stopping long enough for the tail to straighten out, the flier starts . . .  
**Fig. 3:** A horizontal figure eight with a clockwise loop running into a counterclockwise loop using all the tail to make the figure.  
**Fig. 4:** The same as Fig. 3 except it is a vertical figure eight.  
**Fig. 5:** A spiral of three loops with each loop smaller than the other and turning clockwise.  
**Fig. 6:** The same as Fig. 5 but counterclockwise.

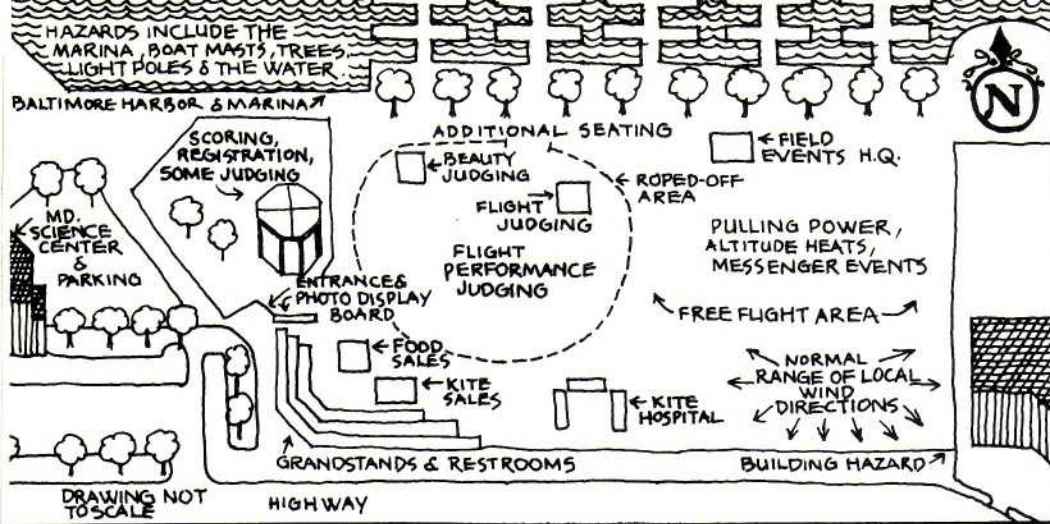


**Fig. 7:** A horizontal figure eight with three sets of loops placed one over the other.  
**Fig. 8:** Done by flying horizontally to the far right and holding there for five seconds, then turning and flying back, passing through center to the far left and holding there for five seconds, then returning to center.  
**Fig. 9:** A dive toward the ground keeping the tail as vertical as possible then making a U turn as close to the ground as you dare, and then returning, keeping the tail vertical.  
**Fig. 10:** Free form; that is, any stunt the flier desires to do, or his or her "biggie." The flier could write his or her name with the tail (as shown) or make a three-point landing



Left, Red Braswell of Manassas, VA, flies one of his favorite kites, a rotor.





... Continued from page 56

A band and clowns may be wanted. Balloons, sky-divers and hang-gliders can be invited to allay anxieties you may have about the crowd. I have always felt that if kites are not enough attraction there is no point in a kite festival.

Another extra item, rather costly, is taking color Polaroid pictures of each entrant and his or her kite. These photos can be numbered and mounted on a board for the crowd to view in balloting for the Spectator's Choice award. Later the photos can be given (or sold) to the entrants or kept for the festival scrapbook.

A popular extra is Certificates of Participation. Many contestants save these from year to year. Patches (if affordable) could serve as keepsakes, too, and be sewn to fliers' "scare coats."

Because I believe a well-run kite festival is a great gift to the community, I don't favor giving away kites at the festival. This will certainly attract people, but I have seen it create a detracting effect on a kite festival. Consistent with this opinion, I take a dim view of holding a kite festival "for charity." Kite festivals are a charity!

### Awards

I like to see many prizes and awards given at kite festivals, to bring more recognition and smiles. If a choice has to be made, I think these are preferable to a few large awards. Opinions vary here, as they do over cash vs. trophies. I happen to be very resistant to dazzle by trophies, but I'm not really impressed by cash, either. Surely the important thing is appreciation. There are many imaginative kite-related awards - kites, kite books, kite accessories, AKA memberships. Some awards are good fun: a ball of string, a "concrete" kite. I am aware of one ribbon manufacturer (Hodges Badge Co., Inc., Schoolhouse Lane, Portsmouth, RI 02871) that has a kite symbol it can print on your ribbons. For what they mean to your festival, lavish ribbons are relatively inexpensive.

In ordering ribbons, be sure to have an extra set of placing awards and other duplicates where your instinct says you may have ties. Organizers can and should try to avoid ties in setting up the judging system, but if they occur the fairest solution is to award them.

It is also good to have a few ribbons marked simply "Special," for those unpredictable happenings your judges should be instructed to look for. Ribbons and trophies can be rather constricting, lettered in advance as they are. Struggle against that effect. Be flexible, ready to recognize

anything deserving. Flexibility is an admirable goal - not easy to achieve.

Appreciation is an intangible that can also be expressed throughout the day - and should be. Judges and other officials should be instructed to compliment the kitefliers freely. This habit need not affect or reflect upon the fairness of actual scores. Try to be generous, too, in honoring requests for rescoring.

Don't forget your volunteers. They are there to be appreciated, too. Give them Judge and Committee ribbons and other suitable gifts. One of these, if funds permit, can be a buffet after the festival.

### Recruiting

When seeking help to run a kite festival, never forget that you are working with volunteers. It's an art in itself, fit for treatises of its own, but to summarize, remember that the degree of commitment to the kite festival will vary among individuals. Volunteers can and sometimes do simply not show up, perhaps without any warning. They will usually have what they feel is a good excuse, and no matter how you feel about it, you must accept these excuses. Be covered in depth. Eventually, a recruiter will learn from experience how much he or she can depend on different volunteers.

Who should be a judge? Ideally, only experienced, knowledgeable kitefliers. Have at least one judge per category and at least one extra judge (your most versatile one) to fill gaps at breaks. If you have only a few experts, place them in the key decision areas. You can invite artists to judge beauty and cabinet-makers to judge craftsmanship, but you need real kite experts to judge design, ingenuity and flight performance. If you have any extra bodies, reinforce the flight assistant crew; you will probably need the most help in the flight performance area. Have a chief judge to arbitrate disputes. Besides expertise, a desirable trait is adaptability in unpredictable situations. You will have such moments. Quick thinking people, cool under pressure, will be your salvation.

As for inviting celebrities, the mayor, the local weather announcer, etc., don't fool yourself that these people will work; they seldom will give you full time and usually are just window dressing. It is fine to invite them as long as you understand this.

How many people, in total, are needed to run a kite festival? A small new event could survive with 15 good workers, but more would be better. In

the last few years at the Maryland Kite Festival, the number of volunteers has risen from about 40 to 50. Numbers are not half as important, though, as ability on the job.

May the judges compete? Yes and double yes! Of course, they can't be permitted to score themselves; but the judges are chosen partly on the basis of the very talents they are judging. It would be a shame to deprive them or the festival crowd of an opportunity to display outstanding kiteflying.

This raises a question often debated. Should there be separate divisions for "professional" and "amateur" kitefliers? In answer, consider these questions. First, just what is "professional" and what is "amateur"? Is there inherently, necessarily or even usually any distinct superiority attributable to a kite made by a commercial manufacturer? Is an enthusiast who continually experiments with new kite designs really at a disadvantage against a commercial kitemaker who makes the same kites over and over? Does a kite buff gain as much satisfaction from winning when he cannot compete with the best, with all the contestants rather than with a preselected division of "amateurs"? My bias is probably apparent by now, but I am not really inflexible on this. I can conceive of a manufacturer's division for the purpose of giving special awards specifically to commercial models. But if the president of Hi-Flier wants to come out and fly his personal invention and enter as an individual rather than a company, I believe he should be able to do so, with no handicap.

As your festival becomes better established and draws people from increasingly greater distances, you may find that dedicated and expert kites will travel many miles to appear. These people should be regarded as pure gold and their talents capitalized upon. Invite them to consult, judge or demonstrate their particular proficiencies. Above all, don't make the gauche mistake of excluding them as "professionals." They may indeed raise the level of competition in your locality, a result which, far from being unfair, is a testimony to your success.

Securing judges is only the tip of the iceberg where recruiting for a kite festival is concerned. A complete list of positions should be made up. Some to be covered are: field set-up, four to six people; registration and information station, two or more people; kite shop staff, two or more; kite hospital, two or more; announcer, one or two; scorekeepers, two or more; certificates inscriber, one; awards manager and presenter, two; flight assistants, several; "gophers," several; field events directors, several (depending on number of games planned); clean-up, two to six people (and you might pay youngsters in hotdogs to help collect trash).

Another point: some volunteers will not be able to stay the full day, so shifts may be necessary in places. The kite shop is a case in point; its staff should plan to open early and close late, perhaps having a sale at day's end to clean up the stock.

### Publicity

Whole libraries have been written about pee-arr, but to simplify it in relation to kite festivals,

the thing to do is involve a good writer with a good feeling for promotion – and let him or her do it. (Publicity is like beauty: everyone has his or her own opinion. But it's still true that some people are better at it than others.) Publicity is critically important if wide participation is wanted, especially for a new kite festival. You don't want people to miss the day because they didn't know about it. Try to get early publicity – at least a month in advance – so people will have time to make special kites. A good publicist will help with and spur on the committee's advance planning. At the same time, though, he or she will project whimsy and keep the subject properly light. The publicist should work out a plan for timing and placement of news releases to all the media. If a legitimate excuse can be found for flying kites at the site in advance, you may be able to pull a TV story in addition to public service announcements. Part of the releases must tell when events are to take place on the field. If you advertise that your kite contest runs from 1:00 to 4:00 p.m. and people come at 2:00 and miss the altitude event at 1:30, it's your fault, not theirs.

What items must be printed? Circulars are essential. If possible, print them in quantity for distribution through the schools. Posters are good, but a luxury, costing not only money to print but time and effort to distribute.

Kite workshops may bring you advance attention, but don't expect the people who come to them to show up at the festival itself – surprisingly few do.

When the day of the festival arrives, the publicist's job isn't over. One or more good photographers must be out getting black-and-white photos for next year's publicity. The list of winners should be readied for the media if they ask (sadly, they don't make a regular practice of this). A crowd estimate should be made by a competent person; it will usually be at least three times the number of kite entries.

And by the way, drawing 50 home-made kites is a Big Day; 100 is Gigantic! Don't measure your success simply by number of bodies, and remember that the interest will build and the festival will improve each year. Keeping names and addresses of entrants and volunteers each year will help build a mailing list and may even be the start of a kite club. (That's how the Maryland Kite Society came to be; it wasn't vice versa, as some may have supposed.)

#### FOR THE LOVE OF KITES

Bolled down, my formula for kite festival success is this: F + F = F (Fairness plus Flexibility equals Fun). Fun is what will be remembered; a well-run kite day will conceal its own machinery. The memory of such a day can mean much to participants and spectators alike – children, teens, adults, senior citizens. The atmosphere on such an occasion cannot really be described or analyzed. For true believers, kites are already next to Mom, the flag and apple pie. A festival multiplies the kite joy. That rare mixture of art, sport and science takes on a social dimension as well. A kite festival is simply an experience without parallel. You may conceive a kite festival – but its life is entirely its own. ◇



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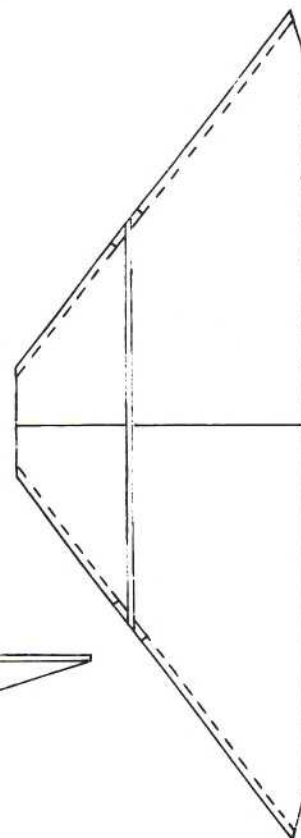
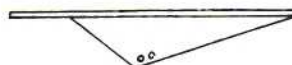
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# L'INTRODUCTION AU CERF-VOLANT CLUB DE FRANCE

Story and Photographs  
by David M. Checkley

Hospitable, enthusiastic and eager for new ideas – that's how I would describe the new Cerf Volant Club de France.

On Sunday, September 11, 1977, I had the privilege of flying kites with this group at the Polygon in the Bois de Vincennes, southeast of Paris. The Polygon, now a city park, was formerly a military training reservation, and

was the site of some of the first tests of French military kites in the early 1900's.

The Cerf Volant Club de France (Kite Club of France) now has about 30 members, mostly in the Paris metropolitan area. Approximately 50 persons attended the fly, including picnicking families and tail-gating kitters – very much like our local affairs in the States. A few arrived with long kites strapped to motorbikes, as in Japan.

I saw a multitude of fine kites, mostly fabric. Several were variations of the French military kite, large box kites (there was little wind, so some of the most spectacular ones didn't get off the ground), unusual Eddy kites with rotating outriggers, large Parafoils and a sophisticated version of the Rogallo Corner Kite with fiberglass spars and Velcro® fasteners for tensioning the covering on the frame. There were also several interesting reel designs and a very compact and effective aerial photography rig.

Michel Berard, second generation kite photographer, uses a miniature Rolleiflex full-frame 35mm camera, attached to the kite with a protractor-like support to establish the correct angle. The camera is activated by a lever linked to a kitchen timer, which had been lightened by boring holes in the base plates. Berard and his father have been making photographs from kites all over France for many years, and have carefully documented their experiments in permanent record books, detailing the equipment used, height of camera, angle, wind direction and speed, and light conditions. The quality of the photographs is remarkably good, particularly the ones taken with the new apparatus, just described. Berard's address is 59 rue Andre Laurent, 94120 Fontenay sous Bois, France.

Berard and his father also make hot air balloons, which the club flies when the wind is too light for kites. The balloons are made of wrapping paper, about 10 to 12 feet high, with aluminum foil insulation around the inside of the bottom opening. They are powered by hot air from a charcoal brazier, which remains on the ground once the balloon is filled with hot air — so there is no fire hazard.

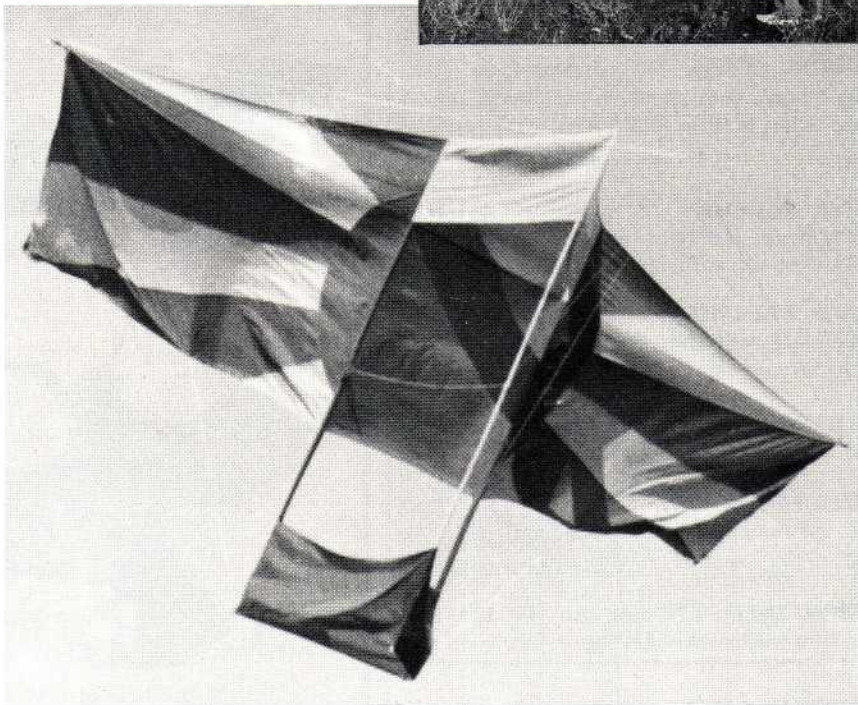
One of the outstanding kite makers in the club is Guy Gerard, who does his own sewing, mostly in rip-stop nylon. Perhaps the leading kite-making artist in France is Jacqueline Monnier, who flew one of her long-tailed creations for a few minutes before the wind subsided. Her kites were featured in the kite exhibition held by the Festival d'Automne a Paris in 1976.

My genial host was Jean-Louis Bouisset, President of the Cerf Volant Club de France, assisted by Bill Corson, one of the two Americans in the group. Bouisset was too busy organizing the event and making introductions to do much kiteflying. His address is 17 rue Lacharriere, 75011 Paris. ◇

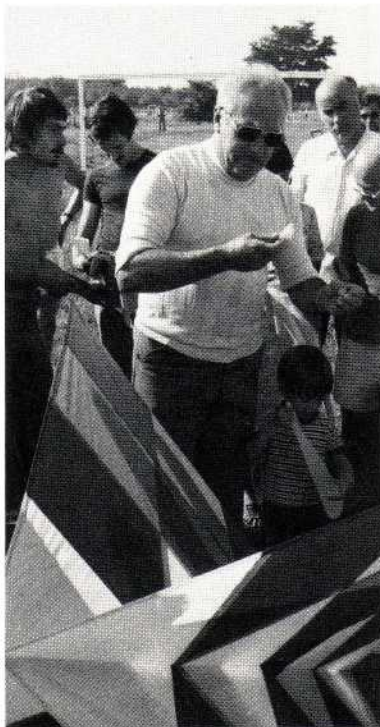
Meet the Club, *opposite*, including Jean-Louis Bouisset, the President, *left*, and Jacqueline Monnier, *right*, one of France's leading artist-kitemakers.

*Right*, Guy Gerard, back to camera, launches his sunburst winged box kite, in red and yellow nylon, at the Polygon, Bois de Vincennes, near Paris.

*Below*, the sun also rises.



*Below left*, the French kitefliers examine a multicolor Corner Kite made of rip-stop nylon and using collapsible fiberglass spars and Velcro® fasteners to attach the sails to the frame and to tension them. *Below right*, Michel Berard shows his aerial photography rig using a miniature Rollei, modified kitchen timer and adjustable angle support system. Berard and his father also make and fly hot air balloons.



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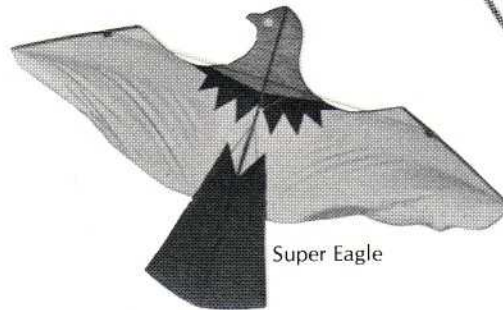
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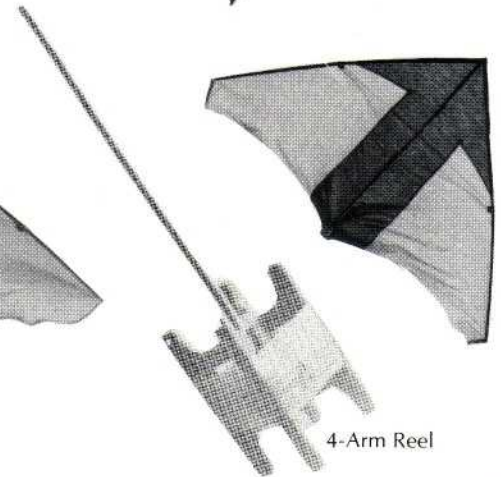
Black Bat-Chee



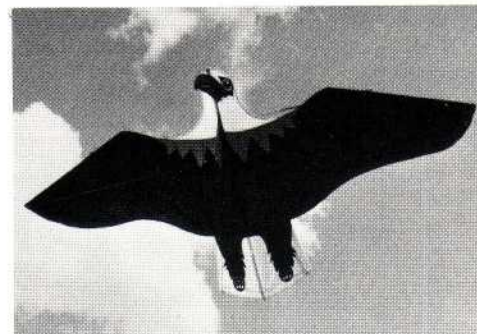
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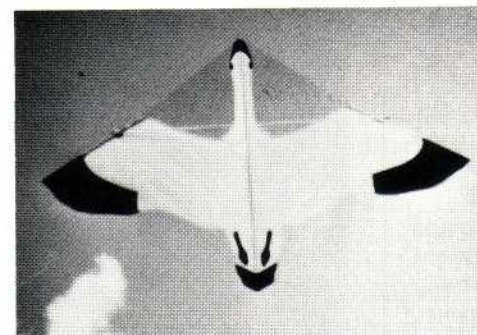
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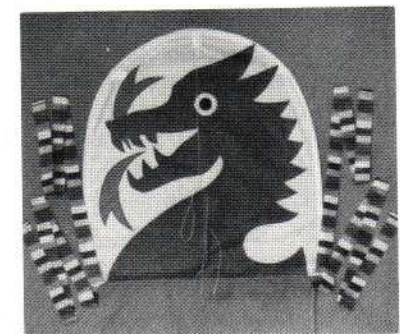
National Eagle



Morning Sun-Rainbow

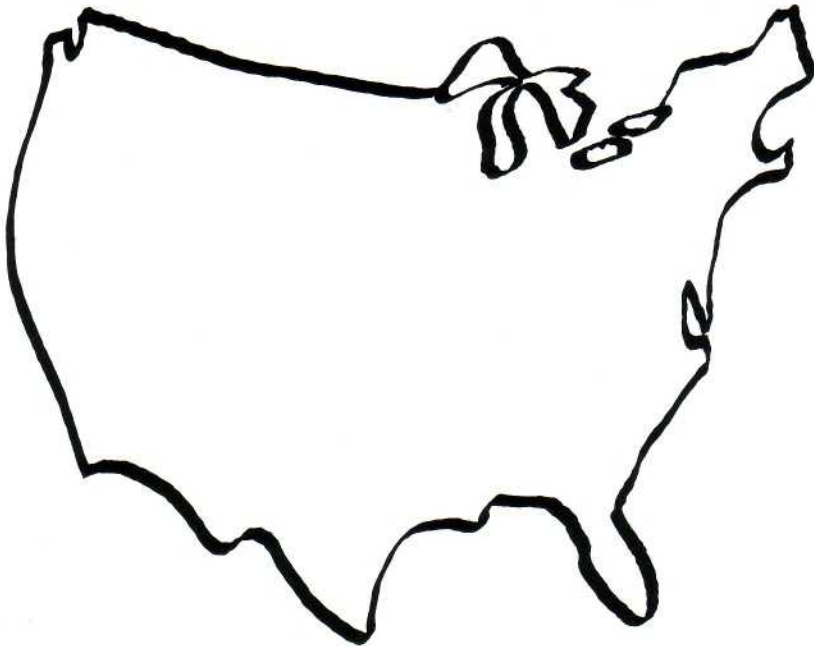


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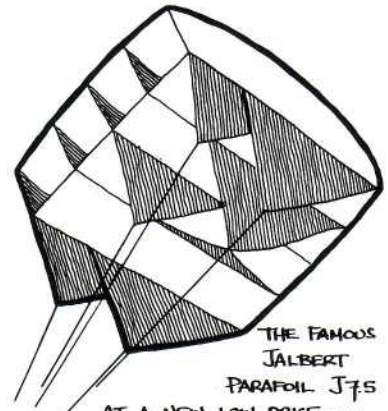
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# AKA NEWS AKA NEWS

The survey conducted in the Summer 1977 issue of *Kite Lines* revealed that AKA members are indeed interested in seeing their organization develop — or so we infer from the 12% who responded that they were willing to attend a national meeting at their own expense. Also a healthy half of the respondents expressed willingness to serve AKA as officers, committee members, representatives or correspondents.

When all the unfinished business of AKA is balanced against the apparent energy that could be tapped to work on it, the conclusion seems clear: an effort should be made to set up enabling channels. Those of us who dislike meetings (as opposed to, for example, kiteflying) will have the opportunity to set up, at this embryonic time, a model structure



for minimum involvement participation. Also, of course, the occasion will bring us a chance to share some very good kiteflying together.

A trade show and seminar may be held before the meeting proper if response to this idea is good. Many of the people who will be attending the meeting would appreciate having a defined time and place for showing their wares and sharing their experiences in the kite business.

As this issue is prepared, only a general schedule has been outlined. Members are invited to write or call with ideas for the agenda. Complete information will be mailed separately to all members soon, but do plan now to join us at Ocean City for a weekend of kites at their zenith!

## AKA at Work in Washington

In early January of this year, AKA learned that the U.S. Department of the Interior was holding hearings on issues to be identified in a Nationwide Recreation Plan.

On very short notice, Wood Ellis, AKA Life Member, responded to our appeal and attended a meeting as an unofficial representative of the interests of AKA and kitefliers.

He learned that the concerns of kitefliers (for example, conservation of open space) were shared by several other recreation groups. Also he was pleased to find that the Recreation '78 Task Force seemed to want the needs of kitefliers identified and presented, to be included with others' in developing the plan.

Wood did not back off from the very specific requirements set by the Task Force for the way in which the issues should be written up. He studied those concerns he believed kitefliers have. Then in the few days he had available

before the deadline, he wrote a document to satisfy the bureaucratic process while still giving spirited expression to the values of kiteflying.

We would like to think Wood's efforts will be effective. But the ways of government are not such that we can count on great results. In any case, AKA has had a chance to be heard and in turn to hear. As Wood said in his covering letter accompanying his document to the Task Force, "You have, in effect, galvanized us into awareness of our political responsibility. We are grateful, and ask that you give great weight to these issues."

### THREE ISSUES FOR KITEFLYING PRESENTED FOR THE 1978 NATIONWIDE RECREATION PLAN

By Wood Ellis  
Issue 1

The Department of the Interior, in collaboration with the Federal Aviation Administration, state

governments and appropriate agencies, should establish and designate in each state a multiple use park, relatively clear of trees and obstructions in at least 1000 contiguous acres, in which users of kites, balloons, tethered aircraft, model aircraft and model rockets would have priority over all other users, including operators of conventional aircraft, on the ground and up to 10,000 feet above the ground.

### Background Information on the Issue

There are at least 60, perhaps 75, well-established annual mass kite festivals which cater to adults in the U.S.A. Some kitefliers travel hundreds of miles to participate. There are tremendous obstacles to planning such events, such as non-availability of space, prohibitive local ordinances and liability problems. Many kite builders spend a year or more in designing, building and testing their entries. Countless experimental kites, kite trains, kite winches, etc., never get past the

drawing board because there is no suitable place for testing them. In some urban counties, such as Arlington County, VA, mass kite events are impossible due to the complete lack of suitable space.

In view of the persistence of dedicated kitefliers, the tremendous numbers of casual kitefliers, the popularity of kite festivals and the endless frustrations the kite enthusiasts partly overcome, it seems likely that kiteflying and kite festivals would increase a hundredfold if suitable large areas were provided for them. Typically, a kite festival entertains many thousands of spectators in addition to participants. Kitefliers practice in every month of the year when weather permits. Kite festivals are becoming well distributed, even into January.

Kiteflying fits admirably into the multiple use concept of recreational lands. The area should also be used for horseback riding, archery, soccer and family picnics, in addition to its priority usage for aerial recreations.

The maintenance cost of the required clear space might be offset by selling the hay crop from the land. Expensive, installed facilities are undesirable.

Kiteflying is a wholesome national sport. It does not pollute, nor consume fossil fuels. It cultivates good health. It is usually quiet. It can be viciously competitive. It connects the flier both tangibly and lyrically to the wild elements. It provides limitless challenges to the scientifically inclined. It teaches craft skills and self-reliance. It celebrates liberty. It is a family sport, involving all ages from four to fourscore.

### Issue II

Many urban governments adopt policies of zoning and taxation which are basically antagonistic to space-loving recreations such as kiteflying, horseback riding, archery, model aircraft flying, soccer and simply existing in a spacious environment.

#### Background Information on the Issue

Urban governments are corporate entities which sell their services in exchange for money (taxes), and which generally seek to enlarge and perpetuate themselves. They usually practice the belief that high priority is to "expand the tax base." They consequently promote high density commercial and residential developments, which in turn radiate higher real estate values to peripheral low-density properties, which in turn produce more tax revenue, and this tax burden provides a concrete disincentive to maintaining clear areas for recreational use, either as private or public property. Parks which are "little used" are considered wasteful, even though they greatly expand the lifestyle options of citizens. The continuing and irreversible encroachment on clear areas might be evidence of a harmful philosophy of city government.

Because of the land management interests of the Interior Department, in behalf of the citizenry as a whole, attempts to improve the quality of city life by developing and promulgating recommendations for city governments would seem to be within the charter of the Department. One such recommendation might consist of a philosophy of taxation and zoning which encourages maintaining clear areas, which discourages high density developments and which penalizes enlargement of the governmental corporate entity.

### Issue III

The filling of open areas with trees, electric overhead lines and game courts is not necessarily good, as such areas then cannot be used for kiteflying and other space-loving activities.

#### Background Information on the Issue

Kitefliers require open space before all other things. Many managers of outdoor recreational areas believe that they should fill the areas with as many attractions as possible, starting with trees and continuing the packing process indefinitely toward higher density usage. A specific example of this on-going process is the Lee District Park on Telegraph Road in Alexandria, VA. Another example, where the clash between philosophies is much publicized, is New York City's Central Park.

It is possible to achieve high density usage without filling the open areas with obstructions, as has been demonstrated at the Monument grounds in Washington, DC, and at various seashore parks. Furthermore, there are philosophical rationales for avoiding high density usage of designated recreational areas.

#### Current Efforts to Resolve the Issues

This is the first action undertaken by the American Kitefliers Association (AKA) in behalf of these issues. The AKA has been consistently nonpolitical, although its members are well-positioned for influence near their homes.

### SAFETY COUNCIL REPORT

By Wood Ellis

AKA's Kite Safety Council (KSC) convened for the first time on November 16, 1977, in a meeting room of the Smithsonian's National Air and Space Museum, Paul Garber and John Hastings co-chairing.

After lengthy discussions the KSC decided to (a) sponsor kite safety codes or standards if they could be uniformly agreed upon, (b) compile a file of data relating to accidents in which kites were involved and (c) continue the KSC in operation.

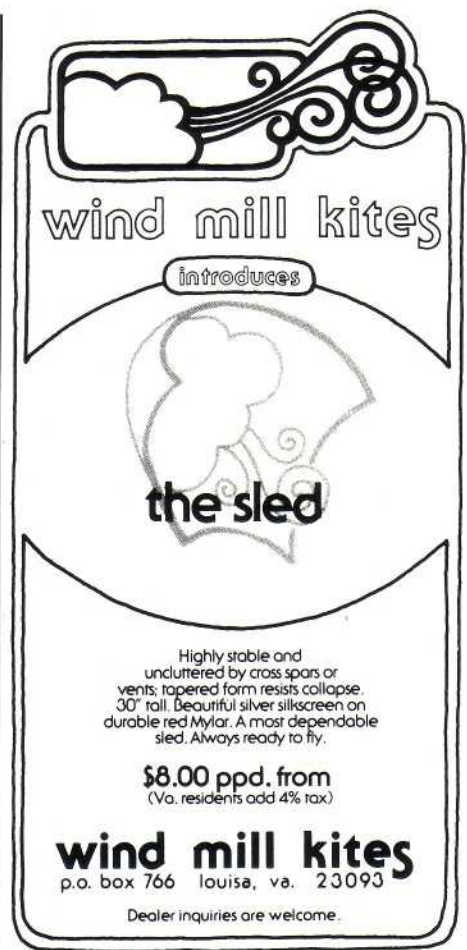
The KSC is composed loosely of about 49 people nominated by Valerie Govig or by themselves. The first meeting was attended by 19 members from a wide East Coast area (Connecticut was the most distant place represented). KSC business can be conducted in this column in most issues of Kite Lines and in the mails if people approve and cooperate. Members of the KSC should feel some obligation to reply when votes or other responses are requested. Other AKA members are urged to participate similarly if they wish, by mail.

Serving as a temporary administrator of the KSC, I wrote letters to various utility and government agencies to acquire data on kite-related accidents, and some replies have been received.

As an interim measure, Valerie wrote a guide for safe flying which at least one manufacturer is now enclosing with his kites. The complete text is printed with this article. Kite manufacturers are encouraged to plan their packaging in the future to include this information.

The discussions of November 16 and some fine letters by Guy Aydlett, Warren ("Stormy") Weathers and others make it seem that we should distinguish between three kinds of guides: kite design, individual kiteflying and mass kite-

Continued on page 70 . . .



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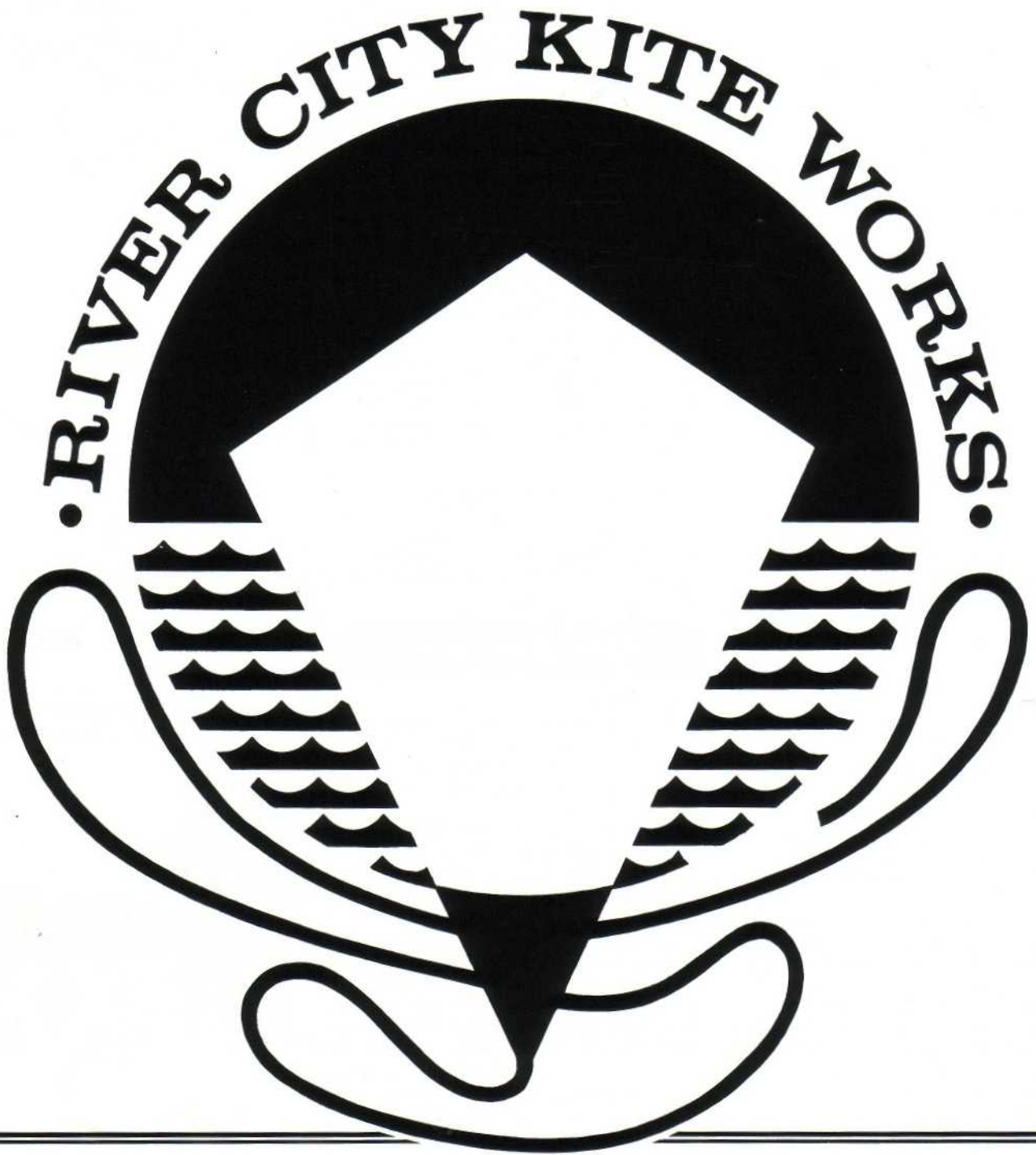
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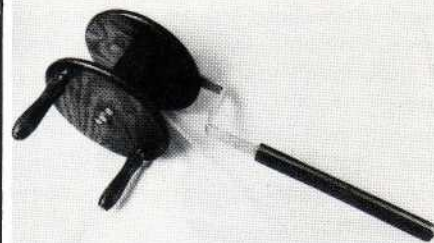
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# Flying with the Old Pro

By Bob Ingraham  
Founder, American Kitefliers Association

Only a few current members of AKA are aware of the history of the organization which had some very dark days in the beginning as well as some highly exhilarating ones. I have been asked to reveal some of these occurrences and I hope that they will prove interesting to members.

AKA began more or less by accident. It was never expected to become big or even important. It was a diversion which acquainted me with what I thought were a very few adult kitefliers spread out thinly over the nation.

First issues of *Kite Tales* (predecessor of *Kite Lines*) mimeographed upon an ancient discarded machine, were produced with real physical effort. The machine's impression roller was so bad it required a full minute of precise turning of the cylinder to make a readable print. If only 10 or 12 pages had been involved, this wouldn't have been so bad but ambition drove me to put out 50-page issues and that was pure murder.

All issues were collated and stapled by hand. Beginning in the kitchen, pages were laid out in sequence on every available space and continued on into the living room, from there through the bedroom and over the bed, winding up in the office. No record was ever kept of the miles walked during this operation but the figure must have been impressive.

This went on for nearly two years until generous contributions of a few members provided a new electric mimeograph. The laborious cutting of stencils remained, however, but the copies were legible and printed on both sides. The machine tossed them out and stacked them neatly as long as you were staring intently at it. Leave the room for two minutes and when you returned, the air was full of flying sheets of paper and sometimes you had a ruined stencil from a wadded sheet caught on the drum. The scene resembled a kitefly and was appropriate in that sense.

If anyone asks if I ever made a mistake during those early days, you can tell them I did. Realizing that more money was needed to meet the demands of a growing organization and magazine, I foolishly upped the membership fee to \$10 from a mere \$3



and a dive to oblivion began. Of the first 170 renewal notices sent out, just 10% responded.

Realizing I was doomed, I returned new applications with a note explaining that *Kite Tales* was being phased out with four more issues which would satisfy all obligations. One such application was from Dick Mair, sales manager for North Pacific Products Co., a Bend, OR, firm which, among other novelties, makes the Glite kite. In just no time, Dick, who envisioned a better future for kiting than I did, called me and said to hang on and await further word from him. I did and found myself one cold, pre-Christmas December night winging over Oregon forests and lakes enroute to talk about the future of *Kite Tales* with the officials of N.P.P. in their quaint little factory on the edge of the Cascade slopes.

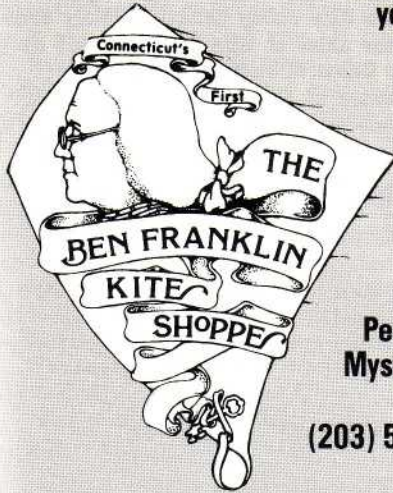
I landed at the Bend airport at 11 p.m. in snow and cold the likes of which I hadn't experienced in many years. A guest of the Mairs in their new but yet incomplete country home, I spent two nights in an unfinished room, one end of which was hung with a blanket in lieu of a wall. In the heat of the excitement and aided by an electric heater, I survived to face a grueling two days trying to impress the owners of N.P.P. with the importance of *Kite Tales* and its glowing future. It wasn't easy. However, the conclusion was reached. N.P.P. was to print *Kite Tales* on its own little offset press with

the type set from my copy by their local printshop and newspaper. They would absorb all expenses and pay me \$75 per week to supplement the part-time newspaper job I held at the time. I would forward all membership monies and other revenues to them at intervals. I returned home exhausted but elated and went to work.

Dick Zimmerman, executive of N.P.P. and a true gentleman, patiently taught me how to make the layouts from the returned proofs. When finished, the layouts were mailed back to Bend and the magazine, reduced one per cent to fit the press, began a renewed life. Only one issue was missed during this changeover.

Dick Zimmerman died two years ago. Dick Mair had a stroke and is now retired and lives in Florida. I had to withdraw the publication after several issues because the company would not go above 28 pages and I was determined to make *Kite Tales* ever bigger and better. But the relationship, as long as it lasted, saved *Kite Tales* from becoming a journalistic casualty and I am very grateful to those fine men who made it possible to go on.

This was not the only crisis in the history of *Kite Tales* and none of this relates directly to kiteflying but it certainly does to kiting. Since AKA and *Kite Lines* mean a lot to you, you may be interested now to know about the "Valley Forge" I endured in the winter of '70 so that AKA might live. ♦



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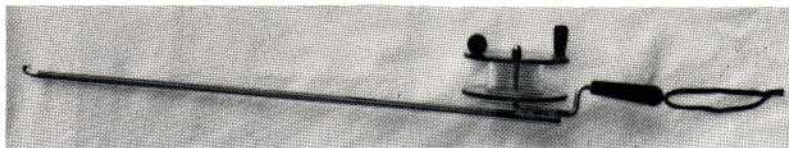
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  - NOW with fibre glass wing spars. Unbreakable, evenly flexible and won't warp.
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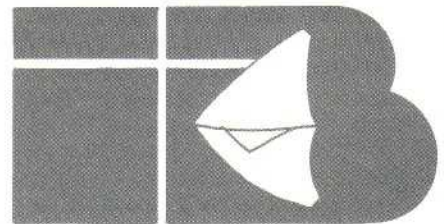
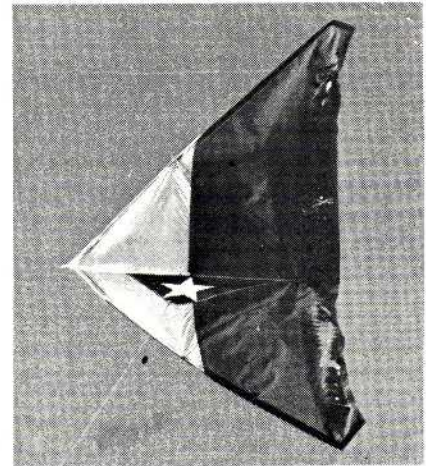


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Order from:

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Silver City, N.M. 88061

**AKA NEWS**

... Continued from page 65

flying. Valerie's piece is an individual kiteflying guide. We may need to write guides for the other two areas also.

AKA members are the worst offenders. Little kids seldom experiment with kite trains, high altitude tries, giant kites, aluminum tubing kites, cutting lines, indoor kites, wire tethers, etc. A

**INTERIM SAFETY CODE**

In the U.S., the Federal Aviation Administration has a single regulation governing kites under five pounds in weight:

**"No person may operate any kite in a manner that creates a hazard to persons, property or other aircraft."**

To make this general rule specific, the American Kitefliers Association is drawing up a code for kitefliers. The following rules are being considered and are recommended:

**Four Nevers of Kiteflying:**

1. Never fly a kite in wet or stormy weather, and keep your line dry.
2. Never fly a kite near electric power lines, transmission towers or antennas.
3. Never fly a kite with wire or anything metallic in its line.
4. Never fly a hard-pulling kite without wearing gloves.

**Five Things to Avoid while Flying Kites:**

1. Public streets and highways: don't fly in or near them.
2. Air traffic patterns.
3. Bystanders in your kite's line of attack (when flying maneuverable kites).
4. Rocky, bumpy or obstacle-filled fields — they can trip you up.
5. Trees — but if you do lose a kite to a kite-eating tree, loosen the line and let the wind fly it out.

simple safety guide that is appropriate for children could outlaw many fascinating aspects of kiting practiced by AKA members. Maybe the KSC could classify kites in some way, with a different safety guide for each class. The guide for very large kites, for example, could mention the need for solid anchoring and for adhering to FAA requirements. The guide for mass kiteflying could mention the hazards of leaving loose lines on the ground and of running through the crowd.

The preceding paragraphs suggest two different ways to categorize safety standards and they subdivide each other as indicated in the matrix.

Valerie's good guide does not pertain fully to every kind of kite or flier or situation. Her Never Number Four is about gloves, which implies that the kite can be held by hand, which implies that it is not large enough to require a power winch, which suggests a weight limitation — let's say 20 ounces, for example. The general tone of the guide sounds appropriate to a large urban park. We can put it together and say, for the moment, that Class D means a kite of 10 to 20 ounces intended for use in urban parks or larger. The leaflet then would become guide Number 2D, according to the matrix. A guide for this category seems to be urgently needed, but it is not the only one that is needed.

The spectacular controversies over the hazards of metal in kites have generated widely divergent views from equally intelligent individuals. Some favor an absolute "ban," whatever that is. Some

simply favor more education and safety awareness. The writer favors careful development of the guides in well-defined categories. In that context, a ban could be a statement in Guide Number 1D, pertaining to the design of kites weighing 10 to 20 ounces intended for use in urban parks or larger. It could say, "Do not include metallic conductors of over three inches in length in the kite." Of course, we might choose to say something different, for example requiring a written warning label or different dimensions, etc., for the kite. The ban would be a recommended guideline, not a federal law with punitive provisions.

Assumptions and opinions as expressed above are now open to attack or affirmation, as the case may be, by all AKA members. Please send your responses directly to the Kite Safety Council Secretary, Wood Ellis, 6212 N. 18th Road, Arlington, VA 22205.

**REFERENDUM**

Kite Safety Council members and all other interested AKA members, please respond promptly by mail to the following questions:

**Question 1:** "The KSC and the AKA approve Valerie Govig's guide, as written, as a useful one, subject to possible later revision." **Vote Yes or No** and comment if you wish.

**Question 2:** "Safety guidelines for kites should be of three kinds: design guidelines for safe kites, safety guidelines for individual kiteflying and safety guidelines for mass kiteflying." **Vote Yes or No** and comment if you wish.

**Question 3:** "Safety guidelines for kites should be of several classes, according to the sizes of kites, the kinds of kites or the intended uses of kites." **Vote Yes or No.** If you vote Yes, include a suggested list of class definitions.

**MATRIX OF CATEGORIES FOR KITE SAFETY STANDARDS**

	1. Kite Design	2. Individual Kiteflying	3. Mass Kiteflying
Class A			
Class B			
Class C			
Class D			
Class E			
Etc.			

**Question 4:** "The KSC and the AKA approve the methodology of this writing, in which issues are formalized in print and votes are taken by mail." **Vote Yes or No.** If you vote No, try to suggest an alternative system, bearing in mind that we have no funds for frequent mass mailings, meetings of people who live all over the nation, etc. This experiment in pseudo-parliamentary procedure can be cancelled by a majority negative vote at this time.

**Question 5:** "The AKA should continue to study the issue of metal in kites and should alert kitefliers to the hazards involved, but should avoid taking any detailed or controversial position until such time as questions 2 and 3 are resolved and a list of desired guidelines is formulated." **Vote Yes or No.** Please comment freely.

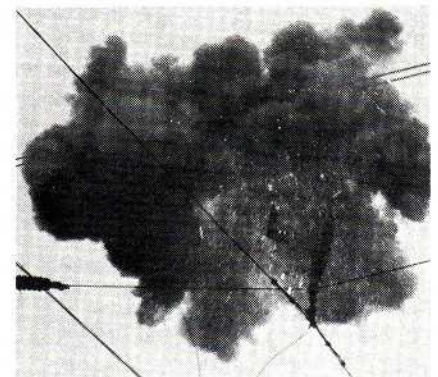
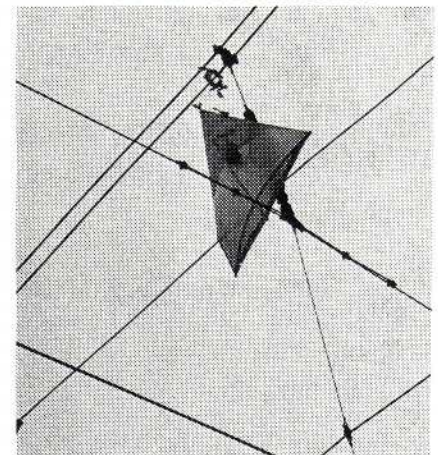
**KITE SAFETY IN THE HEADLINES**

As if to remind us of the importance of AKA's Kite Safety Council, a story arrived at the office of Kite Lines, as told by Dr. Hajo Onken of Germany:

Beware of high voltage lines. They can be dangerous to your life, cause inconveniences and cost you a bundle.

A kite was flown close to the commuter train line in the neighborhood of Frankfurt. The weather was overcast. Soon after the kite hit the power lines they were switched off. Fortunately nobody was hurt. A light rain started to fall and the kite line got wet. Another train had to use the

A kite accident in the German press.



rails, so the power was again switched on. Then it all happened: an explosion with flames and smoke caused by the conducting kite line and kite parts destroyed part of the power line assembly. Train service was halted for a couple of hours.

A kiteflier still holding the line could have suffered a fatal stroke and could have been severely burned. Maintenance engineers from the

Federal Railway moved in with a tower-car and repaired the damage. This is the balance of the minor kite mishap: two hours of interrupted train service, repair costs of \$1000, plus consequential damage for eight cancelled trains. The Federal Railway will collect the money from the parents of the juvenile kiteflier. The parents are thankful that the child's life was spared.

## DIRECTORY OF KITE CLUBS

One evidence of the growth of kiting over the past few years is the increased number of kite organizations. To the best of our knowledge, there are now 27 such groups around the globe. AKA chapters have made a pronounced jump in the last year from nine to 14 in all. Kite groups in the U.S. usually become a chapter of AKA as soon as they feel reasonably well established. Clubs in other countries are less likely to affiliate with AKA officially, but they do maintain informal communication with us.

No defined requirements presently exist for AKA chapterhood. Every request till now has been granted on simple evidence of real

members and activity. This laissez-faire approach may be amended in time, but for the present, new clubs that believe they fit the prescription need only send to AKA a contact name and address and some description of the group's activities to become a chapter.

Some kitefliers may now be living near a kite club without knowing it. This distressing thought prompts us to list below the names and addresses of the current rivulet (one hesitates to call it a flood).

Information about newsletters is also given for those organizations which publish them. An update of this Directory will be published from time to time.

### Chapters of AKA

#### California

Long Beach Chapter, AKA  
(inactive)  
c/o Maria Sharpe  
Long Beach Recreation Dept.  
155 Queens Way Landing  
Long Beach, CA 90802

San Diego Kite Club  
c/o R. Victor Heredia  
P.O. Box 3248  
San Diego, CA 92103

#### Colorado

Beulah Valley Association for  
Tethered Flight  
c/o Frances Weaver  
8969 Squirrel Creek Road  
Beulah, CO 81023

#### Delaware

Delaware Kite Club  
c/o Dr. Floyd Cornelison, Jr.  
16 Stone Hill Road  
Wilmington, DE 19803

#### Hawaii

Hawaii Chapter, AKA  
c/o Wayne Baldwin, President  
47-120 Uakoko Place  
Kaneohe, HI 96744

#### Maryland

Maryland Kite Society  
(sporadic newsletter, "The Windy  
Notice"; annual dues, \$2 per

individual, \$4 per family)  
c/o Robert S. Price,  
Executive Secretary  
P.O. Box 10467  
Baltimore, MD 21209

#### New York

Long Meadow Chapter, AKA  
c/o Edwin L. Grauel  
799 Elmwood Terrace  
Rochester, NY 14620

Utica Chapter, AKA  
c/o Betty Devins  
1038 Albany Street  
Utica, NY 13501

#### Ohio

Ohio Society for the Elevation of  
Kites  
(newsletter, monthly in season,  
"Shoot the Breeze"; \$2.50  
annual dues)  
c/o Thomas Rask, President  
2687 East 128 Street  
Cleveland, OH 44120

#### South Carolina

Florence Kite Flying Association  
c/o Robert F. Liger, Jr.  
1807 Hazel Drive  
Florence, SC 29501

#### Washington

Washington Kitefliers Association  
(newsletter, monthly in season;  
\$3 annual dues)

c/o Pacific Science Center  
200 Second Avenue N.  
Seattle, WA 98109

#### Foreign

Australian Kite Association  
c/o Helen Bushell, Secretary  
10 Elm Grove, North Kew 3102  
Victoria,  
Australia

Kite Fliers Association of South  
Australia  
(infrequent newsletter)  
c/o Ian Perrin,  
Secretary-Treasurer  
P.O. Box 40  
Burnside  
South Australia 5006

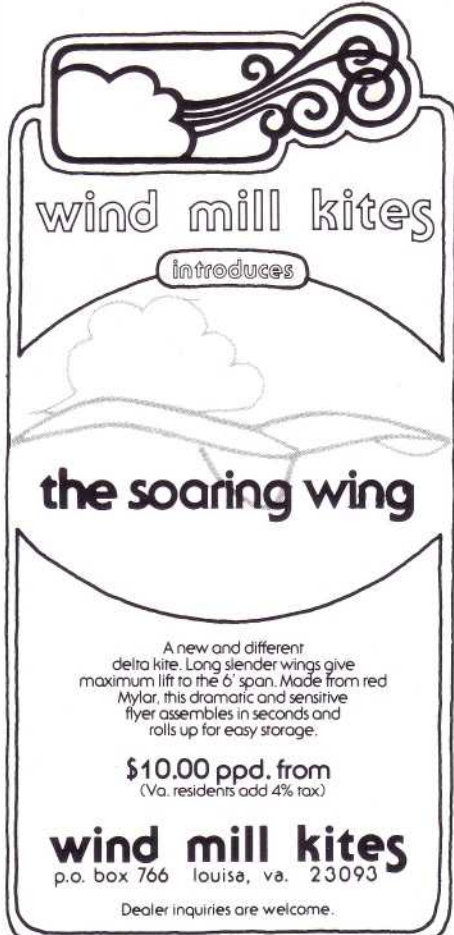
Waikato Chapter, AKA  
(infrequent newsletter,  
"Kite Lines")  
c/o Logan Fow,  
Secretary-Treasurer  
62 Paul Crescent  
Hamilton  
New Zealand

### Unaffiliated Associations

#### United States

Connecticut Kitefliers Association  
(newsletter planned;  
\$5 annual dues)  
c/o Douglas Allen  
4-L Lakeside Drive  
Ledyard, CT 06339

... Continued on page 76



wind mill kites  
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the soaring wing

A new and different delta kite. Long slender wings give maximum lift to the 6' span. Made from red Mylar, this dramatic and sensitive flyer assembles in seconds and rolls up for easy storage.

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# The Ocean City Maryland

## Grand National Kite Festival

**Saturday  
Sept. 23, 1978**

(Rain date, Sept. 24, 1978) Starting time: 11:00 a.m. on the beach  
at Second Street (Registration time: 10:00 a.m. Saturday)

**TOTAL  
PRIZE  
AWARDS**

**\$2000.<sup>00</sup>**

in addition to  
trophies and ribbons



Each participant and kite will be limited to one category except that an extra kite for the AKA category may be entered.

### First Place Cash Awards

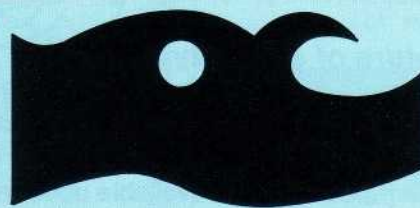
## Categories

1. Most kites on a train (AKA proposed guidelines will be followed)	\$200.00
2. Largest kite (Square feet of lifting area)	\$200.00
3. Endurance (Could last several days)	\$200.00
4. Highest flying kite (FAA has been notified)	\$200.00
5. Strongest pulling kite (Single line, single kite)	\$200.00
6. Best all-around kite (youth) (Handcrafted by flier 15 years or younger)	100 yds. of rip-stop nylon
7. Best AKA kite (Kite must carry AKA name, letters or logo prominently and will be judged on craftsmanship and performance)	\$200.00
8. Best dual-control performance (Flight pattern will be specified)	\$200.00
9. The most innovative kite (Handcrafted and never entered in contest before)	\$200.00
10. The most innovative manufacturer's kite (Kite must not have been on the market before Sept. 1, 1977 and must be flown by manufacturer or representative)	\$200.00

# The challenge is on and you are invited

Come to Ocean City, Maryland and participate in a most exciting and joyful experience. There is an excellent chance that several world records will be broken. In addition, the festival is expected to encourage new and unusual approaches to kite design and craftsmanship. Join us on the beach of Ocean City, Sept. 23, 1978 for a festival of kites!

An observer for the Guinness Book of World Records will be on hand to witness any official attempts to break world records.

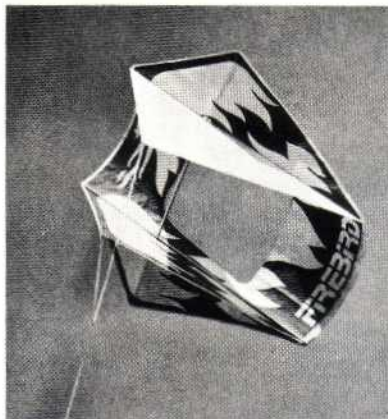


For further information contact:  
The Ocean City Chamber of Commerce  
Dept.: Flight/Rt. 1, Box 310 A  
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Phone: (301) 484-4861

In cooperation with the  
American Kitefliers Association,  
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*The Firebird Windform™ Adaptable  
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Don't take our word for it. Here's what expert Mel Govig had to say in his review of the FIREBIRD ("Kite Lines", Summer 1977).

*"A truly new kite (design) . . . looks like a winged sled . . . flies like a Conyne . . . develops tremendous lift . . . very durable . . . rated easy enough for the novice (active enough to satisfy a pro)."*

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- **DOUBLE-KEEL GUIDED:** A big double-keel and unique venting make the Firebird unusually responsive and stable to shifting winds . . . easy to launch.
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... Continued from page 71

Marine Park Kitefliers Association  
c/o Joe Manzi, Jr.  
20 Colin Place  
Brooklyn, NY 11223

The Marina Greeners  
c/o Brendan Cooke  
8712 Sturgeon Way  
Sacramento, CA 95826

England

Blackheath Kite Association  
c/o Terry Shea  
47, Roydene Road, Plumstead  
London, SE18 1PZ  
England

British Kite Flying Association  
(newsletter planned;  
£ 3 annual dues)  
c/o Ron Moulton  
P.O. Box 35 Bridge Street  
Hemel, Hempstead, Herts.  
HPI 1EE  
England

Cornwall Kite Club  
c/o John L. Sweetman  
Mah-Jong, Forge Way,  
Shortlanesend  
Truro, Cornwall  
England

Essex Kite Group  
(quarterly newsletter, "Kite  
Wings"; annual dues, £ 1 per  
adult, 25p per junior to age 16)  
c/o Clive C.O. Rawlinson  
The Croft, Howe Street  
Gt. Waltham, Chelmsford, Essex  
England

European Kitefliers Association  
(quarterly magazine, European  
Kiteflier; \$20 U.S. annual dues)  
c/o Nick Laurie  
Longstone Lodge, Aller  
Langport, Somerset TA10 0QX  
England

France

Le Cerf-Volant Club de France  
(quarterly newsletter, in French;  
200 francs to join)  
c/o Jean-Louis Bouisset, President  
17 rue Lacharriere  
75011 Paris France

Japan

Create Kitefliers Club, Japan  
Matsuo Isobe, Managing Director  
c/o Noritsu Machinery Mfg. Co.  
14-13, 5-Chrome, Ebara  
Shinagawa-Ku, Tokyo  
Japan

Japan Kite Association  
(magazine, in Japanese)  
Shingo Modegi, President  
c/o Taimeiken  
1 Chome, 12-10 Nihonbashi  
Chuoku, Tokyo  
Japan

Kite-X-Club  
Rokuro Yoshida, head  
3-4 Kotobuki-Cho  
Tokorozawa 369  
Japan

Malta

Malta Kitefliers Group  
c/o Alfred Darmania-Gay,  
Secretary  
2, Princess Anne flats, Ball Street  
Paceville, Malta

Nonassociations

Will Yolen, International  
Kitefliers Association  
321 E. 48th Street  
New York, NY 10017

New Jersey Section, International  
Kitefliers Association  
c/o A. Alan Leveen  
241 Main Street  
Hackensack, NJ 07601



Let your spirit ease on and up,  
into the calm of oceans aloft.  
Celebrate the ever gathering  
tide of winds... with a kite,  
Mans finest gift to himself in over 2000 years.

# The GREAT WINDS

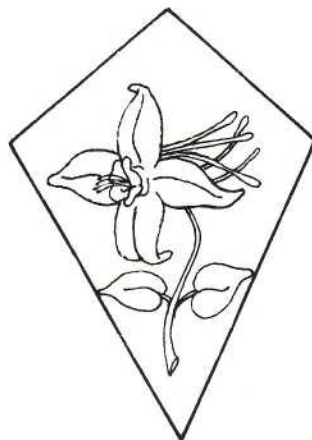
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very finest kites from here and afar,  
kiting accessories and a complete line  
of materials.



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TAILLESS BOW KITE  
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## SKY SCRAPERS, KITES

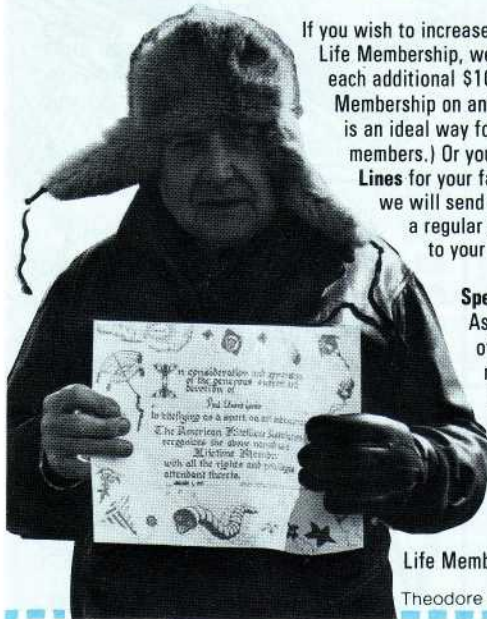
2563 15TH DENVER CO. 80211

(303) 433-9518

# Have you considered LIFE MEMBERSHIP in the American Kitefliers Association?

Inquiries prompt us to provide information on this special status. For \$100, we'll make you a Life Member of AKA, the international organization devoted to the advancement of kiteflying. Join such great names in kiting as Wyatt Brummitt, Paul Garber, Al Hartig, Domina Jalbert, Tal Streeter, Will Yolen and others. Sure, not everyone can afford it. But if you believe in AKA and *Kite Lines* as the special journal of an unusual community and you wish to show your commitment and support, here's an ideal way to do it.

We are not yet well known and well promoted, and in these early stages of organization our need is great. In gratitude for your support we will send you our beautiful framable Life Member Certificate (proudly shown by Paul Garber) and we will list your name in our journal's pages.



If you wish to increase your support in addition to a single Life Membership, we have a way in which you can do so. For each additional \$100 you send, we can bestow a gift Life Membership on any person you wish to honor and please. (This is an ideal way for clubs to recognize long-standing service of members.) Or you can create a lifetime subscription to *Kite Lines* for your favorite library, alma mater, etc.; for these we will send the Life Member Certificate to you and a regular gift card denoting lifetime subscription status to your recipient.

**Special Announcement:** The American Kitefliers Association has now established a special category of membership for corporations. For \$500 we can name your company in a special listing in *Kite Lines* and present you with a Sustaining Life Member Certificate. In addition, this status carries with it a 10% discount privilege on *Kite Lines* advertising space rates.

Life Member Paul Garber with his Certificate.

Theodore L. Manekin

American Kitefliers Association  
7108 Campfield Road • Baltimore, MD 21207, USA

I enclose a \_\_\_\_\_ check or \_\_\_\_\_ money order for \$ \_\_\_\_\_ made payable to the American Kitefliers Association, for which . . .

- Please enroll me as a Life Member of the American Kitefliers Association.  
 Please enroll the following as a Life Member of the American Kitefliers Association as my gift.

Name and address of recipient of Life Membership:

\_\_\_\_\_

- Please enroll the following as a lifetime subscriber to *Kite Lines* as my gift.  
 Name and address of recipient of lifetime subscription:

\_\_\_\_\_

- Please enroll my company as a Sustaining Life Member of the American Kitefliers Association.

Name and address of company:

\_\_\_\_\_

- Yes, you may list my name in *Kite Lines*.  
 Please do not list my name in *Kite Lines*.

My name \_\_\_\_\_

My address \_\_\_\_\_

My city, state, zip \_\_\_\_\_

## NEW LIFE MEMBERS

Anonymous  
 Joseph Arena  
 Charles Bernstein  
 Dr. Myron Bernstein  
 Louis Bigge  
 William R. Bigge  
 Lt. Col. and Mrs.  
     Bevan H. Brown  
 Wyatt Brummitt  
 Dr. Floyd Cornelison, Jr.  
 Elliott N. Couden  
 Thomas E. Cows  
 Wood and Virginia Ellis  
 Dale Fleener  
 Pat York Gilgallon  
 Paul Scot Gilgallon  
 Pat Hammond  
 Hugh A. Harrison  
 Al and Betty Hartig  
 John Hastings  
 Robert Hieronimus  
 Gary Hinze  
 A. Pete Januzzi  
 Robert and Hazel Ingraham  
 Bill Jones  
 Nat Kobitz  
 Theodore T. Kuklinski  
 Theodore L. Manekin  
 Curtis Marshall, M.D.  
 William G.B. Ochse  
 Robert S. Price  
 Carol A. Rogallo  
 William A. Rutiser  
 Dr. John H. Seipel  
 Charles A. Sotich  
 Bernard A. Spalding  
 Tal Streeter  
 John F. Van Gilder  
 Cleveland J. Wall  
 Bruce Wulfsberg

## LIFE MEMBERS

Gregory A. Apkarian  
 John C. Armanino  
 Guy D. Aydlett  
 Clifford Bantel  
 William R. Bigge  
 Wyatt Brummitt  
 Kenneth Bryan  
 J. H. Bugg  
 John F. Carroll  
 David M. Checkley  
 Thomas W. Dietz  
 Sr. Mary Ann Lenore Eifert  
 Douglas Fales  
 John D. Forbes  
 Paul Edward Garber  
 Aylene D. Goddard  
 Edwin L. Grauel  
 Hugh A. Harrison  
 Eugene Hester  
 Henry H. Howard  
 Domina Jalbert  
 Tony Johnston  
 Mrs. David Jue  
 Ben Kim  
 Theodore Kuklinski  
 Oswald S. Markham  
 Carol Master  
 Lt. Col. Joseph O'Brien  
 Lt. Raymond Reel  
 Francis M. Rogallo  
 Gordon Shute  
 Charles Siple  
 Robert Smith  
 H. J. (Hod) Taylor  
 William E. Temple  
 Dr. Alfred Thelin  
 Thomas Troyer  
 Arthur Vash  
 Mike Wright  
 Harold Writer  
 Will Yolen  
 Anthony Ziegler

# a little puff about the American Kitefliers Association

**T**he American Kitefliers Association is a worldwide organization devoted to the advancement of kiteflying.

**A**t the time of this printing, the Association enjoys approximately 2500 members, representing all 50 states and 27 foreign countries. The AKA was founded in October 1964 as the first organization of its kind in this country, and it maintains ties with several far-flung national and international chapters and clubs.

**T**he Association's principal means of communication is its quarterly publication, *Kite Lines*<sup>™</sup> (incorporating *Kite Tales*). Membership includes subscription to this magazine, which brings you such regular departments as:

- Design Workshop
- Kite Calendar
- What's New: Reviews of Kites, Books, Sundries
- Kid's Corner
- Ultimate Questions
- Profiles

... and more, as well as advertisements for interesting kites and in-depth feature articles. The contents of *Kite Lines* reflect and support the growing kite community, which you will soon come to know and enjoy as your friends.

**T**he only requirement for membership is an interest in kites. If you believe yourself qualified to accept this lightest of all responsibilities, you are entreated to fill out the order form on the reverse and send it to us today.

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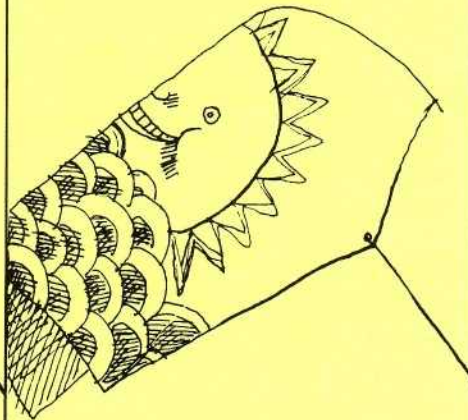
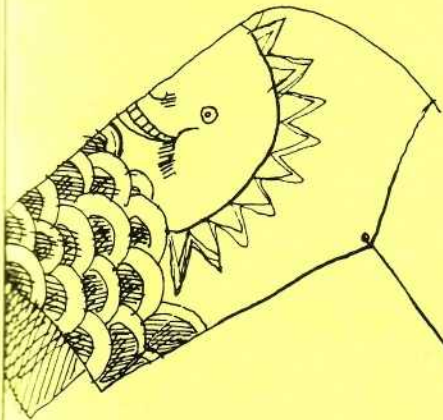
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**MEMBERSHIP/SUBSCRIPTION APPLICATION**

Membership in AKA and subscription to *Kite Lines* can be yours at these low rates:\*

3 years (12 issues)	\$15
2 years (8 issues)	\$11
1 year (4 issues)	\$6

\*Add \$1 per year for postage outside U.S. (except APO/FPO). Or you may choose special air mail rate for foreign mailings at \$5 per year additional.

**BONUS** with each new, renewal or gift subscription: member will receive the annual AKA *Annotated Kite Bibliography* at time of its publication. (Bibliography is also available from AKA separately for \$1 per copy postpaid.)

*Note:* All subscriptions begin with the next issue of *Kite Lines* unless order specifies to start with current issue (no extra charge for this service). Quarterly publication dates are: the end of February, May, August and November. Back issues are available for \$2.

---

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 Address \_\_\_\_\_  
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 Sign gift card(s) "From \_\_\_\_\_"

Please enter the following membership/subscription(s) for:

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Send with your check to:  
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 Association  
 7106 Campfield Road  
 Baltimore,  
 Maryland 21207, USA

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Name \_\_\_\_\_  
 Address \_\_\_\_\_  
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I enclose check or money order to cover:

Membership(s) \$ \_\_\_\_\_  
 Special postage if required \_\_\_\_\_  
 Other \_\_\_\_\_  
**TOTAL** \_\_\_\_\_



Send with your check to:  
 American Kitefliers  
 Association  
 7106 Campfield Road  
 Baltimore,  
 Maryland 21207, USA

# Classifieds

Services and products are listed as a service and listing does not imply endorsement by the American Kitefliers Association. Publisher reserves the right to reject any ad not in keeping with publication's standards, and to abbreviate to save space. Rates: 20¢ per word, \$2 minimum. Post office box numbers and telephone numbers count as two words, abbreviations and zip codes as one word. Check or money order, made payable to American Kitefliers Association, must accompany copy and be received prior to closing date (as given on masthead, page 5). Send to *Kite Lines Classifieds*, 7106 Campfield Road, Baltimore, MD 21207.

## WANTED

**CLIPPINGS:** News and articles of kite interest are actively solicited by AKA. First person to send an original with name and date of source will receive a small reward. Later duplicates received will be returned if sender supplies stamped, self-addressed envelope. Send clippings to American Kitefliers Association, 7106 Campfield Road, Baltimore, MD 21207.

**GOING OUT OF BUSINESS?** Close outs? Discontinued models? We buy them (kites and accessories). Ben Franklin Kite Shoppe, One-Half Pearl St., Mystic, CT 06355.

## FOR SALE — KITES

**WORLD FAMOUS FLEXIFOIL** \$59.95 each postpaid. Introductory offer for a limited quantity only. Four to six weeks delivery. Send money order or certified check to: G. E. Steinhoff, 45 Highwood Rd., E. Norwich, NY 11732.

**GIBSON GIRL BOX KITES:** Limited number of new (dated Jan. 1945) boxed G. G. box kites. Note: these are sealed/new and unopened. A unique offer. Offers over \$100 each. All inquiries promptly answered. Write air mail to: C. Doble, 51 High St., Wells, Somerset, England, or phone Wells 73974.

## FOR SALE — MISCELLANEOUS

**BLOWN SKY-HIGH,** the easy kite book of proven fliers. (See review, *Kite Lines*, Spring 1977.) \$4.50 by mail. Margaret Greger, 1425 Marshall, Richland, WA 99352.

**Super Kites,** book by Neil Thornburn, \$2.50, 4738 Elmhurst Dr., San Jose, CA 95129.

**KITE MANUFACTURING BUSINESS:** Leading quality cloth kite manufacturing business for sale. Owner has other interests. Very reasonable. Kites presently sold nationally and in many leading mail order catalogs. Contact Art DiAdamo, Hull's Hobbies, 1203 Chapel St., New Haven, CT 06511, (203) 865-4319.

**AKA EMBLEM PATCHES** now available direct from AKA. Washable, red-white-and-blue, 2½x2½", \$1.75 ea. (2 for \$3.25, 3 or more \$1.25 ea, all postpaid. (Foreign orders add estimated postage.) Send check or money order to American Kitefliers Association, 7106 Campfield Road, Baltimore, MD 21207.

**SLIDE SHOWS:** Two educational 80-slide shows, "All Manner of Kites" (about 14 min. on history and varieties) and "How to Go Fly a Kite" (about 9 min. on flying techniques, contests), with synchronized tape cassettes. Write for order form to Maryland Kite Society, P.O. Box 10467, Baltimore, MD 21209, or call (301) 445-0575.

**Exciting new idea in kiteflying:** To receive your kite-released parachute plans and instructions, send \$3.00 to Perry's Chutes, 2807 Blair St., Salt Lake City, UT 84115.

**BACK ISSUES OF KITE TALES:** All that's left. Vol. 8 No. 4; Vol. 9 Nos. 1, 2 and 4; Vol. 10 Nos. 2 and 3. One each all remaining issues \$10 including mailing. Singles \$2 ea. Write Bob Ingraham, 315 N. Bayard St., Silver City, NM 88061.

**CLOSE OUT** on *Kite Craft* books. Only \$4.30 each while they last. Send check or m.o. to Bob Ingraham, 315 N. Bayard St., Silver City, NM 88061.

**MANY HAPPY RETURNS.** When air is calm, throw a boomerang. List from Ruhe-Rangs, Box 7324, Franklin Station, Washington, DC 20044.

## WHOLESALE, MANUFACTURERS AND MAIL ORDER BUSINESSES

**Airplane Kite Co.,** 1705 W. Alameda, Roswell, NM 88201, (505) 622-7529.

**AIRTIME MFG., INC.,** 2978 Teagarden St., San Leandro, CA 94577, (415) 895-8373.

**Ben Franklin Kite Shoppe,** One-Half Pearl St., Mystic, CT 06355, (203) 536-0220.

**Explorers,** 21 W. Micheltorena St., Santa Barbara, CA 93101, imported kites, wholesale only.

**High as a Kite,** 131 Water St., Vancouver, B.C., Canada V6B 4M3. Mail order catalog available.

**Kite & Gift, Inc.,** 333 Jefferson #7, Fisherman's Wharf, San Francisco, CA 94133, (415) 885-5785.

**The Kite Store,** 848-A Yonge St., Toronto, Canada M4W 2H1, (416) 964-0434. Retail, mail order.

**Shanti Kite Spools,** 210 Chattanooga St., San Francisco, CA 94114, (415) 648-2621.

**FLY ROCKY MOUNTAIN HIGH KITES** from Colorado, Sky Scrapers (at the Platte), 2563 15th St., Denver, CO 80211, (303) 433-9518. Wholesale-Retail.

**Touch the Sky, Inc.,** importers-wholesalers, 848-A Yonge St., Toronto, Canada M4W 2H1, (416) 964-0434.

## ANNOUNCEMENTS

**THE KITE SITE** welcomes you at any one of our 3 locations: 1075 Wisconsin Ave., N.W., Georgetown, DC 20007, (202) 965-4230; 405 8th Ave. N., Myrtle Beach, SC 29577, (803) 448-7711, open mid-March; 904 Boardwalk, Ocean City, NJ 08226, (609) 398-5746, open mid-May.

## Swap

Shop

A new service of Kite Lines to kitefliers. Space is free but limited to one-half column overall or about a dozen listings per issue. Items are accepted first-come-first-served and are subject to editing to save space.

---

I wish to exchange kites in the \$1 to \$20 range with anyone anywhere in the world. I will send you a \$5 kite and get one back—or you may send me a \$10 one and you will get one back. Logan Fow, P.O. Box 6042, Hamilton, New Zealand.

---

I will exchange a Tyvek™ Cody-type box kite kit (made by Fruit Cake Kite Co., no longer in production) or other kite for a Gibson Girl box kite. I would like to obtain several G.G. boxes in this way. Frank Intelisano, Ben Franklin Kite Shoppe, One-Half Pearl St., Mystic, CT 06355.

## KITE GALLERY of the *midwest*



The *Unique Plate*

send for our catalogue

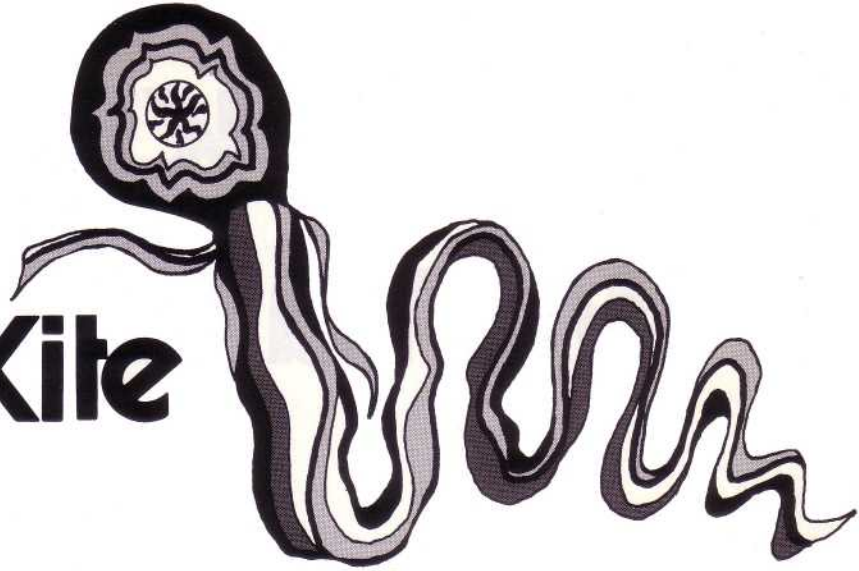
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# Come Fly a Kite introduces the california sunshine dragon . . .



This 45 ft. kite brings the California sun into your skies with a four color sun design that begins on the head and flows all the way down the tail.

No other kite like it!

This offer includes 500 ft. of 20 lb. line with spool.



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Enclosed is my check or money order for \$11.99 payable to Come Fly a Kite, Inc.

Charge it to \_\_\_\_\_

Master Charge \_\_\_\_\_ Cardholder's name \_\_\_\_\_

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A new age in mylar kites is dawning . . .

# Kites with a difference...



As the established leader in the kite market, Go Fly A Kite is well known for its excellent quality and large selection of kites from around the world. We are manufacturers, distributors and importers. Please send for our color catalogue.  
**Go Fly A Kite**, 1434 Third Ave., New York, New York 10028, (212) 988-8885